

**DEVELOPMENT MODEL OF THE ELDERLY'S HEALTH  
SERVICE SYSTEM TOWARDS THE EXCELLENCE OF  
TERTIARY HOSPITALS ATTACHED TO  
THE ROYAL THAI NAVY**



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**A Dissertation Submitted in Partial  
Fulfillment of the Requirements for the Degree of  
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The Graduate School of Environmental Development Administration  
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## ABSTRACT

<b>Title of Dissertation</b>	DEVELOPMENT MODEL OF THE ELDERLY'S HEALTH SERVICE SYSTEM TOWARDS THE EXCELLENCE OF TERTIARY HOSPITALS ATTACHED TO THE ROYAL THAI NAVY
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The development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy used the mixed quantitative and qualitative research and aimed to 1) Study the elderly's health service system of tertiary hospitals attached to the Royal Thai Navy 2) Compare the quality of life and demand of health service of the elderly with different abilities of daily living and seeking services of the tertiary hospitals in different areas and 3) Synthesize the development model of the elderly's health service system of the tertiary hospitals. The sample included 308 elderly seeking services at the outpatient department of the tertiary hospitals attached to the Royal Thai Navy and there were 17 key informants, staff of the tertiary hospitals attached to the Royal Thai Navy. The descriptive statistics was employed to find frequency, percentage, mean, standard deviation, and the inferential statistics was used to compare the quality of life and demand of health service of the elderly's different abilities of daily living and seeking services in the tertiary hospitals in different areas, by using the analysis of Two – way MANOVA with the statistical significance at the level of .05. An interviews and focus group were also carried out with 17 key informants in which the results obtained went through the content analysis by determining the content from interpretation and determining the issue framework of the development model of the elderly's health service system. Model of the elderly's service health system towards the excellence of the tertiary hospitals was therefore constructed.

The research results revealed the following: 1) The overall quality of life, divided by the abilities of daily living of the elderly namely the society engaged elderly, the home attached elderly, and the bedridden elderly, revealed a high level ( $\bar{x} = 97.86$ ) and a fair level ( $\bar{x} = 76.71$  and  $77$ ), respectively. The elderly seeking services at different hospitals overall had different quality of life with the statistical significance at the level

of .05 and the elderly's different abilities of daily living overall had different quality of life with the statistical significance at the level of .05. The two pairs with different quality of life included the society engaged elderly and the home attached elderly, and the society engaged elderly and the bedridden elderly 2) The elderly seeking services in tertiary hospitals in different areas and the elderly's different abilities of daily living overall had different demand of health service but there was no statistical significance 3) There was no interaction between the variables of the elderly seeking services in the tertiary hospitals and the elderly's abilities of daily living on overall quality of life and overall demand of health service 4) Model of health service system of the society engaged elderly, the home attached elderly and the bedridden elderly in the perspective of efficient operation was developed activities towards the excellence namely clear policy of health service system, establishment of committee on the elderly, operation handbook such as annual medical checkup, health promotion and the long-term elderly care network; management of the society engaged elderly such as support of the elderly's self-reliance, support of the elderly's knowledge source, development of knowledge source and the potential of the club for the elderly; management of the home attached elderly such as home visits, health promotion of specific diseases, support of participation from families, clubs, temples; management of the bedridden elderly such as development of knowledge and innovation, home visit, rehabilitation of specific diseases, development of potential of the caregivers of the bedridden elderly, and overnight center of the care of the elderly, and 5) Guideline of development elderly's health service system by establishing the Geriatric Medical Center, would serve as the center of operation on the elderly, the administrative center of control, supervision, follow-up, and coordination of network, regular up to date risk management of the elderly, assessment of performance of the elderly's health service system, and linkage of works on the elderly of hospitals attached to the Royal Thai Navy by using telemedicine network system.



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# CHAPTER 1

## INTRODUCTION

### 1.1 Background and Significance of the Problems

Currently, in Thailand, there is a tendency for the change in population structure towards the ageing society. Well-being, coherent overall and balanced physically, mentally, socially, and intellectually are intertwined with factors such as environment, which is a key factor in the development of the aging service system (World Health Organization, 2015), including the advanced technology in medicine and public health increases people's age, and reduces death rate. The social conditions are also changing with families having fewer children, leading to reduced birth rate. Subsequently, the share of the elderly speedily enters the ageing society all over the world. By 2530, Thailand will enter the Super Aged Society with the index higher than 200. The elderly index means the ratio of population over 60 years of age per the population of 100 young people younger than 15 years of age. The elderly index shows how many elderly people per 100 young people. If the index is higher than 100, it means there are more elderly people than young people (Office of the National Economic and Social Development Board, 2013). Therefore, Thailand must be prepared to enter the ageing society with quality in parallel with national development in other fields. The elderly according to the Activity Daily Living (ADL) are divided into three groups namely Group 1: Society engaged elderly with ability to help themselves, they may have chronic disease but controllable, they can engage in social activities, and can help others; Group 2: Home attached elderly with ability to help themselves to a certain extent, they need some assistance, they may have chronic diseases and diseases hindering movement, they have limitation in participating in social activities; Group 3: Bedridden elderly with inability to help themselves, they have many chronic diseases, complication diseases, or terminally ill patients who cannot participate in social activities. The conditions of social problems are divided into those with no worries and those with worries such as lack of caregiver, they cannot help themselves, they are left

on their own, ignored, not properly cared for, and poor (Division of Elderly Potential Promotion, 2016). The 20-year National Strategy between 2017- 2036 focuses on Sustainable Development Goals (SDGs) in Strategy 3: Development and creation of potential of human resource by developing the potential of people through their lives from pregnancy to old age; Strategy 4: Opportunity and social equality by providing fairness in having access to public health and education, especially those with low income and disadvantaged. For Thailand, the urgent matters for the first five years (2018-2022) of the National Strategy consist of six dimensions. The urgent dimension requiring upgrading of quality of life includes ageing society and public health service to upgrade the quality of life of Thais. The preparation for these conditions includes: system and special channel of public health service for the elderly, formulation of policy of the public and private sectors to develop and provide services to accommodate the changes, development of public health system, IT system on health, planning on health-related workforce, production and development of workforce, development of the efficiency of health-related workforce management system, and development of networks of the people sector and health-related civil society. These are in line with the Elderly Person Act B.E. 2546 (Social Development and Human Security Law, 2003) and the 2<sup>nd</sup> National Plan on the Elderly (2002-2021) (Elderly & The Ministry of Social Development and Human Security Thailand, 2010) that focus on the strategy of caring for the well-being and quality of life of the elderly, and strategy to set up sufficient clinics for the elderly to provide service and accommodate illness of the elderly. The announcement of the Ministry of Public Health on medical and public health services provided convenience and speed specifically for the elderly. The clinics for the elderly in each level of health facilities must be 100 percent established by 2006. Puchong Nodethaisong (2018) conducted a survey and found that Thailand was approaching the aged society where those over 60 years of age increased rapidly and continuously, or increase of 16.7 percent of the total population. The consideration of the current healthcare coverage of the elderly revealed that most elderly or 99.2 percent had major healthcare coverage and only 0.8 percent did not have healthcare benefit. Most of healthcare benefits for the elderly or 83.2 percent were from the public welfare namely universal health insurance (gold card), followed by government officials/retired government officials, social security/compensation fund, state enterprises, and others

(13.0 percent, 1.6 percent, 1.5 percent, and 0.7 percent respectively). Work on the elderly still faced many problems such as policy and continuity, workforce, budget, and personnel development on the elderly, etc. The announcement of the Ministry of Defense contained medical and public health services for the specific convenience and speed of the elderly B.E.(2554) 2011 with the content of Item 1 : Assign service units at the level of hospitals under the Ministry of Defense to provide medical and public health services to the elderly except in times of irregularities, fighting, or war, for example, provision of special channel for the elderly separated from general service recipients in the outpatient department and determination of process and period of time for providing service to the elderly through visible board and announcement during service and Item 2 : This announcement would be enforced thirty days after the announcement in the Royal Gazette on 19 April 2011. Ageing society has become an increasingly serious problem in many countries around the world. According to the statistics of the United Nations, in 2017, United Nations • New York (2017) developing countries were the countries with the fast and highest rate of the elderly as developing countries were chosen as residences for the elderly worldwide. It is forecast that in 2050, 79 percent of the elderly will reside in developing countries. At present, countries in East Asia such as Singapore, Hong Kong, Taiwan, and South Korea move towards the same direction. South Korea is an interesting country in terms of dealing with the ageing society. The policy on the elderly's care is similar in almost all countries such as the elderly should stay with their family as long as possible. But in South Korea, there is no access or willingness to receive service or assistance from the government due to the strong culture of gratitude. Therefore, there must be living standards. The influential NGO group formulates the policy and projects for the elderly, and the guideline to solve the management problems of the elderly. For South Korea, it is the combination of health service and local administration, similarly to decentralization of Thailand's Ministry of Public Health. As for the quality certification of service, South Korea uses the municipal law on quality control (Yaowarat Porapakkham & Pornpan Bunyaratpan, 2006). The provision of welfare for the elderly in the case of the elderly's care center in Seoul includes development of the elderly's care center in metropolitan area, and management of the elderly's care center in Seoul. The welfare of the elderly's care center in Seoul is provided in many aspects including accommodations of

travelling and food, welfare on emotional, physical, and intellectual developments. Based on the study of the elderly's welfare system in China which is complicated and depending on areas in each city in each province, welfare will be arranged with the main criteria of supervising people's welfare covering all professions and all classes. The collected counterpart fund will be used as the elderly's pension. The Chinese government therefore places importance on the care of the elderly in terms of pension collection which the government will make sufficient contribution to the elderly until their death without having to depend on their children. Moreover, the government places importance on management of the elderly's care centers with various aspects such as Day Care dispersed in every district in China, allowing the elderly to have easy access to these service centers, and the service providers are well trained to take good care of the elderly. Based on the report of National Institute of Health (2015), Ministry of Health, Labor, and Welfare of Japan (2018), a policy was formulated to improve the system and increase compensation to the entrepreneurs with performance of the care of the elderly at the self-reliant level, starting in the budget year 2018.

In Thailand, the announcement of the Ministry of Defense on medical and public health services for specific convenience and speed of the elderly B.E. 2554 (2011) contained the content of Item 1: Assign service units at the level of hospitals under the Ministry of Defense to provide medical and public health services to the elderly except in times of irregularities, fighting, or war as follows: 1) Provision of special channel for the elderly separated from general service recipients in the outpatient department 2) Determination of process and period of time for providing service to the elderly through visible board and announcement during service. The descriptive study by Wichuda Tatkaeo and Chanin Chareonkul assessed the situations of the elderly's health service provision in hospitals attached to the Royal Thai Army. The study found that the hospitals attached to the Royal Thai Army could provide special channel to service the elderly in the outpatient department. The problems and obstacles of service provision included shortage of personnel to provide special services to the elderly, and inconvenient locations with difficulties in arranging for specific clinics for the elderly (Wichuda Tatkaeo & Chanin Chareonkul, 2017). As part of this study of the development model of the elderly's health service system of the Royal Thai Navy, the researcher studied the system of services of specialized clinics provided for

the elderly as well. It was the researcher's evaluation that the tertiary hospitals attached to the Royal Thai Navy could set up geriatric clinics as Queen Sirikit Naval Hospital was already operating a geriatric clinic but not Somdech Phra Pinklao Hospital. Therefore, the researcher wished to study the topic in order to synthesize the feasibility of operating a geriatric clinic which would respond to the service recipients for the common model in both hospitals. The study of Tidarat Atichatanan and Praewpan Mangkala (2011) discussed the impact from retirement in many dimensions. The impact was in accordance with the study of Penprapa Benchawan (2015) on preparation prior to happy retirement which revealed dimensions in the preparation. Those who made good preparations would spend their lives happily after retirement with good quality of life. Kwanmuang Kaeodumkoeng, Doungetre Thummakul, and Ujsara Prasertsin (2015) studied the topic to promote health-related knowledge for the elderly and discussed planning for environmental and public service management. One major factor on the preparation for ageing society included promotion of health-related knowledge. The elderly would have health-related immunity created from the knowledge of the use of information and news beneficial to their own health, and reduce dependence on health service system. This study on the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy would involve the study of quality of life and needs of the elderly's health service based on their ability to perform daily routine. Once the demand of health service was known, the researcher could determine the model of health service in response to the demand of each group of the elderly seeking service in hospitals and were treated with speed, reduced waiting time, and reduced contact with diseases in the infected patient department while waiting for treatment.

The Royal Thai Navy is a large organization with a large number of retired government officials every year. The main problem was that the retired government officials did not have families or their families were not ready to take care of them when they fell ill. The Royal Thai Navy started to focus on the problems by considering its policy in 2016 on general affairs item 5: Development of workforce welfare system to efficiently respond to service recipients including off-duty personnel and the general public. The Royal Thai Navy assigned the Naval Medical Department to be responsible for prevention of illness and care for the elderly treated at the hospitals. Work started

on the development of health promotion of the elderly at Queen Sirikit Naval Hospital at Sattahip District, Chonburi. Activities included elderly club, vaccinations for the prevention of the elderly's necessary diseases, program arrangement for chronic diseases for those at risk of diabetes, guideline arrangement to prevent the risk of dementia, and clinic for the elderly which was e n a special channel for the elderly's health service. Somdech Phra Pinklao Hospital, Thonburi District, Bangkok provided a nursing home for the elderly "Pritvej Homecare" with health service for the elderly by a team equipped with quality standards for comfort and warmth of home. It was for both male and female elderly with over 60 years old. Activities were arranged according to the physical conditions and appropriateness of service recipients such as making merit by offering alms to monks, prayers, conversation, use of psychology to stimulate the working of the brains, exercises, and recreational activities. Moreover, the center also provided doctor's visit twice a month, rehabilitation doctor's visit once a month, and registered nurse's evaluation visit four times a month. The operation of the center faced the problems of insufficiency to support the bedridden elderly. As there were so many of them that caregivers could not provide enough services, the elderly were taken in for 24-hour care. The lessons learned from the problems of professional, multidisciplinary team of the two tertiary hospitals attached to the Royal Thai Navy were that the main problems included falling, use of medicines in the elderly, environment not appropriate to the elderly, mental and social problems, and shortage of caregivers for the elderly attached to home or bedridden. Based on the literature review of the research of Royal Thai Naval Staff College on Development of Quality of Life of the Royal Thai Navy's Retired Government Officials (Puvanant Wiputhanuphongs, 2017), it was found that retired government officials had no caregiver. At present, there is only one nursing home of the hospital attached of the Royal Thai Navy and that is Pritvej Homecare Center of Somdech Phra Pinklao Hospital, Naval Medical Department, situated on Somdet Phra Chao Tak Sin Road, Bukkhalo Subdistrict, Thonburi District, Bangkok. Those seeking services must be evaluated with the ability to pay for quite high service fees which could not be reimbursed by the government. In approximately seven years from now, there will be a lot or retired government officials and the Royal Thai Navy has not prepared for the situations. From the problems, the researcher viewed that the study should be

conducted on quality of life and demand of health service of the elderly, seeking services in tertiary hospitals attached to the Royal Thai Navy as the services of the two hospitals did not have the same pattern. At the same time, not only retired naval officials of the Royal Thai Navy but also a lot of retired civilians came to seek services in the hospitals. Therefore, the researcher wished to study the development model of the elderly's health service system of tertiary hospitals attached to the Royal Thai Navy by using the mixed methods research. The quantitative research was the comparison of quality of life and demand of health service of the elderly with different abilities of performing daily routine and who sought services of tertiary hospitals attached to the Royal Thai Navy in different areas. The results of the quantitative research would be used as information to confirm and support continued analysis of qualitative research which consisted in in-depth interviews of executives responsible for the elderly in the two hospitals in order to acquire the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The researcher was interested in conducting research on tertiary hospitals because they were the strategic host hospitals of Naval Medical Department and to develop, monitor the progress of main hospitals in order to yield concrete results. It is in line with the strategic plans of Naval Medical Department between 2019 – 2021, Strategic issue 2: Develop towards medical excellence, Strategic target 9: Naval Medical Department's health service responds to the demand of the Royal Thai Navy. The Key Performance Indicator is the level of success of providing the health service for the elderly of the Royal Thai Navy. There are strategic hosts consisting of four main hospitals divided into two tertiary hospitals namely Somdech Phra Pinklao Hospital, Naval Medical Department, and Queen Sirikit Naval Hospital, Naval Medical Department and two secondary hospitals namely Bangkok Naval Hospital, Naval Medical Department, and Abhakornkiatiwong Hospital, Sattahip Naval Base. But the researcher conducted research at the tertiary level because, for large hospitals, research could be conducted covering the development model of the elderly's health service system and covering the elderly groups. The researcher conducted research of three groups of the elderly namely society engaged elderly, home attached elderly, and bedridden elderly which no tertiary hospital attached to Ministry of Defense had conducted research on. The research results would concretely and clearly yield the model of the three groups of the



elderly which would serve as the guideline to develop the elderly's health service system. The researcher applied the conceptual framework of Balanced Scorecard in managing the organization to concretely accomplish success, appropriately evaluating organization's performance, and assisting the organization to implement the strategy. The analysis of internal factors used McKinsey 7S Framework with the basic principle that an organization's efficiency came from the relation within the organization of various factors which would yield effectiveness and reach the target of strategic implementation. Analysis was also conducted with the external factors by using the concept of PESTLE Analysis which would help understand the overall picture of the environment and external factors, affecting the development of health service system. The analysis of the relation of the concept would lead to the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The elderly's different health and social characteristics and the development model of health service system for the society engaged elderly, home attached elderly, and bedridden elderly were sources of knowledge acquired from the research which could be applied in primary and secondary hospitals according to the context of each hospital. Once the Naval Medical Department acquired the development model of the elderly's health service system towards the excellence of tertiary hospitals, and once the researcher presented the model to the executives for application, it was expected that the results of the elderly's health service system would respond to the needs of the elderly, seeking services. It would encourage motivation, and pride in the elderly's own value. It would bring to the elderly happiness, human dignity, and good quality of life. At the same time, all sectors would cooperate to assist and solve the problems of health service system in the ageing society in the future.

## **1.2 Research Questions**

1.2.1 How is the elderly's health service system of tertiary hospitals attached to the Royal Thai Navy?

1.2.2 What are the quality of life and demand of the elderly who seek services at tertiary hospitals attached to the Royal Thai Navy?

1.2.3 What should be the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy?

### **1.3 Objectives**

1.3.1 Study the elderly's health service system of the tertiary hospitals attached to the Royal Thai Navy.

1.3.2 Compare the quality of life and demand of the elderly's health service with different abilities to perform daily routine and seeking services of the tertiary hospitals attached to the Royal Thai Navy in different areas.

1.3.3 Synthesize the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy.

### **1.4 Expected Benefits**

1.4.1 Acquire knowledge on the elderly's health service system of the tertiary hospitals attached to the Royal Thai Navy.

1.4.2 Acquire the results of the comparison of the quality of life and demand of the elderly's health service with different abilities to perform daily routines and seeking services of the tertiary hospitals attached to the Royal Thai Navy in different areas.

1.4.3 Acquire the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy.

1.4.4 Hospitals attached to the Royal Thai Navy apply the development model of the elderly's health service system to the context of each hospital and develop continuously based on the context of the hospitals due to different potentials of each hospital. So, the part that can be operated should be applied.

1.4.5 Hospitals attached to other ministries can apply the model as appropriate

## **1.5 Scope of Research**

The development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy used the quantitative and qualitative mixed research methods, studied the quality of life and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy, compare the quality of life and demand of health service of the elderly with different abilities to perform daily routine and seeking services of tertiary hospitals attached to the Royal Thai Navy in different areas, and synthesize the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The sample included 308 elderly people seeking services in outpatient department of tertiary hospitals attached to the Royal Thai Navy namely Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The 17 key informants included executives responsible for the elderly, doctors specializing in family medicine, medical record specialist nurses, nurses with at least one year experience in the care for the elderly, social workers with at least one year experience in the care for the elderly, nurses specializing in the care for the elderly at Pritvej Homecare, physiotherapists, experts on elderly clubs, home visit nurses, and presidents of elderly clubs. The data was collected between October 2019-March 2020.

## **1.6 Definition of Terms**

Elderly means people over 60 years of age, who received welfare and benefits from the government, whether retired government officials, their families, and elderly civilians receiving treatment in tertiary hospitals attached to the Royal Thai Navy.

Society engaged elderly means all elderly people who were self-reliant, could assist others, communities, and society, with the total scores of physical abilities equal or over 12/20 scores, and seeking services in tertiary hospitals attached to the Royal Thai Navy.

Home attached elderly means all elderly people who could move and were self-reliant to a certain extent, with the total scores of physical abilities in the range of 5-11/20 scores, and seeking services in tertiary hospitals attached to the Royal Thai Navy.

Bedridden elderly means all elderly people who could not move, could not help themselves, or physically disabled, with the total scores of physical abilities in the range of 0-4/20 scores and seeking services in tertiary hospitals attached to the Royal Thai Navy.

Quality of life, readiness of the elderly in terms of physical, mental, social relation, and environmental factors necessary for their living and impacting their happy living in society consisted of four dimensions namely:

1. Physical readiness means the elderly seeking services acknowledged their own physical conditions impacting their daily lives such as their physical strength, happiness and comfort without pain, ability to manage their physical pain, force in daily lives, and ability to perform daily routine.

2. Mental readiness means the elderly acknowledged their own mental state such as positive acknowledgement of hospital service providers towards them, acknowledgement of their own image, acknowledgement of their feeling of pride, self-confidence, thoughts, memory, and concentration of decision in medical treatment.

3. Social relation readiness means the elderly acknowledged their own relation with others to participate in the activities organized by families and hospitals with the team of doctors and nurses in treatment, including acknowledgement of sexual emotions or sexual intercourse.

4. Environmental readiness means the acknowledgement of environment affecting living such as convenient transport to hospital, financial resource supporting hospital fees, social work, acknowledgment of receiving news or trainings in various skills, engagement in recreational activities and activities in their free time, and acknowledgement of safe environment.

Demand of the elderly means demand to develop quality of life and receive response in the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy, showing the compositions of four perspectives namely Perspective of effectiveness of performing work (Effectiveness Perspective), Perspective of quality of service (Stakeholder Perspective), Perspective

of efficiency of performing work (Internal Process Perspective), and Perspective of organizational development (Learning and Growth).

Elderly health service system means health service, illustrating the compositions of four perspectives as follows:

1. Perspective of effectiveness of performing work (Effectiveness Perspective) means the perspective of the success of excellence of elderly's health service system consisting of budget allocation of elderly's health service system, control, supervision, follow-up, and performance evaluation, report of operation on the elderly submitted to the committee on the elderly, cooperation of professional, multidisciplinary team, and happiness and satisfaction of personnel working with the elderly.

2. Perspective of quality of service in all sectors (Stakeholder Perspective) means the perspective of the elderly who were service recipients such as ADL screening, health, mental health, and quality of life, evaluation of the demand of health service, activities according to the elderly's ability, and satisfaction evaluation of service providers and recipients.

3. Perspective of efficiency in performing work (Internal Processes Perspective) means the perspective of executives' policy, management, operation, report of meetings of committee on the elderly, standards of clinics for the elderly with quality, standards of clubs for the elderly with quality, standards of care centers for the elderly with overnight stay, and network of long-term care for the elderly.

4. Perspective of organizational development (Learning and Growth) means the perspective to develop the structure and environment appropriate to the elderly, the potential of personnel working with the elderly, the potential of the elderly and caregivers, IT system, and research and innovation.

Towards the excellence means medical model specifically of geriatrics of tertiary hospitals attached to the Royal Thai Navy, importance given to the elderly health care, development of clinic for the elderly, potential of personnel working in clinic for the elderly, network of long-term care of the elderly, and transfer of model of care of the elderly and telemedicine network system.

Tertiary hospitals attached to the Royal Thai Navy means the Navy's hospitals with capacity to receive patients requiring complicated treatment, specific expertise,

and advanced medical technology, doctors with expertise in main, secondary, and some minor fields, as referral hospitals, consisting of two hospitals namely Somdech Phra Pinklao Hospital (Bangkok), and Queen Sirikit Naval Hospital (Chonburi).

Somdech Phra Pinklao Hospital, Naval Medical Department, is located at 504, Somdet Phra Chao Tak Sin Road, Bukkhalo Sub-district, Thonburi District, Bangkok. It is a main and important tertiary hospital of the Royal Thai Navy. It is registered as a 750-bed hospital. Its main responsibilities include health services provided to navy personnel and their families, support of the government's policy to provide healthcare to the public, and institute providing trainings for medical staff, with hospital accreditation from the Healthcare Accreditation Institute (Public Organization) and accreditation of health promoting hospital, Department of Health, Ministry of Public Health.

Queen Sirikit Naval Hospital, Naval Medical Department, is located at 163, Moo 1, Phlu Ta Luang Sub-district, Sattahip District, Chonburi with the area of 400 rais. It is a 1,000 -bed hospital. Its main responsibilities include health services provided to the military, military cadets, civilian personnel attached to Ministry of Defense, military personnel attached to Ministry of Defense, civilians, government employees, staff, their families, general public. The hospital also provides medical trainings and research with healthcare accreditation from the Healthcare Accreditation Institute (Public Organization) and it is bestowed with the Ideal Hospital Award of the east.

## CHAPTER 2

### RELEVANT DOCUMENTS AND RESEARCH WORKS

For the study of Development Model of the Elderly's Health Service System towards the Excellence of Tertiary Hospitals attached to the Royal Thai Navy, the researcher collected related concepts, theories, and research works to accompany the study as follows:

#### 2.1 Concepts and theories relevant to the elderly

2.1.1 Situations of the elderly and non-communicable diseases

2.1.2. Definition and classification of the elderly

2.1.3 Pathology of geriatric syndrome

2.1.4 Situations of the elderly in the Royal Thai Navy

#### 2.2 Retirement of government officials in the Royal Thai Navy

2.2.1 Definition of government officials' retirement

2.2.2 Impact from government officials' retirement

#### 2.3 Concepts and theories relevant to the elderly's quality of life

2.3.1 Maslow's hierarchy of needs theory

2.3.2 Concepts of promotion of the elderly's quality of life

#### 2.4 Policy on Thailand's elderly

2.4.1 Second National Plan on the Elderly (2002-2021)

2.4.2 20-Year National Strategy on Public Health (2017- 2036)

2.4.3 Strategy to drive the health and social service system for the elderly

2.4.4 Measures to drive the national agenda on the ageing society 6

Sustainable 4 Change (improved version)

#### 2.5 Health and social service system for the elderly

2.5.1 Factors related to the demand of the elderly's health service

2.5.2 Social welfare

2.5.3 Long-term care

#### 2.6 Balanced Scorecard

#### 2.7 McKinsey 7S Framework

## 2.8 PESTLE Analysis

## 2.9 Principle of arrangement of the Royal Thai Navy's health service system

### 2.9.1 Arrangement of the Royal Thai Navy's health service system

### 2.9.2 Royal Thai Navy's current management of the elderly's care

## 2.10 Domestic and international health service systems of the elderly

## 2.11 G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences

## **2.1 Concepts and theories relevant to the elderly**

### **2.1.1 Situations of the elderly and non-communicable diseases**

During the World Health Organization meeting in September 2011, the world leaders agreed to devise a roadmap to solve the global problems of non-communicable diseases, and a plan and a policy to prevent and control non-communicable diseases (NCD). In order to drive for success, in 2013, 25 indicators and 9 targets were formulated for 2025 to prevent and control non-communicable diseases. The key performance indicators were formulated for the Global NCD Action Plan 2013-2020 (World Health Organization, 2014a). The non-communicable diseases in the elderly were the diseases that WHO placed importance on for the urgent prevention and control consisting of 4 main diseases namely cardiovascular disease, diabetes, cancer, and chronic pulmonary disease. WHO stated that the diseases from the current livelihood of people around the world came from non-communicable diseases which was as high as 68 percent. There were 4 risk factors of common behavior namely smoking, drinking alcohol, unsuitable food, and insufficient exercise. There were also 4 risk factors of change namely high blood pressure, hyperglycemia, overweight and obesity, and hyperlipidemia. Moreover, the survey of Information and Communication Technology Center, Office of the Permanent Secretary for Social Development and Human Security (Department of Older Persons, 2015) revealed that in 2013, the elderly population of over 60 years of age started to constitute the share of over 10 percent. It was forecast that in 2024 the population of over 60 years of age would have the share of over 20 percent which would be the same share of the children. And in 2030 it would increase 2 folds compared to the children or approximately one



fifth of the total population of the country. The ageing index shows the comparison of the substitution structure of the elderly population (over 60 years of age) and the child population (under 15 years of age). If the ageing index is lower than 100, it means there are fewer elderly population than child population. On the contrary, if the ageing index is over 100, there are more elderly population than child population. At present, the global population lives longer. The ageing index is therefore used to divide the society as follows: the young society means the index is lower than 50, the aged society means the index is between 50 - 119.9, the completed aged society means the index is between 120 - 199.9, and the super aged society means the index is over 200. The forecast of Thailand's population between 2015 -2030 revealed that in general Thailand was in the situation of aged society and started to enter the completed aged society impacting the changes in the economic dependency of the population of different ages (Pramote Prasartkul, 2019)

### **2.1.2 Definition and classification of the elderly**

The population trend impacting the elderly's health service system and care is the speedy increase of the very old elderly (old-old subgroup). The elderly in this group are ill, disabled, or unable to perform daily routine activities, and need additional health and social services. Moreover, the professional personnel working on the elderly still have many false beliefs concerning the elderly and the old age. The social conceptual framework still influences the perception of the elderly or the treatment of the elderly. For example, agricultural society has different system of families and communities than the industrial society where the line entering the old age is clear, influencing the mind, and taking into account the output mainly in terms of material, reducing the dimension of value or mind. The definition of old age can be explained with the number of ages from birth and the ability to perform duties (Paralee Opanant, Porntip Pa-in, & Sunee Punyawong, 2015).

2.1.2.1 Chronological Age is the definition of the elderly based on the number of the years each one was born. For example, the age of 65, when considering the chronological order, will be older than those aged 30 years old. The criteria of the age used to give the definition of the elderly is divided into two main criteria namely over 60 years of age and over 65 years of age as the same standard worldwide. In

Thailand, the Act on the Elderly gives the definition as people who are over 60 years of age. According to National Statistical Office of Thailand, Office of the Prime Minister, the elderly means both males and females aged over 60 years old. The elderly people are classified into two groups namely the young elderly and the old elderly. The young elderly means both males and females aged between 60-69 years old. The old elderly means both males and females aged over 70 years old. WHO classifies the elderly into 3 groups namely the young elderly aged between 60-74 years old, the middle-age elderly aged between 75-84 years old, and the old elderly aged over 85 years old.

2.1.2.2 The Functional age derives from the experts on the elderly and the profession providing care to the elderly which is widely used. It is an alternative to replace the use of age as criteria as people can be useful to society, others, and themselves, depending on society and culture. Moreover, it is found that the elderly usually assess themselves as “old” when their physical and mental abilities diminish. The benefit of such definition based on ability relates to the level of happiness and welfare. It contributes to the positive attitude of old age. The assessment of the ability to perform duties can be concluded from the following: 1) Basic activities of daily living (basic ADLs) such as washing face and brushing teeth, going to the bathroom, taking a bath, getting dressed, getting out of bed 2) Activities that are more complicated than Basic ADLs (Instrumental activities of daily living or IADLs) such as shopping, cooking, medicine management 3) Advanced Activities of Daily Living (AADLs) assess the ability to perform daily routine activities, newly developed by Reuben & Solomon (1989). They are voluntary activities with communities or religious organizations such as work for temples, churches, or mosques, or sports such as golf. The elderly who can perform AADLs are very strong. Therefore, AADLs are very important.

2.1.2.3 Diseases: the elderly people are classified into two groups namely those without diseases and healthy (Healthy elderly) and those with chronic diseases.

2.1.2.4 Health is used to classify the groups with focus on functional ability. The geriatric syndrome and disease & illness are divided into three groups namely society engaged elderly (the elderly who can help themselves, others, and

society), home attached elderly (the elderly who can help themselves to a certain extent), and bedridden elderly (the elderly who are sick, cannot help themselves, or are disabled).

### **2.1.3 Pathology of geriatric syndrome**

Pathology of geriatric syndrome is clinical symptom derived from changes in pathology of geriatric syndrome. It serves as indicator in diagnosis of the geriatric syndrome as follows:

2.1.3.1 Found a lot in the elderly especially the old-old age due to homeostasis and immune system causing chronic illness, and long accumulation of risk factors (Olde Venterink, Wassen, Verkroost, & De Ruiter, 2003). Subsequently, the symptom is shown together with illness in another organ such as inability to control urination together with pneumonia or lung infection.

2.1.3.2 Many risk factors and causes affect many organs to malfunction and both the causes and risk factors can affect one another and show abnormal symptoms such as acute confusion from inflammation, infection in body resulting in malfunction of endocrine and metabolic systems, leading to impaired ability to perform physical function such as frequent fall, weight loss, and acute confusion in the end (Yaffe, Weston, Blackwell, & Krueger, 2009).

2.1.3.3 Patients' major symptom is not specific to any illness or any one organ impacting health but the clinical symptom in most patients come from abnormality of more than two organs or from different systems in body such as the elderly suffer from the changes in the function of the nervous system resulting in defect of thinking and intellect. At the same time, the ability to help themselves diminishes with changing behavior. So, confusion and impaired ability to perform physical function are diagnosed (Olde Venterink et al., 2003). The 4 clinical symptoms frequently found include 1) Older age 2) Cognitive impairment 3) Functional impairment and 4) Impair mobility. These factors cause frequent fall. More risk factors will increase the opportunity for disorder. The risk factors can also react or affect one another. The example includes the relationship of increased death rate and increased risks of impaired mobility in the vulnerable elderly (Cappola et al., 2003).

#### **2.1.4 Situations of the elderly in the Royal Thai Navy**

The number of the retired government officials from the Royal Thai Navy without caregivers has increased every year. The Royal Thai Navy is a large organization. Each year, there are approximately 900 retired government officials (Puvanant Wiputhanuphongs, 2017). If the average age of 75 years was used, in 2015, there would be 13,500 alive, retired government officials from the Royal Thai Navy. The survey in 2014 revealed that there were 1,215 retired government officials living alone and 405 government officials who needed caregivers but did not have one. The problem might stem from the fact that the elderly did not have families or their families were not ready to take care of them.

Based on the theoretical theories related to the elderly, the researcher concluded that WHO placed importance on the definition of the basic activities of daily living of the elderly relevant to the level of happiness and welfare, positive attitude on old age, by assessing the ability to perform daily routine from the assessment of the basic activities of daily living (basic ADLs) such as washing face and brushing teeth, going to bathroom, having a bath, getting dressed, getting out of bed. The health issue used for the division with focus on functional ability, geriatric syndrome, and disease & illness is divided into 3 groups namely society engaged elderly (the elderly who can help themselves, others, and society), home attached elderly (the elderly who can help themselves to a certain extent), and bedridden elderly (the elderly who are sick, cannot help themselves, or disabled). Pathology of geriatric syndrome, clinical symptom as a result of changes in pathology of geriatric syndrome which are found together and can cause many organs to malfunction. Both the causes and risk factors can affect one another and show abnormal symptoms such as acute confusion from inflammation, infection in body resulting in malfunction of endocrine and metabolic systems, leading to impaired ability to perform physical function such as frequent fall, weight loss, and acute confusion in the end. Therefore, the researcher used the concept to compare the quality of life and demand of health service of the elderly with different abilities of daily living and seeking service of tertiary hospitals attached to the Royal Thai Navy in different areas. Sample was defined through collection of data divided into society engaged elderly, home attached elderly, and bedridden elderly. Then, the data was used to synthesize the development

model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy.

## **2.2 Retirement of the government officials in the Royal Thai Navy**

### **2.2.1 Definition of government officials' retirement**

Government Pension Act B.E. 2494 (1951) Office of the Council of State (1951) and Government Pension Fund Act B.E. 2539 (1996) stipulated that "government officials reaching the age of 60 years old will terminate their official duties at the end of the budget year in which they reach the age of 60 years old". It means that those reaching the age of 60 years old according to the budget must leave the administration from the date of 1 October of the new budget year or "retirement of government officials". For the government officials of Ministry of Defense, the Ministry will control the retirement of its government officials.

### **2.2.2 Impact from government officials' retirement**

When one adheres to something and if one loses it, it will be difficult to accept it. The same goes for position, work, and responsibility. Work makes one tired or frustrated, or happy mixed with sad emotions. But when one has to stop working due to retirement, one is stressful due to the changes in life. Western academics have long called this symptom "The retirement syndrome". The definition of the word may be different in each context. But in general, it means the mental impact on the retiring or retired officials. The definition of retirement syndrome which is generally understood comes from the article of John S. McNeil and Martin B. Griffin printed in a psychiatry magazine in 1967. The article discussed the stress and illness in the retired and off-duty soldiers. The other academic who gave the detailed and interesting definition of "The retirement syndrome" in line with the understanding of general public was Manfred F. R. Kets de Vries, the Dutch psychiatrist and professor in management at INSEAD. In 2003, Manfred F. R. Kets de Vries wrote an article, "The retirement syndrome: The psychology of letting go" to explain the types of mental state of retiring organizational leaders or employees, not wishing to retire and getting very

depressed after retirement (De Vries, 2003). This phenomenon explains that when organizational leaders or employees are in positions of power for a long time and, with the approach of retirement, they do not want to retire. If they work in public or private organizations with clear retirement age, they will want to stay in power as long as possible. After retirement, they will be very stressed and depressed. In case of family business, sometimes the organizational leaders may work into old age without rest or without allowing offspring to take care of business in their place. It is what is called “The retirement syndrome” which is believed to come from the following reasons:

2.2.2.1 For those who work all their lives with single-mindedness possibly without taking interest in anything else (as Westerners would say “put all eggs in one basket”), work is therefore the only thing in their lives. It brings praises, power, income, social status, etc. If they must stop working even due to retirement, they will feel emptiness, stress, and depression.

2.2.2.2 Fear of losing public recognition: Some organization leaders or executives place much importance on their social image. Leadership or executive position makes them powerful. Losing position will make them feel as if they lose social status.

2.2.2.3 Loss of control and importance: Organizational leaders, executives, or employees with positions may adhere to and admire important persons, power to give orders to others, influence on others, role model for others, as well as praises received from their subordinates. The loss of their positions is therefore similar to the loss of the importance.

2.2.2.4 Financial concerns: After retirement, most people will earn less income. Some organizational leaders or executives may not devise financial plan well enough when they are younger. Some earn high income for a long time and may be trapped with luxurious lifestyle. Retirement entails reduced income and causes stress.

2.2.2.5 Fear of retaliation: In the path of career advancement to become organizational leaders or executives, during management, sometimes their decision may cause their subordinates or related persons in some groups to lose benefit. If the leaders or executives do not have the artful skill to reduce dissatisfaction or unfair management, sometimes the feelings of tit for tat retribution (talion principle) will occur when the leaders or executives are no longer in power.

2.2.2.6 Wish to leave a legacy: Some leaders or executives may want to be seen as great people or “edifice complex”. When assuming the positions of power, they will do great things such as construction of big buildings or great business empires. When reaching the age of retirement, they are worried that their business heirs will not take care of their accomplishments sufficiently well or that the empire that they have built may crumble. So, they decide to continue working. Due to these several reasons, many organizational leaders or executives are stressed or depressed at their retirement. However, to reduce the problems, Manfred F. R. Kets de Vries recommended two issues to prevent problems namely organization and retiring organization’s leader or executive. In terms of organization, advanced planning of retirement of organization’s leader or executive will be good for both sides. Systematic formulation of policy will facilitate work of the organization such as gradually reduced role or working time of organization’s leader or executive before retirement. It is one good method. Some policy such as engaging organization’s retired leader or executive to work as part time consultant which may help them gradually adapt themselves. It is to show attention towards one another and the organization benefits from the knowledge of work system from the former organization’s leader or executive. As for the organization’s leader or executive, Manfred F. R. Kets de Vries recommended to look at old age as a natural, ordinary process that diminishes some physical abilities. Everyone must rest and make way for the young generation to work. This perspective will help reduce stress. Early retirement planning including money, society, and private life is highly recommended. They will be prepared when retirement arrives. Manfred F. R. Kets de Vries also recommended that the retiring people should develop their interests than work and should learn to build relationship with others more than business or work relationship before retirement to make retirement graceful, smooth, and respectful from others. Preparation for retirement, as recommended by Manfred F. R. Kets de Vries, is therefore reasonable. Retirement with problems not only affects retirees but also their families. In Japan, it is called “retired husband syndrome or RHS”. The syndrome happens to the wives who have to stay with their retired husbands all the time, resulting in stress and physical illness such as rash, mouth ulcer, asthma, and high blood pressure (Kenyon, 2006). Dr. Nobuo Kurokawa, with over 10 years’ experience of treatment of these diseases, believed that the retired husband syndrome could happen to 60 percent

of married elderly couples in Japan. The reason of retired husband syndrome is believed to come from culture in Japan. Males are income earners in family while females are housewives. When the husband still works, the couple meet only in the evening and during the weekend. But when the husband is retired and stays at home all the time, his income is reduced. If he does not adapt himself but still giving orders to his wife to do all housework, getting angry with her, considering her as his subordinate, there will be stress in the family. If the problems are severe, divorce may follow with old age. It will add to social problems. Apart from Japan, other countries may face the same problems.

Based on the retirement of government officials, the researcher concluded that retirement of government officials might have mental impact, causing stress and illness to retired and off-duty soldiers. Planning prior retirement is therefore crucial because they will be ready when their retirement arrives. Retirement with problem not only have negative impact on the retiree but also on the retiree's family. In Japan, the "retired husband syndrome or RHS" is the syndrome that occurs when a wife has to stay with her retired husband all the time. It will cause stress and physical illness such as rash, mouth ulcer, asthma, high blood pressure (Kenyon, 2006). If the problems are severe, divorce may follow with old age. It will add to social problems. Therefore, the researcher used this concept to study the development model of the elderly's health service system in the perspective of service quality by determining the assessment of mental health of the elderly seeking services in hospital.

## **2.3 Concepts and theories Relevant to the Elderly's Quality of Life**

### **2.3.1 Maslow's Hierarchy of Needs Theory**

The theory developed by Abraham Maslow (McLeod, 2007), a psychiatrist at Brandeis University, is the most well-known. It discusses the hierarchy of individual needs from the lowest to the highest. The theory has 3 main concepts namely 1) Individuals are living creatures with needs and the needs influence or motivate behavior. Only the unfulfilled demand is the motive. The fulfilled demand is no longer the motive. 2) Individual needs in the hierarchy are from basics to



complicated demands and 3) Needs lower down in the hierarchy are satisfied before individuals move to needs higher up. Maslow stated that there are 5 groups of individual needs with the hierarchy of the needs as follows:

2.3.1.1 Physiological Needs: They are the lowest order of needs and the foundation of life such as food, water, lodging. If the elderly can live with food and lodging, they will have the will to live. Suitable environment such as cleanliness, light, good ventilation, health service can fulfill the needs in this hierarchy.

2.3.1.2 Safety Needs: These are the needs that happen when physical needs are fulfilled with no shortage such as health safety, life and health insurances, fair rules and regulations, safety at work.

2.3.1.3 Social Needs: Once they are safe, the elderly will need love, friendship, closeness, socializing opportunities, acceptance as members of a group or groups.

2.3.1.4 Esteem Needs: Once social needs are fulfilled, individuals want to create their own high status for pride and self-respect, pleasure of their own accomplishment such as rank, position, high salary, challenging work, praise from others, participation in decision-making.

2.3.1.5 Self-actualization Needs: They are the needs at the top of the hierarchy to fulfill their own potential, most desired accomplishment, advancement, development of maximum skill and ability, freedom of decision and creativity, higher position.

Based on the hierarchy of needs of Maslow, the researcher had the concept that the problems and physical and mental demands of the elderly started from the basics. If the elderly's demands were satisfied, they would have better quality of life. Jinnicha Pongdee and Piyathida Kuhirunyaratn (2015) conducted descriptive research on the problems and demands of the elderly's health in responsible areas of Ban Mueang Baeng Health Promoting Hospital, Nong Ya Plong Sub District, Wang Saphung District, Loei Province. It was found that the elderly recognized the problems of physical health at a high level and mental health at a fair level. Moreover, age and gender were factors related to the recognition of health problems of the elderly and the elderly's caregivers constituted the factor related to health demand with a statistical significance ( $p < 0.05$ ).

### **2.3.2 Concepts of promotion of the elderly's quality of life**

Due to the changes in population structure in Thailand and in many countries worldwide towards the ageing society, countries must urgently develop the system concerning the elderly to be ready for the coming challenges such as increase of chronic diseases, disabilities, and state of dependency. These factors will affect the quality of life of the elderly. Apart from the preparation for the health and social service system, the elderly themselves are important as they determine their own quality of life in old age. The goal of the quality of life of the elderly is to depend on themselves as long as possible, freedom to live daily lives, and continuously react with society. The concept used to promote the quality of life of the elderly includes active ageing, successful ageing, and healthy ageing (Paralee Opanant et al., 2015).

#### **2.3.2.1 Concept of active ageing**

According to the definition of WHO, "Active ageing is the process of optimization opportunities for health, participation, and security in order to enhance quality of life as people age" (World Health Organization, 2002) Harrison (2006) gave the definition as lifestyle to promote health by maintaining the existing physical, emotional, and social health to function as best they could in order to help themselves as much as possible with honor and dignity until their death. The robust old age process has the following important criteria: 1) Realization and make commitment 2) Self-reliance 3) Everyone does and Does for everyone 4) Do continuously.

#### **Importance of active ageing**

Many visible social challenges both at present and in the future include 1) Rapidity of population ageing 2) Recurrent diseases especially non-communicable diseases such as diabetes, high blood pressure, and cardiovascular disease 3) Expansion of disabilities 4) Society's negative attitude towards old age and the elderly by viewing that the elderly do not have good health, are sick often, cannot help themselves, must depend on others, should not work, and create low benefit. In fact, most elderly are still healthy, can help themselves, can work, can assist family members and community, and are still valuable to community and society 5) Decrease in life security for the elderly in terms of caregivers, economic means, lodging, and environment 6) Big increase in financial system and costs for health and social management affecting the

government's financial and fiscal situations and the country's economy and 7) Humanity and morals concerning the elderly has become a major issue such as who should take care of the elderly or the problems of attack and abandonment of the elderly.

Due to these challenges, society needs to change the perspective of health development with the target of strong old age and long, happy life in family and society.

### **Principle of active ageing**

The principle of active ageing that leads to success consists of 7 points (Walaiporn Nunsupawat, 2009) as follows: 1) Activities leading to well-being of individuals not taking into account income from the activities 2) All the elderly must participate whether they are weak or dependent of others 3) Initial concept of active ageing is protection, meaning that all age groups must participate in this process all their lives 4) Retention of intergeneration solidarity which is specific to the operation of active ageing. Intergeneration involves everyone in the future, not only the elderly but everyone is stakeholder 5) The concept is both rights and obligations, rights to be protected in terms of society, and life-long education and trainings in parallel with obligations to receive benefits of education and training opportunities 6) Strategy of active ageing should be participative and involve empowerment. It is determined by the policy from the top and stimulates people's participation and 7) Active ageing accepts diversity of nations and cultures.

### **Compositions of active ageing**

The major compositions according to the concept of the elderly with active ageing include information on health, information on participation, information on security. (KanjanaTisayaticom, Kusol Soonthorndhada, ChalernpolChamchan, Supon Limwattannanon , & Tangcharoensathien, 2015) applied the concept of active ageing of WHO (2002) and recommendations of the Australian government's Active Ageing Taskforce (De Vaus, Stanton, & Gray, 2003; Taskforce, 2003) to the survey of Thailand's elderly to construct the active ageing index (National Statistical Office of Thailand, 2017) as follows:

1. Health index has 2 indexes and 3 indicators. Health and mental health index has 3 indicators namely health conditions answered by the assessor, mental health, and disabilities. The physical index has 3 indicators namely ability to perform daily routine, limit of physical functioning, and behavior of exercise.

2. Participation index has 3 indexes namely participation at work, participation in family, and participation in group/club activities.

3. Security index has 2 indexes and 6 variables namely economic index has 3 indicators namely income, sufficient income, and income sources, and physical index has 3 indicators namely house ownership, lodging, and safe facilities.

The study of Sarothon Muangkliang and Veerachai Weerachantachart (2011) revealed that the elderly's happy living based on international model should consist of the following 6 factors namely 1) Care received from family or relatives for the normal 4 requisites the same as other family members 2) Personal space that the elderly are familiar and can use it as they wish such as day bed on the patio or wherever they wish 3) Access to religion and religious places through looking, making merit, prayer, where they go by themselves or accompanied by caregivers 4) Regular greetings or conversation with offspring, relatives, or neighbors, depending on occasions 5) They can perform activities of daily routine by themselves or assisted by caregivers to a certain level and 6) They have warm, loving, united family and they can live family lives.

Thailand, through Office of the National Economic and Social Development Board, formulated the strategies to prepare the Thais to enter the ageing society with quality and strength, as well as security when entering the ageing society, consisting of health security, caregivers, economic dimension, environment, and lodging as follows:

1) Health security: By laying down the guideline to develop health and hygiene of population of all ages to prepare them for healthy ageing. The approach to reach the goal should be conducted at individual, family, and community levels. The main objectives include focus on quality of life of the elderly, ability to help themselves, happy living with family and in community with value and dignity, as well as continuous social interactions. The health development at the individual level should start from young to old age. Old age must have care, welfare, income, and health protection with additional model and channel to facilitate life-long learning. Rules and regulations are improved to facilitate work, skill development, and income increase, as well as environmental development, and basic infrastructure for the elderly 2) Security of the caregivers: Due to the social and economic changes, the familial care as accustomed and practiced up till now may not cover all dimensions especially in case

the elderly fall ill or when the caregivers have to go out to work. The strategy therefore focuses on the roles of community, society, the public and private sectors to support and assist family in caring for the elder who need help to prevent physical, mental, social, and economic impacts on the elderly and their families 3) Economic security: the income security is an important factor that contributes to secure livelihood. Especially the elderly, the opportunity to work and earn income is limited. So, the elderly will spend longer period of their lives without work or income. If there is no income security, life in the old age will not be secure. Therefore, the saving system is established which is under concrete operation involving community welfare system and national pension system for the elderly and 4) Environmental and lodging security: Development of suitable, livable, and safe environment will accommodate the elderly's livelihood to be able to help themselves as long as possible especially development of lodging, basic infrastructure of communication, transport, public utilities, and public facilities, and recreations suitable to the elderly such as design of home, design of functional areas both indoor and outdoor appropriate to the elderly's livelihood.

#### 2.3.2.2 Concepts of successful ageing

The study of many research works Phelan and Larson (2002) revealed that the factors impacting successful elderly include both intrinsic and extrinsic. The intrinsic factors consist of present health conditions, level of blood sugar, level of blood pressure, bone mass, strength of joints, body mass index, intellect, cognition, ability to adapt, recognition of own ability, ability to control themselves, pride in themselves, and satisfaction with life. The extrinsic factors consist of gender, education, income, behavior (smoking, drinking alcohol, eating, exercise), support from society, relatives, friends, neighbors, religious organizations, health officials, and ability of physical function.

#### 2.3.2.3 Concept of healthy ageing

According to the definition of World Health Organization, healthy ageing means the elderly have no illness, and can perform activities in terms of physiology, mental state, and society which change with old age in order to appropriately function. Healthy ageing requires improvement of the environment appropriate to physical changes. Hansen et al. (2005); Peel (2011) gave the definition as retention of physical, mental, and social function without illness or accident.

Physical health consists of state without illness or disability, recognition of positive health condition, mental health condition, intellect without mental health problems, satisfaction in life, ability to control themselves, social participation, and living in safe environment. The characteristics of healthy ageing frequently found are 1. Adaptation to changes 2. Meaning of themselves 3. Gradual physical changes 4. Desire to live their own lives for the duration of their lives 5. Ability to perform physical, mental, and social functions and 6. Continuous adaption of themselves in parallel with regular self-assessment, and can adapt to give meaning of themselves and their abilities.

The factors determining the elderly with good health (Ebersole & Hess, 2001) consist of the following: 1) Social 2) Environmental 3) Culture 4) Spiritual 5) Biologic, and 6) Psychological. If any determinant changes, it will affect the ageing society with good health. The Healthy Ageing Instrument (HAI) (Ladda Thiamwong, Jittima Thamarpirat, Wantana Maneesriwongul, & Sutthichai Jitapunkul, 2008) under the context of Thai culture consists of the following: 1) Simple and reasonable living 2) Stress management 3) Good relationship and support from family members and neighbors 4) Merit making and accumulation of good deeds 5) Awareness and self-care 6) Attention to physical function 7) Thought management 8) Social interaction and 9) Acceptance of old age.

The theoretical concept related to the quality of life of the elderly can be concluded that the fact that the elderly have good quality of life, including active ageing, successful ageing, and healthy ageing, is not only about the elderly but everyone in society and all ages who must join hands to assist and support them so that the Thai society is filled with forceful elderly, towards the ageing society with grace and potential, and can live in society with dignity, engagement, and appropriate care. As the problems and physical and mental demands of the elderly start from the basic needs, the researcher had the concept to construct and develop the tool relevant to the demand of the elderly's health service based on Maslow's hierarchy of needs theory consisting of 5 groups of individual needs namely Physiological Needs, Safety Needs, Social Needs, Esteem Needs, and Self-actualization Needs.

## 2.4 Policy on Thailand's elderly

### 2.4.1 Second National Plan on the Elderly B.E. 2545-2564 (2002-2021), First revision in B.E. 2552 (2009) stated that

1. Creation of security for the elderly is the process to create security in society.

2. The elderly have value and potential and should be encouraged to participate in activities beneficial to society.

3. The elderly have dignity and should live their lives in their community with appropriateness and quality.

4. Most elderly people are not disadvantaged or are burden to society. Although some elderly people face hardship and need assistance from society and the government, it is only for some period of their lives.

Strategy of the National Plan on the Elderly is divided into 5 dimensions namely

1. Strategy on preparedness of the population to reach old age with quality is divided into 3 main measures as follows:

1.1 Measure of income security for the elderly

1.2 Measure of life-long education and learning

1.3 Measure to raise awareness of people in society to recognize value and dignity of the elderly

2. Strategy on promotion of the elderly consists of 6 main measures as follows:

2.1 Measure to promote knowledge on health and initial self-protection

2.2 Measure to promote grouping and strengthen organization for the elderly

2.3 Measure to promote work and income for the elderly

2.4 Measure to promote the elderly with potential

2.5 Measure to promote and support all types of media to offer programs for the elderly and encourage the elderly to acquire knowledge and gain access to news and media

2.6 Measure to promote and support the elderly to have suitable and safe lodging and environment

3. Strategy on social protection system of the elderly consists of 4 main measures as follows:

3.1 Measure of income protection

3.2 Measure of health security: develop and promote health security system with quality for all the elderly; promote the access to health services and widespread annual medical checkup, vaccination as necessary according to standards; prevention and promotion of health of the elderly; the government must provide equipment necessary to the elderly's livelihood such as glasses, cane, wheelchair, and denture

3.3 Measure of families, caregivers, and protection: Measure to enable the elderly to stay with their families as long as possible by encouraging the attitude of cohabitation with the elderly, promote family members and caregivers to have potential in taking care of the elderly by transferring knowledge and information to family members and caregivers on useful services

3.4 Measure of service system and assistance network: Improve all public health service systems to facilitate the elderly's livelihood and interaction with society, group, and people; Set up and develop health and social services, including long-term care system of the elderly in community to reach the elderly as many as possible by focusing home service and coordination between health and social services and should cover the following services: promotion of long-term care, support system, care for chronic diseases such as high blood pressure, diabetes, and stroke; Volunteers in community; Encourage the caregivers to have knowledge and ability in the care of the elderly: Encourage local administrative organizations, religious organizations, private organizations, NGOs to engage in welfare for the elderly through community: Encourage the private sector and local administrative organizations to provide health and social services for the elderly who can afford, with the supervision of standard and fair service fees; Government has system and plan to assist the elderly in time of natural disasters, encourage public and private hospitals to provide alternative medical treatment, and set up clinic for the elderly in over 120-bed public hospital



4. Strategy to manage integrated development of the elderly at the national level and development of personnel working with the elderly consists of the following 2 measures:

4.1 Measure to manage integrated development of the elderly at the national level

4.2 Measure to promote and support development of personnel working with the elderly in order to produce or train sufficient personnel at the professional level and the standards are in place to determine the plan to produce appropriate and sufficient personnel in response to national demand and continuous follow-up

5. Strategy on collection, development, and dissemination of knowledge on the elderly, and follow-up and assessment of the implementation according to the National Plan on the Elderly

5.1 Measure to support and promote research and development of knowledge on the elderly for policy formulation and development of service or operation beneficial to the elderly

5.2 Measure to continuously follow up and assess operation according to the National Plan on the Elderly with standards

5.3 Measure to develop accurate and modern information system of the elderly with the important database on the elderly and with easy access and search

#### **2.4.2 20-Year National Strategy on Public Health (2017-2036)**

On 23 February 2016, the Prime Minister General Prayut Chan-o-cha issued the order to all government agencies to prepare the 20-Year plan of their main missions (2017-2036) (Ministry of Public Health, 2018) in accordance with the 20-Year National Strategy in formulation of strategy and reform framework and formulation of the Draft 20-Year National Strategy to drive and develop the country towards its vision of “Thailand as a developed country with security, prosperity and sustainability in accordance with the Sufficiency Economy Philosophy”. As a government agency, Ministry of Public Health formulated the 20-Year National Strategy (on public health) following the Prime Minister’s order. The Thai health system has faced many challenges such as the ageing society, change from rural to

urban society, linkage of trade and investment worldwide, as well as technological advancement. As a result, people expect more of the quality of service. As the government budget started to be limited and not sufficient to cover the increased costs of public health, the Thai health system must be ready to deal with the changes. Therefore, Ministry of Public Health as the country's main agency needs to formulate the 20-Year National Strategy as a guideline to develop health system to ensure people with good health and quality of life, and affect the government's health expenses. It is in accordance of the reform of Thailand and reform of public health to strengthen the health system based on security and sustainability on a par with other Asian countries. The direction to lay down the 20-Year National Strategy (on public health) is divided into 4 phases, with 5 years for each phase. The focus of each phase consists of the following: Phase 1 2017-2021 Reform of system, Phase 2 2022-2026 Creation strength, Phase 3 2027-2031 Towards sustainability, Phase 4 2032-2036. It is one among three countries in Asia. The strategy consists of the following:

Vision: Main agency responsible for health, central point to rally social forces for people's good health

Mission: Develop the system of health care based on participation and sustainability

Target: Healthy people, happy officials, sustainable health system

#### **2.4.3 Strategy to drive the health and social service system for the elderly**

Based on the meeting to reach recommendations and guideline to drive the entire system of health and social services that accommodate the elderly's state of dependency in January 2015, it was found that nowadays although there was more continuous implementation based on the strategy to drive the health and social service system for the elderly, the coverage was not sufficient. The continuous care of the elderly reveals that the elderly have more than one illness. But the services sought for health promotion of preventive diseases reveal that there is a high level of elderly seeking high blood cholesterol tests but a low level for other services such as oral health examination and dental treatment, screening of patients with risks of depression or severe arthritis, or dementia. It shows the lack of integration of structure, mission, personnel, and information. Nowadays, most care of the elderly are undertaken by

family members who lack knowledge, understanding, and experience. It is an indicator of the tendency of the shortage of caregivers. Therefore, the Constitution determines decentralized local authorities to take care of society, including development of the elderly's quality of life, management of concrete results with first priority namely payment of subsistence allowance to the elderly, and immediate assistance to the poor for livelihood. But the understanding of the philosophy of social care service of local administrative organizations does not end there. It also covers mid-term health care system. It means the care that closes the gap between acute treatment that is missed from the country's main service system. The coverage of long-term care in conjunction with health agencies is not sufficient. So, it must be integrated with the promotion of cohabitation and strengthening of the organization. Moreover, the direction of the health and social care system for the elderly up till now determines concrete and complete implementation. But due to many limitations, it does not reach the target.

Manpower responsible for health: In the current situations, is found that the caregivers of the elderly are mostly the spouses and old as well. They lack experience in taking care of the sick and they may face both income and time limitations. Most of the elderly with chronic disease have more than one disease such as they have combined diseases of diabetes, blood pressure, arthritis, etc. As a result, the elderly's health care requires more than medical and public health services. The missions of first priority include development of the elderly's care system in various forms both officially and unofficially in house and community. It is therefore necessary to formulate manpower plan and development of the caregivers' potential, as well as system and mechanism of quality control. An agency should be set up and responsible for care standards and supervision by 1) Preparation to produce personnel who are the elderly's caregivers in community. As 10 percent of the elderly's caregivers in family are spouses, they are limited by physical conditions and knowledge, impacting the family's income. It shows the tendency of shortage of the elderly's caregivers in the future 2) Promotion of local administrative organizations to coordinate network and mobilize manpower related to the elderly's care system such as professional organizations to work together in planning of development of manpower and potential of the elderly's caregivers 3) Accelerate the development of manpower in accordance with the model of the elderly's care, both officially and unofficially, depending on the elderly's illness such as

multidisciplinary team uses professional knowledge of advanced care techniques, public health volunteers in village, volunteer caregivers of the elderly at home, and volunteer elderly in community taking initial health care.

Budget, financial and fiscal system specific for the elderly revealed that in the budget year 2015, National Health Security Office formulated the policy to support long-term care for the elderly. Therefore, there should be security fund of mid-term care for the elderly as well for continuous care and it will also enable local administrative organizations to manage budget and take care of the elderly's health in the entire system, covering health and social services.

IT system on health: At present, the continuous care service system for the elderly uses different programs and database. As a result, some elderly are missing from the system and may not be continuously cared for. Therefore, it is necessary to design the database of the elderly, forward communication system, and information of continuous care that is connected with the information between network health facilities and various sectors both officially and unofficially. Moreover, data system of the elderly at the area level is necessary as each area is different in terms of the context of local culture and social capital.

The guideline to develop social service system and promotion and development of quality of life of the elderly with the community and local bases can be concretely implemented to arrange for social services in different service centers. The government provides services for people in society in 6 dimensions namely health, hygiene, education, lodging employment, and income. The 6 social and recreational services are called social care. The definition of social care means diverse services organized by the local and private sectors for the elderly residing in community and health facility and it is not related to treatment system. This service aims to allow the elderly to depend on themselves. It also encourages participation as citizens meaning people have the rights to manage themselves. The social care system at the local level reveals the role of local administrative organizations in social service for the elderly such as subsistence allowance or promotion of income; urgent assistance such as hardship, shortage of food, and illness; promotion of grouping such as recreation, religion, lodging, occupation, etc. It is found that what most local authorities operate quite little is the plan to promote cohabitation and strengthen the organization. It is also found that there is operating

budget from the central government. But the operation to promote such strength is not quite successful. Local organizations and social agencies still do not really understand the basic philosophy of service from the problem that causes failure that is lack of understanding of basic philosophy of social care service without analysis of social capital and resources. There also lacks the assessment process that facilitates social care system. As social care involves spirit and quality of life which must be assessed in terms of quality to reflect the potential and lead to continuous development, it cannot be measured with quantity. The misunderstanding of the definition of social capital stems from the fact that it focuses on budget without looking at the spiritual, cultural, wisdom, and human resource perspectives. As a consequence, the importance to use the dimension to develop social care diminishes. So, the model of service is diverted from the concept of community as base to ensure that social care system, in whatever model that can promote social and local care, will succeed with the following recommendations: 1) Create faith and it will create participation from community residents 2) There should be process to analyze the demand of community and resources in community and by community which will lead to formulation of plan to solve problems of the elderly in community such as spiritual capital, wisdom capital, human resource capital (club for the elderly), natural capital, lifestyle, and social network to accommodate appropriate and successful services 3) Promote and develop service mind for community residents to encourage optimal use of resources and caring society 4) Services with equality in order to receive equal public services without discrimination of culture, race, or class 5) Recognition of the elderly's attitude which is similar to people of all ages and the issue of the elderly involves people of all ages 6) Policy of the central government to promote concrete readiness to enter old age in the future for young people. Local administrative organizations are responsible for support and 7) There should be main agency responsible for follow-up and assessment of performance on social service and development of the quality of life of the elderly including local and central agencies. The fact that Thailand enters the ageing society does not involve only the elderly but people of all ages. Many main ministries need to develop and integrate the elderly in terms of health and society. Local administration is charged with the main responsibility of planning the development of social care system for the elderly who are clear in many issues each year such as promotion of potential to take

care of themselves, development of competency of family and community to be able to take care of the elderly so that they live their lives with value and happiness, or development of the disadvantaged elderly, etc. Apart from coordination with network, the local administrative organizations are also responsible for providing services through integration with local agencies to efficiently manage budget such as daycare center for the elderly with may be merged among subdistricts and vehicles provided to reduce management budget, manpower for the care, and repetitions of the mission. The service of each dimension essentially depends on situations, problems, and demands of each area.

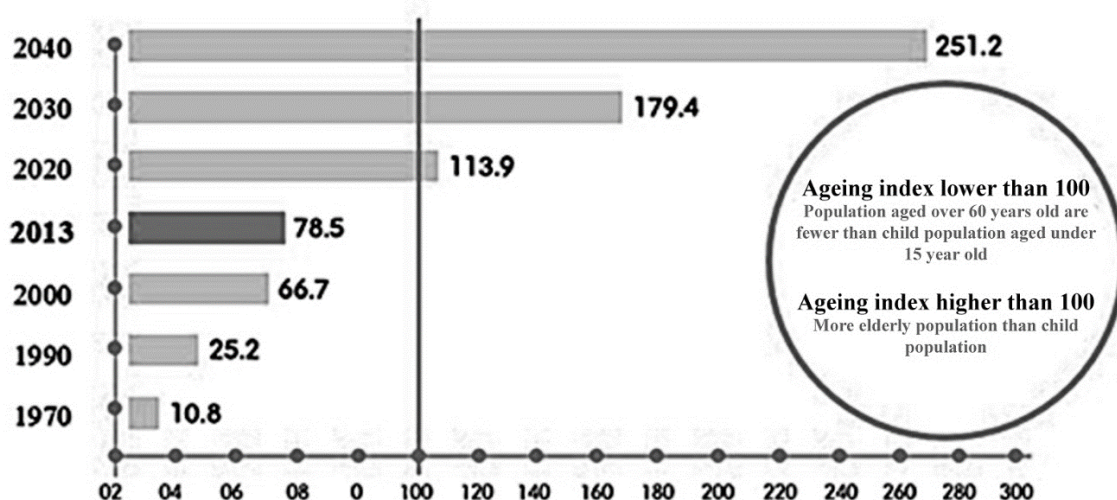
The social service on information, news, and database of the elderly in community consists of information of the elderly with subsistence allowance from local administrative organizations, database of health system of subdistrict health promoting hospitals, number of patients in the system, and database of Ministry of Social Development and Human Security that shows the number of the elderly requiring social services in various forms. Moreover, GIS (Geographic Information System) is necessary because it shows the location of community in which the elderly need assistance, etc. Each area can develop and design collection, data processing, and usage as necessary in each area. The recommendations to obtain database that can be used at the community level consist of the following: 1) Development of local potential and agencies responsible for the care of the elderly in the design of database system through joint analysis of the information necessary to develop the elderly in terms of health and society, forum for exchange of necessary information and various information sources from agencies, leading to integration and design of database appropriate to common usage 2) Government should determine the agency responsible for linking local and central information related to the elderly 3) The strong network of organizations of the elderly will enable the elderly to have better quality of life than before. Many clubs for the elderly have the elderly with experience in many fields of knowledge that can be transferred to other elderly in community. For example, multifunctional center for the elderly in community is a model of service that focuses on the use of potential of the elderly in community. It comes from the concept of physical, mental, social, and spiritual integrations and focuses on solving welfare management problems in family and community to be able to provide service and develop the elderly for good quality

of life. Local administrative organizations are main operating agencies and serve as coaches to support management of participation, coordination to link internal and external communities to jointly analyze and plan to acquire management by themselves in solving problems such as plan to assist the elderly at each illness level. Moreover, the elderly's potential is used in service management to develop quality of life. This will promote the young generation to see the value of the elderly.

The guideline to drive the recommendations towards movement in the entire system 1) Determine the elderly as national agenda in all dimensions 2) There must be an agency at the department level specifically responsible for the elderly with supporting budget 3) Mechanism for integration at the area level such as committees at provincial, district, and subdistrict levels as forceful coordinators in dealing with the elderly and supplementing the role of sub-committee to promote welfare at the provincial level to cover more work on the elderly and create mechanism to integrate at the district and subdistrict levels. However, the central management must be restructured such as 1) and 2) to be able to support the mechanism for integration at the area level 4) Manpower restructuring at least at the district and community levels of relevant agencies to be able to have sufficient manpower for the service under development 5) Care system in parallel with existing system to increase the quality of the elderly's care and prevent the elderly to become dependent as long as possible and that is mid-term care, or even palliative care that must be enhanced in the future as well, and preparation before old age or retirement 6) Importance placed on management system to take care of the elderly at the level of local community. Major relevant ministries namely Ministry of Public Health, Ministry of Social Development and Human Security, and Ministry of Interior define the supporting system of work in the local areas to promote and develop the elderly. The local areas are the common areas for the access to service "Meet at local areas" under clear conditions namely 1) Clear mission and linkage to budget that should be allocated based on the mission 2) Development of potential of local administrative organizations including public health manpower, physical therapy, hire of caregivers 3) Central information sources for management 4) Central curriculum to enable local authorities to use under appropriate context, financial and fiscal burdens, and demand of the elderly 5) Access to trainings organized by main agencies and coaches provided for necessary and continuous

academic advice and recommendations 6) Management of savings for the elderly by contributing part of subsistence allowance to National Savings Fund to ensure that all the elderly have savings and receive pensions at the end of their lives 7) Strengthen the elderly who are existing resources such as club for the elderly, wisdom club for the elderly, Elderly's council by supporting budget and developing management potential, at least new management of Elderly Fund, accommodations for organizing activities for the elderly, and use of local budget to promote and develop the elderly through the important mechanism to support the care of the elderly in community, preparation before old age, and care of themselves to slow down dependency 8) Continuous communication in various forms to give importance to the slogan "Take care of people as family". All will be made to feel that they have relatives who are doctors. It will yield two-way results. Doctors will feel that their family have sick elderly. The treatment will then be equal. The drive of major policy includes family care team and long-term care for the elderly in community with communication of concrete and systematic operation 9) Small forum in the area for mission of all agencies responsible for the elderly. Targets of operation on the elderly are similar or different leading to the integrated work on the elderly, reducing repetitive activities, budget, and personnel and 10) Lessons learned from the show case and best practice on health and social service in order to develop into numerous models by analysis to separate the opportunities and limitations to be used in each different area in terms of culture, resources, social capital, and management for nationwide use.





**Figure 2.1** Ageing index of Thai population in 1970, 1990, 2000, 2013, 2020, 2030, and 2040

**Sources:** 1) Population and Housing Census 1970, 1990, 2010, National Statistical Office  
2) Thailand's population projections 2010-2040, Office of National Economic and Social Development Board

#### **2.4.4 Measures to drive the national agenda on the ageing society 6 Sustainable 4 Change (improved version)**

The cabinet resolutions on 4 December 2018 assigned Ministry of Social Development and Human Security in conjunction with Ministry of Education and other relevant agencies to consider the feasibility to dissolve small schools with small number of pupils and establish centers of knowledge and care of the elderly under the supervision of Ministry of Social Development and Human Security as appropriate to each area with strict implementation in accordance with relevant laws, regulations, and cabinet resolutions as follows: (Ministry of Social Development and Human Security, 2019)

Main measure 1 Development of quality of life of the elderly and people of all ages

Sub measure 1.1 (S1) Creation of the protection and welfare systems for the elderly: Creation of the protection system and rights covering all types of the elderly and in line with the patterns of urban and rural societies to extend protection and rights

to the elderly with standards care from quality personnel to reduce violence and violation of the rights of the elderly

Key performance indicators and target

1. Prototype community for care and protection of the elderly both in urban and rural areas

2. Share of 100 percent of business establishments providing care for the elderly and passing the standard criteria

Sub-measure 1.2 (S2) Encourage the elderly to work and earn income: Encourage the elderly to work by determining work, occupation, and period of time appropriate to the elderly by producing goods with the elderly's brands and with support from public-private cooperation, community enterprise, and social enterprise

Key performance indicator and target: 80 percent of the elderly wishing to work

Sub-measure 1.3 (S3) Health system to accommodate the ageing society: Linkage of the system of the elderly's care from primary, secondary, tertiary cares, center of expertise, mid-term care, long-term care, palliative care, including care of the elderly with specific needs, and preparation of good health prior to old age

Key performance indicator and target:

1. 50 percent of the elderly population with desired behavior
2. 90 percent of the elderly are screened and assessed for their health
3. 70 percent of bedridden elderly receive health and social care

Sub-measure 1.4 (S4) Improve the environment around communities and houses for the elderly's safety: Improve the appropriate environment in houses, communities, and old basic structure to facilitate the elderly's livelihood by focusing on participation from the public, private, local sectors and devising incentives to attract the private sector to serve as driving mechanism

Key performance indicator and target:

1. Elderly-friendly prototype communities (24 communities in 4 regions)
2. 50 percent of public places providing facilities for the elderly
3. 80 percent of footpaths in urban areas are suitable and safe for everyone

Sub measure 1.5 (S5) Time bank to take care of the elderly in Thailand: Promote local administrative organizations, clubs, groups in communities to drive the

care of the elderly in the form of “Time bank” by establishing management system, data storage, in line with the urban and communal contexts

Key performance indicator and target: 10 percent of the center for the development of quality of life and promotion of occupation of the elderly operate as Time bank to take care of the elderly in Thailand

Sub measure 1.6 (S6) Creation of know-how for the young generation to be prepared in all dimensions: Encourage people to acquire knowledge to be prepared in terms of health, exercises, economic dimension, financial planning, by organizing activities in academic institutions for children and young people and creating media to raise awareness to all sectors in society

Key performance indicator and target:

1. 90 percent of population aged between 18 - 59 years old (40,671,216 persons) have positive attitude towards the elderly
2. 95 percent of population aged between 30 - 59 years old (29,478,124 persons) have old age security
3. 20 percent of products to promote readiness with approach of old age

Main measure 2 Upgrading ability towards 4.0 public administration

Sub measure 2.1 (C1) Upgrade cooperation and promote force of ageing society: Integration of work on the elderly at the levels of policy, government agencies, down to local implementation, creation of knowledge process to drive the national agenda, development of follow-up and assessment system, linkage of mechanism from local to policy levels.

Key performance indicator and target: All major agencies responsible for the elderly report progress of work to the National Committee for the Elderly at least twice a year

Sub measure 2.2 (C2) Amendment of laws, rules, regulations that facilitate work on the elderly: The agencies responsible for the elderly amend laws, rules, and regulations on the elderly to accommodate work and keep abreast with new situations, and solve the elderly’s problems in line with the social context of each area

Key performance indicator and target: 100 percent of laws are amended and enforced

Sub measure 2.3 (C3) Reform of the data system to efficiently drive work on the elderly: The agencies responsible for providing services to the elderly link the data of the elderly between agencies to obtain the overall information of the elderly, including problems, demands, and services that the elderly receive from the government

Key performance indicator and target:

1. Up to date database on the elderly with continuous linkage between agencies every year
2. Use of IT to formulate policy and plan to reduce inequality for the elderly

Sub measure 2.4 (C4) Use of innovation to reduce social inequality for the elderly: Promote the use of social innovation to ease the elderly's livelihood by driving and enhancing the concept in areas, encourage the private sector, network, entrepreneurs, produce and commercialize elderly-based innovation to provide more opportunity for the elderly to gain access to innovation

Key performance indicator and target: Pattern and increased number of products, innovation, and technology that benefit the elderly

Based on the policy of Thai elderly, the researcher concluded that for the strategy to drive the health and social service system for the elderly, the operation for the strategy to drive the health and social service system for the elderly can accommodate the increased number of the elderly. It is done continuously but does not appropriately cover all aspects. Nowadays, most care of the elderly is undertaken by family members who lack knowledge, understanding, and experience. It represents the index of the shortage of personnel responsible for the care of the elderly. Long-term care management in conjunction with health agencies are not sufficiently implemented. Up till now, the direction of the elderly's health and social service determines concrete and complete implementation. But the goal has not been achieved due to many limitations. Most of the elderly caregivers are their spouses who are elderly themselves and lack experience in taking care of the sick. The first priority of the mission is to develop the care system of the elderly in various patterns, both officially and unofficially. It is necessary to plan manpower and develop caregivers' potential, including system and mechanism of quality control, with responsible agencies, establishment of supervision standards as follows: 1) Prepare to produce personnel to take care of the elderly in community as 10 percent of the caregivers of the elderly in family are spouses with

physical limitations and knowledge, affecting the family income. It shows the tendency of shortage of the caregivers of the elderly in the future 2) Process to promote local administrative organizations to coordinate network and mobilize forces related to the elderly's care such as professional organizations to perform duty together in planning of the development of manpower and potential of the caregivers of the elderly 3) Accelerate manpower in accordance with the pattern of the elderly's care, officially and unofficially, depending on the illness of the elderly such as professional, multidisciplinary team uses professional knowledge requiring advanced technique. Public health volunteers in villages, volunteers taking care of the elderly at home, and volunteer elderly in communities taking part in initial health care. Therefore, the researcher applied the concept to synthesize the research in accordance with the policy of Thai elderly and measures to drive the national agenda on the ageing society 6 Sustainable 4 Change through review and study of the importance of each indicator to apply the development model of the elderly's health service system.

## **2.5 Health and social service system for the elderly**

### **2.5.1 Factors related to the demand of the elderly's health service**

The literature review could analyze 3 main factors related to the demand of the elderly's health service as follows:

#### **2.5.1.1 Factors on the elderly**

The old elderly are different from the young elderly and more seriously affected. Therefore, it is found that the old elderly are disabled more than other groups and affected by the decline in the ability to perform daily routine when ill or admitted in hospital (Samrit Srithamrongsawat, 2008). Health problems and geriatric syndrome are important problems impacting the elderly's quality of life. Illness is caused by physical and mental changes from old age and risk factors especially the accumulation of chronic diseases with many diseases at the same time. Old age and illness cause complicated problems and affect many organ and physical systems, leading to disabilities, and loss of the period in life when they can take care of themselves or active life expectancy The elderly have their health expectations. They expect that they can

live and perform daily routine as long as possible. However, based on the survey of health conditions through medical checkup, it is found that 95.6 percent and 93.07 percent of the elderly males and females can perform daily routine by themselves whereas 11.7 percent of the males and 17.5 percent of the females need assistance in housework. Based on the forecast of the elderly with dependency in 2009, it was found that approximately 60,000 elderly males and 80,000 elderly females had severe dependency, bedridden, requiring caregivers all the time, and would increase to 100,000 males and 140,000 females in 2019 or in 10 years

#### 2.5.1.2 Factors of the elderly's health conditions and illness

Based on the forecast of Thailand's population between 2015-2030, Thailand will overall enter the "aged society" causing vulnerable health problems for the elderly without caregiver. The fast rise of the share of the elderly will cause the changes in the economic dependency among the population of different ages. Based on the survey of non-communicable diseases from the public health statistics between 2007-2013 (World Health Organization, 2014b), it was found that the number and rate of patients with major non-communicable diseases included high blood pressure, Ischemic heart disease, stroke, paralysis, and diabetes. It was found that the diseases were continuously on the rise. High blood pressure also constituted 16.5 percent of the cause of death worldwide, smoking and high blood sugar level constituting 9 percent, lack of exercise 6 percent, overweight 6 percent, and obesity 5 percent of the cause of death. These chronic diseases were generally found in the elderly who lived their lives without taking care of their health. Smoking caused 6 million deaths every year, including third-hand smokers. It was forecast that the deaths would reach 8 million. Moreover, 3.2 million people died from insufficient exercises, 2.5 million from drinking alcohol, and 1.7 million from insufficient consumption of fruits and vegetables. Vision problem was also important and obstructed daily lives of the elderly and might lead to accident and fall. The research of Isabel Ortiz and Cummins (2011) pointed to the fact that the major problems of Thai elderly included economic issues and health. Nearly half of the elderly did not have sufficient income to live and the health of two-thirds was from fair to not very good. Many diseases reportedly found in the elderly included back pain, waist pain, arthritis, high blood pressure, gastric disorder, and heart disease. Moreover, it was found that the elderly's illness was one

important reason that the elderly could not earn their living (Jintana Artsunthia & Ratchanee Pomthong, 2018)

Noncommunicable diseases in the elderly: Health problems is the first priority for the elderly. It is the age when body starts to degrade and is easily infected especially non- communicable diseases (NCDs), including mental disorder such as depression. These diseases affect the elderly with disability and they cannot perform daily routine by themselves. More cases of disability with more intensity are found with the advancing of age. Therefore, the elderly need help from others in daily life, differently according to the seriousness of the disability. These problems not only affect livelihood of the elderly or the caregivers but also budget and health expenses of the government. In 2010, the share of health expenses for the elderly constituted 30 percent of all groups of population. It is forecast that in 2022, they will increase 3.5 folds. The elderly need more health services. If the government does not formulate measures to enhance good health, the country may lose a huge sum of money for medical treatment in the future. However, even with relevant plans or measures, accomplishment of the goals is more challenging. Although a lot of elderly are screened for diabetes and high blood pressure, the results of the screening are not efficiently communicated. Therefore, the screened elderly are not aware that they are at risk of the diseases. If the problem is not solved, more elderly will suffer from chronic diseases, impacting their own quality of life and their relatives who take care of them, as well as the government's expenses in allocating health budget. The policy recommendations consist of the following: 1) Department of Health should improve the health promotion plan of the elderly through proactive measures outside hospitals by focusing on the important role of family and community to encourage the elderly to have desired behavior to reduce risk factors and opportunities to have chronic diseases 2) Department of Health should formulate efficient policy and measures to encourage the Thai elderly to have more desired behavior which may develop into research with accurate assessment system and 3) Public health officials should increase the quality of disease screening for the elderly especially the notification of the screening results and behavior of those with diseases or not.

#### 2.5.1.3 Factors of the elderly's disabilities

Disability means loss of ability to perform normal activities as a result of physical changes especially from chronic diseases such as paralysis or muscle weakness due to stroke, preventing them to perform daily routine. Disability is the greatest concern and importance to the elderly. The loss of the ability entails dependency or assistance from others in living and doing activities while the elderly use ability or freedom to assess health situations and strength. Therefore, disability is an indicator of health of the elderly (Inouye, Studenski, Tinetti, & Kuchel, 2007).

#### 2.5.1.4 Factors of social and economic changes

Due to the changing social situations such as smaller household, shift from agricultural to industrial society, increased share of the elderly living alone or living with spouses, more women work outside home. At the same time, the elderly tend to have chronic diseases impacting the care of them in family and community. Family is found to be the main caregiver of the elderly with 81.2 percent being offspring and relatives (Sasipat Yodpetch, 2009). However, when family members cannot give appropriate or quality care to the elderly or there are social changes, it will impact the quality of life of the elderly and the demand of services in all aspects for the elderly. Moreover, the economic, social, public health system development up till now affect the size of structure, relationship, and support system in household and community. Smaller families, more single families, migration of labor force from rural to urban areas, women receive higher education and more economic roles, and more urbanization all decrease the ability of family and community to support care of the elderly, especially the elderly with dependency. It is found that 13 percent of the elderly have high level of dependency but have to take care of themselves or without caregiver ( Samrit Srithamrongsawat, David Hughes, Jadej Thammatach-Aree, Weerasak Putthasri, & Songkramchai Leethongdee, 2010).

### 2.5.2 Social welfare

The preparation of the health and social welfare system to accommodate the complete ageing society is in accordance with the goal of the development of the elderly namely active ageing and security consisting of health security, caregiver, income, and residence. The security must start with quality support from family, community, with assistance supplemented by the public and other sectors for welfare



and services with quality and standards to enable the elderly to live their best and longest life with family and community, including care of the elderly facing hardship

Health and social service has similar meaning to long-term care. It means arrangement of health and social service to respond to those in need due to chronic diseases, accident, disabilities, as well as old elderly with disabilities of daily living both officially (care by health and social personnel) and unofficially (care by families and neighbors). The replacement service is usually social service focusing on rehabilitation, therapy, as well as regular and continuous health promotion to this group of people to enhance good quality of life, independent living as much as possible based on human respect and dignity (Sasipat Yodpetch, 2009). The social welfare system for the elderly in Thailand up till now has used problem alleviation as the conceptual framework for work. The elderly are considered disadvantaged and poor and need government's assistance. Later on, the concept of service has changed to community's participation. But the concept of problem alleviation is still influential to determine welfare system. Therefore, the change of service model in the future to cover the goals of the development of the elderly requires the long-term care system which is both official and unofficial, with continuous care and linkage with the cares in family, institution, and community. The health and social service is distributed to replace the basic demand of individual to be able to perform social function, with strong health and good livelihood. The elderly do not feel abandoned but feel more secure in lives. The review of the development of welfare system and health service for the elderly found that there were services arranged or developed directly for the elderly at present as follows:

2.5.2.1 Elderly's club: At present, there are 3,487 clubs for the elderly nationwide. Individual model of operation under the network of National Elderly Council, Ministry of Public Health, and other agencies.

2.5.2.2 Establishment of clinic for the elderly in hospital. The clinic for the elderly was first established in Thailand in 1963. Up till the present, the clinics for the elderly in hospitals constitute approximately 44 percent of the total government hospitals. They are mostly operated in central and general hospitals rather than in community hospitals.

2.5.2.3 Health center for the elderly and project of health rehabilitation for the elderly mostly established by Bangkok Metropolitan Administration

2.5.2.4 Services in hospitals are mostly acute health services.

Appropriate methods of the elderly by doctors and medical personnel are still limited. There are few convalescent and rehabilitation centers.

The study on the social welfare for the elderly (Wichitra Wichianchom, 2013) found the problems and obstacles of good livelihood for the elderly in 3 aspects namely 1) Management of social welfare service. In the main committee, some committee members cannot truly dedicate time, knowledge, and ability. There is no coordination between the public and private sectors, and local administrative organizations closest to the elderly in the community with efficiency. Moreover, there still lacks the elderly's participation 2) The elderly's rights by which the government provides some parts of social service for the elderly but not in line with the needs and demand of the elderly as appropriate to the Thai society and 3) Fund for social welfare costs for the elderly, savings service for some types of the elderly, and problem of the fund management is still not feasible. Therefore, the government should encourage families to take part in the care of the elderly, including physical, mental, and emotional cares for the elderly. All sectors must prepare. Especially, public health must prepare for the elderly who require close care.

### **2.5.3 Long-term care**

Long-term care (LTC) is indispensable for health system and social service. It consists of activities undertaken by caregivers outside the system (families, friends, neighbors), and caregivers inside the system, including professional personnel and assistants (personnel working on health and society), and traditional caregivers and volunteers for those requiring care gave the definition as care for those with chronic diseases, or disabilities, loss of ability to conduct activities due to illness or disability, as well as services in institutions or communities of many levels, whether daycare, health service at home, care of temporary lodgings, care during transition, rehabilitation service, care requiring nursing skills, end-of-life care, and palliative care which are cares separated from primary health facilities. Bureau of Health Promotion, Department of Health, Ministry of Public Health specifies that long-term care means

activities that caregivers which may be professionals in health or social fields or members of family, friends, neighbors, or the general public provide services to those who cannot take care of themselves to have the highest possible quality of life, taking into account individuality, freedom, and human dignity. It provides services to enable those to perform daily routine in society by responding to the 6 basic activities namely getting dressed, walking, taking a bath, shopping, cooking, care for lodging. (Sasipat Yotphet, 2006) gave the explanation that long-term care means official or unofficial arrangement for services with the characteristics of continuous care and connection with care in families, institutions, and communities and the health and social service must cover the target groups as much as possible. This is to replace basic needs to enable those who lose their abilities to fulfill social duties and have the best quality of life as possible. The National Health Commission in 2009 gave the definition of long-term care as adapted from WHO that long-term care of the elderly means care that covers social, health, economic, and environmental dimensions for the elderly facing problems from chronic illnesses or disabilities, with abilities to partly take care of themselves or cannot help themselves in daily life by official caregivers (personnel responsible for health and society) and unofficial caregivers (families, friends, neighbors), including services in families, communities, or service facilities. Therefore, long-term care means care that covers all social, health, economic, and environmental dimensions with official caregivers (personnel responsible for health and society) and unofficial caregivers (families, friends, neighbors), including services in families and communities.

Based on the review of the health and social service system for the elderly, the researcher concluded that health and social service are arranged to respond to the needs of those suffering from hardship from chronic illnesses, accidents, disabilities, as well as the old elderly who cannot help themselves in daily lives, officially (care by personnel responsible for health and society), and unofficially (care by families, neighbors). The shift in service pattern in the future will cover the goals of the elderly's development relying on the long-term care system, with continuous care and connection with care in families, institutions, and communities for good health and well-being. At the same time, the elderly do not feel abandoned and feel more secure in life. The researcher therefore used this concept to determine the guideline to synthesize the

research of the development model of the elderly's health service system namely setting up the club for the elderly, the clinic for the elderly in hospital, nursing home, and long-term care as indispensable parts of the health system.

## 2.6 Balanced Scorecard

Balanced Scorecard (BSC) is a management tool to assess an organization and enable the organization to implement the strategy (Strategic Implementation). It starts from an organization's vision, mission, and strategy which are process to determine the key success factors. Then, the Key Performance Indicators (KPI) are constructed to serve as the indicator of the goals and measure the performance which is crucial to strategy. Balanced Scorecard is a concept of Professor Robert Kaplan at Harvard and Dr. David Norton, management advisor.(Kaplan & Norton, 1996) Both studied and surveyed the causes of the problems the US stock market faced in 1987. It was found that most organizations in US preferred financial indicator. The kind of events also took place over and over in 1992. Kaplan and Norton (from Harvard Business School) realized that the old tools to measure the efficiency of companies had weakness and ambiguity such as figures in a company's financial statement constituted only a dimension of the company's success in the past, and did not show the company's potential and trend in the future. So, both Kaplan and Norton presented the concept of assessment that showed the composition of an organization in 4 perspectives. The researcher applied the perspectives in the research of the development system of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy and used the concept of Balanced Scorecard of the 4 perspectives in public agencies of Office of the Public Sector Development Commission to determine the concept of the research (Office of the Public Sector Development Commission, 2010). as follows:

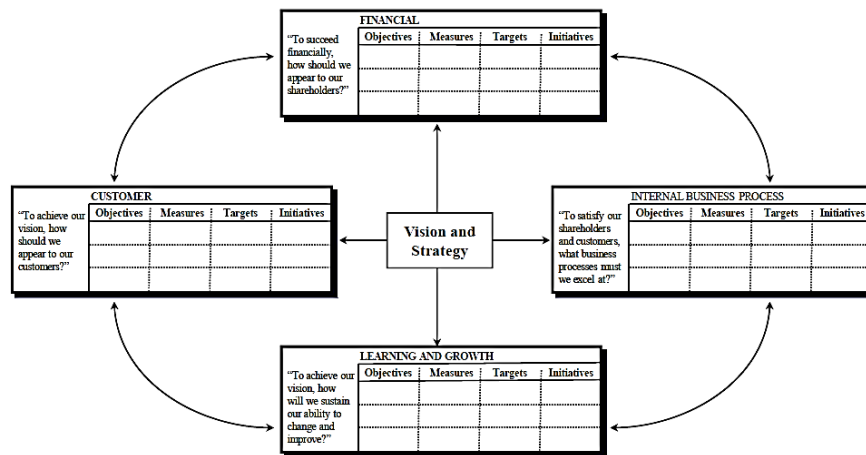
2.6.1 Perspective of effectiveness in performing work ( Effectiveness Perspective) is the perspective of the success of the excellence of the elderly's health service system consisting of budget allocation of the elderly's health service system, control, supervision, follow-up, assessment, reporting of performance on the elderly to

committee on the elderly, cooperation of professional, multidisciplinary team, and happiness and satisfaction of personnel working with the elderly.

2.6.2 Perspective of quality of service (Stakeholder Perspective) is the perspective of service recipients who are the elderly such as screening of ADL, health, mental health, and quality of life, assessment of demand of health service, activities based on the abilities of the groups of the elderly, and assessment of satisfaction of service providers and recipients.

2.6.3 Perspective of efficiency in performing work (Internal Processes Perspective) is the perspective of executives' policy, management, operation, report of meeting of committee on the elderly, standards of quality clinic for the elderly, standards of quality club for the elderly, standards of overnight care center for the elderly, and network of long-term care for the elderly.

2.6.4 Perspective of organizational development (Learning and Growth) is the perspective of development of structure and environment appropriate to the elderly, development of potential of personnel working with the elderly, development of potential of the elderly and the caregivers, development of IT system, and development of research and innovation.



**Figure 2.2** Management concept of Balanced Scorecard (Kaplan & Norton, 1996)

### Process to construct BSC

1. SWOT Analysis of an organization to know the status and background of the organization

2. Devise Vision and strategies of the organization
3. Devise Perspective of many fields that will serve as key success factor in operating the perspective of each operation which is different, depending on the basis of operation
4. Formulate the Strategy Map at the organizational level by determining the objective in each perspective
5. Top executives must join the meeting to confirm and approve the devised strategy map
6. Determine the Key Performance Indicators (KPIs) and Target for each perspective with priority ranking
7. Formulate the Action Plan

#### **Benefits for the organization by using the Balanced Scorecard**

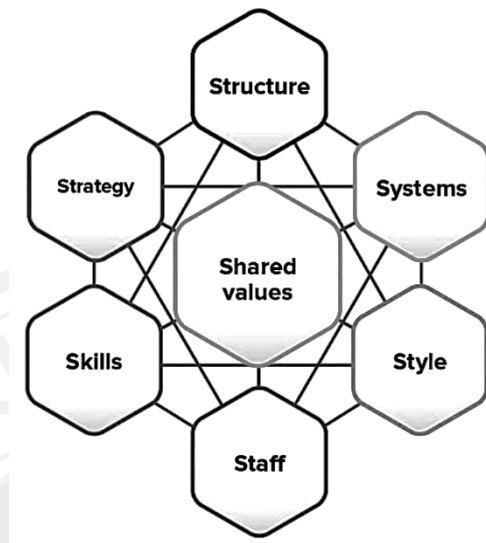
1. Organization's clearer vision
2. Organization's better performance
3. With approval and recognition by executives at all levels, all units can perform work in accordance with plan
4. Use as a framework to determine guideline of work in the entire organization
5. Appropriate allocation of budget and resources for each activity
6. Integration of strategies of all units with the organization's business plan enabling the accordance of all strategic plans
7. Ability to assess performance both at team and individual levels
8. Enable organization to place importance on its strategy by obliging personnel in the entire organization to focus more on organization's strategy and as a tool to implement the strategy
9. Change of organization's behavior and culture by determining the KPI and target as tools in changing personnel's behavior
10. Enable personnel to be aware and understand that each work has its own background and how their own performance will affect performance of others and the organization

Based on the concept of Balanced Scorecard, the researcher applied it to the research on the development model of the elderly's health service system towards the

excellence of tertiary hospitals attached to the Royal Thai Navy. The concept of Balanced Scorecard with 4 perspectives as used in public agencies of Office of the Public Sector Development Commission (Office of the Public Sector Development Commission) to determine the conceptual framework of the research to enhance efficiency in the work of the elderly's health service system towards the excellence with 4 perspectives namely Perspective of effectiveness in performing work (Effectiveness Perspective), Perspective of quality of service (Stakeholder Perspective), Perspective of efficiency in performing work (Internal Processes Perspective), and Perspective of organizational development (Learning and Growth). They will create inspiration and pride in the elderly's own value, bring them happiness, human pride, and good quality of life, as well as the cooperation of all sectors will help and solve the problems of health service system in the ageing society in the future.

## **2.7 McKinsey 7S Framework**

This research used the Gap Analysis based on the concept of McKinsey which was developed at the beginning of 1980s by Tom Peter and Robert Waterman, consultants at McKinsey. (Peters, 2012). The basic principle of this concept is that an organization's efficiency comes from the relation within the organization of various factors resulting in effectiveness and accomplishing the goals of the strategies. The 7 factors must be in accordance with one another as in Figure 2.3.



**Figure 2.3** McKinsey 7S Framework

McKinsey 7S Framework is widely recognized and used in the situation requiring accordance within an organization. The researcher used it to analyze the internal factors impacting the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The researcher also used it in conjunction with the Balanced Scorecard. McKinsey 7S Framework consists of 7 issues as follows:

1. Structure is organizational structure established according to work process, control, centralization, and decentralization of executives. Good organizational structure must show the relationship between duties and responsibilities that will enhance flexibility, reduce mistakes and repetitions in performing work, and enable personnel to know the scope of their duties. It is used to analyze the factor of internal process dimension.

2. Strategy is strategic management planned to appropriately respond to the changes in an organization's external and internal factors. It will impact the effectiveness of the elderly's health service system towards the excellence namely basic infrastructure, the elderly's health service system, personnel management system, referral system, budget management system, and control, supervision, follow-up, and assessment systems, as well as specify the problems in order to solve them.

3. System is management of an organization's internal work operation namely basic infrastructure, the elderly's health service system, personnel management system,



referral system, budget management system, and control, supervision, follow-up, and assessment systems, which must be in the same direction as tertiary hospitals attached to the Royal Thai Navy.

4. Style is model of an organization's management, policy of an organization's executives, important role of executives to ensure success, by creating organizational culture and connecting to the internal process dimension which is relevant to the internal process dimension in management and development of operation standards towards the excellence in health service system.

5. Staff is an important factor to ensure that work will meet with success. Personnel with specific qualifications for the elderly's care will perform work with potential namely geriatric physicians, geriatric nurses, and multidisciplinary professionals working on the elderly must be able to manage work on the elderly, work with society engaged elderly, home attached elderly and bedridden elderly, ability of financial management, health care planning, ability of safe environment management for the elderly, and continuous development of potential of each personnel to acquire the personnel with suitable qualifications to work with the elderly.

6. Skill is operating skill of personnel with specific ability to deal with the elderly such as assessment of the elderly's physical and mental health, initial screening of health, assessment of the ability of Active Daily Living (ADL), measuring of vital signs, rehabilitation and physical therapy, transfer of patients and use of medical device, principle of use of medicines, care of the elderly with reliance of care of alimentary system, food preparation, tube feeding, care of respiratory tract, oxygenation, insufflation, percussion, care of excretory system, care of urinary catheterization, preventive care for bedsores, position arrangement, change of sleeping position, turning over, and palliative care.

7. Shared Value is organizational culture which will serve as a tool to manage work on the elderly namely work requirements in the same direction as work on the elderly of tertiary hospitals attached to the Royal Thai Navy, recognized by the entire organization to work on the elderly in the same direction.

Based on the McKinsey 7S Framework, the researcher used it to analyze the internal factors impacting the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy and used

it in conjunction with the Balanced Scorecard. The McKinsey 7S Framework consists of 7 factors namely Structure is organizational structure set up according to work process, and used to analyze the factor of internal process dimension; Strategy is process of strategic management resulting in effectiveness of the elderly's health service system towards the excellence; System is organization's internal work system in the same direction of tertiary hospitals attached to the Royal Thai Navy, with model of organizational management model, and policy of organization's executive; Style determines role of leaders; Staff is an important factor for successful work. The personnel with specific qualifications of the care of the elderly can work with potential namely geriatric physicians, geriatric nurses, and multidisciplinary professionals working with the elderly. They must have ability for management of the elderly; Skill is personnel have skills with specific qualifications to work with the elderly; and Shared Value is organizational culture. The practice is in the same line as the work with the elderly in tertiary hospitals attached to Royal Thai Navy recognized by the entire organization in order to perform work on the elderly in the same direction.

## **2.8 PESTLE Analysis**

PESTLE Analysis is a tool used to analyze and understand the overview of the environment of the areas of work and internal opportunities and threats which constitute the analysis of the external areas by Francis J. Aguilar in 1967 (Rastogi & Trivedi, 2016). The researcher used it to analyze the external factors impacting the development model of the elderly's hospital service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy in all dimensions and connecting to the Balanced Scorecard and McKinsey 7S Framework. PESTLE analysis consists of the following:

1. Policy: According to the strategic plans of Naval Medical Department 2019-2021 Strategic issue 2: Development of medical excellence, Strategic target 9: Naval Medical Department's health service has quality to respond to the needs of the Royal Thai Navy. The Key Performance Indicator is the level of success of the Royal Thai Navy's arrangement of the health service for the elderly with 4 hospitals as strategic

hosts, among these 2 tertiary hospitals namely Somdech Phra Pinklao Hospital, Naval Medical Department, and Queen Sirikit Naval Hospital, Naval Medical Department.

2. Economic: It is the analysis of budget management from outside for the Naval Medical Department to work on the elderly's health service system such as budget of the Royal Thai Navy, budget of revenue of health facilities, and budget of National Health Security Office

3. Social: Analysis of the access to the health service system of the elderly who are general public responsible for their own expenses. Analysis of satisfaction from the received service. Comfort and convenience of speedy service, reaction with others, assistance from others.

4. Technology: Keeping up with information technology and communication, information receiving, behavior of the elderly in the use of information technology and communication such as search for the information on health, easy, convenient, and speedy access to information and news, coordinating network with hospitals for fast referral, timely access to media of health and health risks to prevent diseases.

5. Environment: Arrangement of suitable environment for the elderly seeking services at hospitals is crucial because it will prevent danger to the elderly, through accident by falling. The guideline to arrange for the elderly's safe environment includes safe building with no danger to health, convenience with at least one passenger elevator, corridor inside the building must be at least 1.5 meters wide to allow a wheelchair to pass on the uniform surface, stairs and ramps connecting the floors of the building with the stairs must be at least 0.9 meter wide, stairs for walking in opposite direction must be at least 1.50 meters, with vertical stair steps the size of 0.15 meter and horizontal stair steps the size of 0.3 meter, and with long rail; fire exit with visible sign of at least 1.5 meters wide and continuous rail; entrance to the building must have uniform floor, not slippery, no barriers; in case of the building with ununiform floor, there should be stairs and ramps for convenient walking up and down and near the car park; signs showing direction and position of accommodations must be visible both day and night; signal system or alarm must be able to receive and send signal; wheelchairs available for convenience in transporting the elderly with walking difficulties, and referral of patients in case of emergency; arrangement of safe areas for activities of the club for the elderly; safety and security in life and property; complete accommodations;

recreational areas, and areas for the elderly's exercises (Bureau of Environmental Health, 2015)

6. Legal: Rules, regulations, stipulations, the Medical Profession Act, the Professional Nursing Act. Analysis of care of human privacy and dignity, protection of rights of the elderly, confidentiality of the elderly seeking services in hospitals, collection of the statistics of complaints of the elderly seeking services, dissatisfaction in treatment, and use of laws relevant to the elderly's health care.

Based on the PESTLE Analysis, the researcher used it to analyze the external factors impacting the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy to cover all dimensions and connecting with the concepts of the Balanced Scorecard, and McKinsey 7S Framework. The PESTLE analysis includes Policy: It is the policy according to the Naval Medical Department's strategic plan 2019-2021 (Naval Medical Department, 2019-2021), Strategic issue 2, Development of the medical excellence, Strategic target 9, Naval Medical Department's health service has the quality that responds to the needs of the Royal Thai Navy; Economic: It is the budget management received for the operation of the elderly namely budget of the Royal Thai Navy, budget of revenue of health facilities, and budget of National Health Security Office; Social: Analysis of the access to health service system, satisfaction of service, convenience in speedy service, reaction with others, and assistance from others; Technology: Easy, convenient, speedy access to information and news. Coordinating network with hospital for fast referral, access to the media of health and health risks to timely prevent diseases; Environment: The arrangement of suitable environment for the elderly seeking services in hospitals is crucial to prevent danger to the elderly, through accident by falling; Legal: Rules, regulations, stipulations, Medical Professional Act, Professional Nursing Act, analysis of privacy care and human dignity as the information for executives to use in consideration of appropriate development of hospitals and used in the synthesis of the development model of the elderly's health service system towards the excellence with appropriateness and feasibility of development.

## **2.9 Principle of arrangement of the Royal Thai Navy's health service system**

### **2.9.1 Arrangement of the Royal Thai Navy's health service system**

As for the arrangement of the Royal Thai Navy's health service system (Supitcha Saengchote, 2017), Naval Medical Department operates under the following principle:

2.9.1.1 Division of the Royal Thai Navy's health care system into two fields and responsible hosts namely Beneficiary Health Service and Readiness Health Service

2.9.1.2 All medical units are responsible for service in two fields with the goal of service namely Beneficiary Health Service and Readiness Health Service

2.9.1.3 Division of the Royal Thai Navy's health service system into three levels namely primary, secondary, and tertiary levels

2.9.1.4 Holistic and integrated services, focusing on health promotion rather than health rehabilitation

2.9.1.5 If services are not properly arranged, then outsource of external services

2.9.1.6 Provide new services especially maritime medicine

2.9.1.7 Customer focus

2.9.1.8 Manpower derived from the main demand of Readiness Health Service

2.9.1.9 Restructuring of the Naval Medical Department into a simple and horizontal structure appropriate to an organization providing professional health services

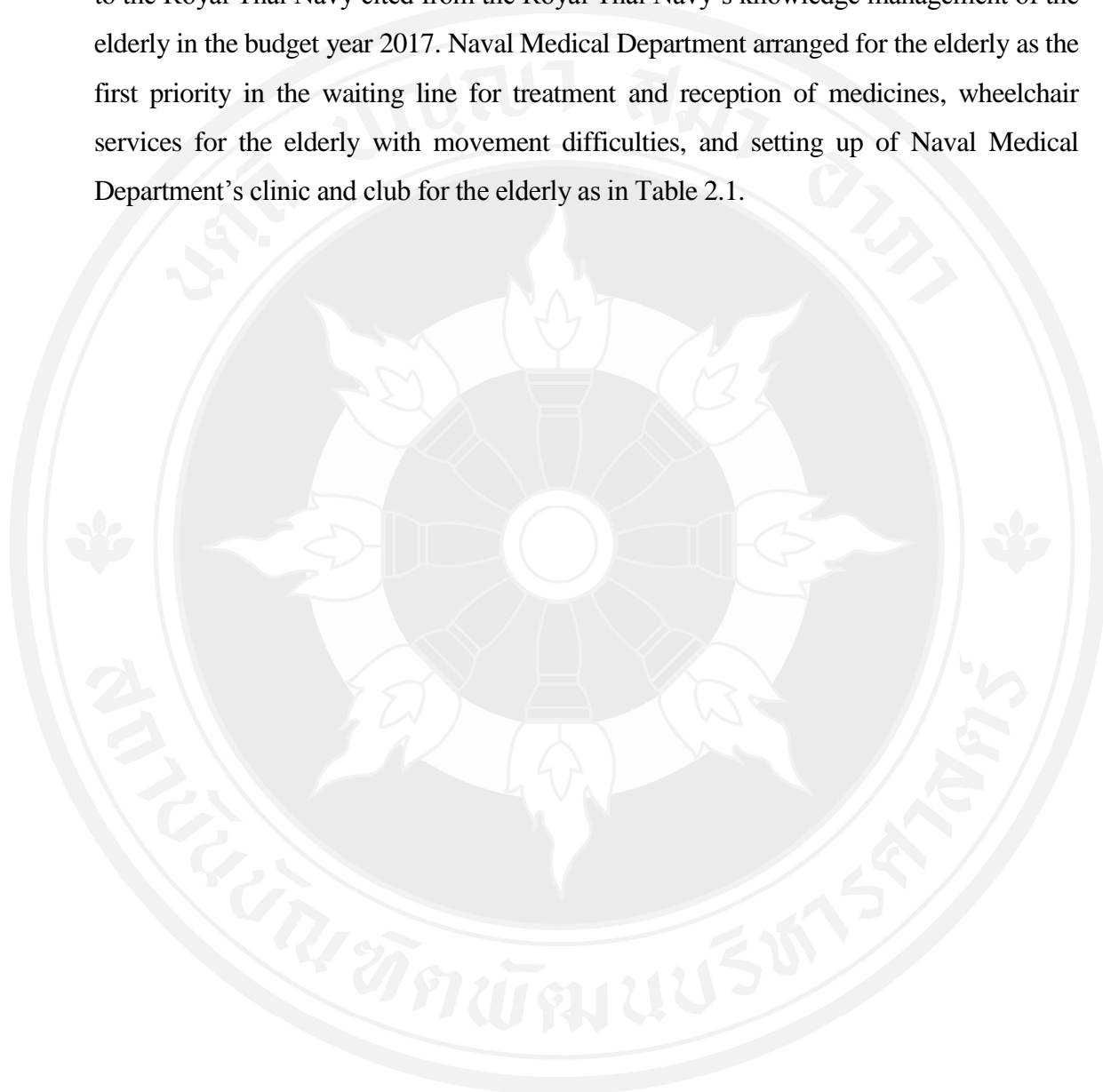
2.9.1.10 Purchaser and provider concept

### **2.9.2 Royal Thai Navy's current management of the elderly's care**

The Royal Thai Navy started to focus on the problems (Puvanant Wiputhanuphongs, 2017) by considering the policy of the Royal Thai Navy in 2016 on general affairs Item 5: Development of work system on welfare to be able to respond

to service recipients, including off-duty manpower and general public with efficiency, by assigning Naval Medical Department as main responsible unit. Naval Medical Department arranges the following services:

2.9.2.1 Assistance to the elderly seeking services in the hospitals attached to the Royal Thai Navy cited from the Royal Thai Navy's knowledge management of the elderly in the budget year 2017. Naval Medical Department arranged for the elderly as the first priority in the waiting line for treatment and reception of medicines, wheelchair services for the elderly with movement difficulties, and setting up of Naval Medical Department's clinic and club for the elderly as in Table 2.1.



**Table 2.1** Naval Medical Department’s development plan to provide services for the elderly in the budget year 2016-2017

Units of Naval Medical Department	Development activities
- Royal Thai Navy Nursing College in cooperation with Personnel Science Division, Naval Medical Department	Trainings of the caregivers
- Somdech Phra Pinklao Hospital	Nursing home (Pritvej Homecare center)
- Queen Sirikit Naval Hospital	Clinic and club for the elderly
- Bangkok Naval Hospital	Daycare project for the elderly
- Abhakornkiatiwong Hospital	“Baan Ping Rak” nursing home

2.9.2.2 Establishment of nursing home. There is currently one “*Baan Ping Rak*” nursing home, Abhakornkiatiwong Hospital, Sattahip Naval Base, established under the management of the use of resources (location and personnel) with great value and maximum benefit. It is open to the general public and government officials, by focusing on the healthy elderly who can help themselves to a certain extent. The old nursing home is improved and open with 8-bed common room (4- bed air-conditioned room and 4-bed regular room) and 4 VIP rooms (1 air-conditioned room, and 3 regular rooms) in total 12 beds, with the monthly costs of approximately 18,000 – 22,500 baht. However, most elderly seeking services are daycare patients with the stay rate of lower than 50 percent.

2.9.2.3 Queen Sirikit Naval Hospital, Sattahip District, Chonburi promotes the elderly’s health by organizing activities of the elderly’s club, vaccination of the diseases necessary for the elderly, program to prevent chronic diseases among those with risk of diabetes, risk prevention of dementia in the elderly, clinic for the elderly as special channel for the elderly’s health service.

2.9.2.4 Somdech Phra Pinklao Hospital, Thonburi District, Bangkok provides the nursing home “Pritvej Homecare” for general civilian elderly and government officials through repair of the second floor of the old emergency building,

by a team equipped with quality standards for warmth and comfort of home. It is open for both males and females aged over 60 years old. Activities are organized based on physical conditions and appropriateness of the service recipients such as merit making by offering alms to monks, prayer, conversation, use of psychology to stimulate the working of the brain, exercises, and recreational activities. Moreover, the center also provides doctor's visit twice a month, rehabilitation doctor's visit once a month, and registered nurse's evaluation visit 4 times a month. The monthly expenses are approximately 30,000-50,000 baht and cannot be reimbursed by the government.

The main concept of the Royal Thai Navy's arrangement of health service system by considering the Royal Thai Navy's policy in 2006 is to develop manpower's welfare to efficiently respond to the needs of service recipients, including off-duty manpower and general public. Naval Medical Department is assigned as a main responsible agency to provide first priority for the elderly's services in terms of waiting for treatment and receiving of medicines. Wheelchairs are provided for the elderly with movement difficulties. Clinic and club for the elderly are set up at Queen Sirikit Naval Hospital and "Pritvej Homecare" nursing home at Somdech Phra Pinklao Hospital to develop health service system in the same direction of the tertiary hospitals. Therefore, the researcher conducted the research of the two hospitals and the synthesis of information for the feasibility of arranging the elderly's health service system of both hospitals.

2.9.2.3 Queen Sirikit Naval Hospital, Sattahip District, Chonburi promotes the elderly's health by organizing activities of the elderly's club, vaccination of the diseases necessary for the elderly, program to prevent chronic diseases among those with risk of diabetes, risk prevention of dementia in the elderly, clinic for the elderly as special channel for the elderly's health service.

2.9.2.4 Somdech Phra Pinklao Hospital, Thonburi District, Bangkok sets up the nursing home "Pritvej Homecare" to provide care for civilian elderly in general and government officials, through repair of the second floor of the old emergency building, by a team equipped with quality standards for warmth and comfort of home. It is open for both males and females aged over 60 years old. Activities are organized based on physical conditions and appropriateness of the service recipients such as merit making by offering alms to monks, prayer, conversation, use of psychology to stimulate



the working of the brain, exercises, and recreational activities. Moreover, the center also provides doctor's visit twice a month, rehabilitation doctor's visit once a month, and registered nurse's evaluation visit 4 times a month. The monthly expenses are approximately 30,000-50,000 baht and cannot be reimbursed by the government.

The researcher had the research conceptual framework by using the Balanced Scorecard to assess the organization's performance and assist the organization to implement the strategy, analysis of internal factors using the McKinsey 7S Framework with the principle that an organization's efficiency comes from relationship within the organization of factors that will yield effectiveness and accomplish the goals of the strategy. The 7 factors must be consistent with one another, and analysis in conjunction with the PESTLE Analysis, analysis and understanding of the overall environment of the physical areas of work and thoughts on opportunities and threats within, analysis of the relationship of the concept leading to the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. As a result, the standards will be established of the elderly's health service system and sustainability will be created for the elderly's health service system.

## **2.10 Domestic and international health service systems of the elderly**

Jehyareeyeh Jehsoh (2012) conducted the elderly's demand of health service and pattern of health service at the Center of health promotion and rehabilitation, Faculty of Nursing, and found that the health service pattern of the elderly members with ability to help themselves diminished and consisted of 4 dimensions namely 1) Demand for safe location 2) Demand of timely assistance in times of emergency 3) Demand to increase health services and 4) Increase the number of caregivers who provide good care.

Nongnuch Yamwong (2014) conducted the quality of life and ability to perform daily routine of the elderly seeking services at HRH Princess Maha Chakri Sirindhorn Medical Center and found that the quality of life of the elderly had positive relationship at a high level with the ability to perform daily routine of the elderly.

Pisit Piriyaapun (2015) conducted the development of the standards of the elderly's health care at an overnight center and the results of the development of the standards of the elderly consisted of 5 compositions and 10 standards namely 1) Composition of management namely Standard 1 Management system, Standard 2 Operation, and Standard 3 Financial management 2) Composition of health namely Standard 4 Health care planning, Standard 5 Operation of health care, and Standard 6 Medicine management 3) Composition of rights and protection namely Standard 7 Rights and benefits, and Standard 8 Privacy and human dignity 4) Composition of physical environment and safety system namely Standard 9 Environment and safety, and 5) Composition of internal standard system namely Standard 10 System and mechanism to ensure service quality. The results of the analysis of the appropriateness and feasibility to implement the standards of the elderly's health care in an overnight center revealed that the overall picture was at a high level. When considering the standard of each dimension, it was found that the priority could be set up as follows: 1) Composition of internal standard system at the highest level 2) Composition of physical environment and safety system at the highest level 3) Composition of rights and protection at a high level, and 4) Composition of health at a high level, and 5) Composition of management at a high level.

Wannarat Thianpajeeikul (2015) studied the comparison of the long-term care for the elderly in urban areas and found that there were 6 models of long-term care in urban areas namely nursing home, hospital providing long-term care, health facilities, residences for the elderly, facilities for supporting life, and facilities for palliative care. The government had not covered all the needs. There was also the shortage of personnel responsible for the elderly's care.

Siripan Sasat, Wasinee Wisestrith, Thaworn Sakunphanit, and Rangsiman Soonthornchaiya (2015) studied the development of the standards and guideline of the service to the elderly with dependency in facility for long-term care. The policy recommendations of the elderly's long-term care in the country consisted of the following: 1) The government should consider issuing law on direct long-term care or amend the relevant laws to develop the standards of the long-term care facilities and create more concrete mechanism to supervise the standards 2) Support the establishment of a national committee to supervise quality and long-term care by

assigning Ministry of Public Health to supervise elderly care facilities and Ministry of Social Development and Human Security to supervise the standards of nursing homes

- 3) Support the establishment of a committee to assure quality at local level or independent organization to ensure that the elderly and service recipients get quality care, good quality of life, and peaceful death with respect and dignity
- 4) Promote local administrative organizations such as Bangkok, provincial administrative organizations, or large municipalities to issue permit on elderly care facilities
- 5) Promote the voluntary assessment of elderly care facilities and agency charged with providing advice on standard development to help pass the assessment and upgrade the quality of long-term elderly care facilities in the country with speed and sustainability
- 6) Policy should be devised on development and preparedness of personnel at all levels to have competency in long-term care to meet the demand of the elderly with increased dependency.

Sumitra Vicha et al (2018) studied the development of network system of health service for home attached elderly and bedridden elderly (case study of home attached elderly and bedridden elderly in the Hong Ha Sub-district Health Promoting Hospital, Maetha district, Lampang). The study revealed that the care system of the elderly who depended on community should respond to the needs of the elderly with dependency and their relatives taking into account different people. The elderly with dependency and their relatives should receive support to be able to assess and take care of themselves, people in communities, government agencies, and the private sector should jointly determine the direction of concrete care of the elderly based on integration, continuity, and linkage of care, reduction of repetitive duties, joint planning of the use of community resources (personnel, materials, budget, and management), focus should also be on the importance of development of IT system and application of new technology to the elderly's care to reach the target of caring for the elderly with dependency in order to have good quality of life, and maintain human value and dignity.

Methaporn Methapisal, Arkhom Bunloet, and Sauwanan Bumrerraj (2017) studied the needs of home caregivers in the perspective of the elderly when they lacked the ability of daily living by using equipment. The study found that the society engaged elderly (no illness yet) mostly did not need caregiver to live in at present. With the disability of daily living, the demand for caregiver to live in was the highest. For the activity level where the elderly could help themselves, their demand level was to call

for the caregiver. The elderly wanted their children, spouses, or family members to take care of them in case of future illness or in need of assistance.

Sunisa Yukalung and Prasopsuk Srisaenpang (2017) studied the development of the age-friendly health service in the outpatient department at Phon Thong Hospital. The study found that the age-friendly health service in the outpatient department consisted of 6 compositions namely 1) Expression of respect, honor, care, and attention 2) Understanding and awareness of old age 3) Fast service 4) Specific service for the elderly 5) Service near home and 6) Safe environment for the elderly. The analysis of the situations of service by health personnel teamwork revealed the service-related problems as follows: 1) Some employees were not yet trained to acquire knowledge and skills in taking care of the elderly 2) Heavy workload by focusing on treatment. The service system used the same standards for patients of all ages 3) Location limitation making it impossible to set up clinic for the elderly and 4) Some parts of environment was not suitable for the health of the elderly. The acquired information led to the process of development of age-friendly health service for the elderly consisting of 1) Awareness of age-friendly health service for the elderly 2) Development of specific service system for the elderly and 3) Improvement of the environment which was suitable to the elderly.

Jiraporn Thongdee and Varaporn Boonchiang (2017) studied the system of the elderly's health service and "Thailand 4.0 Model" and found that the policy of Thailand 4.0 model was a good opportunity to develop the care system of the increasing number of the elderly by using technology and innovation to develop the health service system for the elderly in order to respond to their needs and solve their problems to reduce inequality and create the opportunity for access to service, fair health service with quality and efficiency, reduce health expenses to drive the development towards security, prosperity, and sustainability of the health service system for the elderly, and readiness of basic infrastructure to accommodate technology. The basic infrastructure with high efficiency should be developed to cover the entire country.

Kanya Cheunaron and Walainaree Promla (2018) studied the development of the quality of life of the elderly in Pathum Thani. The study found that the guideline to develop the quality of life must formulate the policy to promote good quality of life by promoting and supporting the establishment of club or group for the elderly, support of

rights given to the elderly for annual medical checkup, support the transfer of knowledge on correct self-care, and analysis that the society engaged elderly could help themselves well which was different from the home attached and bedridden groups, making the overall quality of life different.

Siriporn Ngamkham, Nawarat Suwannapong, Mathuros Tipayamongkhogul, and Jaruwan Manmee (2018) studied the access to health service of the elderly in Thawi Watthana district, Bangkok, and found the factors that were related to access to health service such as service quality giving confidence to the service recipients, good service system and service quality on compassion for the service recipients, spouses and children in time of illness. Therefore, for the elderly to gain more access to health service, executives of health care facilities should develop quality of service to give confidence to service recipients such as environmental management, development of personnel's potential, including knowledge, personality, attitude towards service, and service system focusing on family and the elderly as the center. It is also found that the elderly had the problem of the access to health service. It is therefore necessary for Bangkok to develop the system of the elderly's health service to acquire the model of health care with quality and efficiency. The elderly can conveniently gain access to health service as necessary and can respond to the health demand in the area context with more coverage and appropriateness.

Shasshasa Bunniamtang and Jidapa Thirasirikul (2017) studied the structure of the elderly in Korea and found that Korea was facing with the problem of changes in the population structure. It is the fastest country to enter the ageing society, taking only 18 years whereas other developed countries take longer. By entering the ageing society and soon the super ageing society before other countries, it was forecast to enter the complete ageing society in 2018 with the increased population of 14 percent of the total population of the country. The population will increase 21 percent of the total population of the country, reaching the super ageing society in 2026, which is considered very fast. The importance placed on culture, value, and gratitude towards parents tend to decrease due to changes in the young generation's lifestyle, as well as pressure from economic situations. The hard lives of the Korean elderly who are dependent reflects the experience as transferred by a Korean (Yaowarat Porapakkham, 2007) who said "The Korean elderly with over 65 years of age, without family, or live

alone, will receive 300,000 Korean won a month from the government which is not sufficient for living costs. So, they must apply for membership of the center to get assistance in terms of medical costs or health expenses both for prevention and treatment costs. Currently, the elderly receive little education and must engage in labor-intensive supplementary job such as collection of paper or bottles where most of them have to get up early (4 a.m.) and go to bed late (after midnight) to earn approximately 10,000 Korean won a day or approximately 300,000 Korean won a month. Many of the elderly with this kind of job must compete with one another". The government policy on management of the elderly and welfare of the elderly in Korea, the policy of the care for the elderly is similar in most countries. That is, the elderly should stay with their family as long as possible. Korea's culture is strong in gratitude. So, there is no access to the service or the elderly are not willing to seek assistance from the government. Therefore, there must be living standards. A powerful NGO group formulated the policy, and projects for the elderly. The guideline to solve the problems of the elderly's management in Korea is the combination between health service and local administration, similarly to decentralization of Ministry of Public Health in Thailand. As for the certification of the quality of service, Korea used the Municipal Law to control the quality (Yaowarat Porapakkham, 2007). From the lessons learned of the National sub-committee on the elderly No. 4/2015 related to the policy of the Korean government on the elderly, there were 4 measures to accommodate the ageing society as follows 1) Measure to provide care for the elderly workforce by giving incentives to the private sector and companies to continue hiring the elderly workforce through three-party negotiation between the government, employer, and employee for continued employment with work shift, reduced compensation, by determining the quota of the share of elderly workforce and general workforce, improving workplace to accommodate the elderly workforce such as restroom ramp. The measures would enable companies to make tax deduction and were honored as corporate social responsibilities from the government 2) Incentives for the elderly workforce to continue working through tax deduction for workers who worked continuously and law against age discrimination. But these measures were involved by a small number of the private sector so the overall picture could not be changed 3) Measures to promote independent occupation. This measure was very weak because the promotion of a new occupation

of someone who had just retired with a sum of money to open a small business such as a small restaurant would be difficult to succeed. Most elderly had always used to work within a system without sufficient skill or experience. Within 1-2 years, it would be difficult to make business succeed. This measure therefore posed a problem to the elderly 4) Measure to increase population. Korea changed the attitude of the people since young age to live as the elderly with value, cultivate them with long-term savings, health care, and no risk behavior. At the same time, the policy 1 2 3 was formulated to increase population, that is, 1<sup>st</sup> child within the first year of marriage, 2<sup>nd</sup> child before reaching the age of 30 with the government support, and 3<sup>rd</sup> child with the government care. But most Korean married couples did not wish to have children due to high burden and costs.

Welfare for the elderly in Republic of Korea (South Korea): case study of the center for the elderly in Seoul

1) Development of the center for the elderly in Seoul: For this study, the researcher went on an observation field trip and conducted interviews with the officials and the elderly at the center of the elderly in Seoul. The center started to provide services in 2001 with 30 percent supporting budget from the government and donation from the business and private sectors, Buddhist temples in Korea, and the elderly in various communities. This center for the elderly was originally a place of Buddhist worship (temple). In Korea, there are 25 districts. In each district, there is a center for the elderly operated by the government. There are many more places of worship or Buddhist temples in Korea which provide centers for the elderly. Each place will define the type of service recipients. The elderly in each district must seek service in their own district. But this center for the elderly is different. All Seoul elderly residents can use the same service by applying for the center's membership. It is located at the center of Seoul. It starts with a nearby park called Tapgol Park which is a meeting place for the elderly to come and do exercise and various activities such as chess. The park has become Korea's national heritage. The elderly who used to go there are then gathered at this center for the elderly. Currently, the center has 60,100 members. There are 2,540 people who come for the service everyday which is considered a lot compared to other centers for the elderly with 500-600 members seeking service every day and most members are more females than males. But at this center, there are more males than

females. With better care resulting in the elderly's robust health, the members of this center change from those aged between 70-79 years to 80-89 years. As there are more females, activities for females increase accordingly such as DIY, cooking, etc. At present, it receives government support for rental fees which are on the rise due to the increased membership. There are 60 volunteers and the elderly who are the center members also act as volunteers to the other members.

2) Management of the center for the elderly in Seoul: The responsible agency is the Welfare Center for the Elderly in Seoul and is 30 percent supported by the government for office equipment expenses, and salary for the officials who are government employees. Free subway tickets are distributed to the elderly. The remaining volunteer officials will receive donation and support from the private sector in the neighborhood. As there is no membership fee for the elderly, the elderly feel that they have a part in the donation. So, it can be concluded that it is the joint responsibilities between the public and the people sectors and the civil society. The 30 percent of budget on the average will be received from the government as well as the building rent. The remaining expenses come from donation. As for the food, it comes partly from collecting food costs of 1,000 Korean won per meal from the elderly whereas the food costs for each meal exceed 1,000 Korean won. For the elderly who cannot afford to pay, the center will provide the food free of charge on a case by case basis. The employees are government officials with regular salary so it is considered the support from the government as well. As for other employees, most are volunteers who provide services to the center members. They are either the elderly who are themselves members of the center, external elderly who register as volunteers through the center's website, and from communities surrounding the center.

Arrangement of physical environment to accommodate the elderly and facilities: The center provides ramps suitable for the elderly members in the building which originally were stairs to go upstairs. Presently, it is supported by the government sector to change into the elevator to accommodate the elderly in contacting with various departments in the center. In the restroom, safety equipment is installed with rail for sitting or getting up, buzzer in case of accident in the restroom, doctor and medical team are stationed at the center, the location is right in the center of Seoul with subway station where the elderly will receive free tickets from the support of the government and is



located in front of this welfare center of the elderly in Seoul. Free shuttle bus is also provided by the center. It inspires the elderly to make their journey to apply for the membership and participate in the activities to develop their potential of self-reliance in Seoul.

The public relation and communication to forge understanding with the elderly in society will use the approach of making a film that promotes the culture of access to the ageing society in Korea that can be shown continuously. Moreover, the center's another important point is cooperation from the people sector who are professional actors to inspire the elderly for self-reliance and living with value of themselves to enhance human dignity. It is also linked between the elderly and the students who are volunteers by recruiting the students who want to work as volunteers in this center of the elderly. Moreover, to become members of the center, the officials will make detailed recommendation prior to membership. The willingness to become the members of the center will be the elderly's own decision. It thus serves as initial screening to acquire the elderly wishing to develop their potential of self-reliance.

3) Welfare of the center for the elderly in Seoul with many types of welfare as follows:

Welfare on travelling and food accommodations: As travelling involves distance, the center provides shuttle bus and underground station in front of the center to accommodate the travelling so there are a lot of the elderly. At present, the escalator receives budget from the government sector. Moreover, the center for the elderly provides free lunch until 2014 to ease budget burden through common responsibility for lunch expenses. The elderly members must pay their own lunch 1,000 Korean won a day but the amount of food and nutritive value are higher than 1,000 Korean won. For the elderly who cannot afford the lunch, they will be served free lunch on a case by case basis. Most of the money to service the elderly comes from donation and the elderly members of the center. As the space to serve lunch in the center may be insufficient due to 2,540 elderly seeking service a day, the rounds are therefore arranged with 300 elderly a round. The expenses for document operation will be supported by the government.

Welfare on economic self-reliance: The center for the elderly organizes the employment activities appropriate to the elderly in South Korea to promote the elderly's

self-reliance so that they will have sufficient income to feed themselves. This is because after retirement, the elderly are still sufficiently strong to work and earn income. It is also the activity in their free time which will help reduce the elderly's feeling of loneliness and uselessness. Therefore, the center sets up this department to respond to the needs of the elderly wishing to earn income and divides 2 types of work as appropriate to the elderly namely work that requires training first such as coffee shop and work that does not require prior training such as cleaning. Depending on the type of work, experts are invited to transfer knowledge and training focusing on the elderly's personal interests. The timetable of trainings based on various skills is arranged yearly. The elderly wishing to attend any training can register in advance.

**Welfare on emotional development:** The center's broadcast is important as the officials involved are the elderly members of the center which will bring them pride. The importance placed on human dignity where the elderly can perform their favorite activities is important as the activities respond to their needs.

**Welfare on physical development:** The center focuses on the elderly's health care with 2 doctors attached to the center a day, providing treatment and prevention for the elderly's health. Skills on sports for health are also promoted by providing for sports ground. For the elderly who like outdoor exercises, outdoor sports ground is provided.

**Welfare on intellectual development:** The center for the elderly provides arts instruction and performance with members as general public, including the elderly in the center. Art work is also on display in this art center. Mobile library is also provided for the elderly as well as those visiting the Tapgol Park which is South Korea's national heritage. Students in the area can also use the service by applying for members with the rights to rent, borrow, and return books or media. Technological skill is also promoted with the space and supporting equipment. Foreign languages such as English, Chinese, and Japanese are also offered, as well as music and arts and culture by experts who are the elderly members of this center.

**Welfare for mental development:** The center arranges the meeting/training room to provide information before becoming the center members and the discussion room for the elderly such as the increased divorce cases of the elderly, legal problems such as tax payment, mental problems which are the cause of depression in the elderly, as

well as understanding, preparation, and acceptance of old age by special experts as advisors who are mostly social workers.

**Welfare of social development:** The center provides space for the elderly to be able to transfer knowledge in many fields such as foreign languages, in English, Chinese, and Japanese. With increased knowledge, they will be able to assist communities in providing information for foreign tourists. It will promote knowledge sharing to develop society for the elderly who are volunteer teachers to be proud to transfer knowledge and make themselves useful to others. The study results of the welfare of the elderly in Seoul, case study of a center of the elderly in Seoul were used by the researcher to develop the policy recommendations and management of the center for the elderly for Thailand. The public sector should provide the services covering travelling accommodations and lunch for the elderly with low income to enable them to travel to the center and fully seek service, and quality lunch is provided through joint contribution. Service should be arranged to promote the physical, emotional, mental, intellect, and social development for the elderly in terms of prevention and treatment especially advice to the elderly in various issues from volunteer experts from the public sector and civil society to enhance potential of the elderly's self-reliance and participation of the civil society, business with social responsibility and tax incentives to stimulate business engagement, as well as participation from the society and neighboring communities as volunteers to organize activities to promote the physical, emotional, mental, intellect, and social development for the elderly.

Japan is the country with the highest share of the elderly population in the world with the population of over 60 years of age constituting 33 percent. It is therefore the country that enters the "super aged society" before other countries in the region. Japan Pension Service 2016 stated that the Japanese government had set up a good foundation of the welfare system and the supporting pension system. At the same time, the Japanese had higher rate of savings and investment for the future than other countries. Therefore, the old age in Japan had social security and secure supporting income. On the contrary, most developing countries including Thailand do not have sufficiently good plan to deal with the future that may inevitably enter the situation of "getting old before getting rich". Therefore, in order to plan the welfare system for the elderly in

Thailand, the study of the guideline from Japan is crucial which can be summarized that the welfare system for the elderly in Japan is divided into 3 systems as follows:

### 1. Public pension system

Japan started the pension system in 1942 following the enforcement of the Workers Pension Laws. In 1961, international pension system was established covering all people. Moreover, from the 1960s to the beginning of the 1970s, criteria on benefits were improved and plan and policy on pension system were rectified to be ready to enter the “ageing society”. Later in 2000, the Nation Pension Act was amended. In 2004, the pension system was reformed with the important issues namely change of the age of retirees from 60 to 65 years and increase of premium. The pension system in Japan is divided into 3 systems as follows:

1.1 National Pension System (NPS) aims to prepare the basic pension for everyone with residency in Japan. Those who apply for NPS membership are residing in Japan and with their names in the house registration aged between 20-59 years and can be divided into 3 groups as follows:

Group 1 Public and private staff aged not over 65 years old

Group 2 Spouses of group 1 aged between 20-59 years old

Group 3 Others such as independent profession, farmers, doctors, paralegals, unemployed, students, etc. and spouses of group 3 aged between 20-59 years old

Apart from the compulsory model, there is also the voluntary model. Those who are eligible for voluntary application to the NPS system include 1) Those who reside in Japan with their names in the house registration and aged between 60-64 years old 2) Japanese citizens residing abroad and aged between 20-64 years old, and 3) Those who were born before or on 1 April 1965, aged between 65-69 years and who are not satisfied with the minimum duration according to the qualifications.

At present, those in the system must make monthly contribution payment of 16,490 yen (April 2017-March 2018). However, for students, those with low income, and those with disabilities can request for the waive of the contribution payment. The basic pension of the elderly in the NPS system will be paid to those aged 65 years old who have made contribution payment to the system for at least 25 years

and will receive the maximum pension of 779,300 yen a year (if contribution is fully paid for 40 years).

1.2 Employees' Pension Insurance (EPI). For the staff in the private sector, payment will be made through this system. The minimum payment that needs to be made to EPI will be equal to the payment to NPS. Therefore, the payment to EPI will be considered as payment to NPS as well. The excess of the minimum rate will depend on income. Those eligible to be accepted to the EPI system are those who work in a private company with over 5 employees or those who work part-time with 3 out of 4 working time or more compared to regular employees in the same company. For those with less time, they can apply to enter the system with the following qualifications: Work over 20 hours a week, duration of employment of 1 year upward, monthly salary of 88,000 yen upward, not student status, employee has over 500 employees. Those in the EPI system with the qualifications of the retiree according to the NPS system are eligible for the Specially-provided Old-age Employees' Pension before the age of 65 by applying for it during the age of 60-64 years old.

1.3 Mutual Aid Associations (MAA) for government officials from the central administration, local government officials, and staff in private schools. The payment to the fund is close to EPI. Therefore, if the government officials and staff have already paid to MAA, they do not have to pay to NPS.

2. The Medical Care System for Elderly in the Latter Stage of Life started in 2008. The target group is those aged over 75 years old. Those with the right qualifications will register and make contribution payment as stipulated. The access to the system can be done by which the medical fees for the elderly in the system will come from 10 percent of the contribution payment by the registered elderly (except if the elderly's income is at the same level as the people of working age, they will be fined from 10 percent to 30 percent).

3. In 2000, Japan concretely used the Long-term Care Insurance which was considered part of the Health Insurance System and welfare measures for the elderly. It shows the importance and society's awareness related to the elderly, especially the problems of care of the elderly due to the changing social conditions. Moreover, there is also the issue of financial and psychological costs borne by the families which reflects the inability of the current families to take care of the elderly as in the past. Therefore,

the long-term system for the care of the elderly is set up to ease the burden and responsibility for the elderly from families to all people in society. It also assures that everyone will be taken care and supported by the society. The health service system for the elderly determines that the service recipients will be the center to enhance efficiency and equality. The service recipients can choose any types of services. There are services on welfare and health care, and treatment that covers and are consistent with the demand of the service recipients. Moreover, participation from the private sector is also encouraged.(Campbell, 2010)

### **Information systems**

Botsis, Demiris, Pedersen, and Hartvigsen (2008) studied home telecare technologies for the elderly found that there are a number of remote home care technologies that are especially developed. Home remedial chronic disease, equipment must be certified, operations are reformed, infrastructure must be in place, market health prepared, staff must ensure systems are viable and worth assessing. Corporate grants and social dynamics such as cost reduction policies and an aging population are the main drivers for the development of remote care at home, especially for elderly patients. At this time, there is no holistic model for scientific evaluation. From different perspectives.

Jasemian (2008) studied elderly comfort and compliance to modern telemedicine system at home the aim is to monitor and assess the elderly heart patients' (EHP) compliance, trust and convenience associated with a real-time wireless telemedicine system at home. The telemedicine which consists of a GSM / GPRS networked patient unit, concluded that the system was reliable, efficient, and medically acceptable. EHP has demonstrated reasonable compliance and trust in home applications.

Edirippulige, Martin-Khan, Beattie, Smith, and Gray (2013) studied a systematic review of telemedicine services for residents in long term care facilities found that the clinical services provided by telemedicine, including allied health, are: dermatology, general practice, neurology, geriatrics, psychiatry, and a number of specialties. Most of the studies used real-time telemedicine using the remaining five used video conferencing and telemedicine transmission by overall, the quality of evidence for telemedicine in LTCFs was low. There was only one small randomized

controlled trial. Most of the studies were observational and qualitative studies and focused on utilization based on survey and interviewing of stakeholders as a principle. Some studies assess the costs associated with service use telemedicine in LTCF, the current review shows there is evidence for the likelihood and satisfaction of stakeholders of use telemedicine in LTCF in clinical specialization.

Namahoot and Brueckner (2013) studied Tele-Diagnosis System for Rural Thailand Telemedicine is used for people with rural health problems in Thailand and introduces the Telemedicine Diagnosis System for Rural (TEDIST) Thailand for the diagnosis of certain conditions of the people with access to the Internet. It can be used to contact health centers. Each patient's symptom data entry, performed by a specialist in analysis, leverages the database to find the most specialized doctors. Doctors have the opportunity to exchange e-mails or chat with the responsible patient, then their patient information will be kept in a personal health record. Patients can be used from home and in a diagnostic system. Intensive use was found to be flawless 25 patients who may not trust the work of TEDIST, however, encouraging test results, especially acknowledging the fact that TEDIST is in the prototype stage, so it plans to expand the features of the system to diagnose other parts of the body system, such as the neck and skin.

Techatraiphum, Tharnuraikun, Krathu, and Chutimaskul (2016) studied telemedicine acceptance framework for the elderly in Thailand. Telemedicine has become a solution by providing professional medical services in remote areas. Telemedicine in Thailand has not been used for a number of reasons, factors affecting the adoption of telemedicine for the elderly in Thailand, in particular, use the unified theory of acceptance and use of technology (UTAUT) framework to confirm the relationship between the proposed factors and the behavioral intentions. The results indicate that the research provides insights into understanding how older adults accept telemedicine and thus enable the design of telemedicine adoption frameworks for seniors in Thailand.

Hsu (2017) studied clustering-based compression connected to cloud databases in telemedicine and long-term care applications to increase data transfer rates and storage capacity to improve communication between medical staff and patients in long-term, term and medical care. Most of the proposed systems involve a three-dimensional

hopfield neural network (CHNN) histogram clustering, region assignment and modified block cutoff (BTC) coding, CHNN histogram. The results indicate that the proposed system is adaptable and functional, suitable for telemedicine and care applications. Long-term connect to the cloud database.

Andrès et al. (2018) studied the experimentation of 2.0 telemedicine in elderly patients with chronic heart failure: A study prospective in 175 patients found that a heart failure in France requires more than 100,000 hospitalizations a year, accounting for 5 percent of all hospitalizations and is the cause of hospital admissions among the elderly. It is very well documented in heart failure and diabetes. Telemedicine may help, in particular, preventing emergencies and re-hospitalizations. It may also make it possible to structure an integrated care path, which is the most important evidence that found in heart failure.

Fadhil (2018) studied beyond patient monitoring: conversational agents role in telemedicine & healthcare support for home-Living Elderly Individuals found that It is necessary for a system to dynamically interact with the aging population to collect health data and provide support, especially after hospital discharge or home care monitoring. Many medical devices are delivered along with the telemedicine system. Smartphones and other digital services, the new digital ecosystem interaction, represented by Chatbots, will play a leading role by integrating virtual assistant functions and bridging the gap between patients and doctors. Powered by AI and algorithms, it is expected to save on healthcare costs. Combining chatbots with telemedicine systems for elderly patients after leaving the hospital offers the possibility of using a chatbot. To assist healthcare providers and support patients

Shimizu et al. (2018) studied International telemedicine activities in Thailand found that telemedicine is economical, it can be used in developing countries and it has expanded rapidly. Thailand has become the seventh country involved in telemedicine. Asian Development Center in the year 2017 opens 144 Programs in Thailand are mainly in laparoscopy (55, 38%) and surgery (40, 28%), 17 hospitals or medical institutions are active members and there are 165 distant connections in Siriraj Hospital Mahidol University is the first participant with 71 telemedicine connections; Chulalongkorn Hospital was the second participant, with 52 such connections, both of which accounted for 74.5% (123/165) of all telemedicine activities in Thailand. Telemedicine will



expand to rural areas of Thailand and gain more medical expertise from continuous technological developments.

Based on the review of the research related to the elderly's health service system, the researcher found that the elderly with the reduced ability to help themselves needed safe location, timely assistance in times of emergency, increased health service, and increased caregivers with good care. The quality of life of the elderly had positive relationship at a high level with ability to perform daily routine of the elderly. The development of the health care standards of the elderly in an overnight center consisted of ten standards namely management, operation, financial management, health care planning, health care operation, medicine management, rights and benefits, privacy and human dignity, environment and safety, and assurance system and mechanism of service quality. At present, the coverage of the government sector's promotion of the elderly's health service system was not total and there was still shortage of personnel responsible for the care of the elderly. Consequently, there was still limitation of the location so that it was still not possible to set up a clinic for the elderly and some environment was not suitable for the health of the elderly. Therefore, the guideline to develop the quality of life must formulate the policy to promote good quality of life, by setting up club or group for the elderly. For the study of the development model of the elderly's health service system towards the excellence, the researcher studied the feasibility of setting up a club for the elderly at Somdech Phra Pinklao Hospital as Queen Sirikit Naval Hospital had already had one. It was the activity for the society engaged elderly who could help themselves well, which was different from the home attached and bedridden elderly. The overall quality of life was therefore different. To enable the elderly to gain more access to health service, the executives of health facilities should develop health quality to ensure the confidence of the service recipients such as environmental management, development of personnel's potential, including knowledge, personality, attitude of providing services, and arrangement of service system focusing on families and the elderly as center. Based on the study of the hospitals attached to the Royal Thai Army, it was found that the problems and obstacles of service included shortage of personnel specifically responsible for the care of the elderly and inconvenient building and location, with difficulty to arrange for separate clinic for the elderly. As part of the study of the development model of the elderly's

health service system of the Royal Thai Navy, the researcher studied the system of specific clinic for the elderly and assessed that according to the context of tertiary hospitals attached to the Royal Thai Navy, a specific clinic for the elderly could be set up. Queen Sirikit Naval Hospital had already had one but not Somdech Phra Pinklao Hospital. Therefore, the researcher conducted the study to synthesize the feasibility to operate a clinic for the elderly which would respond to the service recipients with the same pattern in the two hospitals. The research of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy was to study the quality of life and demand of the elderly's health service according to the ability to perform daily routine, and to know the demand of health services. The researcher could determine the model of health service in response to the demand of the elderly in each group seeking service in hospitals, with speedy treatment, reducing waiting time, and reducing contact with germs in the infected patients' department. The researcher applied the reviewed research results to synthesize and use it as information in the study of the development model of the elderly's health service system towards the excellence. The research divided the elderly into society engaged, home attached, and bedridden elderly which had not been studied in any tertiary hospitals attached to the Ministry of Defense in terms of quantitative and qualitative mixed research, only the study of the level of satisfaction of health service and the literature review of the telemedicine system will be applied to the development of information system which is defined in Geriatric Medicine Center.

The researcher used the theoretical concept relevant to the retired government officials from the Royal Thai Navy, the theoretical concept relevant to the quality of life of the elderly, policy on Thailand's elderly, health service and social system for the elderly, concept of Balanced Scorecard, concept of McKinsey 7S Framework, concept of PESTLE, principles of health service arrangement of the Royal Thai Navy, and domestic and international health service systems. The researcher applied the guideline to the research to analyze and find the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The methodology of the research will be discussed in the following chapter.

### **2.11 G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences**

G\*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007) It is an important part and improved from the previous version. It is widely used as Windows XP, Windows Vista and Mac OS X 10.4 and covers different statistical tests of the t, F family of test. It also includes a power analysis for z-tests and some exact tests, G \* Power 3 provides improved effect size. The calculator and graphics options support both distributed and design-based input modes and they are all. Types of power analyzes that may be of interest to users The same as its predecessor and free. G\*Power 3 provides procedures to calculate the power for global effects in a one-way MANOVA and for special effects and interactions in factorial MANOVA designs. The task starts from selecting the statistics group, selecting the statistics. Specify the specified variable. The researcher must have information in defining the variable values that must be specified and then display the results. G \* Power program is the ability, speed and help the sample size can be quickly determined. Researchers can download programs come and use it free of cost.

Therefore, the researcher uses the program G\* Power to determine the confidence level at .05, small effect size (effect size = 0.20), power of test (power) at 0.95 as determined by the criteria (Cohen, 2013) yielding 251 sample. The researcher increased the size 25 percent to prevent incomplete information and acquired 314 sample. The questionnaire was checked for complete information before conducting data analysis of 308 sample using the Probability Sampling.

## **CHAPTER 3**

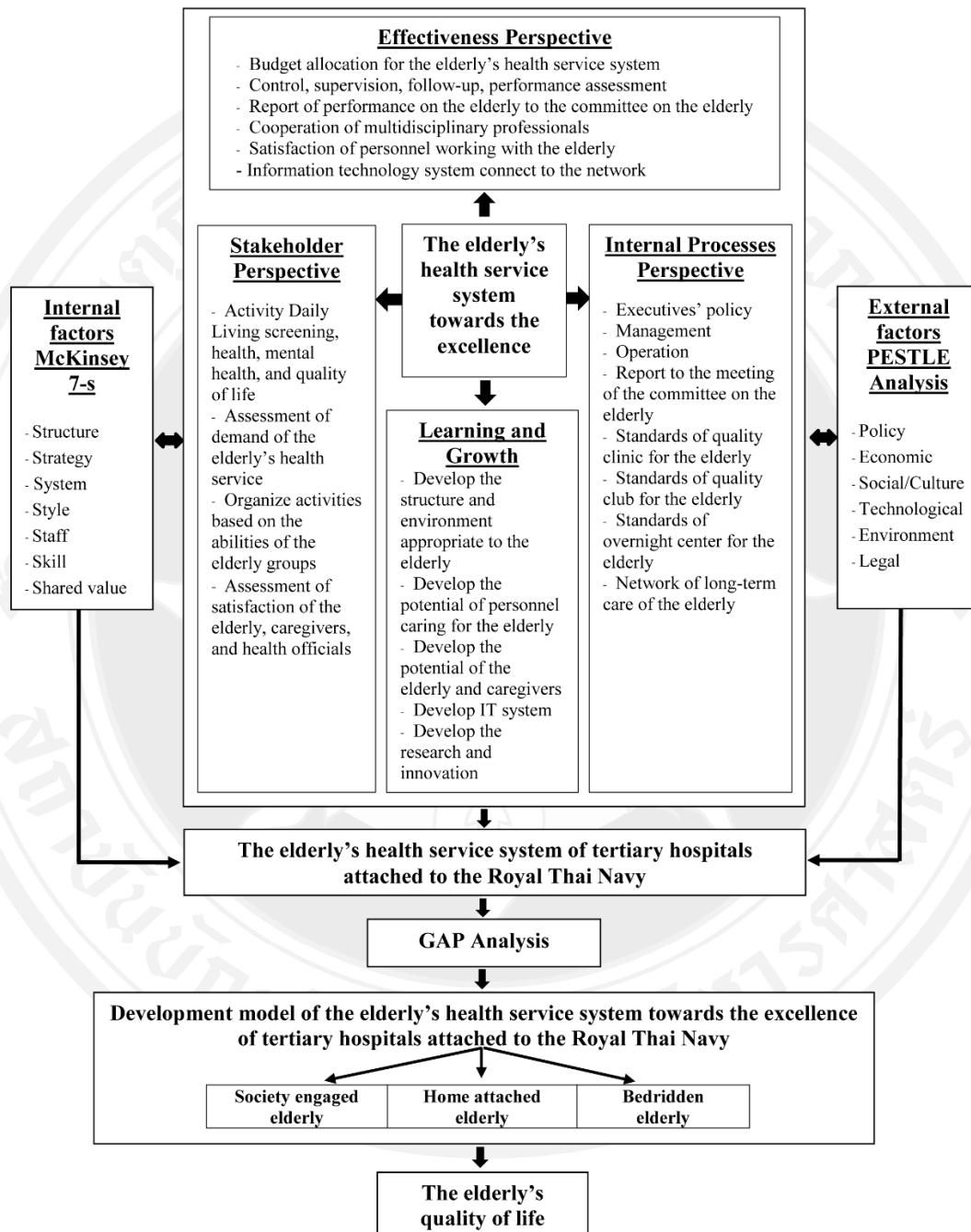
### **METHODOLOGY AND COLLECTION OF DATA**

The development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy used the mixed quantitative and qualitative research, conducted the study of quality of life and demand of health service of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy, the comparison of quality of life and demand of health service of the elderly with different abilities of daily living and seeking services at tertiary hospitals attached to the Royal Thai Navy in different areas, and the synthesis of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy with the following methodology:

#### **3.1 Conceptual framework**

The researcher determined the conceptual framework by using the Balanced Scorecard as a management tool to ensure concrete success for an organization which was appropriate to assess the performance of the organization and assist the organization to implement the strategy. The analysis of internal factors was conducted using McKinsey 7S Framework with the basic principle that an organization's efficiency would come from the relationship within the organization of various factors which would yield effectiveness and reach the goals of the strategy. The 7 factors must also be consistent with one another. The analysis was also conducted with the external factors using PESTLE Analysis which would enhance the understanding of the overall environment of the areas of operation and provide opportunities and threats within. The analysis of the relationship of the concept would lead to the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy was expected to enable the elderly's health service system to respond to the demand of the elderly groups seeking services. It would create

motivation, pride in the elderly's own value, provide them with happiness, human dignity, and good quality of life in their livelihood. All sectors would also join hands to help and solve the problems of health service system that would occur in the ageing society in the future as shown in Figure 3.1.



**Figure 3.1** Research conceptual framework

The research conceptual framework was conducted by using the Delphi Method and seeking opinions from 11 experts namely 2 experts on environmental management for the elderly, 1 expert on geriatric psychology, 1 expert on research ethics, Naval Medical Department, 1 expert on human resource, Naval Medical Department, 3 experts on the elderly, Naval Medical Department, 1 expert on policy and plan, Naval Medical Department, 1 expert on health promotion, Naval Medical Department, and 1 nurse specializing in physical ability and health promotion, Naval Medical Department. The IOC = 0.92 in the appendix A and the operational definition could be explained as follows:

1. Society engaged elderly means all elderly who can help themselves, others, community, and society. The total physical ability scores equal or higher than 12/20 scores and seeking services in tertiary hospitals attached to the Royal Thai Navy.

2. Home attached elderly means all elderly who can move and help themselves to a certain with the total physical ability scores in the ranges of 5-11/20 scores and seeking services at tertiary hospitals attached to the Royal Thai Navy

3. Bedridden elderly means all elderly who cannot move or help themselves, or disabled with the total physical ability scores in the ranges of 0-4/20 scores and seeking services at tertiary hospitals attached to the Royal Thai Navy

The quality of life of the elderly means the physical, mental, social relationship, and environmental readiness of the elderly necessary for livelihood and affect happy living in society. It consists of 4 compositions as follows:

1. Physical means the elderly seeking services recognize their own physical ability that affect daily living such as recognition of physical strength, comfort without pain, ability to manage physical pain, strength in daily lives, and abilities of daily living.

2. Mental means the elderly recognize their own mental state such as recognition of positive feelings of service providers at the hospitals towards them, their own image, pride in themselves, self-confidence, thoughts, memory, and decision on medical treatment.

3. Social relationship means the elderly recognize their relationship with others in participating in activities as requested by families and hospitals with the team of doctors and nurses in medical treatment, sexual feeling, or sexual intercourse.

4. Environmental means recognition of environment impacting livelihood such as convenient communication to come to hospitals, financial source to support medical treatment, and social work, recognition that they have the opportunity to receive news or skills, that they have recreational activities and activities during spare time, as well as safe environment.

The elderly's needs means demand to develop quality of life and response to demand in the system of the elderly's health service towards the excellence of tertiary hospitals attached to the Royal Thai Navy. They show the composition of 4 perspectives namely Effectiveness Perspective, Stakeholder Perspective, Internal Processes Perspective, and Learning and Growth.

System of the elderly' health service means health service system illustrating the composition of 4 perspectives as follows:

1. Effectiveness Perspective: It is the perspective of the success of the system of the elderly's health service towards the excellence consisting of budget allocation for the system of the elderly's health service, control, supervision, follow-up, performance assessment, report of performance on the elderly to the committee on the elderly, cooperation of multidisciplinary professionals, satisfaction of personnel working with the elderly and telemedicine system.

2. Stakeholder Perspective: It is the perspective of the elderly seeking service such as ADL screening, health, mental health, and quality of life, assessment of demand or health service, activities on the abilities of the elderly groups, assessment of satisfaction of service providers and service recipients.

3. Internal Processes Perspective: It is the perspective of executive's policy, management, operation, report to the meeting of committee on the elderly, standards of quality clinic for the elderly, standards of quality club for the elderly, standards of overnight center for the care of the elderly, and network of long-term care for the elderly.

4. Learning and Growth: It is the perspective to develop the structure and environment appropriate to the elderly, development of the potential of the personnel working on the elderly, development of the potential of the elderly and caregivers, development of information technology and telemedicine system, development of research and innovation.

### **McKinsey 7S Framework**

1. Structure is the organization structure established according to work process, control, centralization, and decentralization of executives. Good organizational structure must illustrate the relationship between duties and responsibilities because it enhances flexibility, reduces mistakes, and repetitions in operation, and enables the personnel to know the scope of work, and uses to analyze the factor of dimension of internal process.

2. Strategy is strategic management planned to appropriately respond to the changes of the organization's internal and external environment. It results in the effectiveness of the system of the elderly's health service system towards the excellence such as operation on basic infrastructure system, health service system for the elderly, system to manage the elderly, referral system, system of budget management, system of control, supervision, follow-up, and assessment, as well as identification of problems and rectification.

3. System is management of the internal system of organization such as basic infrastructure system, health service system for the elderly, personnel management system, referral system, budget management system, and system of control, supervision, follow-up, and assessment which must be in the same direction with tertiary hospitals attached to the Royal Thai Navy.

4. Style is model of organizational management, policy of organization's executives, success depends on the role of executives, by creating organizational culture, linking to the dimension of internal process, involving dimension of internal process in management and development of standards of operation towards the excellence in health service system.

5. Staff is an important factor to bring operation to success. Personnel with specific responsibility for the care of the elderly will be able to work efficiently such as geriatric physician, geriatric nurse, and multidisciplinary professionals working with the elderly who must have the abilities to manage work on the elderly, work with the society engaged elderly, home attached elderly, and bedridden elderly, ability of financial management, health care planning, ability of safe environmental management for the elderly, and continuous development of the potential of each personnel to obtain personnel with appropriate qualifications to work on the elderly.



6. Skill is the operating skill of the personnel with the specific qualifications to work on the elderly such as assessment of the elderly's physical and mental health, initial health screening, assessment of abilities of daily living (ADL), vital signs, rehabilitation and physical therapy, transfer of the sick and use of medical devices, principle of use of medicines, care of the elderly with dependency state, care of alimentary system, food preparation, nasogastric tube feeding, respiratory care, oxygenation, insufflation, percussion, care of digestive system, urinary catheter care, care and prevention of bed sores, position arrangement, change of sleeping position, and palliative care.

7. Shared Value is organizational culture which will serve as the tool of management of the elderly such as regulations of operation in the same direction as the work on the elderly of tertiary hospitals attached to the Royal Thai Navy, and to be recognized in the entire organization to be able to work on the elderly in the same direction.

#### **PESTLE Analysis**

1. Policy according to the strategic plan of Naval Medical Department 2019-2021, Strategic issue 2: Development of medical excellence, Strategic goal 9: Health system of Naval Medical Department with quality to respond to the demand of the Royal Thai Navy. The indicators of the goals consist in the Royal Thai Navy's successful health service arrangement for the elderly. The strategic hosts include 4 main hospitals, among these, 2 tertiary hospitals namely Somdech Phra Pinklao Hospital, Naval Medical Department, and Queen Sirikit Naval Hospital, Naval Medical Department.

2. Economic: Analysis of budget management from the outside that supports Naval Medical Department to work on the elderly's health service system such as the Royal Thai Navy's budget, income budget of health facilities, and budget of National Health Security Office.

3. Social: Analysis of the elderly's access to health service system who are general civilians responsible for their own expenses, analysis of the satisfaction of received services, convenient and speedy services, interaction with others, and assistance from others.

4. Technology: Keeping abreast with information technology and communication, Information Receiving, behavior of the elderly in the use of information technology, and communication such as search for health information, convenient and speedy access to information and news, network to coordinate speedy referrals, access to health and health risk media to timely prevent diseases.

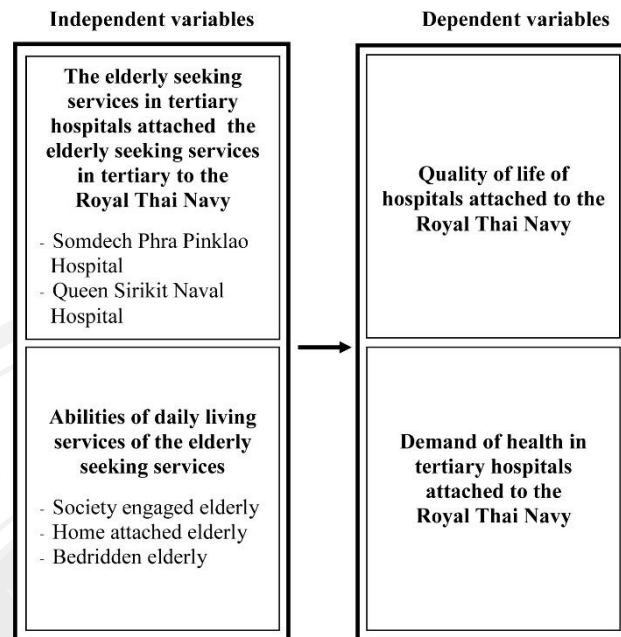
5. Environment: Appropriate environmental arrangement for the elderly seeking services in hospitals is crucial to prevent danger to the elderly, such as accident by falling, guideline to arrange for safe environment for the elderly such as safe buildings that do not pose danger to health, provide convenience with at least 1 passenger lift, passageway in building not less than 1.5 meters wide to allow wheelchairs to pass on the uniform floor, stairs and ramps connecting between floors of the building, with stairs at least 0.9 meter wide, stairs for walking in opposite direction of at least 1.50 meters wide, with vertical stairs the size of 0.15 meter, horizontal stairs the size of 0.3 meter, with long rail, fire exit has visible signs, no less than 1.5 meters wide, with continuous rail, the entrance to the building is uniform floor, not slippery, no obstacles, in case of uneven floors, convenient stairs and ramps should be provided, near car park, visible signs showing positions of facilities both day and night, alarms that transmit and receive signals, wheelchairs to accommodate the elderly with movement difficulties, referrals of patients in case of emergency, arrangement for safe locations to organize activities of the club for the elderly, safety and security in life and property, complete facilities, areas for relaxation, and areas of exercise for the elderly (Department of Older Persons, 2015).

6. Legal: Rules, regulations, Medical Profession Act, and Professional Nursing Act to analyze private care and human dignity, protection of rights of the elderly, confidentiality of the elderly seeking services in hospitals, compilation of statistics of complaints of the elderly seeking services, dissatisfaction in medical treatment, and use of laws related to health care for the elderly.

Factors impacting the development of the elderly's health service system means internal factor (McKinsey Framework) and external factor (PESTLE Analysis) that impact the development of the elderly's health service system. The internal factors include model of management, operation system, personnel, shared value, organizational structure, skills, knowledge, ability. The external factors include policy

on the elderly, economic situations, society/culture, information technology, rules and regulations, and environment.

As for quantitative research, the researcher conducted the analysis of the Stakeholder Perspective to construct the tool to compile data on the elderly seeking services in Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The research conceptual framework explained that WHO divided the quality of life into 4 factors as mentioned previously. It is in line with Maslow's Hierarchy of Needs Theory which stated that individual's good quality of life coming from the response of each individual's needs by the hierarchy from the lowest level to the highest. Individual needs can be divided into 5 groups namely 1) Physical needs such as food, water, lodging. If the elderly can live with food or lodging, they will have the will to live, and with suitable environment such as cleanliness, light, good ventilation, good health services 2) Safety needs such as health safety, life and health security, etc. 3) Social needs such as need for love, friendship, closeness, socializing opportunities with others, accepted members into a group or many groups 4) Needs for honor and fame to heighten their own status, pride, and self-respect, etc. 5) Needs to complete their lives meaning needs to fulfill their own potential, and highest success. The study of relevant documents revealed that the abilities of daily living have positive relation with the elderly's quality of life. The elderly with reduced abilities will require more health services. The problems and obstacles of arranging for the elderly's health include shortage of personnel specifically responsible for the elderly, inconvenient building or location, and difficulty to set up specific clinic for the elderly. Therefore, the researcher was interested in the study of comparison of quality of life and demand of health service with the elderly's abilities of daily living divided into 3 groups namely society engaged elderly, home attached elderly, and bedridden elderly seeking services in tertiary hospitals attached to the Royal Thai Navy, namely Somdech Phra Pinklao Hospital, Bangkok, and Queen Sirikit Naval Hospital, Chonburi. The conceptual framework is in Figure 3.2.



**Figure 3.2** Conceptual framework of quantitative research

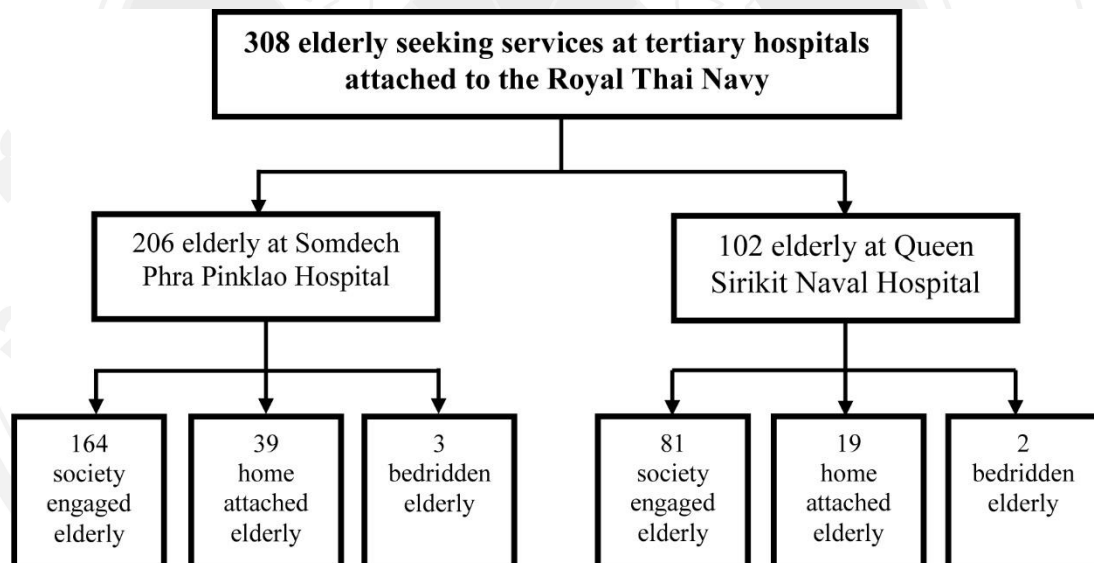
After finishing the analysis of the information, the results will be used to confirm and promote the continuous analysis of the qualitative research which consisted of in-depth interviews of executives responsible for the elderly in both hospitals to acquire the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy.

## 3.2 Population and sample/target groups, and key informants

### 3.2.1 Quantitative research

Population was the monthly average of 4,862 elderly people seeking services in tertiary hospitals attached to the Royal Thai Navy (Naval Medical Department, 2018). The sample was calculated using the program G\* Power (Faul et al., 2007) to determine the confidence level at .05, small effect size (effect size = 0.20), power of test (power) at 0.95 as determined by the criteria (Cohen, 2013) yielding 251 sample. The researcher increased the size 25 percent to prevent incomplete information and acquired 314 sample. The questionnaire was checked for complete information before conducting data analysis of 308 sample using the Probability Sampling. The Stratified Random Sampling was used with the types of hospitals namely 206 elderly seeking services at

Somdech Phra Pinklao Hospital and 102 elderly seeking services at Queen Sirikit Naval Hospital. Then, calculation was done according to the share of the sample and their abilities of daily living, divided the share of the elderly seeking services into society engaged elderly, home attached elderly, and bedridden elderly. The review of documents and latest information revealed that the society engaged elderly constituted 79.5 percent, home attached elderly 19 percent, and bedridden elderly 1.5 percent. Therefore, for the 206 sample seeking services at Somdech Phra Pinklao Hospital, the researcher calculated the share and found 164 society engaged elderly, 39 home attached elderly, and 3 bedridden elderly. As for the 102 sample seeking services at Queen Sirikit Naval Hospitals, the calculation was based on the share and yielded 81 society engaged elderly, 19 home attached elderly, and 2 bedridden elderly as shown in the following chart:



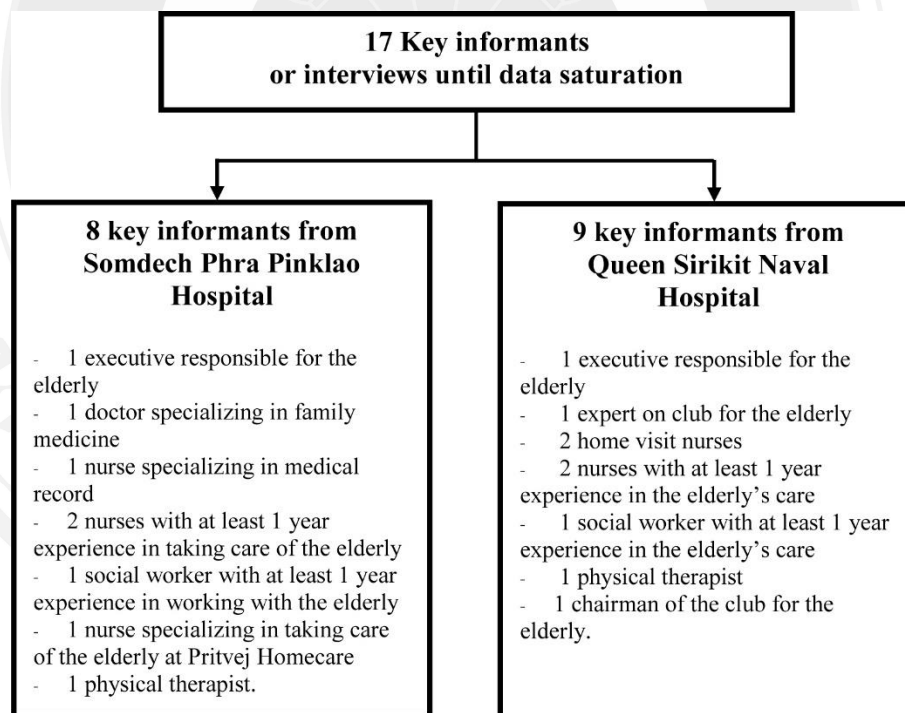
**Figure 3.3** Sample of quantitative research

### 3.2.2 Qualitative research

There were 17 key informants to synthesize the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy or interviews until data saturation. The researcher was an important tool in the interviews.

There were 8 key informants from Somdech Phra Pinklao Hospital namely 1 executive responsible for the elderly, 1 doctor specializing in family medicine, 1 nurse specializing in medical record, 2 nurses with at least 1 year experience in taking care of the elderly, 1 social worker with at least 1 year experience in working with the elderly, 1 nurse specializing in taking care of the elderly at Pritvej Homecare, and 1 physical therapist.

There were 9 key informants from Queen Sirikit Naval Hospital namely 1 executive responsible for the elderly, 1 expert on club for the elderly, 2 home visit nurses, 2 nurses with at least 1 year experience in the elderly's care, 1 social worker with at least 1 year experience in the elderly's care, 1 physical therapist, and 1 chairman of the club for the elderly. The key informants were specifically chosen to be able to answer the interview questions and provide accurate and clear in-depth information as shown in the following chart:



**Figure 3.4** 17 key informants of the qualitative research

**The key informants at Somdech Phra Pinklao Hospital with the following duties:**

1. Executive responsible for the elderly is responsible for operation and management of the committee on the elderly.

2. Doctor specializing in family medicine is the doctor with background in family medicine.
3. Nurse specializing in medical record work on medical record with ability to search for the elderly's information, skills in information and the sick's information storage system. (2 persons)
4. Nurses with at least 1 year experience in taking care of the elderly work as nurses in medicine ward and take care of the elderly admitted in the ward.
5. Social worker with at least 1 year experience in working with the elderly is a nurse responsible for treatment rights and cost information of the treated elderly.
6. Nurse specializing in taking care of the elderly at Pritvej Homecare is the head of the center of the care of the elderly at Pritvej Homecare with 7 years experience in taking care of the admitted elderly.
7. Physical therapist is responsible for physical therapy for inpatient and outpatient cares.

**The key informants at Queen Sirikit Naval Hospital with the following duties:**

1. Executive responsible for the elderly is chairman of operation and management committee and responsible for management in club for the elderly.
2. Expert on club for the elderly is a nurse responsible for management of clinic for the elderly and club for the elderly.
3. Home visit nurses, one is head home visit nurse of bedridden patients suffering from chronic diseases, and the other is home visit nurse. (2 persons)
4. Nurses with at least 1 year experience in the elderly's care are nurses with M.A. degree in care of the elderly with experience in the care of the elderly in medical ward. (2 persons)
5. Social worker with at least 1 year experience in the elderly's care are nurses responsible for treatment rights and cost information of the treated elderly.
6. Physical therapist responsible for physical therapy for inpatient and outpatient cares.

7. Chairman of the club for the elderly is an elderly elected as chairman of the club for the elderly at Queen Sirikit Naval Hospital.

### 3.3 Tools for data collection

#### 3.3.1 Quantitative research

##### 3.3.1.1 Quantitative tools

The tools for data collection consisted of 4 parts as follows:

Part 1 Personal information of the questionnaire respondents divided into 9 questions namely gender, age, personal status, marital status, income, lodging, diseases, treatment rights, and satisfaction in services.

Part 2 Assessment form of screening of the abilities of daily living (Sutthichai Jitapunkul, Pirom Kamolratanakul, & Ebrahim, 1994) divided into 10 questions. The assessment criteria was divided into 3 groups with 20 scores as follows:

Elderly group 1 Elderly who can help themselves, others, community, and society (society engaged elderly) with over 12 scores.

Elderly group 2 Elderly who can help themselves to a certain extent (home attached elderly) with the range of 5 – 11 scores.

Elderly group 3 Elderly who cannot help themselves or disabled (bedridden elderly) with the range of 0 - 4 scores.

Part 3 Quality of life of the elderly divided into 26 questions. The tool to measure the quality of life WHOQOL-BREF THAI (Suwat Mahatnirunkul, Wirawan Tantipiwattanasakul, Wanida Pumpaisalchai, Prommanajirangkul, & Wongsuwan, 1998) consisted of the composition of the quality of life in 4 dimensions as follows:

1. Physical is individual's recognition of physical state impacting daily lives such as recognition of physical strength, recognition of happiness and comfort without pain, recognition of ability to handle physical pain, recognition of strength in daily lives namely items 2,3,4,10,11,12,24.

2. Mental is recognition of own mental state such as recognition of positive feeling of others towards themselves, their own image, self-pride, self-confidence, thoughts, memory, concentration, and decision namely items 5,6,7,8,9,23.



3. Social relation is recognition of their own relation with others, including recognition of sexual feelings, or sexual intercourse namely items 13,14,25.

4. Environment is recognition of environment impacting daily lives, convenient communication, financial sources, health care facilities and social work, opportunity to receive news or skills through trainings, recreational activities, and activities in spare time namely items 15,16,17,18,19,20,21,22.

Item 1, item 26 are the indicator in the section of overall quality of life and health but not included in the composition of the 4 dimensions.

There were 23 questions with positive meaning and 3 questions with negative meaning namely items 2, 9, 11. Each item had 5 levels that the respondents could choose.

Group 1 with 3 questions with negative meaning, and each question with the following scores: Not at all = 5, A little = 4, Fairly = 3, A lot = 2, and Mostly = 1

Group 2 with 23 questions with positive meaning, and each question with the following scores: Not at all = 1, A little = 2, Fairly = 3, A lot = 4, and Mostly = 5. The results of the scores compared to the determined regular criteria were as follows: 26 - 60 scores = bad quality of life, 61 - 95 scores = fair quality of life, and 96 - 130 scores = good quality of life.

Part 4 Demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy divided into 29 questions. The determined weight of the scores with highest demand = 4, high demand = 3, fair demand = 2, low demand = 1, no demand = 0. The results of the scores compared to the determined regular criteria were as follows: 3.21 - 4.00 scores = highest demand, 2.41 - 3.20 scores = high demand, 1.61 - 2.40 scores = fair demand, 0.81 - 1.60 scores = low demand, and 0.00 - 0.80 = no demand.

#### 3.3.1.2 Validity and reliability of quantitative tools

The quality of the tools used for data collection was investigated as follows:

##### 1) Validity

Validity of the questionnaire was undertaken by submitting the developed questionnaire to 11 experts for the investigation of Content validity consisting of experts on the elderly. The questions were considered in 3 issues namely appropriate, not sure, and not appropriate. The consideration was made if the questions

fit or in line with the definition. Recommendations were then filled by item, issue, or the whole. The method of determination used scores. If appropriate = 1 score, not certain = 0 score, and not appropriate = -1 score. The concluded scores of the questionnaire of demand of health service of IOC = 0.93. After consideration from experts, the researcher improved the questionnaire for appropriateness according to the experts' comments under recommendations of the advisors for completeness before testing the reliability of the tools as in the appendix B.

## 2) Reliability

The researcher used the screening assessment form of abilities of daily living, the questionnaire of the quality of life of the elderly, the questionnaire of the demand of health service of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy to test with 30 elderly seeking services in outpatient department at tertiary hospitals attached to the Royal Thai Navy with similar characteristics as the sample. The calculation was then undertaken to find the reliability by using the Cronbach alpha coefficient to find  $\alpha$  – coefficient. The screening assessment form of the abilities of daily living equaled .85, the questionnaire of the quality of life of the elderly equaled .87, and the questionnaire of the demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy equaled .94 as in Appendix. C.

### 3.3.2 Qualitative research

#### 3.3.2.1 Qualitative tools

The tools to collect data consisted of semi-structured interview with the objective to acquire in-depth answers. There were 8 key informants from Somdech Phra Pinklao Hospital consisting of 1 executive responsible for the elderly, 1 doctor specializing in family medicine, 1 nurse specializing in medical record, 2 nurses with at least 1 year experience in taking care of the elderly, 1 social worker with at least 1 year experience in working with the elderly, 1 nurse specializing in taking care of the elderly at Pritvej Homecare, and 1 physical therapist. There were 9 key informants from Queen Sirikit Naval Hospital consisting of 1 executive responsible for the elderly, 1 expert on club for the elderly, 2 home visit nurses, 2 nurses with at least 1 year experience in the elderly's care, 1 social worker with at least 1 year experience in the

elderly's care, 1 physical therapist, and 1 chairman of the club for the elderly. It consisted of 2 parts as follows:

Part 1 Semi-structured interview used the concept of Balanced Scorecard in conjunction with McKinsey 7 S Framework and PESTLE Analysis and used the questions by applying the research of Pisit Piriyaapun et al on the development of standards for the elderly's health care in overnight care center (Pisit Piriyaapun, Wetha Klinwichit, Paungtong Inchai, Rarcharneeporn Subgranon, & Waree Kangchai, 2015). The structure of the questions was open-ended to allow the key informants to express their opinions on the elderly's health care system at present and in the future that should be developed and analysis of GAP according to the standards as follows:

**Table 3.1** Standards of management system of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of management system of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Policy/ Social/ Legal	Control, supervision, follow-up, and performance according to the determined round
	Strategy/ System	Social/ Legal	Satisfaction of service recipients and providers
Internal Processes Perspective	Strategy/ Shared Value	Policy	Policy and shared practice in the standard, academic care or with empirical evidence
	System/ Style		Determination of internal management structure, command, role, duties, and responsibilities related to the care of the elderly
	System		Process to investigate the quality of service
	System		Transparency with accountability
Learning and Growth	Staff/ Skill		Efficient risk management
			Efficient plan to handle emergencies
			Plan to develop competency and potential of service providers responsible for the care of the elderly

**Table 3.2** Standards of operation of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of operation of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/System	<b>Policy/Social/Legal</b>	Control, supervision, follow-up, and performance according to the determined round
Stakeholder Perspective	Strategy/System	Social/Legal	Satisfaction of service recipients and service providers
	Strategy	Policy	Management to allow the elderly to jointly participate in activities
Internal Processes Perspective	System	Policy	Determination of appropriate structure, manpower, and management in accordance with the number of elderly under the care
Learning and Growth	Staff/Style	Policy	Determination of the responsible persons for the elderly
	Staff/Skill		Those dealing with the elderly must have at least 1 year experience in the care and must attend the training on the care of the elderly
	Staff/Skill	Geriatric physician	
	Staff/Skill		Physical therapist to take care of the elderly

**Table 3.3** Standards of financial management of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of financial management of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/System	Economic	Budget allocation for the elderly's health service system
Internal Processes Perspective	Strategy/System	Social/ Economic/ Social/ Legal	Control, supervision, follow-up, and performance according to the determined round
	Strategy/System	Social/Legal	Satisfaction of service recipients and service providers
	Strategy/System	Economic	Systematic financial report and submission of report at least twice a year
	Strategy/System	Policy/Legal	Internal and external audits to monitor and ensure the compliance of expenditure with the regulations

**Table 3.4** Standards of health care planning of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of health care planning of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Technology/ Social/ Legal	Control, supervision, follow-up, and performance according to the determined round
Internal Processes Perspective	Strategy/ System Shared Value	Social/ Legal	Satisfaction of service recipients and service providers
Stakeholder Perspective	Strategy/ System Shared Value	Social	Promotion of health care and family's participation in health care planning
Learning and Growth	System Staff/ Skill	Technology/ Legal	Accurate, modern, and up to date health care , and treatment must be approved
		Social	Promotion of health care and family's participation in health care planning
		Technology/ Legal	Accurate, modern, and up to date health care , and treatment must be approved

**Table 3.5** Standards of health care operation of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of health care operation of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Policy/ Social/ Technology/ Legal	Control, supervision, follow-up, and performance according to the determined round
Internal Processes Perspective	Strategy/ System Strategy/ System Strategy/ System/Style	Social/Legal  Policy  Policy/ Technology	Satisfaction of service recipients and service providers Good rehabilitation Clear empirical evidence Referrals of the elderly to nearby primary and secondary hospitals and ability to forward the information for continued treatment Team of doctors to provide advice 24 hours a day
Stakeholder Perspective	Strategy/ System/Staff Strategy/ System/Style/Staff  Strategy/ System/Style/Staff Strategy/ System	Policy/Social	Activities of social relation through cooperation with multidisciplinary professionals Activities to promote health, prevention of diseases, treatment, and rehabilitation Religious activities and activities of other important days Good rehabilitation Clear empirical evidence

**Table 3.6** Standards of medicine management of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of medicine management of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Technology/ Social/Legal	Control, supervision, follow-up, and performance according to the determined round
Internal Processes Perspective	Strategy/ System	Social/Legal	Satisfaction of service recipients and service providers
	Strategy/ System	Legal	Service system to receive prescribed medicine according to the standards of medical profession
	Strategy/ System / Staff	Legal Technology	Safety surveillance system for the use of medicine, medication error Service providers providing correct information of the use of medicine to the elderly and their relatives
Stakeholder Perspective	Strategy/ System Shared Value	Legal	The elderly receiving prescribed medicine based on the standards of medical profession
	System / Staff	Legal	The elderly and their relatives understanding information on the correct use of medicine

**Table 3.7** Standards of rights and benefits of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of rights and benefits of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Technology/ Social/ Legal	Control, supervision, follow-up, and performance according to the determined round
	Strategy/ System	Social/Legal	Satisfaction of service recipients and service providers
Internal Processes Perspective	Strategy/ System	Technology/ Legal	Speedy and timely assistance system in case of emergencies while seeking services at hospitals
	Strategy/ System	Technology/ Legal	System of notification of costs and willingness of treatment
	Strategy/ System / Style/ Staff	Technology/ Legal	The elderly and their relatives having the right to make appointment with the team of doctors and nurses to plan treatment and referral
Stakeholder Perspective	System / Staff	Technology/ Legal	The elderly receiving news on health care and information on their illness, being the reason for coming to the hospital, with easily understood language
	System / Staff	Technology/ Legal	The elderly and their relatives having the right to make appointment with the team of doctors and nurses to plan treatment and referral
	System / Staff	Legal	The elderly should be completely assisted in time of emergency



**Table 3.8** Standards of privacy and human dignity of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of privacy and human dignity of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Social/Legal	Control, supervision, follow-up, and performance according to the determined round
	Strategy/ System	Social/Legal	Satisfaction of service recipients and service providers
Internal Processes Perspective	System System	Legal	System of adherence to privacy and needs or willingness of the elderly System to keep the elderly's confidentiality. Information should be given to direct relatives only namely spouses and children
		Legal	
Stakeholder Perspective	Strategy/ System	Legal	Care based on privacy and needs or willingness of the elderly
	Strategy/ System	Legal	Keeping of the elderly's confidentiality by providing information to direct relatives only namely spouses and children
Learning and Growth	Strategy/ Staff/ Skill	Legal	The caregiver should attend trainings to acquire knowledge on protection of rights of the elderly

**Table 3.9** Standards of environment and safety of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of environment and safety of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Environment/ Legal	Control, supervision, follow-up, and performance according to the determined round
	Strategy/ System	Social/ Environment/ Legal	Satisfaction of service recipients and service providers The elderly being safe without accident
Internal Processes Perspective	Strategy	Environment/ Legal	Rules to prohibit the elderly to wear valuable belongings
Learning and Growth	Strategy/ System/ Style/ Shared Value	Environment/ Legal	Development of safe design of areas and beds, arrangement of appliances for convenient use, sufficient lights, safety everywhere especially in restrooms, rail to facilitate walking to various areas, clean location, good ventilation Development of exercise and recreational areas for the elderly Improvement of ramps and uneven paths with visible signs or symbols

**Table 3.10** Standards of service quality assurance system of tertiary hospitals attached to the Royal Thai Navy

<b>Standards of service quality assurance system of tertiary hospitals attached to the Royal Thai Navy</b>			
<b>Perspectives</b>	<b>McKinsey 7S Framework</b>	<b>PESTLE</b>	<b>Open-ended questions for expression of opinions</b>
Effectiveness Perspective	Strategy/ System	Technology/ Social/ Legal	Control, supervision, follow-up, and performance according to the determined round
Internal Processes Perspective	Strategy/ System	Social/Legal	Satisfaction of service recipients and service providers
	Strategy/ System		Formulation of policy and importance placed on development of quality of service for the elderly
Stakeholder Perspective	Strategy/ System		Service quality assurance as determined by system
	Strategy/ System/ Skill/ Shared Value	Technology	Report to the meeting of committee on the elderly
Learning and Growth	Strategy/ System/ Style/ Staff/ Skill/ Shared Value	Technology	Modern equipment with standards and circulation service system for the elderly to borrow
		Technology	Continuous development of service quality and report to the committee on the elderly
			Development of IT system to support quality of service
			Network to exchange learning on the development of quality of services among various institutes
			Research and innovation on the development of work on the elderly
			Regular personnel development

Part 2 Prioritization of development by requesting the interview respondents to give the scores of each standard by using the criteria of prioritizing the problems through 4 compositions of Clark and Othumval (Clark, 1994b), The researcher applied it in prioritizing the development as follows:

1. Size of the problems: Based on the problems, it was not possible to develop the elderly's health service system towards the excellence and therefore development was needed, with the scoring criteria as follows:

No problem at all	scoring 0 score
Size of the problem 1-25%	scoring 1 score
Size of the problem 26-50%	scoring 2 scores



### 3.3.2.2 Inspection of the quality of the tools used to collect data

The validity of the interview forms was reached by submitting the developed interview forms to the experts to investigate the content validity by using the triangulation technique, data from collection of secondary data, relevant documents and research works, and then verifying the information from the interviews. The validity of the interview forms in compliance with the appropriateness of the conceptual framework used the concept of the Balanced Scorecard in conjunction with the concepts of McKinsey 7 S Framework and PESTLE Analysis. The Delphi Method was conducted by requesting opinions from 11 experts consisting of 2 experts on environmental management for the elderly, 1 expert on geriatric psychology, 1 expert on research ethics, Naval Medical Department, 1 expert on human resource, Naval Medical Department, 3 experts on the elderly, Naval Medical Department, 1 expert on policy and plan, Naval Medical Department, 1 expert on health promotion, Naval Medical Department, and 1 nurse specializing in physical ability and health promotion, Naval Medical Department, yielding IOC = 0.92. After consideration from the experts, the researcher improved the interview forms according to the comments of the experts, and under the recommendations of the main advisor and the joint advisors. Then, the developed interview forms underwent the try out.

The researcher tested the developed interview forms with 15 officials and the elderly with similar characteristics as the key informants. The information from the analysis was submitted back to the key informants for inspection once again before concluding if there was the same understanding or the same perception of the key informants to confirm accuracy. It was also the investigation of the researcher's reliability at the same time.

#### **Process of the interviews**

1. The researcher's self-introduction with the elderly and health care officials who would be interviewed.
2. Explanation of the objectives of the interviews to the elderly and health care officials for their understanding prior to actual interviews.
3. Interviews in the order of the interview forms and use the language appropriate to the elderly but similar to the old meaning in the interview forms. Easily understood language should be used for clearer understanding.

4. The interviews should not rush for the answers from the elderly. Nor should there be leading questions to obtain the desired answers.

5. All answers were inspected for completeness. For any doubt in any answer, the elderly should be asked again prior to the interviews.

6. Customary protocol of thank you and good bye to the elderly and health care officials every time at the end of each interview.

### **3.4 Protection of the sample's rights**

This research protected the rights of those participating in the research through the committee on research ethics of the Naval Medical Department, project code RP019/62, with the approval date on 21 August 2019 and the date of the end of approval on 20 August 2020. The letter for permission was done through the hospital director. Those participating in the research were explained about the objectives of the research, process of data collection, expected benefits from the research, and signatures to willingly participate in the research, including the rights to withdraw from the research at any time without impacting on receiving services. They were also assured that their information would be kept confidential and would be disclosed by presentation of the overall information for the purpose of research only.

### **3.5 Collection of data**

For the collection of data, the researcher used different methods. For the quantitative data, recording in the questionnaire was used. As for qualitative data, the method of interviews was used, as well as recording in the questionnaire, and sound recording. The duration of data collection covered 5 months between October 2019- March 2020. The researcher conducted quantitative data collection between October- November 2019 from the elderly seeking services at the outpatient department in tertiary hospitals attached to the Royal Thai Navy by requesting permission through the hospital directors. The researcher conducted the qualitative data collection between December 2019- March 2020.

There were 8 key informants from Somdech Phra Pinklao Hospital consisting of 1 executive responsible for the elderly, 1 doctor specializing in family medicine, 1 nurse specializing in medical record, 2 nurses with at least 1 year experience in taking care of the elderly, 1 social worker with at least 1 year experience in working with the elderly, 1 nurse specializing in taking care of the elderly at Pritvej Homecare, and 1 physical therapist. There were 9 key informants from Queen Sirikit Naval Hospital consisting of 1 executive responsible for the elderly, 1 expert on club for the elderly, 2 home visit nurses, 2 nurses with at least 1 year experience in the elderly's care, 1 social worker with at least 1 year experience in the elderly's care, 1 physical therapist, and 1 chairman of the club for the elderly. The key informants were specifically chosen so that they could clearly answer the interviews and provide in-depth information. Each key informant was responsible for work on the elderly. As for the data collection, the researcher conducted the following:

1. Documentary research by studies from documents, books, textbooks on the relevant concepts, theories, and research works as a guideline to conduct the research.
2. Field study consisting of data collection through questionnaire and semi-structured interview as in the following processes:
  - 2.1 Prepare a letter from National Institute of Development Administration to seek permission to collect information in hospitals
  - 2.2 The quantitative data was collected by doing 308 face-to-face interviews with self-introduction, detailed objective explanations, and requesting for the sample to sign their consent.
  - 2.3 17 pieces of qualitative data collection with self-introduction, elaboration on the objectives, and request of the sample to sign their names admitting to participate in the research.
  - 2.4 The researcher explains to the data collection assistant by describing the data collection method in detail and in a similar way.
  - 2.5 Before collecting the data, the researcher must explain the purpose of conducting the research, patient confidentiality both quantitative and qualitative research, and sign a consent to participate in the research project which they will be able to leave the program at any time.

2.6 Verification of the data for accuracy and completeness, and data analysis conducted with statistical methods

### **Process of conducting Focus group**

Once the data from quantitative and qualitative analysis was obtained, the researcher organized Focus group sessions, one session with 8 quality key informants from Somdech Phra Pinklao Hospital and the other session with 9 key informants from Queen Sirikit Naval Hospital to offer opinions and conclude the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy with the following process:

1. The researcher contacted all the qualitative key informants from Queen Sirikit Naval Hospital and from Somdech Phra Pinklao Hospital.
2. Explanation of the objectives for organizing the Focus group and appointments made for the date and venue appropriate to each area.
3. Due to the outbreak of COVID - 19, the researcher focus group by using group lines to jointly express opinions and conclude the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy with the researcher served as moderator.
4. Customary protocol of thank you and good bye at the end of the Focus group

## **3.6 Methods of data analysis and statistics used for data analysis**

This research used the mixed quantitative and qualitative research, questionnaire, and interviews as the tools to collect data. The data was later analyzed by using the software package with the following details:

### **3.6.1 Quantitative data analysis**

Analysis of personal information, quality of life, and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy by using the Descriptive statistics to find frequency, mean, standard deviation, and using the Inferential Statistics to compare the quality of life and demand of health service of the elderly with the abilities of daily living and seeking services of tertiary hospitals



attached to the Royal Thai Navy in different areas by using the Two – way MANOVA at the statistical significance of .05, using IBM SPSS Statistics 22.

### **3.6.2 Qualitative data analysis**

1. Analysis was conducted to find the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy by using the results of the quantitative data analysis namely personal information, quality of life, and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy as the key information to support the other 17 key informants using the process of interviews and recorded information from the focus group discussion, recordings of sound and pictures, as well as the use of reports and conducted the content analysis of the information, using QDA Miner Lite and determining the thematic analysis in reaching the conclusion of the main issues used to consider the possibility of interpretation, in parallel with the advisors' recommendations.

2. Determination of the conceptual framework: The development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy was based on the guideline of determination of the conceptual framework under the 4 perspectives and according to the 3 groups of the elderly namely society engaged elderly, home attached elderly, and bedridden elderly. The information was summarized and interpreted and the tables were set up for comparison and conclusion.

The researcher inspected the accuracy and reliability of the results of the analysis as follows:

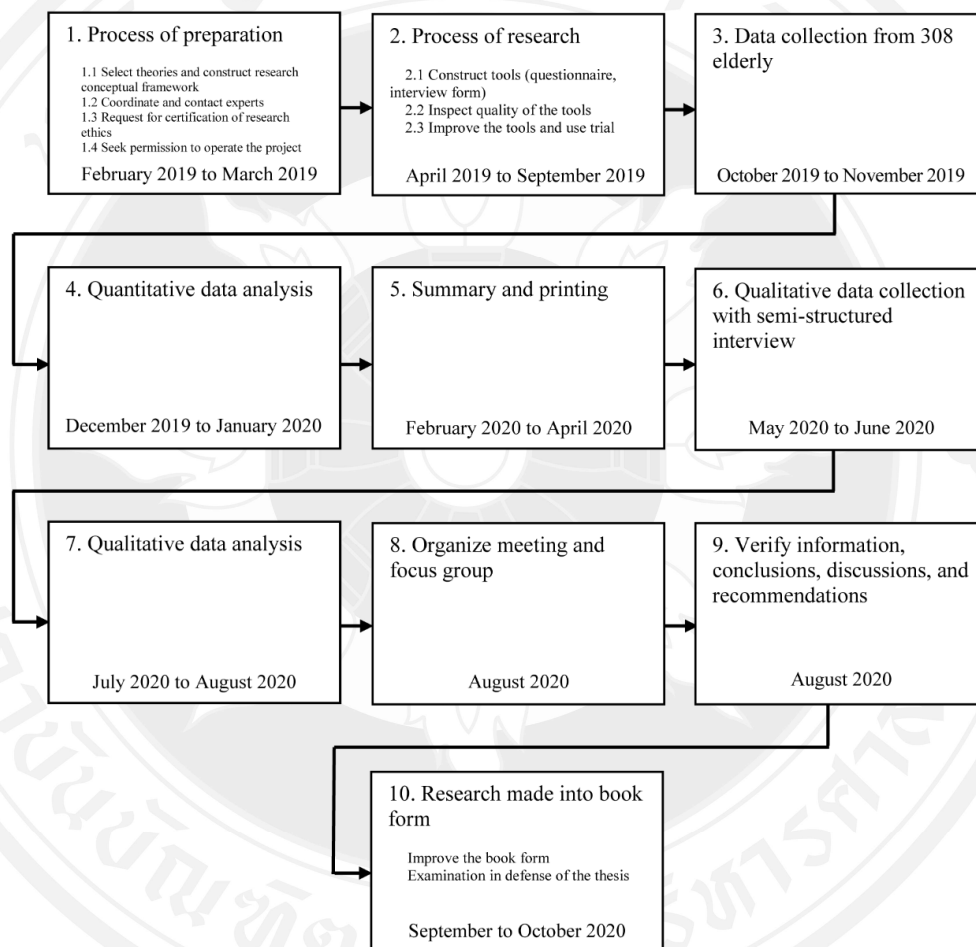
1. Internal inspection by looking back if the obtained information and methods of obtaining the information were appropriate or of good quality, and if the process of data analysis followed the strict principles

2. External inspection by using the methods of the Playback Method from the key informants by holding meetings with important people and people relevant to the development of the elderly's health service system

3. Conformability: As for the inspection of the accuracy of the researcher, the information from the interviews were checked with the knowledge from which the

researcher reviewed the relevant theoretical concept and research documents, and clear proof of conformability. The information from records, interviews, and transcription every time from the 17 key informants was printed out for the advisors to investigate on a regular basis until the information or complete analysis results were obtained.

The research covered the duration of 20 months from February 2019 to October 2020 with the operation process as shown in Figure 3.3.



**Figure 3.5** Duration of research

## **CHAPTER 4**

### **RESULTS**

The research of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy used the mixed quantitative and qualitative research, studied the quality of life, and demand of the health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy, and compared the quality of life and demand of the health service of the elderly with different abilities of daily living, and seeking services in tertiary hospitals attached to the Royal Thai Navy in different areas, as well as synthesized the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The sample included 308 elderly seeking services in the outpatient department of tertiary hospitals attached to the Royal Thai Navy namely Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital, 17 key informants consisting of executives responsible for the elderly, doctor specializing in family medicine, nurse specializing in medical record, nurses with at least 1 year experience in taking care of the elderly, social workers with at least 1 year experience in working with the elderly, nurse specializing in taking care of the elderly at Pritvej Homecare, physical therapist, expert on the club for the elderly, home visit nurses, and chairman of the club on the elderly. The information was collected between October 2019-March 2020. The researcher presented the research results as follows:

4.1 Current health service system for the elderly of tertiary hospitals attached to the Royal Thai Navy

4.2 Quality of life and the elderly's demand of health service were divided into 2 topics as follows:

4.2.1 Quality of life and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy

4.2.2 Comparison of quality of life and demand of health service of the elderly with different abilities of daily living and services of tertiary hospitals attached to the Royal Thai Navy in different areas

4.3 Assessment of the elderly's health system of tertiary hospitals attached to the Royal Thai Navy

4.4 Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy

#### **4.1 Current health service system for the elderly of tertiary hospitals attached to the Royal Thai Navy**

Based on the study of the documents on geriatrics of the care of the retired government officials and their families of Naval Medical Department by the Committee on knowledge management , Naval Medical Department (Committee on knowledge management, 2017), the researcher concluded that the latest handbook of knowledge on geriatrics was the policy of the Royal Thai Navy in 2016 on manpower Item 5 Knowledge management on the application of an organization's best practice to develop work process of the Royal Thai Navy to upgrade readiness in performing work and move towards knowledge and innovation organization. The handbook consisted of Section 1 Arrangement of service system for the elderly with 4 chapters in total namely:

Chapter 1 Promotion of the elderly's health consisting of the sub items namely 1.1) Activities of the club for the elderly 1.2) Vaccination against the diseases necessary to the elderly

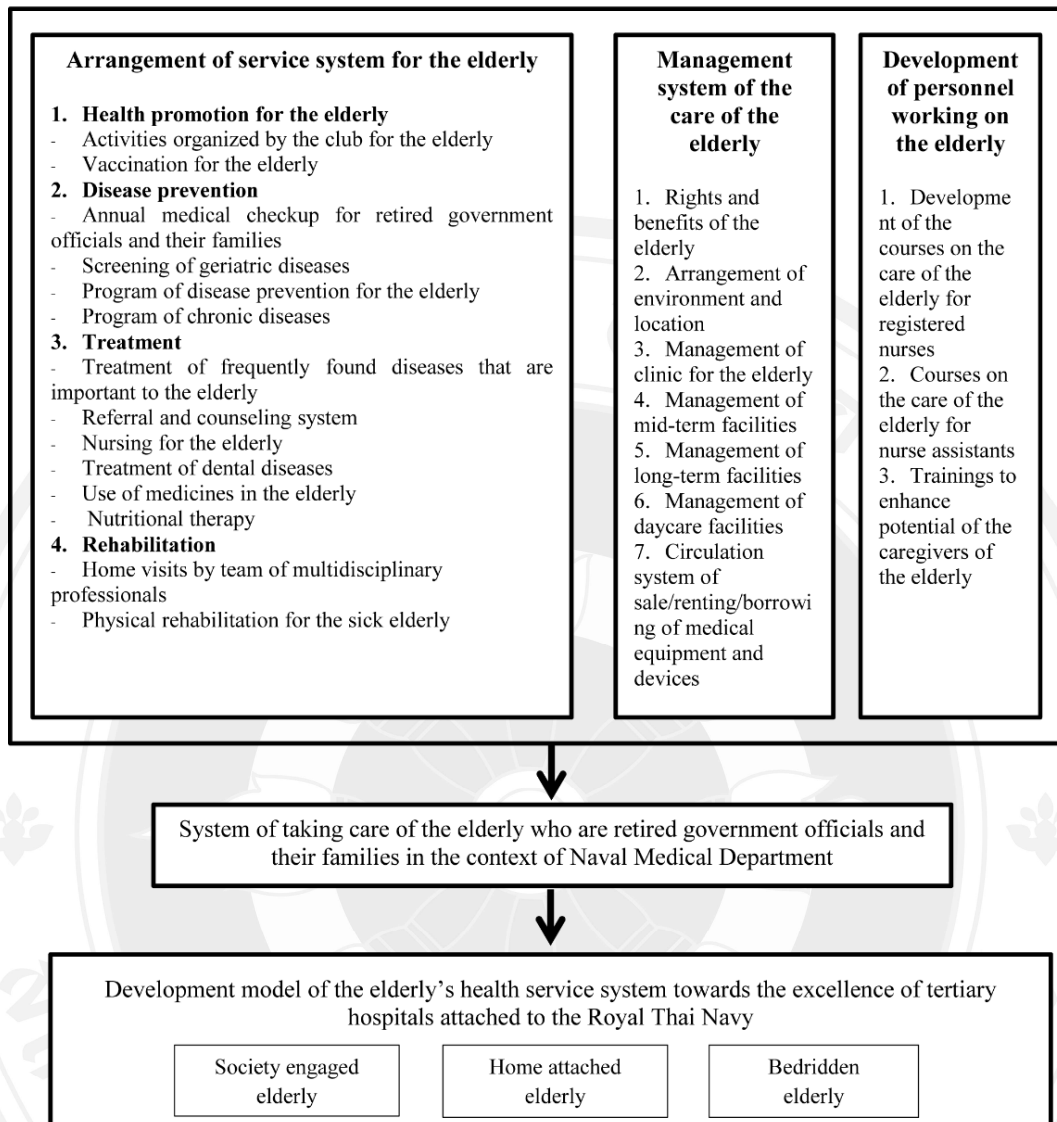
Chapter 2 Prevention of diseases for the elderly consisting of the sub items namely 2.1) Annual medical checkup for retired government officials and their families 2.2) Screening of the illnesses particular of the elderly 2.3) Program of behavior management of prevention and mitigation of urinary incontinence for the elderly seeking services in Queen Sirikit Naval Hospital 2.4) Screening of the enlarged prostate gland at Queen Sirikit Naval Hospital 2.5) Work on osteoporosis 2.6) Program of prevention of illnesses frequently found in the elderly with risk of diabetes 2.7)

Guideline of the care and the prevention of the risk of dementia in the elderly 2.8)  
Prevention of the risk of falling

Chapter 3 Treatment of geriatric diseases consisting of the following sub items  
3.1) Process of work and control of oral infection of the patient before heart valve surgery 3.2) Appropriate food for the elderly 3.3) Cataract surgery without overnight stay 3.4) Treatment of the elderly with loss of hearing from inner ear 3.5) Problems of the use of medicines for the elderly with multiple medicine intake 3.6) Thai traditional medicine and care of the elderly 3.7) Home visits of the elderly with complications

Chapter 4 Rehabilitation for the elderly consisting of the following sub items  
4.1) Exercise in water 4.2) Physical therapy for the elderly and 4.3) Rehabilitation program and promotion of health care for the elderly  
Section 2 Management system of the care of the elderly consisting of the following sub items  
1) Guideline to arrange for special channel for the elderly at Queen Sirikit Naval Hospital 2) Referral system of the elderly for consultation of the illness requiring treatment in specializing department 3) Guideline to provide services of the clinic for the elderly 4) Care of the elderly in wards and 5) Appropriate environment for the elderly in hospital and at home  
Section 3 Development of personnel on the elderly consisting of the following sub items  
1) Training to enhance potential of caregivers of the elderly 2) Courses on the care of the elderly for nurse assistants and 3) Development of courses and instruction on nursing of the elderly for registered nurses. They are mostly operated by Queen Sirikit Naval Hospital as the activities are provided in the club for the elderly and the clinic for the elderly. As for Somdech Phra Pinklao Hospital, there is operation of the overnight center for the care of the elderly.

Based on the study of the mentioned documents, the researcher concluded that the Committee of knowledge management, Naval Medical Department, compiled and screened the data processing from hospitals under Naval Medical Department. In the current context of Naval Medical Department, it is the system to take care of the retired government officials and their families under Naval Medical Department. The system can be concluded to link to the development of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy as in Figure 4.1.



**Figure 4.1** Geriatric knowledge connects to the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy

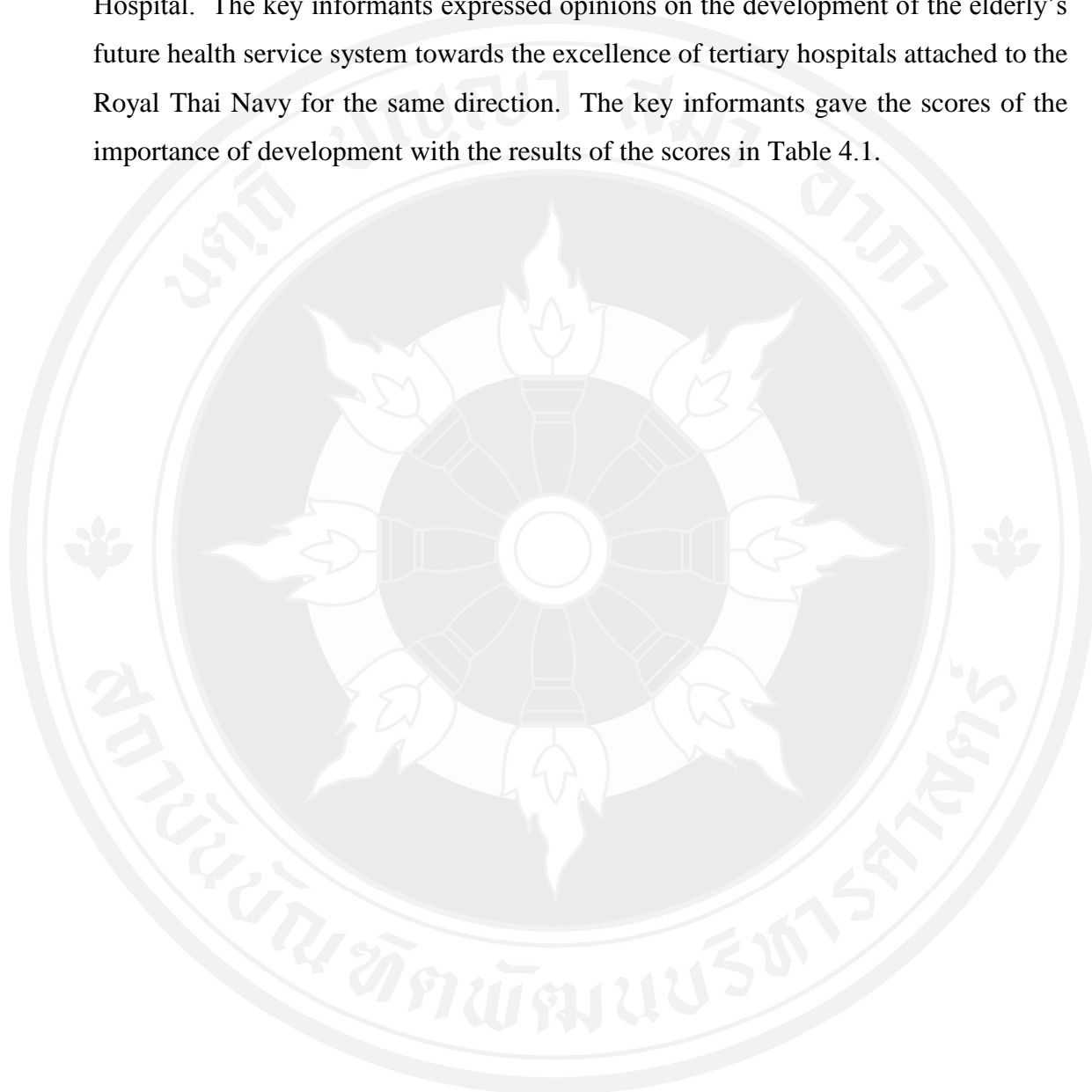
Based on the handbook of geriatric knowledge (Committee on knowledge management, 2017) which was in line with the mission of Naval Medical Department, the researcher concluded that the construction of the best practice of process could apply the knowledge in the same direction for both Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. Apart from taking care of the elderly who are retired government officials and their families, it can be applied to civilian officials seeking services in the hospital.

Based on the research, the researcher collected data from 308 elderly seeking services at the outpatient department in tertiary hospitals attached to the Royal Thai Navy namely Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The data analysis revealed that the elderly who sought services the most were civilians or 67.86 percent. Therefore, the researcher conducted the synthesis of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy to respond to the health demand of the elderly including retired government officials, retired civilian officials, and general civilians. The analysis of the comparison of the elderly seeking services in tertiary hospitals in different areas and with different abilities of daily living revealed that the overall demand of health service was not different. Therefore, the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy should be in the same direction, by dividing into the society engaged elderly, home attached elderly, and bedridden elderly to respond to the needs of health service based on the elderly's abilities of daily living and will be a sustainable model with clear, and concrete operation.

The results of the semi-structured interview used the concept of Balanced Scorecard in conjunction with McKinsey 7S Framework and PESTLE Analysis, and used the questions with application from the research of Pisit Piriya Pun et al. (2015) on the development of standards of the elderly's health care in an overnight center. It consisted of 10 standards namely standards of management, standards of operation, standards of financial management, standards of health care planning, standards of health care operation, standards of medicine management, standards of rights and benefits, standards of privacy and human dignity, standards of environment and safety, and standards of quality assurance system for services with open-ended questions. The study was also conducted of geriatric knowledge on the system of the care of the elderly who are retired government officials and their families in the context of Naval Medical Department. The key informants expressed their opinions on the current system of the elderly's health service in tertiary hospitals. The analysis of the differences between the current system of the elderly's health service and the future system requiring development according to the standards (GAP) revealed the following:

#### 4.1.1 Standards of management system

Based on the information from the interviews on the standards of management system, the researcher concluded the results of the interviews through the current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The key informants gave the scores of the importance of development with the results of the scores in Table 4.1.





**Table 4.1** Results of the interviews on the standards of management system

Standards of management system	Current management system of Somdech Phra Pinklao Hospital	Current management system of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Control, supervision, and follow-up, and performance assessment according to the determined round	Assessment of Pritvej Homecare center for the elderly according to the determined round by the team of Somdech Phra Pinklao Hospital	Assessment of clinic for the elderly and club for the elderly according to the determined round but the standard criteria of Ministry of Public Health has not been used	Geriatric center, Naval Medical Department, should be established to serve as the center of operation on the elderly, provide counseling on control, supervision, follow-up, coordination of network, and assessment of operation on the elderly's health service system of the Royal Thai Navy	Geriatric center, Naval Medical Department, should be established to serve as the center of operation on the elderly, provide counseling on control, supervision, follow-up, coordination of network, and assessment of operation on the elderly's health service system of the Royal Thai Navy	231
2. Satisfaction of service recipients and service providers	Operation on Pritvej Homecare center for the elderly to respond to the needs of the elderly without relatives to take care of them 24 hours a day	- Convenient and speedy operation of clinic for the elderly and club for the elderly for those seeking treatment with convenience and speed - System of satisfaction	-Policy should be formulated on services for the elderly, establishment of clinic for the elderly and one stop service for convenience and speed - There should be satisfaction assessment of services for the society engaged elderly, home attached elderly, and bedridden	- Meeting room should be provided for the club for the elderly - There should be satisfaction assessment of services for the society engaged elderly, home attached elderly, and bedridden	

Table 4.1 (Continued)

Standards of management system	Current management system of Somdech Phra Pinklao Hospital	Current management system of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
3. Policy and shared practice of the care with standards based on academic principles or empirical evidence	<p>Policy not yet formulated for concrete health service for the elderly between Committee on the elderly and Committee on the elderly's affairs. The problem found is that when operation on the elderly is required, there is overlapping role of which agency should be responsible</p>	<p>assessment</p> <p>- Clinic for the elderly and club for the elderly set up a task force on geriatrics of the agency with representatives of multidisciplinary professionals but without clear model of management</p> <p>- For the past home visits of bedridden elderly, no clear management system on the work on the elderly, and specific role and</p>	<p>Somdech Phra Pinklao Hospital society engaged elderly, home attached elderly, and bedridden elderly</p> <p>Queen Sirikit Naval Hospital elderly</p> <p>- Policy should be formulated on work on the elderly from highest ranking executive of the Royal Thai Navy</p> <p>- Geriatric Medical Center, Naval Medical Department, should be set up</p> <p>- Geriatric Medical Center, Naval Medical Department, should be set up</p> <p>- Meeting room should be provided for the elderly and club for the elderly</p> <p>- Meeting room should be used as waiting room before meeting doctor so not convenient for meetings</p>	

Table 4.1 (Continued)

Standards of management system	Current management system of Somdech Phra Pinklao Hospital	Current management system of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
4. Determination of appropriate manpower and management structure in accordance with the number of the elderly under the care	No policy yet formulated on manpower and management structure specifically for the elderly	Sirikit Naval Hospital	<p>Somdech Phra Pinklao Hospital</p> <p>Queen Sirikit Naval Hospital</p> <p>responsibilities not yet formulated for the work on the elderly, but focus on the patients with chronic diseases only</p> <p>- There is still no office or meeting room for the elderly</p> <p>Internal management structure should be determined, role, duties, responsibilities should be determined for work on the elderly</p>	Policy should be formulated for the long-term care system for the elderly and overnight center of the elderly's health care for retired government officials or general civilians without caretaker

Table 4.1 (Continued)

Standards of management system	Current management system of Somdech Phra Pinklao Hospital	Current management system of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
5. Process to inspect the quality of services, transparency and accountability	Process to inspect the services provided at Pritvej Homecare center of the elderly twice a year	Process to inspect the services provided at clinic for the elderly and club for the elderly twice a year	System to inspect the services provided at center for the elderly according to the standards	System to inspect the services provided at center for the elderly and club for the elderly according to the standards	
6. Efficient risk management system and efficient plan to deal with emergencies	Not yet clear risk management system on work for the elderly. And for risk management, information is not updated.	Knowledge management on guideline to prevent risk of dementia in the elderly and prevent risk of falling	Principle of risk management should be applied for the patients in general to the work on the elderly and information is regularly updated	Continuously develop the work on quality prevention of falling which is an indicator of safety	
7. Plan to develop competency and potential of service providers responsible for	Pritvej Homecare has a plan to develop competency and potential of all caretakers of the elderly	Plan to develop competency and potential of caretakers of the elderly by preparing an operation handbook	- Plan should be formulated specifically on the elderly as at present, there is no geriatric physician -Plans should be formulated to	- Plan should be formulated specifically on the elderly as at present, there is no geriatric physician -Plan should be formulated to	

Table 4.1 (Continued)

Standards of management system	Current management system of Somdech Phra Pinklao Hospital	Current management system of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
the care of the elderly			<p><b>Somdech Phra Pinklao Hospital</b>      <b>Queen Sirikit Naval Hospital</b></p> <p>develop the potential of caretakers of the bedridden elderly requiring assistance in of daily living such as nasogastric tube feeding, suction, oxygenation, indwelling catheter care, care to prevent bed sores</p>	
		<p>on the elderly. At present, there are not sufficient officials to work on the elderly. Whenever there are activities, officials from other units are requested to render assistance.</p>	<p>develop potential of caretakers of the bedridden elderly requiring assistance in complicated abilities of daily living such as nasogastric tube feeding, suction, oxygenation, indwelling catheter care, care to prevent bed sores</p>	

Based on the information from the interviews on the standards of management system, it was found that the current operation of Somdech Phra Pinklao Hospital provided Pritvej Homecare overnight center for the elderly. Most service recipients are bedridden elderly without relatives to take care of them 24 hours. Queen Sirikit Naval Hospital provided the clinic for the elderly with special channel for convenience and speed of the elderly seeking services such as medical record, annual medical checkup, fasting blood sugar, blood count, lipid profile, dementia, nutrition, assessment of the use of medicine, screening of urinary incontinence, and falling, as well as the club for the elderly which was a place of members to socialize and participate in activities useful to themselves and others to forge familiarity, fondness, unity, cheerfulness, without loneliness, and happiness. The main activities included religious activities, recreational activities, activities of health promotion with lectures, activities to generate income, traditions, local cultures, and local wisdom, tourism, service mind by singing to get donations to buy medical devices for the hospital. This club used the clinic for the elderly to organize meetings of the club.

The problem that was found included: Both hospitals formulated the unclear policy of structure of manpower and position of management specifically on the elderly. An executive at Queen Sirikit Naval Hospital said “ *The policy of the work on the elderly is still not in the same direction. The Committee on the elderly is set up but changes according to transfer. There is no geriatric physician. There is no clear system of risk management on the elderly and the risk management has not updated the information.*” At present, the nurses with background in the elderly are scattered in various wards in the hospital and do not regularly work on the elderly. Whenever there is an activity organized by the club or other work involving the elderly, the activity organizer will seek assistance of officials in other units in the hospital to help with the activity. A nurse with experience in taking care of the elderly said “*The operation with one center requires the setting up of a Geriatric Medical Center, Naval Medical Department, as a center of control, supervision, follow-up, and coordination with network, regular update of risk management in the elderly, and assessment of performance of the elderly’s health service system of the Royal Thai Navy and of work on the elderly of Naval Medical Department.*”

#### 4.1.2 Standards of operation

Based on the information from the interviews on the standards of operation, the researcher concluded the results of the interviews through the current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed their opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of the importance of development are shown in Table 4.2.



**Table 4.2** Results of the interviews on the standards of operation

Standards of operation	Current operation of Somdech Phra Pinklao Hospital	Current operation of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Control, supervision, follow-up, and performance assessment according to the determined round	System of control, supervision, follow-up, and performance assessment of Pritvej Homecare center twice a year	System of control, supervision, follow-up, and performance assessment of the clinic for the elderly and the club for the elderly	There should be practice based on standards and determination of similar indicators for both hospitals	There should be practice based on standards and determination of similar indicators for both hospitals	229
2. Satisfaction of service recipients and service providers	System of satisfaction assessment but not separate for the elderly	System of satisfaction assessment of the clinic for the elderly	There should be similar standard assessment form of satisfaction for both hospitals	There should be similar standard assessment form of satisfaction for both hospitals	
3. Management to enable the elderly to participate in	No club for the elderly	The club for the elderly organizes activities twice a month according to	There should be activities of health promotion of society engaged elderly to participate in activities	Potential should be built to enable the elderly to have the ability to manage the club	



**Table 4.2 (Continued)**

Standards of operation	Current operation of Somdech Phra Pinklao Hospital	Current operation of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (full scores of 272)
activities			<b>Somdech Phra Pinklao Hospital</b> <b>Queen Sirikit Naval Hospital</b>	
4. Determination of appropriate structure and manpower, and management in line with the number of the elderly under the care	General patient division has not determined the manpower specifically for the elderly only at Pritvej Homecare center	the timetable of activities and meetings of committee of the club for the elderly are held with chairman of the club Officials assisting in the work of the club for the elderly come from many fields and many departments and not regular officials	There should be common value in the work on the elderly to determine the appropriate structure of manpower for work on the elderly Sufficient personnel should be provided to work on the elderly because they must leave their regular work to help with the elderly	
5. Determination of those	At present, there is no Geriatric Medical	At present, there is no Geriatric Medical	Geriatric Medical Center, Naval Medical Center, should be set up as a	Regular officials should be sufficiently arranged to work on the

Table 4.2 (Continued)

Standards of operation	Current operation of Somdech Phra Pinklao Hospital	Current operation of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (full scores of 272)
responsible for work on the elderly	Center, Naval Medical Department, only	Center, Naval Medical Department, only	center to connect the network and coordinate with the elderly of the 4 hospitals attached to the Royal Thai Navy	
6. Caregivers of the elderly must have at least 1 year experience in the care and must attend the training on the elderly's care	Center, Naval Medical Department, only Committee on the elderly Privej Homecare center arranges for 15 officials, 1 manager with the management ratio of 1:5. 100% officials attended 70 hours of training on the care of the elderly.	Officials at the clinic for the elderly and the club for the elderly are geriatric nurses but other officials must be requested from other departments when organizing activities	Continuous trainings should be organized for officials taking care of the elderly Trainings should be organized for officials taking care of the elderly and officials should be sufficiently arranged for regular work to accommodate the number of the elderly seeking services	
7. Geriatric physician	No geriatric physician	No geriatric physician	Demand to develop potential of those responsible for the care of the elderly, including doctors, nurses, and	Demand to develop potential of those responsible for the care of the elderly, including doctors, nurses,

Table 4.2 (Continued)

Standards of operation	Current operation of Somdech Phra Pinklao Hospital	Current operation of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (full scores of 272)
8. Physical therapist to take care of the elderly	No physical therapist to take specific care of the elderly	No physical therapist to take specific care of the elderly	<p>Somdech Phra Pinklao Hospital</p> <p>officials to enhance knowledge and ability specifically on the elderly</p> <p>Queen Sirikit Naval Hospital</p> <p>and officials to enhance knowledge and ability specifically on the elderly Physical therapist should be assigned to attend training on the knowledge of the elderly</p>	

Based on the information from the interviews on the standards of operation, it was found that Pritvej Homecare center of Somdech Phra Pinklao Hospital had manpower of 15 persons and 1 manager with the management ratio of 1 : 5 . All officials attended 70 hours of training courses on the care of the elderly. There was system of control, supervision, follow-up, and performance assessment twice a year. As for the clinic for the elderly and the club for the elderly of Queen Sirikit Naval Hospital, activities were organized twice a month. Meetings of the committee of the club on the elderly were held under the operation of the chairman of the club.

The problems that were found included: Officials helping with the club for the elderly came from many fields and many departments, not regular officials. At present, there was no center of overall administration and coordination with the elderly of Naval Medical Department. There were only committees on the elderly separated between both hospitals. An expert on the club for the elderly said, *“The officials at the clinic for the elderly and the club for the elderly are geriatric nurses. But other officials are requested from other departments for assistance in the club activities”* A chairman of the club for the elderly said, *“There is no meeting room for the committee of the club for the elderly at Queen Sirikit Naval Hospital. At present, the committee uses the meeting room in the outpatient room of the clinic for the elderly. The problem is that it is not convenient to hold meetings because in the room where there are lot of elderly who register for medical record and wait to see the doctors.”* At present, the examining doctors are specialized doctors but not geriatric physicians and there is no physical therapist specifically for the elderly.

#### **4.1.3 Standards of financial management**

Based on the information from the interviews on the standards of financial management, the researcher concluded the results of the interviews through the current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly’s future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of the importance of development as shown in Table 4.3.

**Table 4.3** Results of the interviews on the standards of financial management

Standards of financial management	Current standards of financial management of Somdech Phra Pinklao Hospital	Current standards of financial management of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Budget allocation for the elderly's health care system	<ul style="list-style-type: none"> <li>- Budget allocation for the elderly's health care system is not clear</li> <li>- Budget of Pritvej Homecare center is under the supervision of the hospital's welfare.</li> <li>The need to use the budget requires many processes of payment, and procurement</li> </ul>	<ul style="list-style-type: none"> <li>- Budget allocation for the elderly's health care system is not clear</li> <li>- The elderly in the club for the elderly earn money into the club by volunteers for singing in front of the outpatient department and give the donation to the hospital to purchase medical devices</li> </ul>	<ul style="list-style-type: none"> <li>Naval Medical Department should seek external budget to support work for the elderly such as budget from the Ministry of Public Health</li> </ul>	<ul style="list-style-type: none"> <li>Royal Thai Navy should allocate budget to support work on the elderly</li> </ul>	189
2. Control, supervision, follow-up,	<ul style="list-style-type: none"> <li>System to monitor the budget expenditure twice a year</li> </ul>	<ul style="list-style-type: none"> <li>System to monitor the budget expenditure twice a year</li> </ul>	<ul style="list-style-type: none"> <li>Financial information should be arranged to monitor the operation</li> </ul>	<ul style="list-style-type: none"> <li>Financial information should be arranged to monitor the operation</li> </ul>	

**Table 4.3 (Continued)**

Standards of financial management	Current standards of financial management of Somdech Phra Pinklao Hospital	Current standards of financial management of Queen Sirikit tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
		Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
and performance assessment according to the determined round				
3.Satisfaction of service recipients and service providers	No satisfaction financial management	No satisfaction assessment yet for financial management	Satisfaction assessment should be undertaken for the officials working on the elderly	Demand to set up registration of incoming and outgoing information on the elderly for future use
4.Systematic financial reporting and report at least twice a year	Pritvej Homecare center provides systematic financial reporting twice a year	Clinic for the elderly and club for the elderly provide systematic financial reporting twice a year	Financial information should be established for monitoring of operation	Financial information should be established for monitoring of operation
5.Internal	Pritvej Homecare center	Clinic for the elderly	Financial information should be	Financial information should be

Table 4.3 (Continued)

Standards of financial management	Current standards of financial management of Somdech Phra Pinklao Hospital	Current standards of financial management of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
and external audit units to monitor the expenditure which is in compliance with regulations	provides financial audit system twice a year	and club for the elderly provide financial audit system twice a year	Somdech Phra Pinklao Hospital established to monitor operation	Queen Sirikit Naval Hospital established to monitor operation

Based on the information from the interviews on the standards of financial management, it was found that at present the club for the elderly earned money by volunteering to sing as the club members and used the donation to buy medical equipment for Queen Sirikit Naval Hospital.

The problems that were found included: Naval Medical Department did not have clear policy on financial management in operating the work on the elderly. There still lacked budget for concrete operation. An executive responsible for the elderly said, “*Naval Medical Department should write a proposal plan to request budget from the Royal Thai Navy and supporting budget from Ministry of Public Health to work on the elderly.*”

#### **4.1.4 Standards of health care planning**

Based on the information from the interviews on the standards of health care planning, the researcher concluded the results of the interviews through current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly’s future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of the importance of development are shown in Table 4.4.



**Table 4.4** Results of the interviews of standards of health care planning

Standards of health care planning	Current health care planning of Queen Sirikit Naval Hospital Somdech Phra Pinklao Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
		Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital
1. Control, supervision, follow-up, and assessment of operation according to the determined round	System put in place for control, supervision, follow-up, and assessment of operation of Pritvej Homecare center twice a year	System put in place for control, supervision, follow-up, and assessment of both hospitals	Standards should be complied with and similar indicators determined for both hospitals
2. Satisfaction of service recipients and service providers	Pritvej Homecare center for the elderly without having relatives to take care of them	Clinic for the elderly and club for the elderly	System put in place for satisfaction assessment but not specifically for the elderly
3. Promote health care	Health planning by encouraging	Some groups of the elderly are absent and development of the process	Those responsible for work on the elderly must

Table 4.4 (Continued)

Standards of health care planning	Current health care planning of Queen Sirikit Naval Hospital Somdech Phra Pinklao Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
and encourage families to participate in health care planning	families to participate in the care through process of discharge. The problem is discontinuity in continuous health care.	they do not come to seek services at hospital for referral in view of continuous health care	conduct survey of population census of the elderly's residences so that the officials can participate in planning of care
4. Health care is accurate, modern, and up to date. It must receive the approval to be treated.	Pritvej Homecare center encourages relatives to participate in the care such as cleaning or feeding until 8 pm. Some well off elderly will pay physical	Some elderly not using line may have difficulty to communicate and receive information and news on health care promotion. Some home attached elderly	Health care promotion should be developed to acquire knowledge on the care of the elderly

Table 4.4 (Continued)

Standards of health care planning	Current health care planning of Queen Sirikit Somdech Phra Pinklao Hospital	Current health care planning of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
therapist for rehabilitation message. Most of the patients who make overnight stay at the center are well off.	Somdech Phra Pinklao Hospital	Naval Hospital	Somdech Phra Pinklao Hospital      Queen Sirikit Naval Hospital	
and bedridden elderly do not have knowledgeable caregivers.				

Based on the information from the interviews on the standards of health care planning, it was found that internal medicine wards, surgical wards, obstetrics and gynecology wards, and other wards of both hospitals provided health planning by encouraging families to participate in health care through process of discharge of the patients to go home. But there was discontinuity when some groups of the elderly were absent and do not come back for the doctors' appointment. In case of the bedridden elderly, Pritvej Homecare center of Somdech Phra Pinklao Hospital encouraged relatives to participate in the care such as cleaning or feeding until 8 pm. The center did not allow relatives to spend the night at the center.

The problem that was found included: The case of the society engaged elderly seeking services at the club for the elderly of Queen Sirikit Naval Hospital, a chairman of the club for the elderly said, *“Some elderly do not use the line and may have difficulty with communication and reception of information and news on health care promotion as the club for the elderly has set up a line group to communicate about health news.”* An executive on the elderly said, *“The home attached elderly who do not back on doctors' appointment are absent and cannot be contacted.”*

#### **4.1.5 Standards of health care operation**

Based on the information from the interviews on the standards of health care operation, the researcher concluded the results of the interview through current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of the importance of development are shown in Table 4.5.

**Table 4.5** Results of the interviews on the standards of health care operation

Standards of health care operation	Current health care operation of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital (Full scores of 272)
1. Control, supervision, follow-up, and performance assessment according to the determined round	System put in place for control, supervision, follow-up, and performance assessment of Pritvej Homecare center twice a year	System put in place for control, supervision, follow-up, and performance assessment of the clinic for the elderly and the club for the elderly	Practice should comply with standards and similar indicators are determined for both hospitals
2. Satisfaction of service recipients and service providers	The elderly admitted at Pritvej Homecare center in case their children do not have time to take care of them participate in activities as much as they can as most of them are bedridden	The elderly participate in useful activities organized by the club for the elderly such as lectures on health. There is also a special channel for the elderly for their convenient and fast services	Number of beds should be increased to accommodate more members of Pritvej Homecare as there is an increasing number of the elderly and their relatives do not have time to take care of them
			There should be sufficient officials specializing in the elderly to work in the clinic for the elderly and the club for the elderly

**Table 4.5 (Continued)**

Standards of health care operation	Current health care operation of Queen Sirikit Naval Hospital		Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Queen Sirikit Naval Hospital	
3.Rehabilitation based on good guideline with clear empirical evidence	No clear empirical evidence of rehabilitation	No clear empirical evidence of rehabilitation	Manpower to work on the elderly should be developed to acquire specific knowledge on the elderly	Manpower to work on the elderly should be developed to acquire specific knowledge on the elderly	
4.System of referral of the elderly for health services to nearby primary and secondary hospitals and sending of information for continuous treatment	When the elderly are discharged from hospital, there is no system of referral for continuous care, only home visit department in the case when the bedridden elderly require assistance at home	When the elderly are discharged from hospital, there is no system of referral for continuous treatment in nearly hospital. But there is home visit team to provide services. In case the elderly are not admitted at hospital, the care will not be continuous. Some elderly cannot be contacted for appointment	System should be put in place for referral at primary and secondary hospitals based on illness and potential of the hospital to accommodate continuous treatment	System should be put in place for referral at primary and secondary hospitals based on the conditions of illness and potential of the hospital to accommodate continuous treatment. Training should also be organized to transfer knowledge to the caregivers to be able to correctly take care of the bedridden elderly with complications	

Table 4.5 (Continued)

Standards of health care operation	Current health care operation of Queen Sirikit Naval Hospital		Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
5. Team of doctors provides counseling 24 hours	Pritvej Homecare center and the hospital do not have geriatric physician	Clinic for the elderly only has one physician who is family medicine physician and not geriatric physician	Physician's potential should be developed by assigning them to attend training in geriatric knowledge	Physician's potential should be developed by assigning them to attend training in geriatric knowledge	
6. Activities of social interactions in collaboration with multidisciplinary professionals	At present, the multidisciplinary professionals do not concretely work on the elderly. Nurses specializing in the elderly are scattered in different departments. When activities are organized, their assistance is requested.	Activities organized by the club for the elderly for the bedridden elderly depend on the needs of the elderly. Activities are organized for transfer of knowledge on health promotion and disease prevention.	-Linkage should be developed on the care for the bedridden elderly with the community due to rehabilitation needs	- Linkage should be developed on the care for the bedridden elderly with the community due to rehabilitation needs	

**Table 4.5 (Continued)**

Standards of health care operation	Current health care operation of		Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
7. Activities of health promotion, disease prevention, and health rehabilitation.	No clear pattern of the activities of health promotion for the society engaged elderly. The home attached elderly and the bedridden elderly will be given health advice when discharged from hospital and in case they do not receive continuous treatment.	Activities of health promotion, disease prevention, operated by the clinic for the elderly and the club for the elderly with activities twice a month	-Operations of the clinic for the elderly and the club for the elderly should include activities for health promotion, disease prevention, rehabilitation for the elderly -There should be concrete action plan	-Overnight center of the care of the elderly should be set up to enable the operation of activities for the bedridden elderly based on their abilities. - There should be concrete action plan	
8. Religious activities and other important days	In wards, activities consist in inviting monks so that the patient can make merit by offering	-The club for the elderly will organize religious activities on the appointed day of the club's activities -Songkran Festival	Center for the operation on the elderly should be set up as a center of coordination on the operation of the elderly	Center for the operation on the elderly should be set up as a center of coordination on the operation of the elderly	



Table 4.5 (Continued)

Standards of health care operation	Current health care operation of Somdech Phra Pinklao Hospital	Current health care operation of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction Somdech Phra Pinklao Hospital    Queen Sirikit Naval Hospital	Key informants gave the scores of the importance of development (Full scores of 272)
food to the monk but the wards do not have separate section for the elderly		activities organized by the department of diabetes where there are a lot of elderly diabetic patients		

Based on the information from the interviews on the standards of health care operation, it was found that the elderly participated in the activities organized by the club for the elderly which were beneficial through lecture on health promotion and disease prevention. The lecture topic depended on the needs of the elderly. The club for the elderly organized religious activities on the appointed days for the club's activities for example Songkran Festival activities organized by the department of diabetes. The clinic for the elderly also served as a special channel for convenience and speed in receiving services. The system was put in place for control, supervision, follow-up, and performance assessment twice a year.

The problems found included: There was no empirical evidence in the work of the clinic for the elderly and the club for the elderly. The nurses taking care of the elderly were scattered in various departments. With activities, assistance must be requested for the support of officials and nurses taking care of the elderly. A home visit nurse said, *“The hospital does not have the referral system for continuous care to secondary and primary hospitals, only home visit department for the bedridden elderly.”* In case the patient is not admitted in the hospital, there will be no continuous care. Some elderly are absent and cannot be contacted for appointment for continuous treatment. A nurse specializing in care for the elderly at Pritvej Homecare said, *“At present, at Pritvej Homecare, there are not enough beds to accommodate the elderly.”*

#### **4.1.6 Standards of medicine management**

Based on the information from the interviews on the standards of medicine management, the researcher concluded the results of the interview through current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of the importance of development are shown in Table 4.6.

**Table 4.6** Results of the interviews on the standards of medicine management

Standards of medicine management	Current medicine management of Somdech Phra Pinklao Hospital	Current medicine management of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Control, supervision, follow-up, and performance assessment according to the determined round	System put in place for control, supervision, follow-up, and investigation of the system of medicine management according to the round	System put in place for control, supervision, follow-up, and investigation of the system of medicine management according to the round	Practice should comply with standards and indicators should be determined for both hospitals	Practice should comply with standards and indicators should be determined for both hospitals	219
2. Satisfaction of service recipients and service providers	Fast channel to receive medicine to take home for the Royal Thai Navy officers and retired government officials	Special channel is provided that is clinic for the elderly for convenient and fast services while seeking services	There should be innovation for easy medicine intake of the elderly	There should be innovation for easy medicine intake of the elderly	
3. System put in	System of medicine	System of medicine	Knowledge should be promoted	Knowledge should be promoted	

Table 4.6 (Continued)

Standards of medicine management	Current medicine management of Somdech Phra Pinklao Hospital	Current medicine management of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
place to provide services to receive medicine based on the prescription and on the standards of medical profession	order by using computer to prevent error from medicine order	order by using computer to prevent error from medicine order	<p><b>Somdech Phra Pinklao Hospital</b>    <b>Queen Sirikit Naval Hospital</b></p> <p>on the use of medicine for the caregivers as well because some elderly cannot have complete medicine intake for the treatment especially the home attached and bedridden elderly</p> <p>on the use of medicine for the caregivers as well because some elderly cannot have complete medicine intake for the treatment especially the home attached and bedridden elderly</p>	

Table 4.6 (Continued)

Standards of medicine management	Current medicine management of		Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
4.Surveillance system for safety in the use of medicine and medication error	In case the elderly take medicine at home, it will be difficult to control. Some elderly have caregivers who are elderly themselves. So, they may not have full medicine intake according to the treatment plan.	In case the elderly take medicine at home, it will be difficult to control. Some elderly have caregivers who are elderly themselves. So, they may not have full medicine intake according to the treatment plan.	Knowledge should be promoted on the use of medicine for the elderly and their caregivers	- Knowledge should be promoted on the use of medicine for the elderly and their caregivers -Timetable is set for transfer of knowledge on the use of medicine on the day of activities organized by the club for the elderly	
5.Service provider provide the information on the correct use of medicine to the elderly and their caretakes	A team of pharmacists to give counseling on the use of medicine	A team of pharmacists to give counseling on the use of medicine	Pharmacists should ask relatives or caregivers to listen to the explanation on the use of medicine as well	Pharmacists should ask relatives or caregivers to listen to the explanation on the use of medicine as well	

Table 4.6 (Continued)

Standards of medicine management	Current medicine management of Somdech Phra Pinklao Hospital	Current medicine management of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
6.The elderly and relatives understand the information on the correct use of medicine	A team of pharmacists provides counseling on the use of medicine	A team of pharmacists provides counseling on the use of medicine	There should be innovation on the easier use of medicine for the elderly	There should be innovation on the easier use of medicine for the elderly	

Based on the information from the interviews on the standards of medicine management, it was found that both hospitals provided the system of control, supervision, and investigation of medicine management according to the determined round, fast channel to receive medicine for the officers of the Royal Thai Navy and retired officers of both hospitals, system of medicine order with computer to prevent error from medicine order. Queen Sirikit Naval Hospital had a special channel namely the clinic for the elderly for convenient and fast services when seeking services at the hospital. A team of pharmacists also provided counseling on the use of medicine.

The problem that was found included: The case when the elderly took medicine at home, it would be difficult to control. A home visit nurse said, “*Some elderly have the caregivers who are elderly themselves. So, the sick elderly do not get full medicines based on treatment plan.*”

#### **4.1.7 Standards of rights and benefits**

Based on the information from the interviews on the standards of rights and benefits, the researcher concluded the results of the interviews through current synthesis from Somdech Phra Pinkla Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly’s future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of importance of development are shown in Table 4.7.

**Table 4.7** Results of the interviews on the standards of rights and benefits

Standards of rights and benefits	Current rights and benefits of Somdech Phra Pinklao Hospital	Current rights and benefits of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informant gave the scores of the importance of development (Full scores of 272)
			<b>Somdech Phra Pinklao Hospital</b> <b>Queen Sirikit Naval Hospital</b>	
1. Control, supervision, follow-up, and performance assessment according to the determined round	1. Control, supervision, follow-up, and performance assessment according to the determined round	1. Control, supervision, follow-up, and performance assessment according to the determined round	- Develop work on investigation of rights - Officials should be assigned to study laws on protection of the elderly	187
2.Satisfaction of service recipient and service providers	Equal services for all rights of treatment	Equal services for all rights of treatment	Officials should study the rights and benefits that the elderly are entitled to and provide information to relatives or caregivers	Officials should study the rights and benefits that the elderly are entitled to and provide information to relatives or caregivers
3.System to render fast, and	Officials at the emergency department	Officials at the emergency department	Develop the officials to acquire geriatric knowledge	Develop the officials to acquire geriatric knowledge



**Table 4.7 (Continued)**

Standards of rights and benefits	Current rights and benefits of Somdech Phra Pinklao Hospital	Current rights and benefits of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informant gave the scores of the importance of development (Full scores of 272)
	Phra Pinklao Hospital	Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital
timely assistance in case of emergency while seeking services in hospital	can render immediate assistance as it is a big hospital with complete equipment	can render immediate assistance as it is a big hospital with complete equipment		
4.System to notify costs and voluntary acceptance of treatment	System of giving signature for acceptance of treatment when the elderly are admitted in hospital	System of giving signature for acceptance of treatment when the elderly are admitted in hospital	Officials should be assigned to study the laws on protection of the elderly	Officials should be assigned to study the laws on protection of the elderly
5.The elderly and relatives have the rights for appointment with team of doctors and	-Not yet clear about the appointment with team of doctors for treatment planning. No concrete practice. No clear host responsible	-On appointment in case of death, some do not have permanent address and cannot be contacted	Develop and connect network for sending information between tertiary (treatment) and secondary (referral in the case of possible continuous treatment), and primary hospitals (survey of elderly	Develop and connect network for sending information between tertiary (treatment) and secondary (referral in the case of possible continuous treatment), and primary hospitals (survey of elderly

Table 4.7 (Continued)

Standards of rights and benefits	Current rights and benefits of Somdech Phra Pinklao Hospital	Current rights and benefits of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informant gave the scores of the importance of development (Full scores of 272)
	Phra Pinklao Hospital	Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital
nurses for continuous treatment and referral planning	for work on the elderly.		population census and proactive promotion, care for promotion, prevention, and providing information)	hospitals (survey of elderly population census and proactive promotion, care for promotion, prevention, and providing information)
6. The elderly receive news on health care and information is provided on illness upon arriving at the hospital with the language that the elderly can easily understand	In Pritvej Homecare center, most are bedridden elderly with TV provided for reception of news	Some society engaged elderly, home attached elderly, and bedridden elderly cannot receive information from line so will receive health information less than those with line	- Most elderly are bedridden. The elderly should gain convenient and easy access to health information. - Group line should be provided for the elderly to receive information and news	- Most elderly are bedridden. The elderly should gain convenient and easy access to health information. - Group line should be provided for the elderly to receive information and news

Based on the information from the interviews on the standards of rights and benefits, it was found that both hospitals had the control, supervision, follow-up of performance on the rights and benefits according to the determined round. They provided services based on equality of all rights of treatment. In case of emergency while coming for treatment at the hospital, there were emergency officials who could render immediate assistance, being a big hospital with complete equipment, as well as system of giving signature to accept treatment for admittance at the hospital.

The problem that was found included: both hospitals are not clear in the appointment of medical team to plan treatment. There is no concrete implementation. A social worker working on the elderly said, *“Both hospitals do not have a center as a clear host responsible for the elderly’s rights and benefits. The appointment in case of death, some do not have permanent address so they cannot be traced.”* A nurse with experience in the care of the elderly said, *“Some society engaged elderly, home attached elderly, and bedridden elderly cannot receive information by line so they will receive health information less than others with line.”*

#### **4.1.8 Standards of privacy and human dignity**

Based on the information from the interviews on the standards of privacy and human dignity, the researcher concluded the results of the interviews through the current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly’s future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the scores of the importance of development are shown in Table 4.8.

**Table 4.8** Results of the interviews on the standards of privacy and human dignity

Standards of privacy and human dignity	Current privacy and human dignity of		Key informants expressed opinions on the development of the		Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Control, supervision, follow-up, and assessment of work according to the determined round	System to monitor complaints, negotiation, and mediation but not specifically for the sick elderly	System to monitor complaints, negotiation, and mediation but not specifically for the sick elderly	Officials should be trained for the ability in negotiation and mediation as there is insufficient number of the officials in this field compared to the number of the service recipients	Officials should be trained for the ability in negotiation and mediation as there is insufficient number of the officials in this field compared to the number of the service recipients	196
2. Satisfaction of service recipients and service providers	At present, the hospital adheres to governance. Treatment of the sick is based on compassion, and kindness, without class distinction, and without anything in return	At present, the hospital adheres to governance. Treatment of the sick is based on compassion, and kindness, without class distinction, and without anything in return	There should be system of reporting satisfaction of service recipients and officials every quarter	There should be system of reporting satisfaction of service recipients and officials every quarter	
3. Care system	At present, the hospital	At present, the hospital	There should be assessment of the	There should be assessment of the	

Table 4.8 (Continued)

Standards of privacy and human dignity	Current privacy and human dignity of		Key informants expressed opinions on the development of the		Key informants gave the scores of the importance of development (Full scores of 272)
	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
adheres to the principle of privacy and demand or willingness of the elderly	works by adhering to the principle of human dignity	works by adhering to the principle of human dignity	elderly's demand of health service for further improvement	elderly's demand of health service for further improvement	
4. Confidentiality system of the elderly.	Service adheres to governance.	Service adheres to governance. Treatment of the sick is based on compassion, kindness, and confidentiality.	Professional ethics should be reviewed and continuously practiced	Professional ethics should be reviewed and continuously practiced	
Information should be given only to direct relatives such as spouses, and children	Treatment of the sick is based on compassion, kindness, and confidentiality.	Small number of officials with knowledge on the protection of rights compared to the number	Professional ethics should be reviewed and continuously practiced	Professional ethics should be reviewed and continuously practiced	
5. Officials responsible for the care of the elderly should attend the	Small number of officials with knowledge on the protection of rights	Small number of officials with knowledge on the protection of rights compared to the number	Officials should attend the training to acquire knowledge on protection of rights of the elderly	Officials should attend the training to acquire knowledge on protection of rights of the elderly	

Table 4.8 (Continued)

Standards of privacy and human dignity	Current privacy and human dignity of Somdech Phra Pinklao Hospital	Current privacy and human dignity of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
trainings to acquire knowledge on protection of rights of the elderly	compared to the number of service recipients	of service recipients	Somdech Phra Pinklao Hospital    Queen Sirikit Naval Hospital	

The information from the interviews on the standards of privacy and human dignity revealed that both hospitals provided the overall system of follow-up of complaints, negotiation, and mediation of the hospital, not specifically for the sick elderly. Presently, the hospital adhered to governance, treatment of the sick with compassion, work based on human dignity, and confidentiality.

The problem that was found included: The number of the officials with the knowledge of protection rights. A social worker working on the elderly said, *“There is a small number of the officials working in the section of benefits compared to the number of the elderly seeking services in the hospital.”*

#### **4.1.9 Standards of environment and safety**

Based on the interviews on the standards of environment and safety, the researcher concluded the results of the interviews through the current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly’s future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction. The results of the importance of development is shown in Table 4.9.

**Table 4.9** Results of the interviews on standards of environment and safety

Standards of environment and safety	Current environment and safety of Somdech Phra Pinklao Hospital	Current environment and safety of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Control, supervision, follow-up, and assessment of work according to the determined round	Control, supervision, follow-up of the results of the development of building structure and safety system until the operation covers the entire hospital	Control, supervision, follow-up of the results of the development of building structure and safety system until the operation covers the entire hospital	Improvement of building structure may need time. There should be surveillance of the safety until the improvement finishes.	Improvement of building structure may need time. There should be surveillance of the safety until the improvement finishes.	220
2. Satisfaction of service recipients and service providers based on safety without accident	In the process to improve the building and area for safety and to cover the entire hospital	In the process to improve the building and area for safety and to cover the entire hospital	There should be public relations and assessment of rate of falling for continuous development and improvement	There should be public relations and assessment of rate of falling for continuous development and improvement	
3. Rules to prohibit the elderly from	Public relations and signs to warn the elderly in every	Public relations and signs to warn the elderly in every	Most of the elderly seeking services do not wear valuable items	Most of the elderly seeking services do not wear valuable items	



**Table 4.9** (Continued)

Standards of environment and safety	Current environment and safety of Somdech Phra Pinklao Hospital	Current environment and safety of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development
wearing valuable items	department in the hospital	department in the hospital		
4. Development of safe design of location, bed.	The hospital starts to improve building structure and environment for safety of the elderly seeking services in hospital but the coverage is not complete as the budget for improvement is required	The hospital starts to improve building structure and environment for safety of the elderly seeking services in hospital but the coverage is not complete as the budget for improvement is required	Improvement should be accelerated starting in the departments where a large number of the elderly seek services	Improvement should be accelerated starting in the departments where a large number of the elderly seek services
Arrangement of appliances for convenient use, sufficient lights, safety everywhere especially rail in the restroom and other areas to facilitate walking, clean, well ventilated areas				
5. Development of exercise areas and	-There is no exercise room for the sick in	- There is no exercise room for the sick in the	Exercise room and common room should be provided for the elderly	Exercise room and common room should be provided for the

Table 4.9 (Continued)

Standards of environment and safety	Current environment and safety of Somdech Phra Pinklao Hospital	Current environment and safety of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of development (Full scores of 272)
recreational areas for the elderly	the hospital only the area around the hospital so the elderly can exercise by walking -No recreational area specifically for the elderly	hospital only the area around the hospital so the elderly can exercise by walking - No recreational area specifically for the elderly	to be able to participate in activities elderly to be able to participate in activities	
6. Development of ramps and uneven floors with visible signs or symbols	In the process of improvement for safety of the elderly in the entire hospital	In the process of improvement for safety of the elderly in the entire hospital	Accelerate improvement starting with the departments where there are a lot of the elderly seeking services	Accelerate improvement starting with the departments where there are a lot of the elderly seeking services

Based on the information from the interviews on the standards of environment and safety, it was found that both hospitals underwent development to improve the building structure and environment for the safety of the elderly seeking services. There existed control, supervision, and follow-up of the development of the structure of the building, as well as safety system until the operation covered the entire hospital.

The problem that was found included: The coverage of the improvement of the building structure and environment was not complete. Executives on the elderly, family medicine doctors, and chairman of club for the elderly said, “*The environment has not been improved in all sections in the hospital as it must use the budget for maintenance.*” A physical therapist said, “*Both hospitals do not have recreational area specifically for the elderly. No exercise room for the elderly only the area around the hospital where the elderly can exercise by walking.*”

#### **4.1.10 Standards of quality assurance system for services**

Based on the information from the interviews on the standards of quality assurance system for services, the researcher concluded the results of the interviews through the current synthesis from Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The key informants expressed opinions on the development of the elderly’s future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy in the same direction. The results of the scores on the importance of the development are shown in Table 4.10.

**Table 4.10** Results of the interviews on the standards of quality assurance system for services

Standards of quality assurance system for services	Current quality assurance system for services of Somdech Phra Pinklao Hospital	Current quality assurance system for services of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of the development (Full scores of 272)
			Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
1. Control, supervision, follow-up, and performance of work according to the determined round.	Committee on the elderly follows up the formulation of action plan of operation to support the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022)	Committee on the elderly follows up the formulation of action plan of operation to support the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022)	Responsible persons should be clearly and continuously determined for implementation of the action plan	Responsible persons should be clearly and continuously determined for implementation of the action plan	218
2. Satisfaction of service recipients and service providers	The hospital sets up the overall system of satisfaction assessment of the service recipients but not specifically for the elderly	The hospital sets up the system of satisfaction assessment of service recipients at clinic for the elderly and club for the elderly	Continuous development for improvement of services based on the demand of the society engaged elderly, home attached elderly, and bedridden elderly	Continuous development for improvement of services based on the demand of the society engaged elderly, home attached elderly, and bedridden elderly	
3. Formulation of services	Naval Medical	Naval Medical	Ministry of Defense is involved in	Ministry of Defense is involved	

Table 4.10 (Continued)

Standards of quality assurance system for services	Current quality assurance system for services of		Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of the development (Full scores of 272)
	Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
policy and importance placed on the development of service quality for the elderly	Department is in the process of drafting the action plan of operation to support the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022)	Department is in the process of drafting the action plan of operation to support the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022)	operation to support the rights of the elderly according to the Elderly Person Act B.E. 2546 (2003) Section 11 (1) Medical and public health services specifically provided for convenience and speed of the elderly	in operation to support the rights of the elderly according to the Elderly Person Act B.E. 2546 (2003) Section 11 (1) Medical and public health services specifically provided for convenience and speed of the elderly	
4.System of quality assurance for services as determined	Operation of Pritvej Homecare center for the elderly which is overnight center to facilitate the bedridden elderly without care from relatives	Up till now, quality assurance is not clear as work on the elderly is new with no clear pattern. Clinic for the elderly is operated for specific convenience and speed of the elderly	Demand for the continuous development of quality of services and operation in the same direction for both hospitals	Demand for the continuous development of quality of services and operation in the same direction for both hospitals	

Table 4.10 (Continued)

Standards of quality assurance system for services	Current quality assurance system for services of Somdech Phra Pinklao Hospital		Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction		Key informants gave the scores of the importance of the development (Full scores of 272)
	Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital	
5. Report of the meetings of the Committee on the elderly	Organize meetings of Committee on the elderly once a month as determined	Organize meetings of committee of the club for the elderly twice a month as determined	In order that the operation of tertiary hospitals has the same pattern, a center should be set up for work on the elderly	In order that the operation of tertiary hospitals has the same pattern, a center should be set up for work on the elderly	
6. Modern, standard equipment and tools and circulation system for the elderly to borrow them	The elderly can borrow medical equipment and tools at the "sharing center" in Somdech Phra Pinklao Hospital	The elderly can borrow medical equipment and tools at the "sharing center" in Queen Sirikit Naval Hospital situated at Wat Rat Samakee (Km 10)	-Standard circulation list should be prepared for the borrowing and returning of equipment at the "sharing center" in Pinklao Hospital	-Standard circulation list should be prepared for the borrowing and returning of equipment at the "sharing center" in Somdech Phra Pinklao Hospital	
7. Continuous development of quality of	No concrete system to report the quality of services to Committee	No concrete system to report the quality of services to Committee	There should be report on the elderly's operation on a quarterly basis	There should be report on the elderly's operation on a quarterly basis	

**Table 4.10** (Continued)

Standards of quality assurance system for services	Current quality assurance system for services of Somdech Phra Pinklao Hospital	Current quality assurance system for services of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the development (Full scores of 272)
services and report to Committee on the elderly	Naval Medical Department has not set up concrete information system on the elderly	No system of information management on the elderly. System of information should be developed as it is important to the information work on the elderly	Operation should connect information with the hospital for convenient referral	
8. Information system is developed to support quality of services	Naval Medical Department has not set up concrete information system on the elderly	No system of information management on the elderly. System of information should be developed as it is important to the information work on the elderly	Information system on the elderly should be developed and QR code should be provided for the elderly to receive news	
9. Network for exchange of knowledge on the development of service	Committee on the elderly organizes study tour on the elderly's health	Development of networks among various institutions	Record on health information should be developed and connected to National Health Security Office /customers. The record of the elderly's health information is	Record on health information should be developed and connected to the network of National Health Security Office/customers. The record

Table 4.10 (Continued)

Standards of quality assurance system for services	Current quality assurance system for services of Somdech Phra Pinklao Hospital	Current quality assurance system for services of Queen Sirikit Naval Hospital	Key informants expressed opinions on the development of the elderly's future health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy for the same direction	Key informants gave the scores of the importance of the development (Full scores of 272)
quality between various institutes	Phra Pinklao Hospital	Queen Sirikit Naval Hospital	Somdech Phra Pinklao Hospital	Queen Sirikit Naval Hospital
10. Research and innovation on development of work on the elderly	In terms of quality assurance, research and innovation works should be used for quality assurance. At present, work on the elderly organizes KM with handbook to search for information on the elderly	At present, not many research and innovation undertaken on the topics of the elderly.	connected to the system of National Health Security Office nationwide both inside the Royal Thai Navy and outside. Security Office nationwide both inside the Royal Thai Navy and outside. Research and innovation of the work on the elderly should be increased as empirical evidence for concrete operation on the elderly	



Based on the information from the interviews on the standards of quality assurance system for services, it was found that Naval Medical Department was in the process of drafting the action plan of the operation to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022). Both hospitals provided the system of satisfaction assessment of service recipients. Queen Sirikit Naval Hospital provided the clinic for the elderly for convenience and speed specifically for the elderly. The elderly could borrow medical equipment at the “sharing center” of Queen Sirikit Naval Hospital located at Wat Rat Samakee (Km 10, Sattahip District, Chonburi) and the “sharing center” of Somdech Phra Pinklao Hospital, located in the hospital.

The problem that was found included: Quality assurance did not have clear pattern. An executive responsible for the elderly said, *“Work on the elderly is new. There is yet no center of the operation on the elderly.”* A nurse specializing medical record said, *“No concrete system to report the quality of services to the Committee on the elderly. No concrete information system for the elderly.”* A nurse with experience on the care of the elderly and home visit said, *“At present, not many people undertake research and innovation on the elderly in Naval Medical Department.”*

Based on the interviews with 17 key informants, the researcher concluded the program for qualitative data analysis, the key messages requiring the development of the elderly’s health service system and number of key informants in developing various issues with the ranking of the importance of development as follows: Issue requiring the development of the elderly’s health service system is divided into 10 standards. The researcher recorded the information from the interviews and conducted analysis with the program for qualitative data analysis and concluded that the number of messages that the key informants gave most in the interviews was the issue of clear policy of the elderly with 20 messages or 7.2 percent of all the messages, followed by the issue of development of environment and safety and development of knowledge and potential of officials with 18 messages or 6.5 percent of the total messages. The highest number of the key informants on the issue of development of environment and safety was 17 persons or 100 percent of the total key informants, followed by the issues of clear policy on the elderly, development of

knowledge and potential of officials, and setting up geriatric center with geriatric physician with 12 persons or 70.6 percent of the total key informants as shown in Table 4.11.



**Table 4.11** Results of the analysis of the interviews through the program of qualitative data analysis

Ranking	Issues that need to be developed	Key messages requiring the development of the elderly's health service system		Number of key informants	
		Number of key messages	Percentage	Number (persons)	Percentage
1	Clear policy on the elderly	20	7.2	12	70.6
2	Development of environment and safety	18	6.5	17	100
3	Development of knowledge and potential of officials	18	6.5	12	70.6
4	Setting up of a geriatric clinic with geriatric physician	17	6.1	12	70.6
5	Arrangement of manpower on the elderly	16	5.8	11	64.7
6	Committee and those responsible for work on the elderly	16	5.8	9	52.9
7	Handbook on operation standards	13	4.7	10	58.8
8	Development of information system on the elderly	12	4.3	8	47.1
9	Standards of circulation system of medical equipment at the "sharing center"	10	3.6	9	52.9
10	Setting up of club for the elderly	10	3.6	8	47.1
11	Setting up of overnight center for the care of the elderly	10	3.6	8	47.1
12	Development of innovation and research	8	2.9	8	47.1

### Results of the ranking of the importance of the development of the elderly's health service system

Based on the interviews with 17 key informants, they gave the scores of the importance of the development in each standard. The researcher conducted the analysis of the results of the scores of the ranking of the importance of the elderly's health service system for the first 3 rankings namely standard of management system with the issues of clear policy on the elderly and development of knowledge and potential of the officials (231 scores), standard of operation with the issues of setting up of geriatric clinic with geriatric physician, arrangement of manpower on the elderly, committee and those responsible for work on the elderly, handbook on operation standards, setting up of club for the elderly, and setting up of overnight center for the care of the elderly (229 scores), and standards of environment and safety with the issue of development of environment and safety (220 scores) as shown in Table 4.12.

**Table 4.12** Scores of the ranking of the importance of development of the elderly's health service system

Ranking	Importance of the development of the elderly's health service system	Scores
1	Standards of management 1.1 Clear policy of the elderly 1.2 Development of officials' knowledge and potential	231
2	Standards of operation 2.1 Setting up of geriatric clinic with geriatric physician 2.2 Arrangement of manpower on the elderly 2.3 Committee on the elderly and those responsible for the elderly 2.4 Operation handbook 2.5 Setting up of club for the elderly 2.6 Setting up of overnight center for the elderly	229
3	Standards of environment and safety 3.1 Development of environment and safety	220
4	Standards of medicine management	219
5	Standards of health care planning	218
6	Standards of quality assurance system for services 6.1 Development of the elderly's information system 6.2 Standards of the circulation system of medical equipment at the "sharing center" 6.3 Development of innovation and research	218
7	Standards of health care operation	207
8	Standards of financial management	199
9	Standards of privacy and human dignity	196
10	Standards of rights and benefits	187

## **4.2 The elderly's quality of life and demand of health service**

For the research of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy, the researcher studied the quality of life and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy to know the quality of life of the elderly seeking services in hospitals and compare the quality of life and demand of health service of the elderly with different abilities of daily living and seeking services in tertiary hospitals attached to the Royal Thai Navy in different areas to know the elderly's quality of life and demand of health service. The researcher would synthesize the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy to respond to the needs of the elderly based on their abilities of daily living so that the elderly would receive efficient services of health promotion, disease prevention, treatment, and rehabilitation for the society engaged elderly, home attached elderly, and bedridden elderly.

### **4.2.1 Quality of life and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy**

Based on the personal information, more than half of the elderly were females or 57.47 percent of the entire elderly. More than half were aged between 60 – 69 years old or 52.27 percent. The elderly seeking services were mostly civilians or 67.86 percent. More than half were married and living with spouses or 55.84 percent. Most had sufficient income but no savings or 48.38 percent. More than half had their own house or 54.55 percent. The overall satisfaction of process of service, officials providing services, facilities, and quality of services was at high level or 45.13 percent, followed by fair satisfaction or 32.14 percent, and low satisfaction or no satisfaction constituted 3.24 percent as shown in Table 4.13.

**Table 4.13** Number and percentage of personal information of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy

	Somdech Phra Pinklao Hospital (n = 206)		Queen Sirikit Naval Hospital (n = 102)		Total (n = 308)	
	Number	Percentage	Number	Percentage	Number	Percentage
<b>Personal information of the elderly</b>						
<b>Gender</b>						
Male	90	43.69	41	40.20	131	42.53
Female	116	65.54	61	59.80	177	57.47
<b>Age</b>						
60 – 69 years old	112	54.37	49	48.04	161	52.27
70 – 79 years old	73	35.44	43	42.16	116	37.66
80 – 89 years old	17	8.25	10	9.80	27	8.77
Over 90 years old	4	1.94	0	0.00	4	1.30
Retired military officers	32	15.53	33	32.35	65	21.10
Retired civilian officials	24	11.65	10	9.80	34	11.04
Civilians	150	72.82	59	57.85	209	67.86
<b>Marital status</b>						
Single	45	21.84	5	4.91	50	16.24
Married (living together)	115	55.83	57	55.88	172	55.84
Married (living separately)	13	6.31	6	5.88	19	6.17
Widowhood, divorce	33	16.02	34	33.33	67	21.75

**Table 4.13** (Continued)

Personal information of the elderly	Somdech Phra Pinklao Hospital (n = 206)		Queen Sirikit Naval Hospital (n = 102)		Total (n = 308)	
	Number	Percentage	Number	Percentage	Number	Percentage
<b>Income</b>						
Not sufficient but no debt	39	18.93	9	8.82	48	15.58
Not sufficient and with debt	18	8.74	10	9.80	28	9.09
Sufficient but no savings	104	50.49	45	44.12	149	48.38
Sufficient and with savings	45	21.84	38	37.26	83	26.95
<b>Lodging</b>						
Own house	95	46.12	73	71.57	168	54.55
Child's house	55	26.7	19	18.63	74	24.03
Relative's house	20	9.71	6	5.88	26	8.44
Rented house	18	7.77	1	0.98	17	5.52
Nursing home	4	1.93	0	0	4	1.30
Welfare house	16	7.77	3	2.94	19	6.16
<b>Satisfaction in services</b>						
Most satisfied	48	23.30	11	10.78	59	19.16
Very satisfied	82	39.81	57	55.89	139	45.13
Fairly satisfied	68	33.01	32	31.37	100	32.47
Little satisfied	6	2.91	1	0.98	7	2.27
Not satisfied	2	0.97	1	0.98	3	0.97
<b>Total</b>	<b>206</b>	<b>100.00</b>	<b>102</b>	<b>100.00</b>	<b>308</b>	<b>100.00</b>

The analysis of the quality of life divided by the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy revealed that the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy had overall quality of life at fair level ( $\bar{x} = 88.96$ ). The division of the hospitals that the elderly seeking services revealed that the elderly seeking services at Somdech Phra Pinklao Hospital ( $\bar{x} = 85.58$ ) and Queen Sirikit Naval Hospital ( $\bar{x} = 95.78$ ) had the overall quality of life at fair level as well. The analysis of the level of demand of the elderly's health service divided by the elderly seeking services at hospitals revealed that the elderly seeking services at hospitals had the overall demand of health service at high level ( $\bar{x} = 2.70$ ). The division of the hospitals that the elderly seeking services revealed that the elderly seeking services at Somdech Phra Pinklao Hospital ( $\bar{x} = 2.65$ ) and Queen Sirikit Naval Hospital ( $\bar{x} = 2.79$ ) had the overall demand of health service at high level as well as shown in Table 4.14.

**Table 4.14** Mean, standard deviation, level of quality of life and demand of health service of the elderly divided by the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy

The elderly seeking services at tertiary hospitals attached to the Royal Thai Navy	Overall quality of life			Overall demand of health service		
	$\bar{x}$	SD	Level of quality of life	$\bar{x}$	SD	Level of demand of health service
Somdech Phra Pinklao Hospital	85.58	13.05	Fair	2.65	0.58	High
Queen Sirikit Naval Hospital	95.78	15.00	Fair	2.79	0.74	High
Total	88.96	14.52	Fair	2.70	0.64	High

The analysis of demand of the elderly, home attached elderly divided by aspects as follows: physical needs, psychological needs, social needs and environmental requirements, found that the home attached elderly have psychological needs and social needs were fair level ( $\bar{X}=2.34,2.33$  respectively), while society engaged elderly and bedridden elderly were high level ( $\bar{X}=2.67,2.60$  and  $\bar{X}=3.10,2.91$  respectively) shown in Table 4.15.



**Table 4.15** Mean, standard deviation, and level of demand of health service of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy

Demand of health service of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy	Society engaged elderly			Home attached elderly			Bedridden elderly		
	( $\bar{x}$ )	SD	Level of demand	( $\bar{x}$ )	SD	Level of demand	( $\bar{x}$ )	SD	Level of demand
1. Physical needs	2.97	.65	High	2.75	.56	High	3.20	.612	High
2. Psychological needs	2.67	.90	High	2.34	.86	Fair	3.10	1.02	High
3. Social needs	2.60	.84	High	2.33	.87	Fair	2.91	.54	High
4. Environmental requirements	2.54	.67	High	2.55	.81	High	3.31	.61	Highest
Total	2.72	.62	High	2.55	.68	High	3.15	.51	High

The analysis of the first 5 ranking of the demand of health service of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy divided into the society engaged elderly, the home attached elderly, and the bedridden elderly as shown in Table 4.16 revealed the following:

The demand of the society engaged elderly consisted of the following: demand for initial diagnosis with accuracy, speed, timeliness, demand for setting up of geriatric center, demand for quality treatment planning, demand for convenient, fast services from arrival at hospital to departure for home, and demand for safe environment such as rail in restrooms, sufficient lights, non slippery floors.

The demand of the home attached elderly consisted of the following: demand for initial diagnosis with accuracy, speed, timeliness, demand for fast channel specifically for the elderly, demand for quality treatment planning, demand for convenient, fast services from arrival at hospital to departure for home, and demand for safe environment such as rail in restrooms, sufficient lights, non slippery floors.

The demand of the bedridden elderly consisted of the following: demand for fast channel specifically for the elderly, demand for dental health checkup by dentists at least once a year, demand for support of medicine with equal quality and reduction of medicine costs, demand to be admitted in overnight center for the elderly, and demand to borrow medical devices upon discharge from hospital.

**Table 4.16** Ranking of demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy

Ranking	Demand for health service of the elderly		
	Society engaged elderly	Home attached elderly	Bedridden elderly
1	Demand for initial diagnosis with accuracy, speed, and timeliness	Demand for initial diagnosis with accuracy, speed, and timeliness	Demand for fast channel specifically for the elderly
2	Demand to set up geriatric clinic	Demand for fast channel specifically for the elderly	Demand for dental health checkup by dentists at least once a year
3	Demand for quality treatment planning	Demand for quality treatment planning	Demand for support of medicine with equal quality and reduction of medicine costs
4	Demand for convenient and fast services from arrival at hospital until departure for home	Demand for convenient and fast services from arrival at hospital until departure for home	Demand to be admitted in overnight center for the elderly
5	Demand for safe environment such as rail in restrooms, sufficient lights, and non slippery floors	Demand for safe environment such as rail in restrooms, sufficient lights, and non slippery floors	Demand to borrow medical devices upon discharge from hospital

The analysis of the overall level of quality of life, divided by the elderly's abilities of daily living namely the society engaged elderly, the home attached elderly, and the bedridden elderly revealed that the society engaged elderly ( $\bar{x} = 92.03$ ) had the overall quality of life at high level whereas the home attached elderly ( $\bar{x} = 77.76$ ) and the bedridden elderly ( $\bar{x} = 68.20$ ) had the overall quality of life at fair level. The analysis of the level of the overall demand of health service divided by the elderly's abilities of daily living revealed that the elderly with the overall demand of health service at high level were the bedridden elderly ( $\bar{x} = 3.16$ ) and the society engaged elderly ( $\bar{x} = 2.72$ ) whereas the overall demand of the home attached elderly ( $\bar{x} = 2.56$ ) was at fair level as shown in Table 4.17.

**Table 4.17** Mean, standard deviation, and level of overall quality of life and demand of health service divided by the elderly's abilities of daily living

The elderly's abilities of daily living	Overall quality of life			Overall demand of health service		
	$\bar{x}$	SD	Level of quality of life	$\bar{x}$	SD	Level of demand
Society engaged elderly	92.03	13.74	High	2.72	0.62	High
Home attached elderly	77.76	5.47	Fair	2.56	0.69	Fair
Bedridden elderly	68.20	11.31	Fair	3.16	0.52	High
Total	88.96	14.53	Fair	2.70	0.64	High

#### 4.2.2 Comparison of quality of life and demand of health service of the elderly with different abilities of daily living and seeking services in tertiary hospitals attached to the Royal Thai Navy in different areas

The results of the analysis of the two-way MANOVA by testing the interaction between the variables of the elderly seeking services in tertiary hospitals in different areas and the elderly's different abilities of daily living on the overall quality of life and the overall demand for health service revealed that the elderly seeking services in tertiary hospitals and the elderly's different abilities of daily living had overall quality of life and overall demand of health service were different but with no statistical significance. The consideration of the main influences revealed that the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy and the elderly's different abilities of daily living had different overall quality of life with the statistical significance at the level of .05. As for the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy and the elderly's different abilities of daily living had different overall demand of health service without statistical significance as shown in Table 4.18.

**Table 4.18** Results of the analysis of two-way MANOVA of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy and the elderly's abilities of daily living per quality of life and demand of health service

Source of variation	Wilks'lambda Value	F	Hypothesis df	Error df
The elderly seeking services in tertiary hospitals attached to the Royal Thai Navy	.96	4.90*	2	301
The elderly's abilities of daily living	.80	17.06*	4	602
The elderly seeking services in tertiary hospitals attached to the Royal Thai Navy X the elderly's abilities of daily living	.98	1.05	4	602

Tests of Between-Subjects Effects					
Source of variation	Dependent Variable	SS	df	MS	F
The elderly seeking services in tertiary hospitals attached to the Royal Thai Navy	Overall quality of life	1351.42	1	1351.42	8.91*
	Overall demand of health service	.24	1	.24	.61
The elderly's abilities of daily living	Overall quality of life	10425.38	2	5212.69	34.38*
	Overall demand of health service	1.34	2	.67	1.68
The elderly seeking services in tertiary hospitals attached to the Royal Thai Navy X the elderly's abilities of daily living	Overall quality of life	27.10	2	13.55	.08
	Overall demand of health service	1.59	2	.79	1.99

Box's M test = 45.401, F = 3.276, df1 = 12, df2 = 456.015, P = .000,

Levene's test F = 4.703, df1 = 5, df2 = 302, P = .000,

\* p < .05

The comparison of the elderly's overall quality of life divided by the elderly's abilities of daily living in pair revealed that the elderly's overall quality of life was different with the statistical significance at the level .05 in 2 pairs namely society engaged elderly and home attached elderly, and society engaged elderly and bedridden elderly as in Table 4.19.

**Table 4.19** Results of the multiple comparison of the elderly's quality of life divided by the elderly's abilities of daily living

<b>Groups of the elderly with abilities of daily living</b>		<b>Society engaged elderly</b>	<b>Home attached elderly</b>	<b>Bedridden elderly</b>
	$\bar{x}$	92.03	77.76	68.20
Society engaged elderly	92.03	-	14.27*	28.23*
Home attached elderly	77.76		-	9.56
Bedridden elderly	68.20			-

\*  $p < .05$ 

The results of the analysis of the elderly's quality of life and demand of health service revealed that 1) Overall quality of life divided by the elderly's abilities of daily living namely society engaged elderly, home attached elderly, and bedridden elderly revealed that the society engaged elderly had overall good quality of life. Home attached elderly and bedridden elderly had overall fair quality of life. The elderly seeking services in different hospitals had overall different quality of life at the statistical significance at the level of .05 and the elderly with different abilities of daily living had overall different quality of life at the statistical significance at the level of .05. The results of the analysis of comparison of the elderly's quality of life and demand of health service with different abilities of daily living and seeking services in tertiary hospitals attached to the Royal Thai Navy in different areas revealed that 1) The pairs with different quality of life included society engaged elderly and home attached elderly, and society engaged elderly and bedridden elderly 2) The elderly seeking services in tertiary hospitals in different areas and the elderly's different abilities of daily living had different overall demand of health service with no statistical significance and 3) No interactions between the variables of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy and the elderly's abilities of daily living on the overall quality of life and the overall demand of health service.

### **4.3 Assessment of the health system for the elderly of tertiary hospitals attached to the Royal Thai Navy**

The concept of the Balanced Scorecard is a management tool to ensure that an organization concretely achieves success. It is appropriate to help assess the organization's performance and enable the organization to implement the strategy. The analysis of internal factors using the concept of McKinsey 7S Framework with the basic principle that an organization's efficiency comes from the relationship within the organization of various factors which will result in effectiveness and accomplishment of the targets of the strategy. The 7 factors must also be consistent to one another. The analysis of external factors is also conducted by using the concept of PESTLE Analysis which will facilitate the understanding of the overall environment which will be operated and the concept of opportunities and threats within. The analysis of the relationships of the concepts will lead to the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy is expected to enable the elderly's health service system to respond to the needs of the elderly seeking services, create motivation and pride for the elderly, enhancing the elderly's happiness, human dignity, and good quality of life for their livelihood. Moreover, all sectors will join hands to assist and solve the problems of health service system in the ageing society. The researcher studied the information from the handbook on geriatric medicine and interviews with the key informants and concluded the assessment of the elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy and conducted the GAP analysis to synthesize the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy through the assessment and synthesis according to the Effectiveness Perspective, Stakeholder Perspective, Internal Process Perspective, and Learning and growth as shown in Tables 4.20 to 4.23.

**Table 4.20** Assessment of the elderly's health system of tertiary hospitals attached to the Royal Thai Navy with Effectiveness Perspective

1. Effectiveness Perspective	
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	GAP Analysis
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>Somdech Phra Pinklao Hospital receives allocated operating budget for Pritivej Homecare center under the supervision of Hospital Welfare Division</p> <p>Queen Sirikit Naval Hospital has receives allocated operating budget for projects from income of the hospital and from volunteers of the club for the elderly who sing in return of donation to purchase medical devices and organize activities for the elderly</p> <p>Somdech Phra Pinklao Hospital makes assessment of the performance of Pritivej Homecare center for the elderly</p> <p>Queen Sirikit Naval Hospital makes assessment of performance of the clinic for the elderly and the club for the elderly</p>	<p>No concrete operating budget allocation for the elderly's health service at both hospitals</p> <p>No clear budget allocation for the operation of the project to promote health and prevent diseases</p> <p>Operation between Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital still lacks the comprehensive center of control, supervision, follow-up, and assessment of Naval Medical Department</p> <p><b>Budget allocation of the elderly's health service system</b></p> <ol style="list-style-type: none"> <li>1. Naval Medical Department requests budget support for the care of society elderly, home attached elderly, and bedridden elderly from the Royal Thai Navy</li> <li>2. Naval Medical Department requests budget support from National Health Security Office</li> <li>3. Naval Medical Department supports budget for the development of research and innovation related to the elderly</li> </ol> <p><b>Control, supervision, follow-up, coordination, and assessment of performance of the elderly's health service system</b></p> <ul style="list-style-type: none"> <li>- Establishment of Geriatric Medical Center, Naval Medical Department to serve as the center of operation for the elderly, the administrative center for control, supervision, follow-up, and coordination of network, regular up to date risk management in the elderly and assessment of performance of the Royal Thai Navy's health service system for the elderly</li> </ul>



**Table 4.20** (Continued)

<b>1. Effectiveness Perspective</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>GAP Analysis</b>
<p>Somdech Phra Pinklao Hospital reports the performance to the team of its executives</p> <p>Queen Sirikit Naval Hospital reports the performance to the team of its executives</p> <p>Multidisciplinary professional teams are scattered in Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital.</p> <p>When organizing activities, cooperation from other units is needed.</p>	<p>On report of the performance, the performance does not have the overall information system of the work on the elderly of Naval Medical Department</p> <p>No center with experts on the elderly of Naval Medical Department. When cooperation is needed to organize activities, routine work is disrupted.</p> <p>Assessment of satisfaction separated in each hospital</p>
<p>Somdech Phra Pinklao Hospital makes assessment of satisfaction of Pritvej Homecare center for the elderly</p> <p>Queen Sirikit Naval Hospital makes assessment of satisfaction of the clinic for the elderly and the club for the elderly</p>	<p><b>Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy</b></p> <p><b>System of report of performance of the work on the elderly to Committee on the elderly, Naval Medical Department</b></p> <p>- Prepare the report on the performance of the work on the elderly to Committee on the elderly, Naval Medical Department continuously every quarter</p> <p><b>Multidisciplinary professional team specifically on the elderly of Naval Medical Department</b></p> <p>- System of linkage of care for the society engaged elderly, home attached elderly, and bedridden elderly with multidisciplinary professional team related to the elderly in all fields under the supervision of a geriatric center of Naval Medical Department</p> <p><b>System of assessment of satisfaction of the personnel working on the elderly</b></p> <p>- Set up the system to report satisfaction of the personnel working on the elderly to Naval Medical Department every quarter to develop service system</p>

**Table 4.21** Assessment of the elderly's health system of tertiary hospitals attached to the Royal Thai Navy with Stakeholder Perspective

2. Stakeholder Perspective	
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>Somdech Phra Pinklao Hospital has not yet provided screening of ADL, health, mental health, and quality of life of the elderly seeking services in the outpatient department but screening of ADL is provided at Pritvej Homecare center.</p> <p>Queen Sirikit Naval Hospital provides screening of ADL, assessment of risk of dementia, and assessment of urinary incontinence at clinic for the elderly but no clear system to assess mental health and quality of life</p> <p>Both hospitals have not assessed the concrete demand of the elderly's health service</p>	<p><b>Screening of ADL, health, mental health, and quality of life</b></p> <p>1. Preparation of handbook on the standards of work on the elderly including society engaged elderly, home attached elderly, and bedridden elderly and determination of similar indicators for both hospitals</p> <p><b>Assessment of demand of health service</b></p> <p>1. Assess the demand of the elderly's health service and development to improve services based on the continuous demand of society engaged elderly, home attached elderly, and bedridden elderly</p> <p>2. Survey of the number of the demand for service of overnight center for the elderly and increase the number of beds to accommodate more members of Pritvej Homecare due to the increased number of the elderly without care of their relatives due to lack of time</p>

**Table 4.21 (Continued)**

<b>2. Stakeholder Perspective</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy</b>
<b>GAP analysis</b>	
<p>Somdech Phra Pinklao Hospital asks the relatives taking care of the elderly to help with feeding and washing to encourage families to help the bedridden patients as much as possible. Presently, there are not enough beds to accommodate the bedridden elderly.</p> <p>Queen Sirikit Naval Hospital organizes activities of club for the elderly to the society engaged elderly. Activities are organized to transfer knowledge according to the interest on health promotion, prevention of non communicable diseases, vaccination, nutrition for the elderly, and exercise for the elderly</p> <p>Multidisciplinary professional team is scattered in Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. With organized activities, assistance is requested.</p> <p>Somdech Phra Pinklao Hospital conducts satisfaction</p>	<p>Activities should be clearly separated according to the elderly groups such as society engaged elderly, home attached elderly, and bedridden elderly for easy function in the same direction of both hospitals. If there is future restructuring, operation of clinic for the elderly and overnight center for the elderly should be in the same direction for both hospitals.</p> <p>No center of Naval Medical Department for the experts on the elderly. With organized activities, routine work will be disrupted.</p> <p>Satisfaction system should be</p> <p><b>Activities according to the elderly's abilities</b></p> <ol style="list-style-type: none"> <li>1. Activities of health promotion and health prevention of the society engaged elderly</li> <li>2. Activities of health promotion, treatment, prevention of complications, and rehabilitation for the home attached elderly and the bedridden elderly</li> </ol> <p><b>Cooperation of multidisciplinary professional team</b></p> <ul style="list-style-type: none"> <li>- Promote the development of sufficient officials specifically working on the elderly to operate center for the elderly, club for the elderly, and overnight center for the elderly with multidisciplinary professionals working in team</li> </ul> <p><b>Satisfaction of the elderly, caregivers of the elderly, and</b></p>

Table 4.21 (Continued)

2. Stakeholder Perspective	
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>assessment of Pritvej Homecare center for the elderly</p> <p>Queen Sirikit Naval Hospital conducts satisfaction assessment of the clinic for the elderly and the club for the elderly</p> <p>Both hospitals have not yet conducted satisfaction assessment of the personnel specifically on the elderly</p>	<p><b>personnel working on the elderly</b></p> <ol style="list-style-type: none"> <li>1. Upon discharged from the hospital, home attached elderly and bedridden elderly are accommodated to gain access to health information, and consult on problems upon returning home. Line group is set up or channel for the elderly and their relatives or those taking care of them to have easy access to the information</li> <li>2. Continuous development of the quality of service and operation in the same direction for both hospitals</li> <li>3. System of report of satisfaction of the elderly, caretakes of the elderly, and personnel working on the elderly every quarter</li> </ol>

**Table 4.22** Assessment of the elderly's health service of tertiary hospitals attached to the Royal Thai Navy in Internal Process Perspective

3. Internal Processes Perspective		
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	GAP analysis	Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>The Royal Thai Navy has ordered Naval Medical Department to draft the action plan to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022)</p>	<p>Pending the operation of the Royal Thai Navy on the action plan to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022)</p>	<p><b>Executives' policy</b></p> <ol style="list-style-type: none"> <li>1. Setting up of Geriatric Medical Center, Naval Medical Department, as a center for the elderly, and administrative center to control, supervise, follow up, and coordinate with network, regularly up to date risk management for the elderly and assessment of performance on the elderly's health service system of the Royal Thai Navy</li> <li>2. Formulation of policy to set up a center for the care of the bedridden elderly for retired military officers, retired civilian officials, and general civilians without caregivers in the same pattern in both hospitals. The one presently providing service is at Somdech Phra Pinklao Hospital called "Pritvej Homecare"</li> <li>3. Formulation of the policy of long-term health care for the elderly</li> <li>4. Formulation of policy for society engaged elderly, home attached elderly, bedridden elderly by setting up a clinic for the elderly as a special channel for the elderly with one stop service as the same pattern for both hospitals</li> </ol>

**Table 4.22 (Continued)**

<b>3. Internal Processes Perspective</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy</b>
<p style="text-align: center;"><b>GAP analysis</b></p> <p>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</p>	<p>5. Formulation of policy to set up club for the elderly, especially the society engaged elderly who wish to socialize and conduct activities that will benefit themselves and others. The activities will forge familiarity, fondness, unity, cheerfulness, without loneliness, and happiness. At present, as for the operation of the club for the elderly at Queen Sirikit Naval Hospital, a meeting room should be provided for the task force of the club for the elderly for privacy in managing the club</p>
<p>Somdech Phra Pinklao Hospital manages Pritvej Homecare center for the elderly</p> <p>Queen Sirikit Naval Hospital manages the clinic for the elderly and the club for the elderly</p>	<p style="text-align: center;"><b>Management</b></p> <p>The management system of work on the elderly is still not in the same direction of tertiary hospitals. The Geriatric Medical Center, Naval Medical Department, should be set up.</p> <ol style="list-style-type: none"> <li>1. Determination of management structure within Naval Medical Department</li> <li>2. Determination of common value in the work on the elderly to devise the structure of appropriate and sufficient manpower in the work on the elderly</li> <li>3. Determination of role, duties, responsibilities of work on the elderly of Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital by dividing the responsible persons for society engaged elderly, home attached elderly, and bedridden elderly</li> </ol> <p style="text-align: center;"><b>Operation</b></p> <p>Study should be conducted on</p>
<p>Somdech Phra Pinklao Hospital manages Pritvej Homecare</p>	<p>Study should be conducted on</p>

**Table 4.22 (Continued)**

3. Internal Processes Perspective		
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	GAP analysis	Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>center for the elderly but does not have the handbook on the standards of overnight center for the elderly Queen Sirikit Naval Hospital manages the clinic for the elderly and the club for the elderly but does not have the handbook on the standards of the clinic for the elderly and of the club for the elderly</p> <p>Both hospitals manage work on the elderly and report the meetings to Committee on the elderly of each hospital</p> <p>Both hospitals do not have handbook on standards of quality clinic for the elderly</p>	<p>the standards of the overnight center for the elderly, the standards of the clinic for the elderly and of the club for the elderly. The handbook should be developed as work on the elderly of the Naval Medical Department</p> <p>Both hospitals separately report the meetings to the executive of each hospital</p> <p>There should be study and overall handbook in the name</p>	<p>1. Operation handbook on the elderly for society engaged elderly, home attached elderly, and bedridden elderly</p> <p>2. Survey of population census of the elderly's residential areas to formulate the continuous joint plan for the elderly's health care</p> <p>3. Satisfaction assessment of health services is provided for society engaged elderly, home attached elderly, and bedridden elderly</p> <p>4. Continuous improvement of services according to the demand of society engaged elderly, home attached elderly, and bedridden elderly</p> <p><b>Report of the meetings of the committee on the elderly</b></p> <p>1. System of overall report of the meetings of the Committee on the elderly of Naval Medical Department</p> <p>2. Submit the report of the meetings of each hospital to Naval Medical Department every quarter to develop work on the elderly</p> <p><b>Standards of quality clinic for the elderly</b></p> <p>- Handbook on standards of quality clinic for the elderly of</p>

**Table 4.22 (Continued)**

<b>3. Internal Processes Perspective</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy</b>
<b>GAP analysis</b>	
<p>Both hospitals do not have handbook on standards of quality club for the elderly</p> <p>Both hospitals do not have handbook on standards of overnight center for the elderly</p> <p>Both hospitals provide home visits by being assigned by the sick discharged from the hospital for home visits. Home visits are mostly for home attached elderly and bedridden elderly requesting for assistance upon returning home</p>	<p>of Naval Medical Department</p> <p>There should be study and overall handbook in the name of Naval Medical Department</p> <p>Naval Medical Department</p> <p><b>Standards of quality club for the elderly</b></p> <p>- Handbook on standards of quality club for the elderly of Naval Medical Department</p> <p><b>Standards of overnight center for the elderly</b></p> <p>- Handbook on standards of overnight center for the elderly of Naval Medical Department</p> <p><b>Network of long-term care of the elderly</b></p> <p>1. Develop and connect referral network between tertiary (treatment), secondary (referral for continued care), and primary hospitals (survey of the elderly population census and proactive promotion, health promotion, disease prevention, rehabilitation)</p> <p>Network system should be set up to continuously take care of the elderly in case the elderly were discharged from the hospital</p>



**Table 4.23** Assessment of the elderly's health system of tertiary hospitals attached to the Royal Thai Navy with Learning and Growth

<b>4. Learning and Growth</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy</b>
<p>Both hospitals are in the process of improving basic structure and environment appropriate to the elderly in all departments especially in examination rooms in Somdech Phra Pinklao Hospital, which must be accelerated for the safety of the elderly seeking services</p> <p>Pritvej Homecare center for the elderly at Somdech Phra Pinklao Hospital provides trainings for all officials taking care of the elderly. They are the courses by Academic Affairs Service Center, Naval Medical Department. As for other wards with the admitted elderly, most officials have not attended trainings for the care of the elderly as the admitted elderly are scattered in different wards in the hospital</p>	<p><b>Development of structure and environment appropriate to the elderly</b></p> <ol style="list-style-type: none"> <li>1. Improvement of the building structure may require time. Attention should therefore be paid on safety until the improvement finishes.</li> <li>2. Public relations and assessment of the rate of falling for continuous improvement</li> <li>3. Improvement of the structure of building and safety of the elderly starting in the departments where a lot of elderly seek services</li> <li>4. Build exercise room and common room for the elderly's activities</li> </ol> <p><b>Development of potential of personnel working on the elderly</b></p> <ol style="list-style-type: none"> <li>1. The personnel who will work on the elderly should be developed to have specific knowledge on the elderly</li> <li>2. Develop work on investigation of rights by assigning all officials in the section of investigation of rights to study the laws related to the protection of the elderly</li> </ol>

**Table 4.23** (Continued)

<b>4. Learning and Growth</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy</b>
<p style="text-align: center;"><b>GAP analysis</b></p> <p>towards the excellence requires a plan to develop the personnel working on the elderly. At present, both hospitals do not yet have geriatric physician.</p> <p>Naval Medical Department has not yet had an overall plan to develop the elderly's potential</p> <p>Queen Sirikit Naval Hospital has developed the potential of society engaged elderly by providing them with activities such as members of the club for the elderly with duties and recruitment of volunteers to sing in front of the outpatient room and use the donated money to buy medical devices and donate them in turn to the hospital, creating happiness to the society engaged elderly</p>	<p>3. Assign responsible persons at the "sharing center" of both hospitals to be able to dissemble medical devices for cleaning and correctly maintain them</p> <p>4. Assign officials to attend training on negotiation technique as there are insufficient officials in this field for those seeking services</p> <p style="text-align: center;"><b>Development of the elderly's potential</b></p> <p>1. There should be innovation of easy medicine intake for the elderly</p> <p>2. Determine the timetable of providing knowledge on the use of medicine during the activity days organized by the club for the elderly</p> <p>3. Communicate the information on rights and benefits of services to the elderly in the entire treatment process from receiving treatment until going home</p> <p style="text-align: center;"><b>Development of potential of caregivers of the elderly</b></p> <p>1. Organize trainings for the caregivers to be able to correctly take care of home attached elderly and bedridden elderly with</p>

**Table 4.23 (Continued)**

<b>4. Learning and Growth</b>	
<b>The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy</b>	<b>Development model of the elderly's health service system towards of the excellence of tertiary hospitals attached to the Royal Thai Navy</b>
<p>nurse will make the visit as determined to assess the sick's condition when returning home</p> <p>Both hospitals provide information system of the care for the elderly specifically for each hospital but the information is not connected in the entire Naval Medical Department</p>	<p>of potential of caregivers of the bedridden elderly with complicated chronic diseases, to be able to take care of the elderly after discharge from hospital</p> <p>1. Naval Medical Department does not operate the development of information system specifically on the elderly. Currently, the information system is separated between Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. Problems found when for</p> <p>complications</p> <p>2. Communicate rights and benefits of receiving services to relatives or caretakers in the entire treatment process from arrival to hospital to departure for home</p> <p>3. Formulation of plan to develop the potential of the caregivers of bedridden elderly requiring complicated assistance in the activities of daily living such as feeding through nasogastric tube, suction, oxygenation, indwelling catheter care, and care for prevention of bed sores</p> <p><b>Development of information system</b></p> <p>1. Develop information system and determine the indicators that are similar in both hospitals</p> <p>2. Satisfaction assessment for the same standards of both hospitals</p> <p>3. List of circulation of medical devices at "sharing center" in Somdech Phra Pinklao Hospital and at "sharing center" in Queen Sirikit Naval Hospital for the same standards</p> <p>4. Linkage of information on the elderly with hospitals attached to the Royal Thai for convenient referral</p>

Table 4.23 (Continued)

The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	4. Learning and Growth	Development model of the elderly's health service system towards of the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>GAP analysis</p>	<p>example the elderly who are treated at Queen Sirikit Naval Hospital are transferred to Somdech Phra Pinklao Hospital. The patient's medical record cannot be consulted. Treatment must start anew.</p>	<p>5. QR code to enable the elderly to receive information, news on the elderly</p> <p>6. Development of recording the health information and connecting with the network of National Health Security Office/clients</p> <p>7. Develop the recording system connecting with the information of the elderly in the entire National Health Security Office nationwide both inside the Royal Thai Navy or outside</p>
<p>Naval Medical Department conducts the following research on the elderly:</p> <p>1. The elderly's behavior of health promotion in the project on the elderly, Naval Medical Department (Arpa Chuduang, 2002)</p> <p>2. Development of the criteria to give rubric scores in the</p>	<p>2. Naval Medical Department does not have the concrete and clear system of registration of borrowing/returning of medical devices</p> <p>For the past 10 years, research and innovation on the elderly of Naval Medical Department has not been widely conducted especially research on the elderly's health service</p>	<p><b>Development of research and innovation</b></p> <p>1. There should be innovation for easier medicine intake for the elderly</p> <p>2. Promotion of research and innovation on the elderly for empirical evidence</p>

Table 4.23 (Continued)

4. Learning and Growth	
The elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy	Development model of the elderly's health service system towards of the excellence of tertiary hospitals attached to the Royal Thai Navy
<p>course on operation of the elderly's efforts (Kanoklekha Suwanapong, 2005)</p> <p>3. Results of the program to promote dental health of the elderly in the project of the club for the elderly, Naval Medical Department (Aungkana Nualyong, 2006)</p> <p>4. Results of the program to create force and power and resistance exercise on the frail state of the elderly in community (Krairat Nakkhum, 2019)</p>	<p>GAP analysis</p> <p>system. Therefore, research and innovation on the elderly should be promoted especially home attached and bedridden elderly requiring assistance in rehabilitation</p>

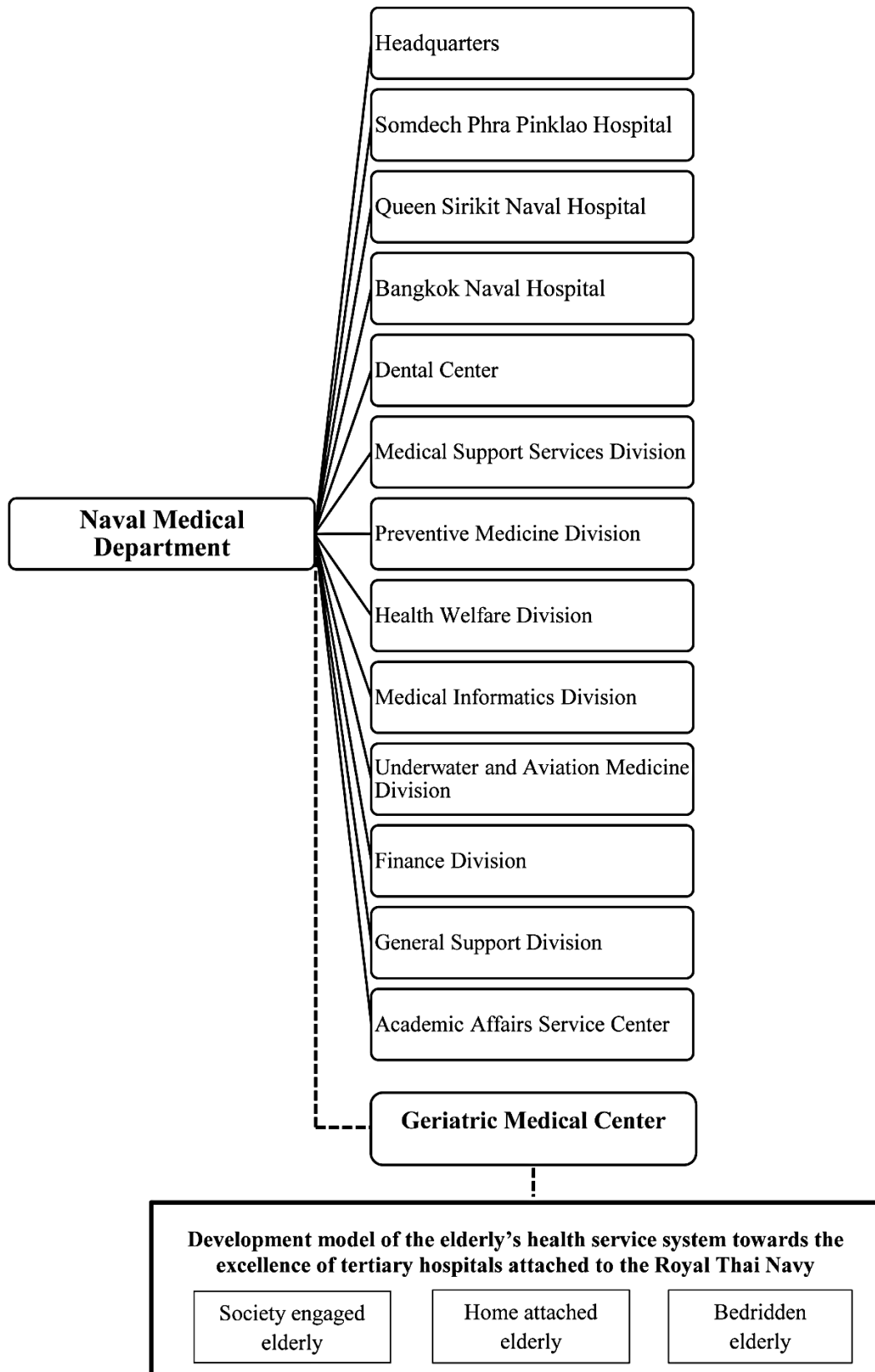
Based on the assessment of the elderly's current health service system of tertiary hospitals attached to the Royal Thai Navy and the GAP analysis to synthesize the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy, the researcher concluded the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy by establishing the Geriatric Medical Center, Naval Medical Department, and designed the activities towards the excellence by dividing the elderly into the society engaged elderly, home attached elderly, and bedridden elderly as in Item 4.4.

#### **4.4 Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy**

Based on the information derived from the interviews with the 17 key informants, it was found that both Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital did not formulate the clear policy of the structure of manpower, and position of specific management of the elderly. The Committee on the elderly was set up which would change according to transfers. There was no geriatric physician. At present, nurses with geriatric education were scattered in wards and not at the elderly's section. Whenever there were activities of the club or work related to the elderly, the activity organizer must seek support from officials in other departments in the hospital. Therefore, for the development of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy to be in the same direction, the key informants recommended the direction of development by establishing Geriatric Medical Center, Naval Medical Department. The researcher recommended the establishment of the center as a center directly under Naval Medical Department with formerly 13 units namely 1) Headquarters 2) Somdech Phra Pinklao Hospital 3) Queen Sirikit Naval Hospital 4) Bangkok Naval Hospital 5) Dental Center 6) Medical Support Services Division 7) Preventive Medicine Division 8) Health Welfare Division 9) Medical Informatics Division 10) Underwater and Aviation Medicine Division 11) Finance Division 12) General Support Division and 13) Academic Affairs Service Center, with the addition of Geriatric Medical Center, in total 14 units. The establishment of the

Geriatric Medical Center, Naval Medical Department, would serve as the center of operation on the elderly, the administrative center of control, supervision, follow-up, and coordination of network, regular up to date risk management of the elderly, assessment of performance of the elderly's health service system of the Royal Thai Navy, and linkage of works on the elderly of hospitals attached to the Royal Thai Navy.

The quantitative data analysis of the elderly seeking services at Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital, Naval Medical Department, data analysis from the interviews with the key informants of both hospitals and ranking of the development of the elderly's health service system, the researcher used the results of the application of the conceptual framework of the Balanced Scorecard for management to enable the organization to achieve concrete success with the appropriateness to assess the organization and enable the organization to implement the strategy. The analysis of the internal factors using McKinsey 7 S Framework with the principle that an organization's efficiency will come from the relationship within the organization due to various factors which will yield effectiveness and accomplish the objectives of the strategy. The 7 factors must be consistent with one another. The analysis was also conducted with the external factors using the concept of PESTLE Analysis which would facilitate the understanding of the overall environment that would be studied. The analysis of the relationships of the concepts would lead to the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy and different health and social characteristics of the elderly. The researcher therefore divided the study of the elderly into 3 groups namely the society engage elderly who can take care of themselves well, the home attached elderly, and the bedridden elderly as shown in Figure 4.2.



**Figure 4.2** Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy



Health service has different objectives. Annual medical checkup, support of self-reliance, activities of health promotion, slowing down of degeneration due to old age, promotion of service mind, development of knowledge and potential of club for the elderly are major objectives of the society engaged elderly. Home visit, activities of health promotion of specific diseases, support of participation from families, clubs, temples, disease control, prevention of complications and disabilities are major objectives of the home attached elderly. Home visit, activities of health promotion and rehabilitation of specific diseases, development of potential of caregivers of bedridden elderly and overnight center for the care of elderly are major objectives of the bedridden elderly. The researcher therefore determined the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy by determining activities towards the excellence, key success factors, key performance indicators to operate and assess the 4 perspectives namely Effectiveness Perspective, Stakeholder Perspective, Internal Process Perspective, and Learning and growth. Afterwards, the researcher organized the Focus Group with the team of the key informants of both hospitals and verified the information with documents related to the elderly's health service system and constructed the model of the development of health service system by dividing the elderly into the society engaged elderly, the home attached elderly, and the bedridden elderly. The development issues are in Figures 4.3 - 4.5.

Based on the interviews with the key informants and the results of data analysis of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy, it was found that the society engaged elderly had top five demands of care upon arrival at the hospital namely demand of initial diagnosis with accuracy, speed, and timeliness, demand to set up clinic specifically for the elderly, demand of quality treatment planning, demand of convenient and speedy services from arrival at hospital until departure for home, and demand for safe environment such as rail in restroom, sufficient lights, non slippery floor. So, what the elderly wanted the most were good health, participation, security, resulting in good quality of life and happiness. Therefore, the work on society engaged elderly seeking services in tertiary hospitals attached to the Royal Thai Navy towards the excellence in response to the demand of the elderly with good health, participation in activities, and security, resulting in good

quality of life, and happiness should follow the practice on the elderly according to the concept of Balanced Scorecard in management to enable the organization to concretely achieve success as in Figure 4.3 as follows:

### 1. Effectiveness Perspective

Activities towards the excellence include 1) Budget allocation of health service system of society engaged elderly 2) Control, supervision, follow-up, and performance of society engaged elderly 3) Report of performance of the elderly to Committee on the elderly. Key performance indicators include 1) Number of supporting sources of budget of the society engaged elderly's health service system 2) Performance of society engaged elderly 3) Satisfaction of personnel working on the elderly and 4) Telemedicine system.

### 2. Stakeholder Perspective

Activities towards the excellence include 1) Activities of screening of ADL, health, mental health, and quality of life 2) Assessment of the demand of society engaged elderly's health service 3) Activities according to the abilities of society engaged elderly and 4) Assessment of satisfaction of society engaged elderly and service providers. Key performance indicators include 1) Activities in accordance with society engaged elderly's health 2) Scores of assessment of society engaged elderly's mental health 3) Scores of quality of life of society engaged elderly 4) Scores of satisfaction of society engaged elderly and service providers and 5) Number of complaints of society engaged elderly.

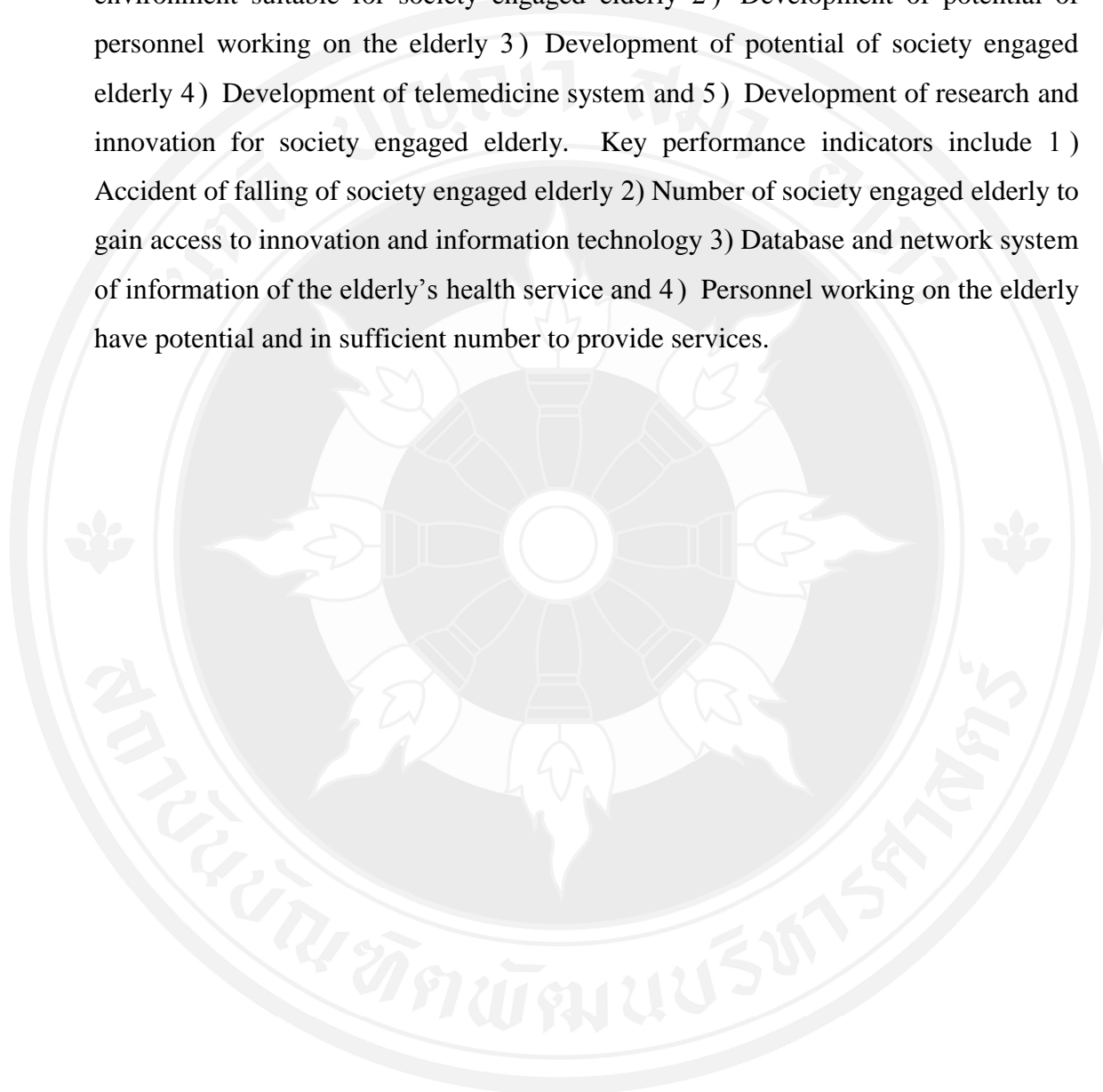
### 3. Internal Process Perspective

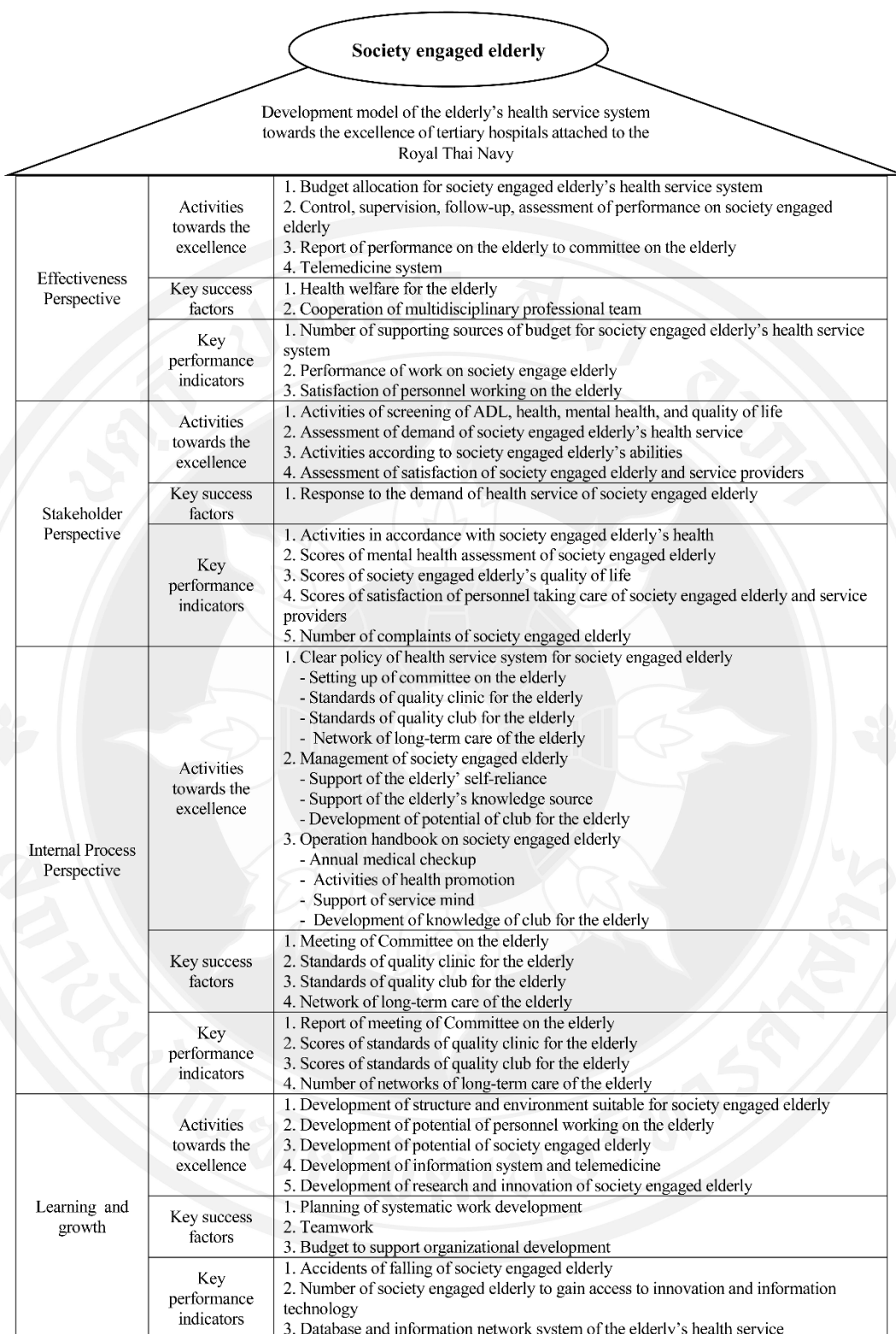
Activities towards the excellence include 1) Clear policy of health service system for society engaged society such as setting up of Committee on the elderly, standards of quality clinic for the elderly, standards of quality club for the elderly, and network of long-term care of the elderly 2) Management of society engaged elderly such as support of the elderly's self-reliance, support of the elderly's knowledge sources, development of potential of club for the elderly 3) Operation handbook for society engaged elderly such as annual medical checkup, activities of health promotion, promotion of service mind, and development of knowledge source in club for the elderly. Key performance indicators include 1) Report of the meeting of committee on the elderly 2) Scores of standards of quality clinic for the elderly 3) Scores of standards

of quality club for the elderly and 4) Number of networks of long-term care of the elderly.

#### 4. Learning and growth

Activities towards the excellence include 1) Development of structure and environment suitable for society engaged elderly 2) Development of potential of personnel working on the elderly 3) Development of potential of society engaged elderly 4) Development of telemedicine system and 5) Development of research and innovation for society engaged elderly. Key performance indicators include 1) Accident of falling of society engaged elderly 2) Number of society engaged elderly to gain access to innovation and information technology 3) Database and network system of information of the elderly's health service and 4) Personnel working on the elderly have potential and in sufficient number to provide services.





**Figure 4.3** Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy (society engaged elderly)

Based on the interviews with the key informants and the results of data analysis of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy, it was found that the top five demands of the home attached elderly while seeking services at hospitals namely demand to undergo initial diagnosis that was accurate, fast, and timely, demand for fast special channel for the elderly, demand for quality treatment planning, demand for convenient and fast service from arrival at the hospital until going home, and demand for safe environment such as rail in restroom, sufficient lights, non slippery floors. Therefore, the work on the home attached elderly seeking services at tertiary hospitals attached to Royal Thai Navy towards the excellence in response to the demand of the elderly, resulting in good health, good quality of life, and happiness should work on the elderly according to the concept of the Balanced Scorecard in management to enable the organization to concretely achieve success is shown in Figure 4.4 as follows:

#### 1. Effectiveness Perspective

Activities towards the excellence include 1) Budget allocation of health service for home attached elderly 2) Control, supervision, follow-up, and performance assessment on home attached elderly 3) Report of performance on the elderly to Committee on the elderly and 4) Telemedicine system. Key performance indicators include 1) Number of supporting sources of budget for health service system of home attached elderly 2) Performance of work on home attached elderly 3) Satisfaction of the personnel working on the elderly.

#### 2. Stakeholder Perspective

Activities towards the excellence include 1) Activities of screening of ADL, health, mental health, and quality of life 2) Assessment of demand of health service of home attached elderly 3) Abilities according to the abilities of home attached elderly and 4) Assessment of satisfaction of home attached elderly and service providers. Key performance indicators include 1) Activities in accordance with home attached elderly's health 2) Scores of assessment of mental health of home attached elderly 3) Scores of quality of life of home attached elderly 4) Scores of satisfaction of home attached elderly and service providers and 5) Number of complaints of home attached elderly.

### 3. Internal Process Perspective

Activities towards the excellence include 1) Clear policy of health service system of home attached elderly 2) Management of home attached elderly such as development of management system of health promotion, management of relationship of networks and increase potential networks 3) Operation handbook on home attached elderly such as annual medical checkup, home visit, activities of health promotion of specific diseases, support participation of families, clubs, temples. Key performance indicators include 1) Report of meeting of committee on the elderly 2) Scores of standards of quality clinic for the elderly and 3) Number of networks of long-term care of the elderly.

### 4. Learning and growth

Activities towards the excellence include 1) Development of structure and environment suitable for home attached elderly 2) Development of potential of personnel working on the elderly 3) Development of potential of the elderly and caregivers of home attached elderly 4) Development of information system and 5) Development of research and innovation of home attached elderly. Key performance indicators include 1) Accident of falling 2) Number of the elderly gaining access to innovation and information technology 3) Database and telemedicine system on the elderly's health service and 4) Personnel working on the elderly have potential and in sufficient number to provide services.



**Figure 4.4** Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy (home attached elderly)

Based on the interviews with the key informants and the results of data analysis of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy, it was found that the first five demands of care of the elderly seeking services at hospitals included demand of speedy and special channel for the elderly, demand of dental care by dentists at least once a year, demand of medicine support with equal quality and reduced medicine costs, demand to be admitted at overnight center of the care for the elderly, and demand to borrow medical devices after discharge from hospitals. Therefore, work on the bedridden elderly seeking services in tertiary hospitals attached to the Royal Thai Navy towards the excellence could respond to the needs of the elderly, rehabilitate health, reduce complications, resulting in good quality of life, happiness, and work on the elderly should be based on the concept of the Balanced Scorecard in management to ensure the organization to achieve concrete success as in Figure 4.5 as follows:

#### 1. Effectiveness Perspective

Activities towards the excellence include 1) Statistics of accident of falling of bedridden elderly 2) Number of caregivers of the elderly with potential to gain access to innovation and information technology 3) Database and telemedicine system of bedridden elderly's health service and 4) Personnel working on the elderly have potential and in sufficient number to provide services to bedridden elderly. Key performance indicators include 1) Number of supporting sources of budget of bedridden elderly's health service system 2) Performance of work on bedridden elderly 3) Happiness and satisfaction of personnel working on the elderly.

#### 2. Stakeholder Perspective

Activities towards the excellence include 1) Activities of screening of ADL, health, mental health, and bedridden elderly's quality of life 2) Assessment of the demand of bedridden elderly's health service 3) Activities according to bedridden elderly's abilities and 4) Assessment of satisfaction of bedridden elderly and service providers. Key performance indicators include 1) Activities in accordance with bedridden elderly's health 2) Scores of assessment of bedridden elderly's mental health 3) Scores of bedridden elderly's quality of life 4) Scores of satisfaction of caregivers



of bedridden elderly and service providers and 5) Number of complaints of caregivers of bedridden elderly.

### 3. Internal Process Perspective

Activities towards the excellence include 1) Clear policy of health service system for bedridden elderly 2) Management of bedridden elderly such as development of knowledge and innovation 3) Operation handbook on bedridden elderly such as assessment of health and annual medical checkup, home visit, activities of health promotion and rehabilitation of specific diseases, development of potential of caregivers of bedridden elderly and overnight center for the care of the elderly. Key performance indicators include 1) Report of the meeting of Committee on the elderly 2) Scores of standards of quality clinic for the elderly 3) Number of networks of long-term care of the elderly and 4) Scores of standards of overnight center for the care of the elderly.

### 4. Learning and growth

Activities towards the excellence include 1) Develop the structure and environment suitable to bedridden elderly 2) Develop potential of personnel working on bedridden elderly 3) Develop potential of the elderly and caregivers of bedridden elderly 4) Develop telemedicine system and 5) Develop research and innovation of bedridden elderly. Key performance indicators include 1) Number of supporting sources of budget of bedridden elderly's health service system 2) Performance of bedridden elderly and 3) Happiness and satisfaction of personnel working on the elderly.



**Figure 4.5** Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy (bedridden elderly)

Based on the interviews with the key informants and based on the results of the data analysis of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy, it was found that the society engaged elderly, home attached elderly, and bedridden elderly demanded care when seeking services at the hospitals. The important focuses of health service that were similar and different in each group based of the ability of daily living. Therefore, the best practice of activities of the services for the elderly seeking services at tertiary hospitals attached the Royal Thai Navy to move towards the excellence, enabled the organization to achieve concrete success and respond to the demand of the elderly, resulting in the elderly's good quality of life and happiness at in Table 4.24.

**Table 4.24** Comparison of activities towards the excellence with similar and different focuses of health service between the society engaged elderly, home attached elderly, and bedridden elderly

Activities towards the excellence	Focus of health service		
	Society engaged elderly	Home attached elderly	Bedridden elderly
<b>Effectiveness Perspective</b>			
1. Budget allocation for health service system	√	√	√
2. Control, supervision, follow-up, assessment, and report performance to the committee on the elderly	√	√	√
3. Records of accident of falling when seeking services at the hospital	√	√	√
4. Records of accident of falling from the bed			√
5. The caregiver has potential to gain access to innovation information technology and telemedicine system	√	√	√
6. Sufficient number of personnel taking care of the elderly			√
<b>Stakeholder Perspective</b>			
1. Screening of ADL, health, mental health, quality of life	√	√	√
2. Assessment of the demand of health service	√	√	√
3. Response to the demand of health service	√	√	√

Activities towards the excellence	Focus of health service		
	Society engaged elderly	Home attached elderly	Bedridden elderly
4. Satisfaction assessment of service recipients and service providers	√	√	√
5. Complaints of services		√	√
<b>Internal Process Perspective</b>			
1. Clear policy of health service system on the elderly	√	√	√
2. Set up Committee on the elderly	√	√	√
3. Standards of quality clinic for the elderly	√	√	√
4. Standards of quality club for the elderly	√		
5. Standards of overnight center of the care of the elderly			√
6. Operation Handbook	√	√	√
7. Activities for health promotion and disease prevention	√		
8. Activities for health promotion and rehabilitation of specific diseases		√	√
9. Promotion of the elderly's self-reliance	√		
10. Support of the elderly's source of knowledge	√		
11. System of relationship of network for continuous care		√	√
12. Standards of home visit		√	√
13. Encouragement of participation from families, clubs, temples		√	
<b>Learning and growth</b>			
1. Develop potential of the club for the elderly	√		
2. Develop structure and environment suitable to the elderly	√	√	√
3. Develop potential of the personnel working on the elderly	√	√	√
4. Develop the elderly's potential	√		
5. Develop potential of the caregivers of the elderly		√	√
6. Develop database of network and telemedicine system	√	√	√
7. Develop research and innovation	√	√	√

Based on the results of the comparison of activities towards the excellence with the similar and different focuses of health service between society engaged elderly, home attached elderly, and bedridden elderly, the conclusion could be reached as follows:

Society engaged elderly with the following focuses of health service: standards of quality club for the elderly, activities of health promotion and disease prevention, support of the elderly's self-reliance, support of the elderly's knowledge source, develop potential of the club for the elderly, and develop of the elderly's potential

Home attached elderly with the following focuses of health service: support participation of families, clubs, temples.

Bedridden elderly with the following focuses of health service: sufficient personnel to take care of the elderly, standards of overnight center for the elderly.

Home attached elderly and bedridden elderly with the following focuses of health service: complaints of services, activities for health promotion and rehabilitation of specific diseases, arrangement of relationships of network for continuous care, standards of home visit, and develop potential of the caregivers of the elderly.

Society engaged elderly, home attached elderly, bedridden elderly with the following focuses of health service: budget allocation for health service system, control, supervision, follow-up, assessment, and report of performance to Committee on the elderly, records of accident of falling when seeking services at hospitals, those taking care of the elderly have potential to gain access to innovation and information technology, activities of screening of ADL, health, mental health, and quality of life, assessment of the demand of health service, response to the needs of health service, assessment of satisfaction of service recipients and service providers, clear policy of health service system of work on the elderly, establishment of committee on the elderly, standards of quality center for the elderly, operation handbook, develop structure and environment suitable for the elderly, develop potential of the personnel working for the elderly, develop database of network and telemedicine system, develop research and innovation.

## **CHAPTER 5**

### **CONCLUSIONS, DISCUSSIONS, AND RECOMMENDATIONS**

The development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy used the mixed quantitative and qualitative research to study the quality of life and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy, compare the quality of life and demand of health service of the elderly with different abilities of daily living and seeking services of tertiary hospitals attached to the Royal Thai Navy in different areas, and synthesize the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy. The sample included 308 elderly seeking services at the outpatient department of tertiary hospitals attached to the Royal Thai Navy namely Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The stratified random sampling was used according to the types of hospitals namely Somdech Phra Pinklao Hospital, Bangkok, and Queen Sirikit Naval Hospital, Chonburi. The ratio of the elderly seeking services in each hospital was calculated by dividing according to the abilities of daily living namely the society engaged elderly, the home attached elderly, and the bedridden elderly. The information was compiled using the assessment form to screen the abilities of daily living, assessment form of quality of life, and questionnaire of the elderly's demand of health service. The information was analyzed using the Descriptive statistics to find frequency, percentage, mean, and standard deviation and using the Inferential Statistics to compare the quality of life and demand of health service of the elderly with abilities of daily living and seeking services in tertiary hospitals attached to the Royal Thai Navy in different areas by using the analysis of the Two – way MANOVA with the statistical significance at the level of .05. The information was collected between October 2019-March 2020.

As for the synthesis of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy, there were 17 key informants. They included executives responsible for the elderly, doctors specializing in family medicine, medical record specialist nurses, nurses with at least one year experience in the care for the elderly, social workers with at least one year experience in the care for the elderly, nurses specializing in the care for the elderly at Pritvej Homecare, physiotherapists, experts on elderly clubs, home visit nurses, and chairmen of elderly clubs. The information was compiled between October 2019-March 2020. The analysis was conducted to find the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy by using the results of the quantitative data analysis namely personal information, quality of life, and demand of health service of the elderly seeking services of tertiary hospitals attached to the Royal Thai Navy as key information to support 17 key informants by using the process of interview and recording of information from the focus group discussion, recording of sound and pictures, together with the use of documents and reports. The acquired information went through the Content Analysis by determining the content from interpretation (Thematic Analysis) and determining the issue framework of the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy according to the guideline to determine the conceptual framework in 4 perspectives and according to the elderly groups namely the society engaged elderly, the home attached elderly, and the bedridden elderly.

## **5.1 Conclusions**

Conclusions of the research results are as follows:

5.1.1 Current system of the elderly's health service of tertiary hospitals attached to the Royal Thai Navy.

5.1.2 Quality of life and demand of health service of the elderly

Quality of life and demand of health service of the elderly seeking services of tertiary hospitals attached to the Royal Thai Navy. Comparison of quality of life and demand of health service of the elderly with different abilities of daily living

and seeking services of tertiary hospitals attached to the Royal Thai Navy in different areas.

5.1.3 Assessment of the elderly's health system of the tertiary hospitals attached to the Royal Thai Navy.

5.1.4 Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy

### **5.1.1 Current system of the elderly's health service of tertiary hospitals attached to the Royal Thai Navy**

Effectiveness Perspective: Somdech Phra Pinklao Hospital is allocated the budget for the operation of Pritvej Homecare center under the supervision of Hospital Welfare Division. The performance assessment of Pritvej Homecare center for the care of the elderly is undertaken. The teams of multidisciplinary professionals are scattered everywhere in the hospital. With organizing activities, assistance will be requested. The system is put in place for the satisfaction assessment of Pritvej Homecare center for the care of the elderly. Queen Sirikit Naval Hospital is allocated operating budget for projects from the income of hospitals and income from the volunteers of the club for the elderly who earn by singing and the donation will proceed to the purchase of medical equipment. While operating activities for the elderly, cooperation is sought if needed. System is in place for the performance assessment of the clinic for the elderly and the club for the elderly. System is also in place for the satisfaction assessment of the clinic for the elderly and the club for the elderly.

Stakeholder Perspective: Somdech Phra Pinklao Hospital does not provide screening of ADL, health, mental health, and quality of life of the elderly seeking services in the outpatient department. But there is screening of ADL at Pritvej Homecare center. The elderly's relatives are encouraged to help in feeding and cleaning the elderly and the families are encouraged to help the bedridden elderly patient as much as possible as at present, there are not enough beds to accommodate the bedridden elderly. Pritvej Homecare center does not have the system of satisfaction assessment of the personnel working on the elderly. But at Queen Sirikit Naval Hospital, there is screening of ADL, dementia, and urinary incontinence at the clinic for the elderly. Activities are organized at the club for the elderly for the society



engaged elderly. Activities are organized according to the interests of health promotion, prevention of non-communicable diseases, vaccination, nutrition for the elderly, and exercise for the elderly. But there is no clear system to assess mental health and quality of life.

Internal Process Perspective: At present, the Royal Thai Navy has ordered the Naval Medical Department to draft the action plan on the operation to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022). Somdech Phra Pinklao Hospital operates Pritvej Homecare center but does not have the handbook on the standards of overnight centers of care for the elderly. Queen Sirikit Naval Hospital operates the clinic for the elderly and the club for the elderly but does not have the handbook on the standards of quality clinic for the elderly and quality club for the elderly. Both hospitals operate work on the elderly and report the meetings to the Committee on the elderly of each hospital. Home visits are assigned by the discharged patients. The home visits are mostly for the home attached elderly and the bedridden elderly requiring assistance when returning home.

Learning and growth: Both hospitals are in the process of improving infrastructure and environment appropriate to the elderly in all departments in the hospitals. As there is a large number of the elderly seeking services especially in the medicine examination rooms of Somdech Phra Pinklao Hospital, it is necessary to accelerate the improvement for the safety of the elderly seeking services. On the training of personnel at Pritvej Homecare center at Somdech Phra Pinklao Hospital, all officials taking care of the elderly have attended training courses on care of the elderly. They are the courses by Academic Affairs Service Center, Naval Medical Department. As for other wards where the elderly are admitted, most officials are not trained on the care of the elderly. As the hospital has the elderly scattered in various wards, there is no concrete plan to develop the elderly's potential. Queen Sirikit Naval Hospital develops the potential of the society engaged elderly by assigning the elderly to be committee members of the club for the elderly with individual responsibilities. Volunteers are also recruited to sing and earn income in front of the outpatient room and use the donation to buy medical equipment to the hospital which enhances the happiness of the society engaged elderly.

Presently, for both hospitals, with discharge of the elderly patients, nurses will instruct the caregivers to help as best they can and home visit nurses will come to the house to assess their condition at home. Both hospitals have information system specifically on the elderly but separately. No information is yet connected in the Naval Medical Department. For research and development, up till now Naval Medical Department has conducted the following research on the elderly:

1. The elderly's behavior of health promotion in the project on the elderly, Naval Medical Department, Arporn Chuduang in 2002.
2. Development of the criteria to give rubric scores in the course on operation of the elderly's efforts, Kanoklekha Suwannapong (2005).
3. Results of the program to promote dental health of the elderly in the project of the club for the elderly, Naval Medical Department, Aungkana Nualyong, in 2006.
4. Results of the program to create force and power and resistance exercise on the frail state of the elderly in community, Krairat Nakkhum in 2019.

### **5.1.2 Quality of life and demand of health service of the elderly**

5.1.2.1 Quality of life and demand of health service of the elderly seeking services of tertiary hospitals attached to the Royal Thai Navy

The research results revealed that 1) Overall level of quality of life, divided by the elderly's abilities of daily living namely the society engaged elderly, the home attached elderly, and the bedridden elderly revealed that the society engaged elderly ( $\bar{x} = 92.03$ ) had the overall quality of life at high level whereas the home attached elderly ( $\bar{x} = 77.76$ ) and the bedridden elderly ( $\bar{x} = 68.20$ ) had the overall quality of life at fair level. The elderly seeking services in different hospitals overall had the different quality of life with the statistical significance at the level of .05 and the elderly's different abilities of daily living overall had the different quality of life with the statistical significance at the level of .05.

5.1.2.2 Comparison of quality of life and demand of health service of the elderly with different abilities of daily living and seeking services of tertiary hospitals attached to the Royal Thai Navy in different areas

The results of the analysis to compare the quality of life and demand of health service of the elderly with different abilities of daily living and seeking services of tertiary hospitals attached to the Royal Thai Navy in different areas revealed the following 1) The pairs with different quality of life included the society engaged elderly and the home attached elderly, and the society engaged elderly and the bedridden elderly 2) The elderly seeking services of tertiary hospitals in different areas and the elderly's different abilities of daily living overall had different demand of health service but with no statistical significance and 3) There was no interaction between the variables of the elderly seeking services at tertiary hospitals attached to the Royal Thai Navy and the elderly's abilities of daily living on the overall quality of life and overall demand of health service.

### **5.1.3 Assessment of the elderly's health system of the tertiary hospitals attached to the Royal Thai Navy**

The researcher conducted the assessment and the GAP analysis in each perspective as follows:

**Effectiveness Perspective:** No concrete budget allocation for the elderly of both hospitals. The budget to operate projects on health promotion and disease prevention is not clearly allocated. The operation on the elderly is separated between Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. There is no overall center for control, supervision, follow-up, and assessment in Naval Medical Department. The report on the performance is also separated. The report of performance does not have the overall information system on the elderly in Naval Medical Department. There is no center for the experts on the elderly in Naval Medical Department. If the officials are requested to assist in activities, their routine work is disrupted. The satisfaction assessment is also separated for each hospital.

**Stakeholder Perspective:** At present, there is yet no clear policy on assessment of the elderly's health and quality of life. Therefore, the guideline on the elderly is not practiced in the same direction in both hospitals. In this research, the researcher assessed the demand of health service for the society engaged elderly, the home attached elderly, and the bedridden elderly. The results of the data analysis on the demand of health service should be clearly separated in operating the activities of

the elderly according to each group such as operation on the society engaged elderly, the home attached elderly, and the bedridden elderly to facilitate the usage in the same direction for both hospitals. If in the future there is restructuring, operation should be similar for both hospitals namely clinic for the elderly, club for the elderly, and overnight center of care for the elderly. There is no center for the experts on the elderly in Naval Medical Department. If the officials are requested to assist in activities, their routine work is disrupted. System should be developed on satisfaction of service recipients, caregivers of the elderly, and personnel working on the elderly into one system in the entire Naval Medical Department in order to make overall assessment of tertiary hospitals.

Internal Process Perspective: Presently, pending on the operation of the Royal Thai Navy on the action plan to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022), the system of the management of the elderly is not in the same direction in tertiary hospitals. Geriatric Medical Center, Naval Medical Department, should be established. Study should be conducted on the standards of overnight center of care for the elderly, standards of quality clinic for the elderly, standards of quality club for the elderly, and development the handbook on the elderly of Naval Medical Department. Both hospitals report meetings separately to the executive of each hospital. Overall handbook should be studied and produced in the name of Naval Medical Department. Naval Medical Department has no system of referral of patients to secondary and primary hospitals for continuous care. There should be system of network for continuous care of the elderly when they are discharged from hospital.

Learning and growth: At present, there is shortage of budget to develop structure and environment appropriate to the elderly. The development is therefore not continuous and quite slow. Naval Medical Department has no plan to develop the potential of the personnel responsible for the elderly. In order to operate the elderly's service system towards the excellence, there must a plan to develop the personnel responsible for the elderly. At present, both hospitals do not have geriatric physician. Naval Medical Department is writing a plan to develop the potential of the caregivers of the bedridden elderly with complicated chronic diseases to be able to care for them safely when they are discharged from the hospital. Naval Medical Department has not

developed information system specifically on the service system for the elderly. Presently, the information system is separated between Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital. The problem is when the elderly patient who is treated at Queen Sirikit Naval Hospital is transferred to Somdech Phra Pinklao Hospital, no medical record can be consulted. Examination must start anew. At present, Naval Medical Department has no clear, concrete registration system of borrowing/returning of medical equipment. As for research and innovation for the past 10 years, at Naval Medical Department, not many research works are conducted on the elderly's health service system. Therefore, research and innovation on the elderly should be promoted especially for the home attached elderly and the bedridden elderly requesting assistance in rehabilitation.

#### **5.1.4 Development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy**

The results of the content analysis by determining the content from interpretation, together with the results of quantitative data analysis are used to support the guideline to determine the conceptual framework of the concept of Balanced Scorecard with the 4 perspectives according to the elderly groups namely the society engaged elderly, the home attached elderly, and the bedridden elderly. The researcher presented the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy as follows:

For the development of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy to be in the same direction, the key informants recommended the direction of development by establishing Geriatric Medical Center, Naval Medical Department. The researcher recommended the establishment of the center as a center directly under Naval Medical Department with formerly 13 units namely 1) Headquarters 2) Somdech Phra Pinklao Hospital 3) Queen Sirikit Naval Hospital 4) Bangkok Naval Hospital 5) Dental Center 6) Medical Support Services Division 7) Preventive Medicine Division 8) Health Welfare Division 9) Medical Informatics Division 10) Underwater and Aviation Medicine Division 11) Finance Division 12) General Support Division and 13) Academic Affairs Service Center, with the addition of Geriatric Medical Center, in total 14 units. The establishment

of the Geriatric Medical Center, Naval Medical Department, would serve as the center of operation on the elderly, the administrative center of control, supervision, follow-up, and coordination of network, regular up to date risk management of the elderly, assessment of performance of the elderly's health service system of the Royal Thai Navy, and linkage of works on the elderly of hospitals attached to the Royal Thai Navy by using telemedicine network system. The management and the operation were divided into 3 groups namely the society engaged elderly, the home attached elderly, and the bedridden elderly.

### **Society engaged elderly**

#### **1. Effectiveness Perspective**

Activities towards the excellence included 1) Budget allocation of health service system of society engaged elderly 2) Control, supervision, follow-up, and performance assessment of society engaged elderly 3) Report of performance of the elderly to Committee on the elderly and 4) Telemedicine system. Key performance indicators include 1) Number of supporting sources of budget of the society engaged elderly's health service system 2) Performance of society engaged elderly 3) Satisfaction of personnel working on the elderly.

#### **2. Stakeholder Perspective**

Activities towards the excellence include 1) Activities of screening of ADL, health, mental health, and quality of life 2) Assessment of the demand of society engaged elderly's health service 3) Activities according to the abilities of society engaged elderly and 4) Assessment of satisfaction of society engaged elderly and service providers. Key performance indicators include 1) Activities in accordance with society engaged elderly's health 2) Scores of assessment of society engaged elderly's mental health 3) Scores of quality of life of society engaged elderly 4) Scores of satisfaction of society engaged elderly and service providers and 5) Number of complaints of society engaged elderly.

#### **3. Internal Process Perspective**

Activities towards the excellence include 1) Clear policy of health service system for society engaged society such as setting up of Committee on the elderly, standards of quality clinic for the elderly, standards of quality club for the elderly, and network of long-term care of the elderly 2) Management of society engaged elderly

such as support of the elderly's self-reliance, support of the elderly's knowledge sources, development of potential of the club for the elderly 3) Operation handbook for society engaged elderly such as annual medical checkup, activities of health promotion, promotion of service mind, and development of knowledge source in the club for the elderly. Key performance indicators include 1) Report of the meetings of Committee on the elderly 2) Scores of standards of quality clinic for the elderly 3) Scores of standards of quality club for the elderly and 4) Number of networks of long-term care of the elderly.

#### 4. Learning and growth

Activities towards the excellence include 1) Development of structure and environment suitable for society engaged elderly 2) Development of potential of personnel working on the elderly 3) Development of potential of society engaged elderly 4) Development of telemedicine system and 5) Development of research and innovation for society engaged elderly. Key performance indicators include 1) Accident of falling of society engaged elderly 2) Number of society engaged elderly to gain access to innovation and information technology 3) Database and network system of information of the elderly's health service and 4) Personnel working on the elderly have potential and in sufficient number to provide services.

### **Home attached elderly**

#### 1. Effectiveness Perspective

Activities towards the excellence include 1) Budget allocation of health service for home attached elderly 2) Control, supervision, follow-up, and performance assessment on home attached elderly and 3) Report of performance on the elderly to Committee on the elderly and 4) Telemedicine system. Key performance indicators include 1) Number of supporting sources of budget for health service system of home attached elderly 2) Performance of work on home attached elderly and 3) Satisfaction of the personnel working on the elderly.

#### 2. Stakeholder Perspective

Activities towards the excellence include 1) Activities of screening of ADL, health, mental health, and quality of life 2) Assessment of demand of health service of home attached elderly 3) Abilities according to the abilities of home attached elderly and 4) Assessment of satisfaction of home attached elderly and service providers. Key

performance indicators include 1) Activities in accordance with home attached elderly's health 2) Scores of assessment of mental health of home attached elderly 3) Scores of quality of life of home attached elderly 4) Scores of satisfaction of home attached elderly and service providers and 5) Number of complaints of home attached elderly.

### 3. Internal Process Perspective

Activities towards the excellence include 1) Clear policy of health service system of home attached elderly 2) Management of home attached elderly such as development of management system of health promotion, management of relationship of networks and increase potential networks 3) Operation handbook on home attached elderly such as annual medical checkup, home visit, activities of health promotion of specific diseases, support participation of families, clubs, temples. Key performance indicators include 1) Report of meeting of Committee on the elderly 2) Scores of standards of quality clinic for the elderly and 3) Number of networks of long-term care of the elderly.

### 4. Learning and growth

Activities towards the excellence include 1) Development of structure and environment suitable for home attached elderly 2) Development of potential of personnel working on the elderly 3) Development of potential of the elderly and caregivers of home attached elderly 4) Development of telemedicine system and 5) Development of research and innovation of home attached elderly. Key performance indicators include 1) Accident of falling 2) Number of the elderly gaining access to innovation and IT 3) Database and system of information network on the elderly's health service and 4) Personnel working on the elderly have potential and in sufficient number to provide services.

## **Bedridden elderly**

### 1. Effectiveness Perspective

Activities towards the excellence include 1) Statistics of accident of falling of bedridden elderly 2) Number of caregivers of the elderly with potential to gain access to innovation and information technology 3) Database and telemedicine network system of bedridden elderly's health service and 4) Personnel working on the elderly have potential and in sufficient number to provide services to bedridden elderly.



Key performance indicators include 1) Number of supporting sources of budget of bedridden elderly's health service system 2) Performance of work on bedridden elderly 3) Happiness and satisfaction of personnel working on the elderly.

## 2. Stakeholder Perspective

Activities towards the excellence include 1) Activities of screening of ADL, health, mental health, and bedridden elderly's quality of life 2) Assessment of the demand of bedridden elderly's health service 3) Activities according to bedridden elderly's abilities and 4) Assessment of satisfaction of bedridden elderly and service providers. Key performance indicators include 1) Activities in accordance with bedridden elderly's health 2) Scores of assessment of bedridden elderly's mental health 3) Scores of bedridden elderly's quality of life 4) Scores of satisfaction of caregivers of bedridden elderly and service providers and 5) Number of complaints of caregivers of bedridden elderly.

## 3. Internal Process Perspective

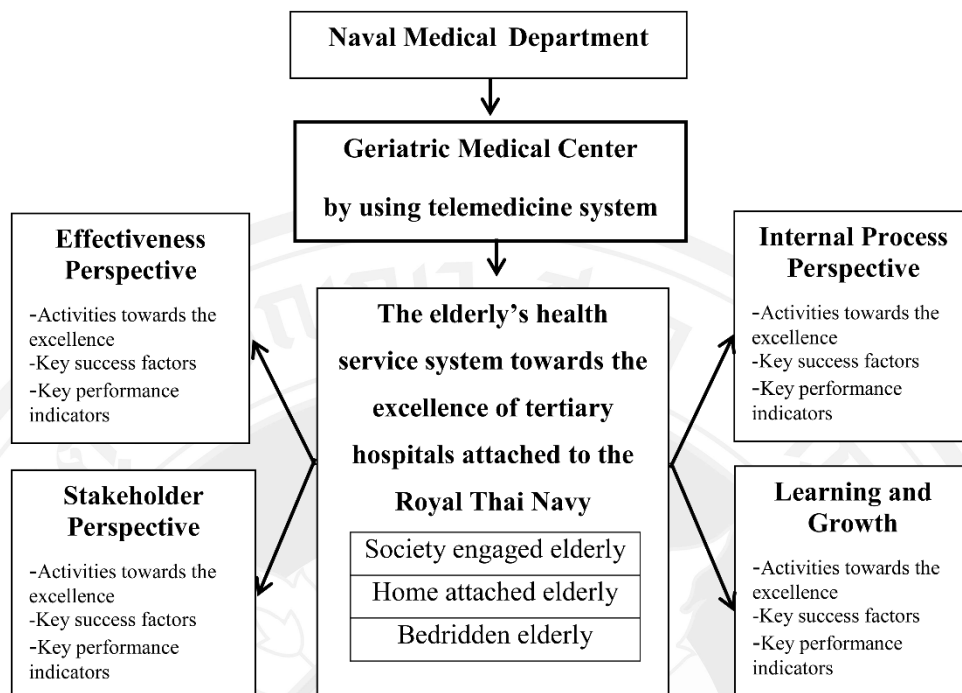
Activities towards the excellence include 1) Clear policy of health service system for bedridden elderly 2) Management of bedridden elderly such as development of knowledge and innovation 3) Operation handbook on bedridden elderly such as assessment of health and annual medical checkup, home visit, activities of health promotion and rehabilitation of specific diseases, development of potential of caregivers of bedridden elderly and overnight center for the care of the elderly. Key performance indicators include 1) Report of the meeting of Committee on the elderly 2) Scores of standards of quality clinic for the elderly 3) Number of networks of long-term care of the elderly and 4) Scores of standards of overnight center for the care of the elderly

## 4. Learning and growth

Activities towards the excellence include 1) Develop the structure and environment suitable to bedridden elderly 2) Develop potential of personnel working on bedridden elderly 3) Develop potential of the elderly and caregivers of bedridden elderly 4) Develop telemedicine system and 5) Develop research and innovation of bedridden elderly. Key performance indicators include 1) Number of supporting sources of budget of bedridden elderly's health service system 2) Performance of

bedridden elderly and 3) Happiness and satisfaction of personnel working on the elderly.

Based on the results of the content analysis by determining the content from interpretation, together with the results of the quantitative data analysis to support the guideline to determine the conceptual framework of Balanced Scorecard in the 4 perspectives according to the elderly groups namely the society engaged elderly, the home attached elderly, and the bedridden elderly, the researcher presented the development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy in the future in the same direction. The key informants suggested the guideline of development by establishing the Geriatric Medical Center, Naval Medical Department, would serve as the center of operation on the elderly, the administrative center of control, supervision, follow-up, and coordination of network, regular up to date risk management of the elderly, assessment of performance of the elderly's health service system of the Royal Thai Navy, and linkage of works on the elderly of hospitals attached to the Royal Thai Navy by using telemedicine network system, by dividing the elderly groups into the society engaged elderly, the home attached elderly, and the bedridden elderly as in Figure 5.1.



**Figure 5.1** Overall development model of the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy (details of the activities are shown Figures 4.3-4.5).

## 5.2 Discussions

### 5.2.1 Current system of the elderly's health service of tertiary hospitals attached to the Royal Thai Navy

#### Effectiveness Perspective

Somdech Phra Pinklao is allocated with the operating budget for Pritvej Homecare center under the supervision of Hospital Welfare Division. Performance assessment is conducted for Pritvej Homecare center for the care of the elderly. Teams of multidisciplinary professionals are scattered everywhere in the hospital. If activities need assistance, cooperation will be sought. There is a system of satisfaction assessment of Pritvej Homecare center. Queen Sirikit Naval Hospital is allocated budget to operate projects from income of hospital and income from volunteers of the club for the elderly who earn by singing and use the donation to buy medical equipment and organize activities for the elderly. If activities need assistance, cooperation will be

sought. There is a system of performance assessment of the clinic for the elderly and the club for the elderly. There is also a system of satisfaction assessment of the clinic for the elderly and the club for the elderly,

Therefore, Naval Medical Department can apply in accordance with the operation of Japan which is the country with the highest share of the elderly in the world. The population of over 60 years of age constitute 33 percent. It is the country entering the “super ageing society” before other countries in the region. Based on Service (2018), the Japanese government has laid down the welfare system and the pension system very well. At the same time, the Japanese have higher rate of savings and investment than other countries. Therefore, the ageing society in Japan is based on social security and secure income. On the contrary, most developing countries including Thailand have not sufficiently planned for the future. So, they may inevitably enter the condition of “Getting old before getting rich”. Therefore, in order to plan the elderly’s welfare system in Thailand, it is crucial to study the guideline from Japan.

The Medical Care System for Elderly in the Latter Stage of Life was first used in 2008. The target group was the elderly of over 75 years old. Those with correct qualifications namely registration and contribution payment can enter the system. The elderly’s medical fees come from 10 percent of the contribution payment of the registered elderly (except the elderly who have the same level of income as people in working age, they will be fined from 10 to 30 percent). Due to the problem of present families who cannot find any caregiver, the long-term care system for the elderly is therefore devised to alleviate burdens of the elderly from families to all people in society. At the same time, it gives assurance that all people will be taken care and supported by society. The system of care for the elderly determines that the service users will be the center to create efficiency and equality. The service users can choose any services as desired, including welfare and health care, treatment with coverage and in compliance of the needs of the service recipients. Moreover, participation from the private sector is also encouraged.

### **Stakeholder Perspective**

Somdech Phra Pinklao Hospital has no screening of ADL, health, mental health, and quality of life of the elderly seeking services at the outpatient department. But there is screening of ADL at Pritvej Homecare center to encourage the relatives to

help feeding or cleaning the patients, and the families to help the bedridden patients as much as possible as at present there are not enough beds to accommodate the bedridden elderly. But Pritvej Homecare center does not have the system of satisfaction assessment of personnel working on the elderly. At Queen Sirikit Naval Hospital, there is screening of ADL, dementia, urinary incontinence at the clinic for the elderly. Activities are organized in the club for the society engaged elderly. They provide knowledge based on the interests in health promotion, prevention of non- chronic diseases, vaccination, nutrition for the elderly, and exercise for the elderly. But there is no clear assessment for mental health and quality of life.

Therefore, Naval Medical Department can apply the research of Shasshasa Bunniamtang and Jidapa Thirasirikul (2017) who studied the structure of the ageing society in South Korea as follows:

Welfare on the emotional development is important. The broadcast room of the center is equipped with officials who are members of the center. It also brings pride to the elderly. The elderly' s human dignity is important as they can perform activities that respond to their needs.

Welfare on the physical development. The center places importance on the elderly' s health care. There are 2 doctors every day at the center for treatment and health prevention for the elderly. Skills in sports are also promoted for health. For the elderly who exercise outdoor, outdoor sports court is also provided.

Welfare on intellectual development. The center for the elderly provides teaching and offers arts performance for members who are general public, as well as the elderly in the center. There are teaching and art exhibition in the center. There is also mobile library where the elderly as well as those coming to Tapgol Park which is a national heritage can use as well. The students in the area can also use the service by becoming members and can rent, borrow, return books or various media. Technological skills are promoted with the supporting area and equipment. Foreign languages are also taught such as English, Chinese, Japanese, as well as music, arts, culture with experts who are elderly and members of the center.

Welfare on spiritual development. The center for the elderly provides meeting and training room to give information before becoming members of the center and to discuss problems of the elderly such as divorce among the elderly which is

increasing, problems of laws such as tax payment, mental problem which is the problem of depression, as well as creation of understanding, readiness, and acceptance of old age, with counseling by experts, mostly social workers.

Welfare on social development. The center for the elderly provides area for the elderly with ability to transfer knowledge in various fields such as foreign languages in English, Chinese, Japanese. With increased knowledge, they will be able to help the community by giving information to tourists. It will promote knowledge sharing to develop society. The elderly who teach as volunteers will be proud to transfer knowledge and useful to others. Based on the study of welfare for the elderly in Korea: case study of the center for the elderly in Seoul, the researcher developed the policy recommendations and management of center for the elderly in Thailand. The government sector should provide services that cover accommodations for traveling and lunch for the elderly with low income so that they can come to fully receive services and lunch as contribution payment. Services should be promoted for the physical, emotional, mental, intellectual, and social development for the elderly in terms of prevention and treatment, especially advice to the elderly in various fields from experts coming from the public sector and civil society as volunteers to promote potential of the elderly's self-reliance. Participation from the civil society should be encouraged as well as the business sector as Social Responsibility and tax incentives to stimulate the participation from the business sector, as well promote society and neighboring communities to participate as volunteers in organizing activities that will promote physical, emotional, mental, intellectual, and social development for the elderly.

### **Internal Process Perspective**

At present, the Royal Thai Navy has ordered the Naval Medical Department to draft an action plan to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022). Somdech Phra Pinklao Hospital operates Pritvej Homecare center but does not have a handbook on the standards of the overnight center for the care of the elderly. Queen Sirikit Naval Hospital operates the clinic for the elderly and the club for the elderly but does not have a handbook on the standards of the quality clinic for the elderly and the quality club for the elderly. Both hospitals operate work on the elderly and report the meetings to Committee on the elderly of each hospital. Home visits are assigned by the discharged patients. Most home visits are for

the home attached elderly and the bedridden elderly requiring assistance when returning home.

Therefore, Naval Medical Department can apply in accordance with the study by Jiraporn Thongdee and Varaporn Boonchiang (2017) who studied the elderly's health service system with the "Model of Thailand 4.0" and concluded that the policy of the model of Thailand 4.0 was an important opportunity to develop the elderly's care system whose number is on the rise. Technology and innovation are used to develop the elderly's health service to respond to the problems and demand of the elderly, reduce inequality, create the opportunity to gain access to services, and receive services that are fair, efficient, with quality to reduce health-related costs to drive the development towards security, prosperity, and sustainability of the elderly's health service system. Basic infrastructure must be ready to accommodate technology. The basic infrastructure of high efficiency should also be developed to cover the whole country.

#### **Learning and growth**

Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital are in the process of improving the basic structure and environment appropriate to the elderly in all departments of the hospitals. As there is a large number of the elderly seeking services especially at medicine examination rooms in Somdech Phra Pinklao Hospital, it is necessary to accelerate the improvement for the safety of the elderly seeking services. In terms of trainings for personnel development, at Pritvej Homecare center of Somdech Phra Pinklao Hospital, all officials taking care of the elderly attended the courses on the care of the elderly. The courses are offered by Academic Affairs Service Center, Naval Medical Department. As for other wards with the admitted elderly, most officials have not attended the courses on the elderly. As the hospital has the elderly scattered in various wards, there is no plan to concretely develop the potential of the elderly. Queen Sirikit Naval Hospital develops the potential of the society attached elderly by assigning them as committee members of the club for the elderly with individual duties. Volunteers are recruited to sing in front of the outpatient room and use the donation in return to buy medical equipment for the hospital, enhancing happiness to the society engaged elderly. As for research and development, Naval

Medical Department has done research on the elderly. But for the past 10 years, there has not been much research in the field of the elderly.

Therefore, Naval Medical Department can undertake organizational development in line with the research of Sunisa Yukalung and Prasopsuk Srisaenpang (2017) who studied the development of age-friendly health services for the elderly at the outpatient department in Phontong Hospital. It revealed that the age-friendly health services for the elderly at the outpatient department had 6 compositions namely 1) Expression of respect, honor, care, and attention 2) Understanding and awareness of old age 3) Fast service 4) Particular space specifically for the elderly 5) Service near home and 6) Safe environment appropriate to the elderly. The analysis of the situation of services provided by the health team revealed the following problems 1) Some personnel were not trained in knowledge and skills on the care of the elderly 2) Heavy workload with focus on treatment of diseases and the same service standards for all ages 3) Limitations of location made it impossible to set up a clinic for the elderly and 4) Some environment was not suitable for the elderly's health problems. The information would go through the process of development to yield the age-friendly health services for the elderly consisting of 1) Awareness of the age-friendly health services for the elderly 2) Development of service system specifically for the elderly and 3) Improvement of the environment to suit the elderly. This supports the research of Jiraporn Thongdee and Varaporn Boonchiang (2017) who studied the elderly's health service system with the "model of Thailand 4.0" and concluded that the policy of the model of Thailand 4.0 was an important opportunity to develop the elderly's care system whose number was on the rise. Technology and innovation were used to develop the elderly's health service to respond to the problems and demand of the elderly, reduce inequality, and create the opportunity to gain access to services and receive services that were fair, efficient, with quality to reduce health-related costs to drive the development towards security, prosperity, and sustainability of the elderly's health service system. Basic infrastructure must be ready to accommodate technology. The basic infrastructure of high efficiency should also be developed to cover the whole country. This is in accordance with the research of Sumitra Vicha et al (2018) who studied the network system of health service for the home attached elderly and the bedridden elderly (case study of the home attached elderly and the bedridden elderly at



Hong Ha subdistrict health promoting hospital, Mae Tha district, Lampang). System of care of the dependent elderly in community should respond to the demand of the dependent elderly and their relatives by taking into account individual differences. The dependent elderly and relatives should be promoted to take care of themselves. People in community, the public sector, and the private sector should determine the concrete, integrated, continuous direction of the care of the elderly with linkage of cares, reduce repetitions in role and responsibilities, planning of the common use of resources in community (personnel, materials, budget, and management), as well as development of information system and use of technology for care of the elderly to reach the objectives of care that is dependent elderly with good quality of life, with value and human dignity.

## **5.2.2 Quality of life and demand of health service of the elderly**

5.2.2.1 Quality of life and demand of health service of the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy.

The analysis of the overall level of quality of life, divided by the elderly's abilities of daily living namely the society engaged elderly, the home attached elderly, and the bedridden elderly revealed that the society engaged elderly ( $\bar{x} = 92.03$ ) had the overall quality of life at high level whereas the home attached elderly ( $\bar{x} = 77.76$ ) and the bedridden elderly ( $\bar{x} = 68.20$ ) had the overall quality of life at fair level. The elderly seeking services in different hospitals overall had different quality of life with the statistical significance at the level of .05 and the elderly's different abilities of daily living overall had different quality of life with the statistical significance at the level of .05. This research was in accordance with Nongnuch Yamwong (2014) who studied the quality of life and abilities of daily living of the elderly seeking services at HRH Princess Maha Chakri Sirindhorn Medical Center. The study revealed that the elderly's quality of life was in highly positive relationship with the elderly's abilities of daily living. It supported the research of Kanya Cheunaron and Walainaree Promla (2018) studied the development of the quality of life of the elderly in Pathum Thani. The study found that the guideline to develop the quality of life must formulate the policy to promote good quality of life by promoting and supporting the establishment of club or group for the elderly, support of rights given to the elderly for annual medical checkup, support the transfer of knowledge on correct self-care, and analysis that the society

engaged elderly could help themselves well which was different from the home attached and bedridden groups, making the overall quality of life different.

5.2.2.2 Comparison of quality of life and demand of health service of the elderly's different activities of daily living and seeking services in tertiary hospitals attached to the Royal Thai Navy in different areas.

The results of the analysis of interaction between the variables of the elderly at tertiary hospitals in different areas and the elderly's different abilities of daily living on the overall quality of life and overall demand of health service revealed that the elderly seeking services in tertiary hospitals in different areas and the elderly's different abilities of daily living overall had different quality of life and overall had different demand of health service without statistical significance. This is probably because the elderly seeking services in Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital are the hospitals at the same level that is tertiary levels. The abilities of daily living of the elderly seeking services in the 2 hospitals are divided into 3 groups namely the society engaged elderly, the home attached elderly, and the bedridden elderly. The demand of health services in the 2 hospitals are not different. Maslow's Hierarchy of Needs Theory discussed the hierarchy of individual needs from the lowest to the highest. The theory has 3 main concepts namely 1) Individuals are living creatures with needs and the needs influence or motivate behavior. Only the unfulfilled demand is the motive. The fulfilled demand is no longer the motive. Compared to the elderly in each group with responded demand of health service, when the demand is met, there will no need of the service. 2) Individual needs in the hierarchy are from basic to complicated demand. Compared to the home attached elderly and the bedridden elderly seeking services in the two hospitals who have more complications in terms of treatment and the treatment of the two tertiary hospitals could respond similarly and 3) Needs lower down in the hierarchy are satisfied before individuals move to needs higher up. Compared to the demand of health service of the elderly in each group seeking services in the two hospitals with similar services, with modern treatment or service, the elderly seeking services in each group demand more modern services. Therefore, the service and response to demand is not different. But the system and model of health service may not go in the same direction for the two hospitals, of which the researcher would further conduct qualitative study.

The analysis of main influences revealed that the elderly seeking services in tertiary hospitals in different areas and the elderly's different abilities of daily living overall had different quality of life with the statistical significance at the level of .05. The elderly seeking services at Queen Sirikit Naval Hospital had higher quality of life according to the assumptions of some part of the research. This is probably because the activities of the club for the elderly are organized monthly based on the timetable of activities. Lectures are also offered with knowledge on promotion of vaccination, support of annual medical checkup, and support of transfer of knowledge similarly to activities in an adult school. This was in accordance with the study of Kanya Cheunaron and Walainaree Promla (2018) who argued that the guideline of the development of quality of life must formulate the policy to promote good quality of life, by promoting the setting up a club or a group of the elderly, support the rights of the elderly for annual medical checkup, support to transfer knowledge of correct self-care. The analysis revealed that the society engaged elderly could help themselves very well which were different from the home attached elderly and the bedridden elderly. As a result, the overall quality of life was different. It was in accordance with the research of Nongnuch Yamwong (2014) who conducted the quality of life and ability of daily living of the elderly seeking services at HRH Princess Maha Chakri Sirindhorn Medical Center and found that the quality of life of the elderly had positive relationship at a high level with the ability to perform activities of daily living of the elderly. Therefore, the personnel in the health team, as well as the caregivers of the elderly should participate in the planning for readiness and promotion of health service of the elderly seeking services at the hospital. It will also stimulate the activities to test for better abilities of daily living. It may help the elderly to receive services or activities to respond to the development of better abilities of daily living.

The elderly seeking services in tertiary hospitals in different areas and the elderly's different abilities of daily living overall had different demand of health service but with no statistical significance. It was found that elderly seeking services at Queen Sirikit Naval Hospital overall had more demand of health service than at Somdech Phra Pinklao Hospital which was slightly different. This is probably because every year there are a lot of retired government officials. The main problem is that for the retired government officials without family or without caregiver, at present the center for the

care of the elderly attached to the Royal Thai Navy is only 1 center which is Pritvej Homecare center of Somdech Phra Pinklao Hospital, Naval Medical Department. It is located on Somdet Phra chao Taksin Road, Bukkhalo Subdistrict, Thonburi District, Bangkok. So, the home attached elderly and the bedridden elderly can seek services at Pritvej Homecare center. The study of Wannarat Thianpajeekul (2015) discussed the comparison of the long-term care for the elderly in urban areas and found that there were 6 models of long-term care in urban areas namely nursing home, hospital providing long-term care, health facilities, residences for the elderly, facilities for supporting life, and facilities for palliative care. The government had not covered all the needs. There was also the shortage of personnel responsible for the elderly's care. Jehyareeyeh Jehsoh (2012) conducted the elderly's demand of health service and pattern of health service at the Center of health promotion and rehabilitation, Faculty of Nursing, and found that the health service pattern of the elderly members with ability to help themselves diminished and consisted of 4 dimensions namely 1) Demand for safe location 2) Demand of timely assistance in times of emergency 3) Demand to increase health services and 4) Increase the number of caregivers who provide good care. This research supports health service based on the ability of daily living of each group in Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital in similar pattern as the overall demand of the two hospitals are slightly different.

Based on the analysis of demand of the elderly, home attached elderly classified by aspects as follows: physical needs, psychological needs, social needs and environmental requirements, found that the home attached elderly have social needs and environmental requirements was fair level ( $\bar{X}$  = 2.34, 2.33 respectively), while the elderly, society engaged elderly and bedridden elderly have high level, and interviewing the home attached elderly and chairman of the club, the home attached elderly had less demand for health services than the society engaged elderly because they did not want to join the club activities and did not want to be busy society. The chairman of the club said that "*elderly living in dependency cannot participate in activities but the elderly living in dependency will be treated by primary caregivers*", There are relatives and neighbors according to the information of the elderly with dependency who can help themselves. Home attached elderly do not require social acceptance. In spite society engaged elderly want to be accepted and want to have social potential. Therefore, the

society engaged elderly should have the capacity to promote potential and the home attached elderly should be encouraged the caregiver's potential.

### **5.2.3 Assessment of the elderly's health system of the tertiary hospitals attached to the Royal Thai Navy**

#### **Effectiveness Perspective**

Somdech Phra Pinklao is allocated with the operating budget for Pritvej Homecare center under the supervision of Hospital Welfare Division. Performance assessment is conducted for Pritvej Homecare center for the care of the elderly. Teams of multidisciplinary professionals are scattered everywhere in the hospital. If activities need assistance, cooperation will be sought. There is a system of satisfaction assessment of Pritvej Homecare center. Queen Sirikit Naval Hospital is allocated budget to operate projects from income of hospital and income from volunteers of the club for the elderly who sing and use the donation in turn to buy medical equipment and organize activities for the elderly. If activities need assistance, cooperation will be sought. There is a system of performance assessment of the clinic for the elderly and the club for the elderly. There is also a system of satisfaction assessment of the clinic for the elderly and the club for the elderly,

Effectiveness perspective explains that both hospitals are not clearly allocated budget in the operation on the elderly of Naval Medical Department. It is in line and can apply with the study of Shasshasa Bunniamtang and Jidapa Thirasirikul (2017) who studied the structure of the ageing society in Korea. It showed that Korea was facing problems of the changes in the population's structure. It is the country that enters the ageing society fastest in the world with only 18 years. Other developed countries take longer. It is forecast to enter the Super Ageing Society before other countries. It entered the complete ageing society in 2018 with the population of 14 percent of the total population of the country. The population will increase to 21 percent of the total population which will make it enter the super ageing society in 2026 which is very fast. The responsible agency for the management of the centers for the elderly in Korea is the welfare center for the elderly. It receives 30 percent of government, and costs for office equipment, salary of government employees, free underground tickets for the elderly, and the volunteer officials are paid through donation and support from

the neighboring private sector. As the membership of the center is free of charge, the elderly also participate in the donation as well. So, it is a cooperative effort between the public, the people's sector, and civil society. Budget will be allocated 30 percent from the government, including building rent. The rest comes from donation. As for food, 1,000 Korean won of food fees are collected from the elderly for one meal although the food costs more than 1,000 Korean won a meal. For the elderly who cannot afford it, the center will provide free meal on a case by case basis. Employees are government officials with regular salary. So, it is the support from the government. As for other officials, they are mostly volunteers to help the elderly. The volunteers either come from the elderly who are the center members, outsiders who are registered as volunteers via the website of the center, or from community around the center.

#### **Stakeholder Perspective**

Somdech Phra Pinklao Hospital has no screening of ADL, health, mental health, and quality of life of the elderly seeking services at the outpatient department. But there is screening of ADL at Pritvej Homecare center to encourage the relatives to help feeding or cleaning the patients, and the families to help the bedridden patients as much as possible as at present there are not enough beds to accommodate the bedridden elderly. But Pritvej Homecare center does not have the system of satisfaction assessment of personnel working on the elderly. At Queen Sirikit Naval Hospital, there is screening of ADL, dementia, urinary incontinence at the clinic for the elderly. Activities are organized in the club for the society engaged elderly. They provide knowledge based on the interests in health promotion, prevention of non- chronic diseases, vaccination, nutrition for the elderly, and exercise for the elderly. But there is no clear assessment for mental health and quality of life.

Stakeholder perspective explains the perspective that responds to the needs of the elderly seeking services. It is in line with the study of Methaporn Methapisal et al. (2017) discussed the needs of home caregivers in the perspective of the elderly when they lacked the ability of daily living by using equipment. The study found that the society engaged elderly (no illness yet) mostly did not need caregiver to live in at present. With the disability of daily living, the demand for caregiver to live in was the highest. For the activity level where the elderly could help themselves, their demand level was to call for the caregiver. The elderly wanted their children, spouses, or family

members to take care of them in case of future illness or in need of assistance. It was also in line with the research of Sunisa Yukalung and Prasopsuk Srisaenpang (2017) who studied the development of age-friendly health services for the elderly at the outpatient department in Phontong Hospital. It revealed that the age-friendly health services for the elderly at the outpatient department had 6 compositions namely 1) Expression of respect, honor, care, and attention 2) Understanding and awareness of old age 3) Fast service 4) Particular space specifically for the elderly 5) Service near home and 6) Safe environment appropriate to the elderly. The analysis of the situation of services provided by the health team revealed the following problems 1) Some personnel are not trained in knowledge and skills on the care of the elderly 2) Heavy workload with focus on treatment of diseases and the same service standards for all ages 3) Limitations of location made it impossible to set up a clinic for the elderly and 4) Some environment is not suitable to the elderly's health problems. The information would go through the process of development to yield the age-friendly health services for the elderly consisting of 1) Awareness of the age-friendly health services for the elderly 2) Development of service system specifically for the elderly and 3) Improvement of the environment to suit the elderly. This supports the research of Jiraporn Thongdee and Varaporn Boonchiang (2017) who studied the elderly's health service system with the "model of Thailand 4.0" and concluded that the policy of the model of Thailand 4.0 was an important opportunity to develop the elderly's care system whose number was on the rise. Technology and innovation were used to develop the elderly's health service to respond to the problems and demand of the elderly, reduce inequality, and create the opportunity to gain access to services and receive services that were fair, efficient, with quality to reduce health-related costs to drive the development towards security, prosperity, and sustainability of the elderly's health service system. Basic infrastructure must be ready to accommodate technology. The basic infrastructure of high efficiency should also be developed to cover the whole country.

### **Internal Process Perspective**

At present, the Royal Thai Navy has ordered the Naval Medical Department to draft an action plan to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022). Somdech Phra Pinklao Hospital operates

Pritvej Homecare center but does not have a handbook on the standards of the overnight center for the care of the elderly. Queen Sirikit Naval Hospital operates the clinic for the elderly and the club for the elderly but does not have a handbook on the standards of the quality clinic for the elderly and the quality club for the elderly. Both hospitals operate work on the elderly and report the meetings to Committee on the elderly of each hospital. Home visits are assigned by the discharged patients. Most home visits are for the home attached elderly and the bedridden requiring assistance when returning home.

Internal Process Perspective explains that the Royal Thai Navy places importance on the development of the elderly's health service system. Therefore, it has ordered the Naval Medical Department to draft an action plan to accommodate the rights of the elderly according to the Elderly Person Act B.E. 2564-2565 (2021-2022). For the elderly's health service system to move towards the excellence, the Geriatric Medical Center, Naval Medical Department, should be established as the center on operation of the elderly, and serves as the administrative center of control, supervision, follow-up, coordination of network, regular up to date risk management for the elderly, performance assessment of the Royal Thai Navy's health service system, and linkage on the work of the elderly of the hospitals attached to the Royal Thai Navy. The research of Pisit Piriya Pun (2015) conducted the development of the standards of the elderly's health care at an overnight center and the results of the development of the standards of the elderly consisted of 5 compositions and 10 standards namely 1) Composition of management namely Standard 1 Management system, Standard 2 Operation, and Standard 3 Financial management 2) Composition of health namely Standard 4 Health care planning, Standard 5 Operation of health care, and Standard 6 Medicine management 3) Composition of rights and protection namely Standard 7 Rights and benefits, and Standard 8 Privacy and human dignity 4) Composition of physical environment and safety system namely Standard 9 Environment and safety, and 5) Composition of internal standard system namely Standard 10 System and mechanism to ensure service quality. It is in accordance with the research of Siripan Sasat et al. (2015) who studied the development of the standards and guideline of the service to the dependent elderly in facility for long-term care. The policy recommendations of the elderly's long-term care in the country consisted of the following: 1) The government should consider issuing law on direct long-term care or



amend the relevant laws to develop the standards of the long-term care facilities and create more concrete mechanism to supervise the standards 2) Support the establishment of a national committee to supervise quality and long-term care by assigning Ministry of Public Health to supervise elderly care facilities and Ministry of Social Development and Human Security to supervise the standards of nursing homes 3) Support the establishment of a committee to assure quality at local level or independent organization to ensure that the elderly and service recipients get quality care, good quality of life, and peaceful death with respect and dignity 4) Promote local administrative organizations such as Bangkok, provincial administrative organizations, or large municipalities to issue permit on elderly care facilities 5) Promote the voluntary assessment of elderly care facilities and agency charged with providing advice on standard development to help pass the assessment and upgrade the quality of long-term elderly care facilities in the country with speed and sustainability 6) Policy should be devised on development and preparedness of personnel at all levels to have competency in long-term care to meet the demand of the elderly with increased dependency.

### **Learning and growth**

Somdech Phra Pinklao Hospital and Queen Sirikit Naval Hospital are in the process of improving the basic structure and environment appropriate to the elderly in all departments of the hospitals. As there is a large amount of the elderly seeking services especially in medicine examination rooms of Somdech Phra Pinklao Hospital, it is necessary to accelerate the improvement for the safety of the elderly seeking services. In terms of trainings for personnel development, at Pritvej Homecare center of Somdech Phra Pinklao Hospital, all officials taking care of the elderly have attended the courses on the care of the elderly. The courses are offered by Academic Affairs Service Center, Naval Medical Department. As for other wards with the admitted elderly, most officials have not attended the courses on the elderly. As the hospital has the elderly scattered in various wards, there is no plan to concretely develop the potential of the elderly. Queen Sirikit Naval Hospital develops the potential of the society attached elderly by assigning them as committee members of the club for the elderly with individual duties. Volunteers are recruited to sing in front of the outpatient room and use the donation in return to buy medical equipment for the hospital, enhancing happiness to the society engaged elderly.

At present for both hospitals, upon discharge from the hospital, a nurse will instruct the caregivers to help the patients in the best of their ability. Home visit nurse will pay them visit to assess the patients' conditions upon returning home. Both hospitals have information system specifically of the elderly in each hospital but the information is not connected in the entire Naval Medical Department. As for the past research and development, Naval Medical Department conducted research on the elderly with Arporn Chooduang (2002) on The elderly's behavior of health promotion in the project on the elderly, Naval Medical Department, Kanoklekha Suwanapong (2005) on a development of scoring rubrics in the nursing administration and management practicum, Aungkana Nualyong in 2006 the results of the program to promote dental health of the elderly in the project of the club for the elderly, Naval Medical Department, and Krairat Nakkhum in 2019 the results of the program to create force and power and resistance exercise on the frail state of the elderly in community.

Learning and growth explains that for the past 10 years, Naval Medical Department has not conducted much research on the elderly. The organizational development on the elderly's health service system of the Royal Thai Navy is in line with the research of Siriporn Ngamkham et al. (2018) who studied the access to health service of the elderly in Thawi Watthana district, Bangkok, and found the factors that were related to access to health service such as service quality giving confidence to the service recipients, good service system and service quality on compassion for the service recipients, spouses and children in time of illness. Therefore, for the elderly to gain more access to health service, executives of health care facilities should develop quality of service to give confidence to service recipients such as environmental management, development of personnel's potential, including knowledge, personality, attitude towards service, and service system focusing on family and the elderly as the center. It was also found that the elderly had the problem of the access to health service. It was therefore necessary for Bangkok to develop the system of the elderly's health service to acquire the model of health care with quality and efficiency. The elderly would be able to conveniently gain access to health service as necessary and respond to the health demand in the area context with more coverage and appropriateness. It supports the research of Jehyareeyeh Jehsoh (2012) who studied the elderly's demand of health service and pattern of health service at the Center of health promotion and

rehabilitation, Faculty of Nursing, and found that the health service pattern of the elderly members with ability to help themselves diminished and consisted of 4 dimensions namely 1) Demand for safe location 2) Demand of timely assistance in times of emergency 3) Demand to increase health services and 4) Increase the number of caregivers who provide good care.

#### **5.2.4 Development model of the elderly's health service system towards the elderly of tertiary hospitals attached to the Royal Thai Navy**

5.2.4.1 In order to develop the elderly's health service system towards the excellence of tertiary hospitals attached to the Royal Thai Navy in the same direction in the future, the key informants recommended setting up the Geriatric Medical Center, Naval Medical Department. The researcher suggested that the center should be directly under Naval Medical Department. It will be the center of the operation of the elderly. It will serve as a commanding division on the elderly with counselling, control, supervision, follow-up, coordination of network, regular update risk management of the elderly, performance assessment of work on health service system, and linkage of work on the elderly of both hospitals. The establishment of the center is in line with the Department of Older Persons, Ministry of Social Development and Human Security Mahidol University in 2019 under the integrated plan to create equality to accommodate the ageing society in the budget year 2019. It is in cooperation with Faculty of Medicine, Siriraj Hospital, Mahidol University to operate the project of setting up the National Academic Centre of Geriatric Medicine at Samut Sakhon. It aims to create the system of the elderly's care which is a national prototype, especially the intermediate care to allow the elderly patient to pass the acute illness and get ready to go back home to reduce the time spent too much at the hospital and prevent getting the same illness. It is in line with the National Strategy 2018-2037 in Strategy 2: Strategy to create competitiveness in industry and comprehensive medical services, Strategy 3: Strategy of development and creation of potential of human resources to promote the elderly as the force to drive the country, Strategy 4: Strategy to create opportunity and social equality to accommodate the ageing society based on quality and for sustainable quality of life. The National Academic Centre of Geriatric Medicine has the size of 25 rais about 35 kms from Siriraj Hospital along Liap Khlong Si Wa Pha Sawat Road,

Mueang District, Samut Sakhon. It is allocated the budget of integration to create equality in order to accommodate the ageing society based on the strategy to promote and develop the potential of human capital, goal of environment and innovation to encourage good health in order to accommodate the ageing society, under the Department of Older Persons, Ministry of Social Development and Human Security. The National Academic Centre of Geriatric Medicine is under the supervision of Faculty of Medicine, Siriraj Hospital, Mahidol University. It will serve as the prototype of integration of the care for the elderly, and allow the elderly with the good quality of life. It is the researcher's view that the setting up of the National Academic Centre of Geriatric Medicine, Naval Medical Department, will connect the health information at the national level as an integration of the work on the elderly with quality and towards sustainable excellence.

5.2.4.2 Development model of the health service system of the society engaged elderly in Effectiveness Perspective, Stakeholder Perspective, Internal Process Perspective, Learning and growth, the 4 perspectives of the society engaged elderly has many factors that will render the operation successful and follow the determined indicators. Key success factors include good health care for the elderly, strong cooperation among multidisciplinary professional teams, response to the demand of the elderly's health service, regular meetings of Committee on the elderly, operation according to the standards of the quality clinic for the elderly, operation according to the standards of the quality club for the elderly, coordination of network of long-term care of the elderly, systematic planning of work development, teamwork, and supporting budget for organizational development. This is in line with the guideline of services for specific groups of the elderly. In the practical handbook on the services of the elderly, the subdistrict health promoting hospital claims that the society engaged elderly can help themselves very well, live independently in society, and usually participate in social activities, abilities of daily living, generally in good health, no chronic diseases, or those with the risks of having 1-2 controllable chronic diseases. They can participate in activities and help their families, others, and society. They may or may not have troubles. The target of service is to maintain the health and ability to work on a continuous basis, develop the ability to use potential and wisdom for their utmost benefit of themselves, families, community, and society.

5.2.4.3 Development model of health service system for the home attached elderly in the Effectiveness Perspective, Stakeholder Perspective, Internal Process Perspective, and Learning and growth. The 4 perspectives have many factors that will render access and in line with the determined indicators. Key success factors include health welfare for home attached elderly, cooperation among multidisciplinary professional team, response to the demand of health service of home attached elderly, meetings of Committee on the elderly, standards of quality clinic for the elderly, number of network for long-term care of the elderly, systematic planning of work development, teamwork, budget to support organizational development. This was in line with the management of specific group of elderly by subdistrict health promoting hospitals. The handbook on the care of the elderly claims that the home attached elderly partly need assistance, limited in social life, with controllable, chronic diseases, or complications of many diseases impacting livelihood. In terms of health, visibly limited in livelihood such as movement, inability to walk on even floors, assisting equipment or helpers are required, ability to eat but spill, need assistance to go to the restroom, cleaning needed after excretion, many uncontrollable diseases, or complications, affecting movement and socializing. Difficult movement, depression, memory loss, and dementia. Little social participation due to risk of danger, as well as those who can go out but do not like socializing due to familial charges such as care for grandchildren. Reinforcement of power to this group of the elderly will enhance potential and need assistance from health team. This is in accordance with the research of Sumitra Vicha et al (2018) who studied the network system of health service for the home attached elderly and the bedridden elderly (case study of the home attached elderly and the bedridden elderly at Hong Ha Subdistrict Health Promoting Hospital, Mae Tha district, Lampang). The research results revealed the pattern of network of health service system for the home attached elderly and the bedridden elderly at Hong Ha Subdistrict Health Promoting Hospital or Hong Ha community (Moo 1, Moo 6, Moo 7, and Moo 8, Nam Cho subdistrict, Mae Tha district, Lampang). It consists of 5 compositions namely (1) Assessment of the conditions of the dependent elderly and potential of caring relatives (2) Care by people in community (3) Continuous health care and information and technology system of Hong Ha Subdistrict Health Promoting Hospital, Mae Tha Hospital, and Lampang Hospital (4) Formulation of policy, action

plan, project, and budget from Nam Cho municipality and (5) Operation on the elderly with other relevant agencies. Each composition connects to coordinate work and use of common resources. System of care of the dependent elderly in community should respond to the demand of the dependent elderly and their relatives by taking into account individual differences. The dependent elderly and relatives should be promoted to take care of themselves. People in community, the public sector, and the private sector should determine the concrete, integrated, continuous direction of the care of the elderly with linkage of cares, reduce repetitions in role and responsibilities, planning of the common use of resources in community (personnel, materials, budget, and management), as well as development of information system and use of technology for care of the elderly to reach the objectives of care that is dependent elderly have good quality of life, with value and human dignity.

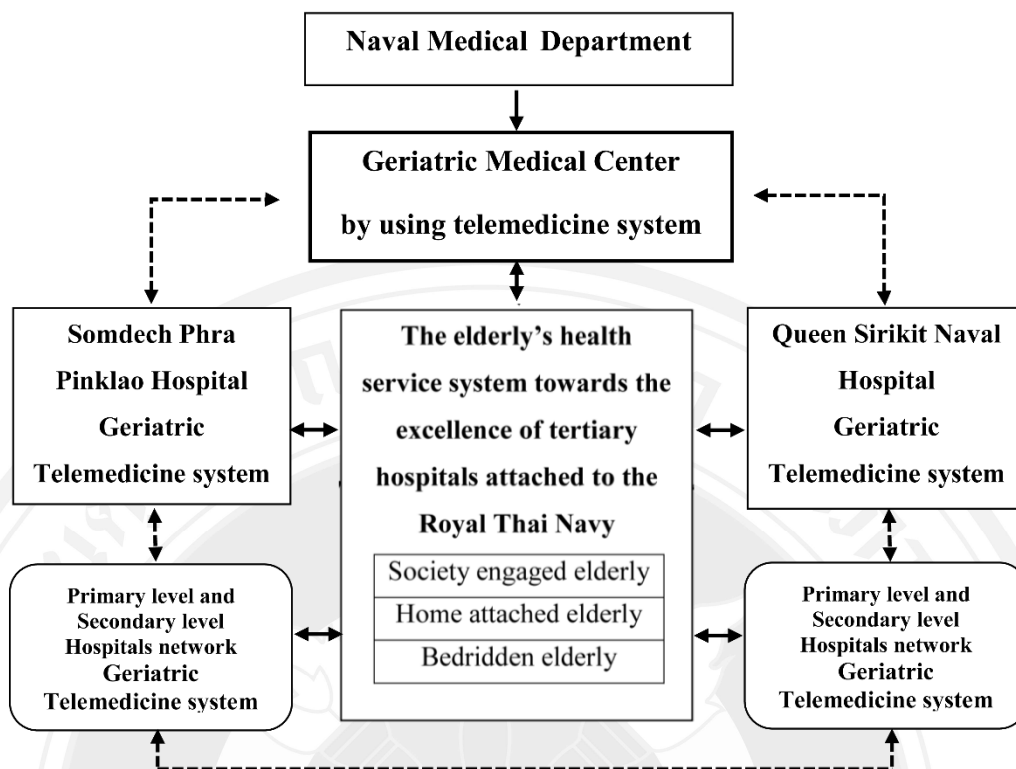
5.2.4.4 Development model of the health service system of the bedridden elderly with Effectiveness Perspective, Stakeholder Perspective, Internal Process Perspective, and Learning and growth, the 4 perspectives have many factors that will render success and in accordance with the determined indicators. Key success factors include health welfare for the bedridden elderly, cooperation among teams of multidisciplinary professionals, response to the demand of health service based on the abilities of daily living, meetings of Committee on the elderly, standards of quality clinic for the elderly, network of long-term care of the elderly, standards of overnight center for the care of the elderly, systematic planning of work development, teamwork, and budget to support organizational development in accordance with the guideline to provide services to the specific elderly by subdistrict health promoting hospitals. In the handbook on services for the elderly, it claims that the bedridden elderly cannot help themselves in daily living, assistance requested for movement, many chronic diseases with complications, frail health, limited abilities of daily living, unable to move while sitting or in sleeping position, difficulty in swallowing, food intake through other means such as nose, excretion in bed, wearing pampers all the time and change often, controllable and uncontrollable diseases, chronic diseases, complications, inability to socialize, need social participation, without potential to assist family and society. Reinforcement of power to the elderly, families, and caregivers will increase happiness to the elderly and potential to the caregivers. Mental problems consist in lack of

caregivers, abandonment, inability to gain access to deserved services, poverty, etc. Necessary social assistance is health team. Target of services is to maintain existing happiness, prevention of complications, and prevention of disabilities to live reasonably with help from caregivers, families, community, society as needed, and no untimely death. This is in accordance with the research of Chavalit Sawatphol (2017) who studied the care of the dependent elderly in northeast of Thailand. It revealed that services of care to the dependent elderly in local communities could be divided into 7 types namely 1) Care by relatives 2) Care by neighbors. The study revealed that neighbors or the researcher called “close neighbors” were important due to proximity and easy access to the dependent elderly and can assist the main caregivers 3) Care by leader, village committee member with allocation of benefits from funds to members and coordination for assistance from external agencies 4) Volunteers in local communities who have attended initial trainings on the care of the dependent elderly such as village health volunteers, social development and human security volunteers, volunteers in take care of the elderly in community (Caregiver) 5) Care by organization and institutions within community such as monks, social networks such as network of club for the elderly at subdistrict or district level, network of volunteers to take care of the elderly in community (Caregiver) 6) Care by local administrative organizations and 7) Care by government officials divided by role and responsibility such as health service network, assistance/treatment such as social development and human security agencies. The care of the dependent elderly mainly by communities consisted in 1. Home visit 2. Home health care. The services of the central government included allowance for the elderly and health services, universal health coverage. However, the care of the dependent elderly is not continuous with no clear action plan, uncomplete coverage, discrimination, lack of coordination between agencies and network of local communities. The development of the structure and environment appropriate to the elderly, the researcher took into account the relationships that connect the factors of individual, environment, and health system. The individual and environment are always related which will affect good health and quality of life. Therefore, the development model of the elderly’s health service system constitutes Holistic care. The environment appropriate to the elderly seeking services at hospital is very important

because it will not cause danger to the elderly, no accident by falling which is an important indicator in the development of the elderly's health service system.

The literature review of Andrès et al. (2018) studied the experimentation of telemedicine in elderly patients with chronic heart failure: A study prospective in 175 patients found that Hjjam, a heart failure in France requires more than 100,000 hospitalizations a year, accounting for 5 percent of all hospitalizations and is the cause of hospital admissions among the elderly. It is very well documented in heart failure and diabetes. Telemedicine may help, in particular, preventing emergencies and re-hospitalizations. It may also make it possible to structure an integrated care path, which is the most important evidence that found in heart failure which is consistent with the study of Fadhil (2018) studied beyond patient monitoring: conversational agents role in telemedicine & healthcare support for home-living elderly individuals that is necessary for a system to dynamically interact with the aging population to collect health data and provide support, especially after hospital discharge or home care monitoring. Many medical devices are delivered along with the telemedicine system which will support the Naval Medical Department linking the elderly operations of the Royal Thai Navy hospitals by using telemedicine network system by categorizing the elderly into society engaged elderly, home attached elderly and bedridden elderly as shown in Figure 5.2.





**Figure 5.2** Geriatric Medical Center by using telemedicine network system

### 5.3 Recommendations

#### 5.3.1 Policy recommendations

1. Formulation of clear policy towards the excellence of tertiary hospitals attached to the Royal Thai Navy and establishing Geriatric Medicine by using telemedicine system as shown in Figure 5.3.

2. Management of the elderly's health service system by applying the concept of the Balanced scorecard for the success of an organization by synthesis of 4 perspectives namely Effectiveness perspective, Stakeholder perspective, Internal Process perspective, and Learning and growth.

3. Organizational management in improving structure and arranging environment appropriate to the elderly seeking services in tertiary hospitals attached to the Royal Thai Navy for safety to the elderly without accident of falling while seeking services at the hospital.

4. Develop the potential of the personnel working on the elderly and develop training specifically on the elderly.

5. Develop the potential of the caregivers of the elderly especially the bedridden elderly with non-communicable diseases but with complications requiring assistance in daily living from the caregivers with potential.

6. Allocation of budget for the operation on the elderly in health promotion, disease prevention, treatment, and rehabilitation will develop work on the elderly towards the excellence in health service system and there is a system for assessing expenses in the event of a financial crisis.

### **5.3.2 Operating recommendations**

1. The results of the mixed quantitative and qualitative data analysis aim to know the demand of health service based on the elderly's abilities of daily living while seeking services in tertiary hospitals attached to the Royal Thai Navy. Naval Medical Department can apply the development model of the elderly's health service system towards the excellence to respond to the needs of the service recipients namely the society engaged elderly, the home attached elderly, and the bedridden elderly.

2. Hospitals attached to the Royal Thai Navy apply the development model of the elderly's health service system in the context of each hospital and continuous development according to the context of each hospital as the potential of each hospital is not the same. So, the application will be in the part that can operate.

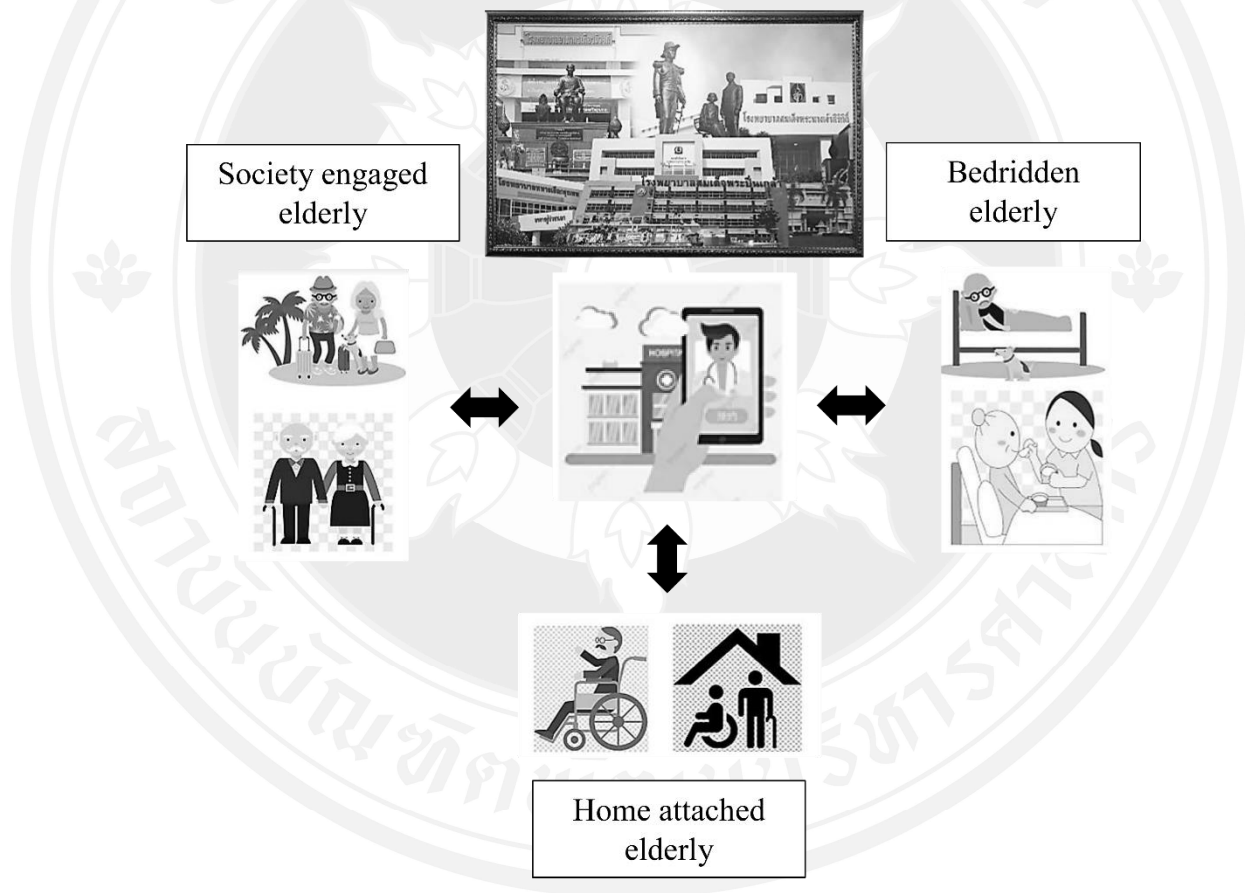
3. Hospitals attached to other Ministries can apply the model as appropriate.

### **5.3.3 Academic recommendations**

1. There should be study, research, development, and enhancement by follow-up and assessment of practice of application of activities towards the excellence such as formulation of clear policy to work on the elderly, activities that are in line with the elderly's abilities of daily living, and development of structure and environment appropriate to the elderly by determining key performance indicators and assessment of the key performance indicators to develop the response to the needs of service recipients and hospital executives on the elderly.

2. Additional study of the elderly's communities should be conducted to analyze the elderly's quality of life and demand to order to forward to the communities for further participation in health care.

3. There should be study and research of the development model of the elderly's health care system in primary and secondary hospitals attached to the Royal Thai Navy as key information for referral of the elderly and for development of health service system of the elderly seeking services in hospitals attached to the Royal Thai Navy in response to the needs of health service of the elderly seeking services based on the potential and cover primary, secondary, and tertiary hospitals.



**Figure 5.3** Geriatric Medical Center by using telemedicine system

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## APPENDIX A

### The Index of Item Objective Congruence

Research conceptual framework was performed using the Delphi method, seeking opinions from 11 experts, including environmental management 2 specialist for the elderly, 1 expert in geriatric psychology, research ethics specialist Naval Medical Department, 1 person, human resources specialist Naval Medical Department, 1 person, specialist in the elderly Naval Medical Department, 3 people, policy and planning specialist Naval Medical Department, 1 person, health promotion specialist Naval Medical Department, 1 person, nurse specializing in physical fitness and health promotion The Naval Medical Department, 1 person, receives the IOC = 0.92 as follows:

#### Index of Item Objective Congruence of the conceptual framework

McKinsey 7S	Define	IOC		Interpret results / suggestions
		congruence	No congruence	
Structure	An organizational structure based on the work processes, controls, power integration and decentralization of management. A good organizational structure must demonstrate the relationship between authority and responsibility. Because it contributes to flexibility reduce errors and redundancy in operations. And help personnel to know the scope of their duties. Used to analyze internal process dimensional factors	///////// 0.90	/ 0.10	Available 1. Some of them are not specific in the current elderly work. 2. Coordination of agencies.
Strategy	Strategic management is planned to be responsive and appropriate to changes in the external and internal environments. This resulted in the effectiveness of the elderly health service system to excellence. Infrastructure Elderly health service system personnel	///////// 1		Available Identify problems that arise and fix them.

McKinsey 7S	Define	IOC		Interpret results / suggestions
		congruence	No congruence	
	management system forwarding system budget management system and systems for controlling, supervising, monitoring and evaluating, including identifying problems that arise and solving them.			
System	management of operating systems within the organization, including infrastructure systems elderly health service system. Personnel management system, forwarding system, budget management system and control, supervision, monitoring and evaluation systems, which must operate in the same direction in tertiary hospitals of The Royal Thai Nany	///////// 1		Available In the same direction And in accordance with the policy of the main agency.
Style	Organization model corporate management policy. The role of a leader is essential to success. By creating an organizational culture to happen connected to the internal process dimensions which is related to the internal process dimensions In managing and developing operational standards to strive for excellence in the healthcare system.	///////// 0.90	/ 0.10	Available 1. Roles of management, especially senior management 2. Leaders are important to involve the team in shaping the care model. 3. Should increase the policy of the hospital's management to excellence.

McKinsey 7S	Define	IOC		Interpret results / suggestions
		congruence	No congruence	
Staff	Key factors for successful operations having specialized personnel in the health observation of the elderly will be able to operate with operational potential which includes the elderly specialists Elderly specialized nurse and multidisciplinary practices in the elderly which must have the ability to manage work for the elderly elderly, social, home and bed-bed groups financial management capabilities health care planning. The ability to manage a safe environment for the elderly And there must be continuous development of the potential of each personnel in order to obtain the personnel qualified for the elderly work.	///////// 1		Available  Sufficient personnel with appropriate knowledge and care.
Skill	Operational skills of personnel with specific abilities in the elderly such as physical, psychological, elderly health assessment, primary health screening Barthel activities of daily living, vital signs measurement rehabilitation and physical therapy, patient mobility and medical	///////// 0.90	/ 0.10	Available  Elderly job skills such as ...

McKinsey 7S	Define	IOC		Interpret results / suggestions
		congruence	No congruence	
	device use, principles of drug use, dependent care for the elderly in gastrointestinal care. Food preparation, feeding, respiratory care oxygen delivery, nebulization, lung percussion, excretory system care urinary catheter care preventative care, pressure ulcers, posture, posture, posture, and end-stage elderly care.			
Shared Value	The organizational culture, which will serve as a tool for elderly work management, includes the same guidelines for the elderly in the tertiary hospital under the navy are accepted throughout the organization, enabling the elderly to work in the same direction.	///////// 0.90	/ 0.10	Available  1. Working on the elderly in the same direction and in line with the main agencies. 2. Make you see the building process “Corporate culture on aging operations” will provide a clear view of the Shared Value process. 3. There is a sense of unity.



PESTLE Analysis	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Policy	Strategic Plan Policy Of the Royal Thai Naval Medical Department 2019 - 2021 Strategic issue 2 Develop medical excellence strategic objective 9: the health service of the Naval Medical Department has the quality to meet the needs of the Navy, with indicators of objectives: The level of success of the naval elderly health service. The strategy is hosted by 4 main hospitals, 2 tertiary hospitals, namely Somdet Phra Pinklao Hospital. Naval Medical Department And Queen Sirikit Hospital Naval Medical Department	///////// 0.81	// 0.19	Available 1. External factors are factors that are beyond control that affect internal operations. 2. Political factors and policies of countries affecting the elderly service system should mention national policy 3. Policy of nation, government, economic and social development plan
Economic	It is an external budget management analysis that the Naval Medical Department is encouraged to work on the elderly health service system, namely The Navy budget, the hospital income budget, and the National Health Security Agency budget.	///////// 1		Available Do we consider the economic situation?
Social	Analyzing access to the general civilian elderly health care system at their own expense. Analyze the satisfaction of the services received. Getting a comfortable and fast service. Interaction with other people. Getting help from other people.	///////// 0.90	/ 0.10	Available 1. Behavior of all groups, forces, families and people. 2. Increased access to military personnel.

PESTLE Analysis	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Technology	Information receiving behavior of the elderly in the use of information and communication technology such as searching for health information for easy, convenient and fast access to information. The nurse of the referral unit quickly has access to health media and health hazards to prevent disease in a timely manner.	///////// 1		Available 1. Access to health media with technology. 2. The network of each hospital should be specified. 3. More equipment Elderly Innovation.
Legal	Rules, regulations, the Medical Profession Act and nurses analyzes privacy and human dignity, rights protection and protection of the elderly and confidentiality of the elderly attending hospital services, compiling statistical data on the prosecution of the elderly. Dissatisfaction in medical treatment and the application of various laws related to elderly health care.	///////// 0.90	/ 0.10	Available 1. Laws relating to the Elderly Regulations How are the elderly service regulations covered? 2. Law Section 11, Item 1, the medical services of public health that provide convenience and speed to the elderly in special cases. 3. Is there a lawsuit statistics? 4. To receive services according to the rights of the elderly, convenience and speed.
Environment	Setting an environment suitable for the elderly who come to the hospital It is very important	///////// 1		Available 1. Environment affecting aging

PESTLE Analysis	define	IOC		Interpret results / suggestions
		congruence	No congruence	
	<p>because it will not cause harm to the elderly, not to have a fall accident. Guidelines for the environment for the elderly to be safe include Building a safe place that is not dangerous to health and convenience should have at least one passenger elevator and corridors at least 1.5 meters wide in order to allow wheelchairs to pass the floor level. The staircase is at least 0.9 meters wide, the staircase can walk at least 1.50 meters wide, has a set ball of 0.15 meters, a sleeping ball size 0.3 meters and a long handrail with a fire escape. There is a clear sign guiding the exit, not less than 1.5 meters wide, with continuous handrails, the entrance to the building is a smooth floor, no slippery, no obstructions. Parking lot, the sign showing the direction of the facility's location, clearly visible day and night, the alarm or alarm system that can send and receive signals, has wheel chairs to facilitate movement for the elderly who do not walk. easy and referring to patients in emergencies. Provide a safe place for activities of the elderly club, safety and security in life</p>			<p>represents the importance of aging such as the infrastructure in the hospital.</p> <p>2. Most of the recipients are located in which areas.</p>

PESTLE Analysis	define	IOC		Interpret results / suggestions
		congruence	No congruence	
	and property, complete facilities, and a place to rest and exercise for the elderly. (Department of Health, Ministry of Public Health, 2015)			

Effectiveness Perspective	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Infrastructure	Arrangement of an appropriate hospital environment for the elderly to facilitate safe environment guidelines for the elderly, the Environmental Health Bureau, Department of Health, Ministry of Public Health and public services suitable for the elderly such as public transportation, travel to the hospital for medical treatment or to participate in social activities.	///////// 1		Available 1. Service organization structure and proper environment, buildings and places conducive to the elderly, have handrails, ramps and adequate lighting. 2. Having few indicators but showing clear results such as quality of life of the elderly - National Plan for the Elderly (2002 - 2021)
Health services are elderly groups.	Health screening, treatment planning, pharmaceutical care, rehabilitation, mental health care, oral health care, nutrition care, health promotion,	///////// 1		Available Elderly health service standards

Effectiveness Perspective	define	IOC		Interpret results / suggestions
		congruence	No congruence	
	prevention of complications, and Thai / alternative medicine care.			
Personnel management system	Personnel planning to support the elderly who are admitted to the hospital. Produce elderly care personnel such as family medicine physicians, geriatric physicians / nurses, physical therapists and clinical psychologists.	///////// 0.90	/ 0.10	Available 1. The number of each branch should be specified in the tertiary standard. 2. Expand concrete understanding of planning, such as personnel planning, knowledge, competency, etc.
Referral system	Hospitals / Elderly Care Centers can refer the elderly to the elderly to receive primary care, secondary, specialized medical treatment or other health care can be done in a nearby hospital and can pass on health information for ongoing treatment and follow up on treatment in that hospital.	///////// 0.81	// 0.19	Available Referrals should be networked for care.
Budget management system	Develop a financial and fiscal system for the elderly care system by studying the appropriateness of the extension of benefits / welfare for the elderly in the health insurance system, including long-term care insurance system, and appropriate carer compensation. There are various sources of money, seeking a joint investment approach between	///////// 0.90	/ 0.10	Available Lack of right to medical care

Effectiveness Perspective	define	IOC		Interpret results / suggestions
		congruence	No congruence	
	the public and private sectors in the provision of care services.			
Controlling, supervision, monitoring and evaluation	Develop a system for controlling, supervising, monitoring and evaluating the performance of the elderly, taking part in multidisciplinary involvement in order to continually develop a model of healthcare for the elderly to be more quality and efficient and strive for excellence of the elderly health service system in tertiary hospitals	///////// 0.90	/ 0.10	

Stakeholder Perspective	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Elderly (well elder, home bond elder, bed bond elder)	- The need for health services of the elderly - Access to the health service system - satisfaction from hospitalization until returning home	///////// 1		Available  1. Demand covers all groups. 2. Take the satisfaction assessment form collected by the hospital as data.
Worker	Satisfaction in performance and service provision	///////// 1		Available  Consider other issues as well, such as participation.

Internal Process Perspective	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Implementation of the elderly work system	<ul style="list-style-type: none"> <li>- Manpower requirements planning</li> <li>- Development of operational standards</li> <li>- Development of elderly health information system</li> <li>- Health security system, security, drugs and medical supplies</li> <li>- Good Governance System</li> <li>- Reduction of the duration of service</li> <li>- Medical expenses</li> <li>- Service of the staff</li> <li>- Development of a multidisciplinary network</li> </ul>	<p>//////////</p> <p>1</p>		<p>Available</p> <ol style="list-style-type: none"> <li>1. There is a standard practice.</li> <li>2. Development of health service information system for the elderly</li> <li>3. The provision of services according to the right of treatment</li> <li>4. Reducing the waiting time.</li> <li>5. If there is an activity that has been done, bring it in</li> </ol>

Learning and Growth	define	IOC		Interpret results / suggestions
		congruence	No congruence	
The development of personnel working in the elderly health service system	<ul style="list-style-type: none"> <li>- Develop a suitable structure and environment for the elderly</li> <li>- Develop the potential of elderly workers</li> <li>- Develop the potential of the elderly and carers</li> <li>- Develop information systems</li> <li>- Develop research and innovation</li> </ul>	<p>//////////</p> <p>1</p>		<p>Available</p> <ol style="list-style-type: none"> <li>1. Develop personnel in innovation.</li> <li>2. Development of information personnel.</li> </ol>

Current health service system	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Elderly health service system	A study of the elderly health service system of Somdej Phra	<p>//////////</p> <p>1</p>		

of tertiary hospitals under the Royal Thai Navy	Pinklao Hospital and Queen Sirikit Hospital by analyzing internal factors (McKinsey 7S) and external factors (PESTLE Analysis).			
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Health service system development model	define	IOC		Interpret results / suggestions
		congruence	No congruence	
The development model of the elderly health service system to excellence in tertiary hospitals under the Royal Thai Navy	The development model of the elderly health service system to strive for excellence and to be a model for the elderly health care services, well elder groups, home bond and bed bond , there is a medical development system specialized in geriatric medicine. Developing the elderly clinic, develop the capacity of personnel working in the geriatric clinic, establish a network of participation in long-term elderly care, transfer of a model of care for the elderly, and for excellent effectiveness, infrastructure must be developed. Develop personnel management system Develop a referral system for the elderly to be cared for continuously develop the budget management system develop a system for controlling, supervision, monitoring and evaluation.	///////// 0.90	/ 0.10	Available 1.The term for the well elderly, the home bond, the bed bond should be further defined. 2. Should write a conceptual framework that is about to further study care such as participation. In the care of the elderly in each phase such as acute care, intermediate care and long term care to complete all dimensions.



Health service system development model	define	IOC		Interpret results / suggestions
		congruence	No congruence	
Average score summary		0.92	0.08	Available 1. Stakeholders should add an elderly caregiver 2. Optimize the conceptual framework before creating questionnaires and interviews.

### Item Objective Congruence score of the conceptual framework

Expert Opinion List	Estimate the opinions of experts											IOC	Interpret results
	1	2	3	4	5	6	7	8	9	10	11		
McKinsey 7S	0.29	1	1	1	0.86	0.43	1	1	1	1	1	0.87	Available
PESTLE Analysis	0.17	1	1	0.5	1	0.5	1	1	1	1	1	0.83	Available
Effectiveness Perspective	1	1	1	0.6	1	0.17	1	1	1	1	1	0.89	Available
Stakeholder Perspective	1	1	1	1	1	1	1	0	1	1	1	0.91	Available
Internal Process Perspective	1	1	1	1	1	1	1	1	1	1	1	1	Available
Learning and Grow	1	1	1	1	1	1	1	1	1	1	1	1	Available
Current health service system	1	1	1	1	1	1	1	1	1	1	1	1	Available
Health service system development model	1	1	1	1	1	-1	1	1	1	1	1	0.82	Available

$$IOC = \frac{0.87+0.83+0.89+0.91+1+1+1+0.82}{8}$$

8

$$= 0.92$$

The conceptual framework is available

**Item Objective Congruence of the interview form**

Standard	define	IOC		Interpret results
		congruence	No congruence	
1. Management system	<p>1. There is control, supervision and monitoring of the performance in the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers</p> <p>3. There is a common policy and guideline for caring that meets the standards of academic principles or evidence-based evidence.</p> <p>4. There is a management structure within the command. Roles, duties and responsibilities in relation to caring for the elderly</p> <p>5. There is a process for inspecting the service quality that is transparent and can be examined.</p> <p>6. There is an effective risk management system. Have an effective emergency response plan</p> <p>7. There is a plan to develop the competencies and capabilities of the elderly care providers.</p>	1		Available

Standard	define	IOC		Interpret results
		congruence	No congruence	
2. Operation	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers</p> <p>3. There is management to allow the elderly to do activities together.</p> <p>4. An appropriate structure, number of personnel and management have been established in line with the number of elderly in care.</p> <p>5. There is a designated person responsible for the elderly.</p> <p>6. Elderly caregivers must have at least 1 year of experience in caring for and must be trained in elderly care.</p> <p>7. There is a medical specialist for the elderly.</p> <p>8. Have physical therapists take care of the elderly.</p>	0.81	0.19	Available
3. Financial Management	<p>1. Budget allocation for the elderly health service system</p> <p>2. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>3. Satisfaction of service recipients and service providers</p> <p>4. There is a systematic financial reporting. And reported at least twice a year</p>	0.90	0.10	Available

Standard	define	IOC		Interpret results
		congruence	No congruence	
	5. There are internal and external audit agencies to monitor the use of funds in accordance with the regulations.			
4. Health care planning	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers.</p> <p>3. Promote health care and involve families in health planning.</p> <p>4. Health care is accurate, up-to-date and up to date and requires consent for care.</p> <p>5. Promote health care and involve families in health planning.</p> <p>6. Health care is accurate, up-to-date and up to date, and care must be obtained.</p>	1		Available
5. Health care practices	<p>1. There is control, supervision and monitoring of the performance in the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers</p> <p>3. There is a good rehabilitation program with strong evidence.</p> <p>4. There is a system for referring the elderly to health services at the primary care level. Secondary care in a nearby hospital and can pass</p>	0.90	0.10	Available

Standard	define	IOC		Interpret results
		congruence	No congruence	
	<p>information for continued treatment</p> <p>5. Have a team of doctors to give advice 24 hours a day.</p> <p>6. Have activities in social relations. In collaboration with multidisciplinary</p> <p>7. There are activities to promote health, prevent disease, cure and restore health.</p> <p>8. Have religious activities And important day activities</p> <p>9. There is a healthy rehabilitation with a strong evidence.</p>			
6. Drug Administration	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers</p> <p>3. There is a service system for obtaining prescription drugs according to medical practice standards.</p> <p>4. There is a system to monitor the safety of drug use.</p> <p>5. Providers provide accurate dosing information to elderly and relatives.</p> <p>6. The elderly are receiving prescription drugs according to the professional practice standards.</p>	0.81	0.19	Available

Standard	define	IOC		Interpret results
		congruence	No congruence	
	7. Elderly and relatives have accurate understanding of drug use information.			
7. Patient rights and benefits	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers</p> <p>3. There is a timely assistance system in the event of an emergency while entering the hospital.</p> <p>4. There is a system to notify expenses and obtaining consent for treatment voluntarily.</p> <p>5. Seniors and their relatives are entitled to an appointment with a team of doctors and nurses to plan the care and refer to continuing care.</p> <p>6. The elderly are aware of health care news and provide information about the illness conditions that come to the hospital in languages that are easy to understand.</p> <p>7. Elderly and relatives have the right to be appointed with the medical and nursing team in order to plan the treatment and refer further care.</p> <p>8. The elderly should be fully rescued in an emergency.</p>	1		Available

Standard	define	IOC		Interpret results
		congruence	No congruence	
	9. In an emergency, the elderly should be fully rescued.			
8. Privacy and Human Dignity	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers</p> <p>3. The care system is based on privacy and the needs or willingness of the elderly.</p> <p>4. There is a confidentiality system for the elderly and should only provide information to direct relatives. Spouse and children</p> <p>5. Care is based on privacy and the needs or willingness of the elderly.</p> <p>6. The elderly are kept a secret. Should provide information only to direct relatives. Spouse and children</p> <p>7. Caregiver staff should be trained to have knowledge on rights protection and to provide protection for the elderly.</p>	1		Available
9. Environment and Safety	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers. The elderly are safe without accidents.</p>	1		Available

Standard	define	IOC		Interpret results
		congruence	No congruence	
	<p>3. There are regulations forbidding the elderly to carry valuables with them.</p> <p>4. There is a development in the design of the place where the bed is safe, objects are placed, convenient appliances, sufficient light, safe everywhere, especially the bathroom. There is a handrail to help walk to different places. Has a clean, ventilated place</p> <p>5. Development of exercise and leisure places for the elderly.</p> <p>6. Ramps and ramps are developed, clearly marked with signs or symbols.</p>			
10.Service quality assurance system	<p>1. There is control, supervision and follow-up of the performance according to the specified cycle.</p> <p>2. Satisfaction of service recipients and service providers.</p> <p>3. There is a policy and put emphasis on the development of service quality for the elderly.</p> <p>4. There is an operating system for quality assurance of service according to the specified system.</p> <p>5. There are minutes of the committee on the elderly.</p> <p>6. There are modern standard equipment and a system to borrow to the elderly.</p>	0.81	0.19	Available



Standard	define	IOC		Interpret results
		congruence	No congruence	
	7. There is continuous improvement in service quality and reporting to the committee on the elderly. 8. Developing an information system to support service quality. 9. There is a network to exchange knowledge on the development of service quality between various institutions. 10. There is research and innovation in the development of the elderly.			
Average score		0.92	0.08	Available

$$\begin{aligned}
 \text{IOC} &= \frac{1+0.81+0.90+1+0.90+0.81+1+1+1+0.81}{10} \\
 &= 0.92
 \end{aligned}$$

The interview form is available



N O	Expert Opinion List	Estimate the opinions of experts											IO C	Interpret results	
		1	2	3	4	5	6	7	8	9	10	11			
	entering the hospital until leaving the hospital														
16	Want to get a quality treatment plan	1	1	1	0	1	1	0	1	1	1	1	0.8	Available	
17	Want to get a mental health assessment	1	1	1	1	0	1	1	0	1	1	1	0.8	Available	
18	Want to join the elderly club	0	1	1	1	1	1	1	0	1	1	1	0.8	Available	
19	Want to stay in an elderly care center	1	1	1	1	0	1	1	1	0	1	1	0.8	Available	
20	Want to go in a day care center	1	1	1	1	1	1	1	1	1	1	1	1	Available	
21	Want to borrow medical equipment	1	1	1	1	1	1	1	1	1	1	1	1	Available	
22	Need a resting corner for the elderly when entering the service	1	1	1	1	0	1	1	1	0	1	1	0.8	Available	
23	Want staff to visit the house after leaving the hospital	1	1	1	1	1	1	1	1	1	1	1	1	Available	
24	Want to have a fast channel especially for the elderly	1	1	1	1	1	1	1	1	1	1	1	1	Available	
25	Want to have a health promotion unit for the elderly for well elderly and home bond group	1	1	1	1	1	1	1	1	1	1	1	1	Available	
26	Need a standardized long-term elderly health care center for the elderly who are unable to help themselves. (bed bond elderly)	1	1	1	1	1	1	1	1	1	1	1	1	Available	
27	Want the elderly club to be established	1	1	1	1	1	1	1	1	1	1	1	1	Available	
28	Want to establish a clinic for the elderly	1	1	1	1	1	1	1	1	1	1	1	1	Available	
29	Others specify.....	1	1	1	1	1	1	1	1	1	1	1	1	Available	
	..														

$$IOC = \frac{0.8+1+1+1+1+1+0.8+1+1+0.8+1+1+1+0.8+1+0.8+0.8+0.8+0.8+1+1+0.8+1+1+1+1+1+1+1}{29}$$

$$= \frac{27.2}{29} = 0.93$$

29

Questionnaire is available

## APPENDIX C

### Reliability ADL, QOL, Health Service Needs

#### ADL (Standard)

##### Reliability

[DataSet1] D:\NIDA\วิจัย ป.เอกนิด้า\วิเคราะห์วิจัยผู้สูงอายุ\ผู้สูงอายุติดเตียง.sav

##### Scale: ALL VARIABLES

###### Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded <sup>a</sup>	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

###### Reliability Statistics

Cronbach's Alpha	N of Items
.857	10

#### Quality of life (Standard)

##### Reliability

##### Scale: ALL VARIABLES

###### Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded <sup>a</sup>	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

###### Reliability Statistics

Cronbach's Alpha	N of Items
.871	26

## Health Service Needs

### ➔ Reliability

#### Scale: ALL VARIABLES

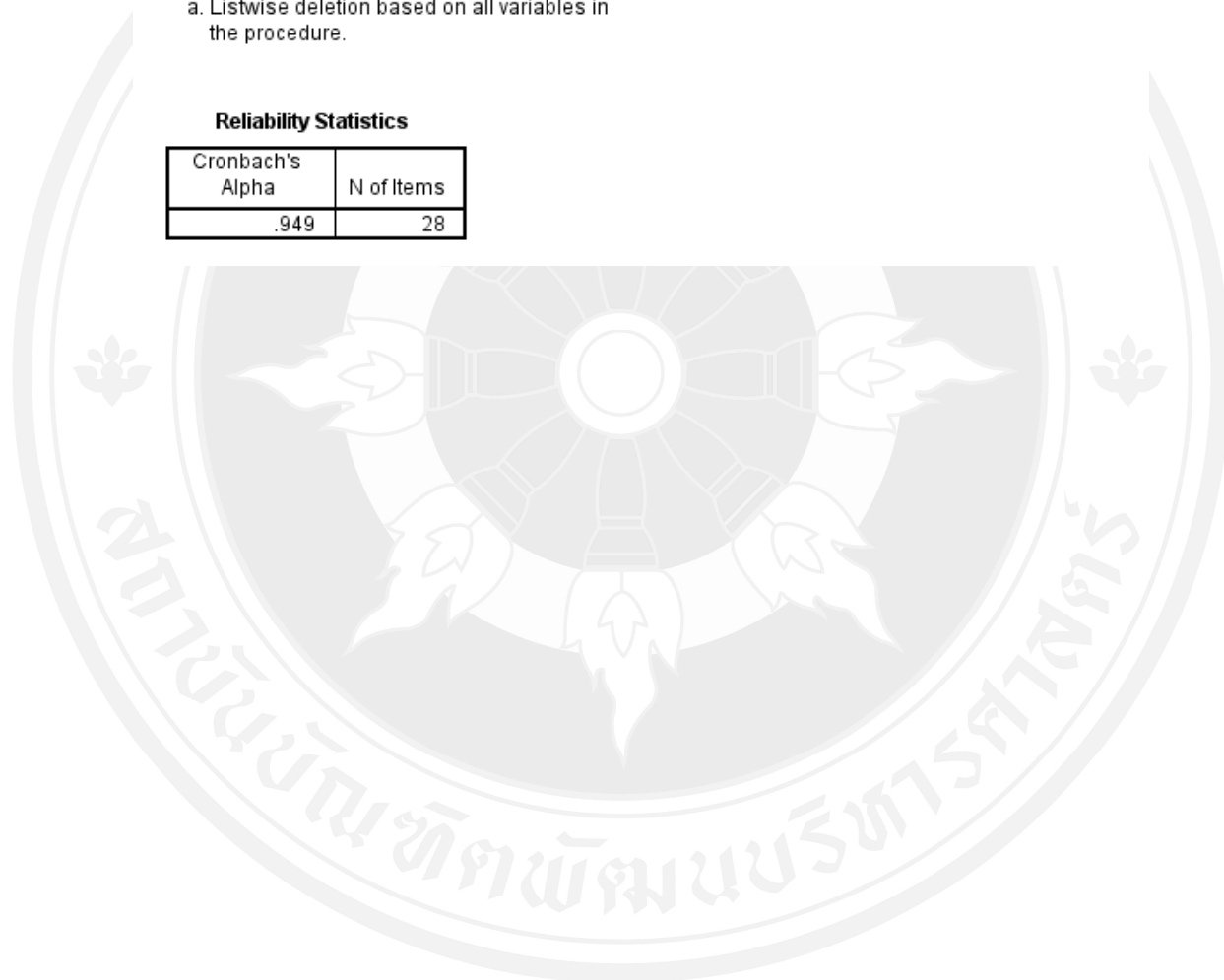
##### Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded <sup>a</sup>	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

##### Reliability Statistics

Cronbach's Alpha	N of Items
.949	28



## APPENDIX D

### Questionnaire for the elderly

Interview date.....

#### **Part 1** : Personal information

Explain : Answer truthfully.

1. Sex 1.  male 2.  female
2. Age.....
3. What kind of person are you?
  1.  Military personnel after retirement
  2.  Civil servants after retirement
  3.  Civilian
4. Marital status
  1.  single
  2.  Married (living together with your spouse)
  3.  Married (separated from the spouse)
  4.  Widowed, Divorced
5. Your monthly income is enough with your monthly expenses or not.
  1.  Not enough, but no deb
  2.  Inadequate and in debt
  3.  Enough
  4.  Enough and have leftovers
6. Where do you live?
  1.  Own house
  2.  The child's house
  3.  Relative's house
  4.  House for rent
  5.  Nursing home
  6.  temple
  7.  Others specify.....
7. Have you come to get medical treatment with any disease?
  1.  Coronary heart disease
  2.  Stroke
  3.  Diabetes
  4.  Cancer
  5.  Obesity
  6.  Hypertension
  7.  Hyperlipidemia
  8.  Others specify.....
8. Your medical rights
  1.  Government Pension Benefits
  2.  Insurance card
  3.  Pay yourself
  4.  Others specify.....
9. You are satisfied with the service from entering the hospital until leaving the hospital.
  1.  Most satisfied
  2.  Very satisfied
  3.  Moderate satisfaction
  4.  Less satisfied
  5.  Not satisfied, specify.....

**Part 2** : Modified Barthel ADL index\* Measure of physical disability used widely to assess

behaviour relating to activities of daily living for stroke patients or patients with other disabling conditions. It measures what patients do in practice.

Assessment is made by anyone who knows the patient well.

1. Feeding
  - 0 = Unable
  - 1 = Needs help, e.g. cutting
  - 2 = Independent
2. Grooming
  - 0 = Needs help with personal care
  - 1 = Independent (including face, hair, teeth, shaving)
3. Transfer (bed to chair and back)
  - 0 = Unable, no sitting balance
  - 1 = Major help (1 or 2 people), can sit
  - 2 = Minor help (verbal or physical)
  - 3 = Independent
4. Toilet Use
  - 0 = Independent
  - 1 = Needs some help
  - 2 = Independent
5. Mobility
  - 0 = Immobile
  - 1 = Wheelchair independent (including corners)
  - 2 = Walks with the help of 1 person (physical or verbal help)
6. Dressing
  - 0 = Dependent
  - 1 = Needs help – can do ~ ½ unaided
  - 2 = Independent (including buttons, zips, laces, etc.)
7. Stairs
  - 0 = Unable
  - 1 = Needs help (verbal or physical)
  - 2 = Independent
8. Bathing
  - 0 = Dependent
  - 1 = Independent (bath or shower)
9. Bowels
  - 0 = Incontinent or needs enemas
  - 1 = Occasional accident (1x/wk)
  - 2 = Continent
10. Bladder
  - 0 = Incontinent or needs enemas
  - 1 = Occasional accident (1x/wk)
  - 2 = Continent
  - 3 = Independent (may use aid)

**Part 3:** Passed by for you to explore yourself and assess your situation or feelings. Then mark / In the answer box that is appropriate and true to you.

The answer has 5 options:

**No** It means that you have no feelings like that. I felt very dissatisfied.  
Or feeling very bad

**Little** You have such a feeling. Rarely, that feeling is a little uncomfortable or distressing.

**Medium** You have such feelings that are moderate. A feeling of satisfaction in the middle level or a feeling of being at the middle level

**Very** You feel like that often, feeling satisfied or feeling good.

**The most** You always have that feeling. Feeling like that the most Or feel complete I feel very satisfied, I feel very good.

No	Clause In the last 2 weeks	No feeling	Little	Medium	Very	The most	Not relevant
1	How satisfied are you with your health now?						
2	Physical pain, such as headache, pain, body pain makes you unable to How much to do what you want						
3	Do you have enough energy to do things each day? (Both about work or operation Daily life)						
4	How much satisfaction do you feel in life (ie, happiness, peace, hope)?						
5	How much satisfaction do you feel in life (ie, happiness, peace, hope) ?						
6	How well are you concentrating on work?						
7	How much self-satisfaction do you feel?						
8	Can you accept your own appearance?						
9	How often do you have bad feelings, such as feeling lonely, depressed, depressed, hopeless, and worried?						
10	How satisfied do you feel that you can go through each day?						
11	How much medical treatment do you need? In order to work or live can go on each day						



No	Clause In the last 2 weeks	No feeling	Little	Medium	Very	The most	Not relevant
12	How satisfied are you with being able to perform tasks that you have done before?						
13	Are you satisfied with making friends or getting along with other people? How long ago						
14	How satisfied are you with the support you've received from your friends?						
15	Do you feel that your life is safe and secure each day?						
16	How satisfied are you with the situation of the house you are in right now?						
17	How much money do you need to spend?						
18	Are you satisfied to be able to use public health services as How much is needed?						
19	You have learned the news that you need in your daily life. How much						
20	How many opportunities do you have to relax and unwind?						
21	How much good is your health environment?						
22	Are you satisfied with your travels? (Refers to the transportation) at least How much						
23	How much do you feel your life means?						
24	How well can you get around by yourself?						
25	How satisfied are you with your sex life? ( Sexual life means that when sexual feelings arise, you There is a way to manage it. Can be loosened, including helping yourself or Having sex )						
26	You think you have the quality of life. (Life) What is the level?						

**Part 4:** Questionnaire of health service needs of the elderly who use hospital services at the tertiary hospital of the Royal Thai Navy

Explain : Answer questions according to your needs about the health service system.

NO	Health service system requirements	Level of need					Not relevant
		The most (4)	very (3)	moderate (2)	Little (1)	don't want (0)	
1	Want equal access to health promotion services to the navy pension patients						
2	Want equal access to preventive care services to the navy pension patients						
3	Want equal access to treatment services to the navy pension patients						
4	Want equal access to health rehabilitation services to the navy pension patients						
5	Want to be safe from the environment such as the bathroom has handrails, adequate lighting, non-slippery floors.						
6	Want to receive early diagnosis tests that are correct, fast and timely						
7	Want to have an oral health exam by a dentist at least once a year						
8	Want to receive support for drugs of equal quality and reduce drug costs						
9	Want to receive a physical fitness test at least once a year						
10	Want to receive support for travel expenses to the hospital						
11	Want to receive health promotion, diet and exercise to prevent complications						
12	Want to join a recreational group at least once a year Birthday activities						
13	Would like to receive services in Thai traditional medicine / alternative medicine						

NO	Health service system requirements	Level of need					Not relevant
		The most (4)	very (3)	moderate (2)	Little (1)	don't want (0)	
14	Want to have an agency to train relatives, caregiver for the elderly						
15	Want to receive fast and convenient service from entering the hospital until leaving the hospital						
16	Want to get a quality treatment plan						
17	Want to get a mental health assessment						
18	Want to join the elderly club						
19	Want to stay in an elderly care center						
20	Want to go in a day care center						
21	Want to borrow medical equipment						
22	Need a resting corner for the elderly when entering the service						
23	Want staff to visit the house after leaving the hospital						
24	Want to have a fast channel especially for the elderly						
25	Want to have a health promotion unit for the elderly for well elderly and home bond group						
26	Need a standardized long-term elderly health care center for the elderly who are unable to help themselves. (bed bond elderly)						
27	Want the elderly club to be established						
28	Want to establish a clinic for the elderly						
29	Others specify.....						

**APPENDIX E**  
**Interview form**

<b>Standard</b>	<b>the future should be</b>	<b>The current elderly health service system</b>	<b>Comment Towards development</b>	<b>Priority</b>				
1. Management system	1. There is control, supervision and monitoring of the performance in the specified cycle.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">The size of the problem 4 3 2 1</td> </tr> <tr> <td style="text-align: center;">Severity 4 3 2 1</td> </tr> <tr> <td style="text-align: center;">Ease of development 4 3 2 1</td> </tr> <tr> <td style="text-align: center;">Awareness 4 3 2 1</td> </tr> </table>	The size of the problem 4 3 2 1	Severity 4 3 2 1	Ease of development 4 3 2 1	Awareness 4 3 2 1
	The size of the problem 4 3 2 1							
	Severity 4 3 2 1							
	Ease of development 4 3 2 1							
	Awareness 4 3 2 1							
	2. Satisfaction of service recipients and service providers							
	3. There is a common policy and guideline for caring that meets the standards of academic principles or evidence-based evidence.							
4. There is a management structure within the command. Roles, duties and responsibilities in relation to caring for the elderly								
5. There is a process for inspecting the service quality that is transparent and can be examined.								
6. There is an effective risk management system. Have an effective emergency response plan								
7. There is a plan to develop the competencies and capabilities of the elderly care providers.								

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority		
2. Operation	1. There is control, supervision and follow-up of the performance according to the specified cycle.			<table border="1"> <tr> <td>The size of the problem</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	The size of the problem	4 3 2 1
	The size of the problem					
	4 3 2 1					
	2. Satisfaction of service recipients and service providers			<table border="1"> <tr> <td>Severity</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	Severity	4 3 2 1
	Severity					
	4 3 2 1					
	3. There is management to allow the elderly to do activities together.			<table border="1"> <tr> <td>Ease of development</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	Ease of development	4 3 2 1
	Ease of development					
4 3 2 1						
4. An appropriate structure, number of personnel and management have been established in line with the number of elderly in care.			<table border="1"> <tr> <td>Awareness</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	Awareness	4 3 2 1	
Awareness						
4 3 2 1						
5. There is a designated person responsible for the elderly.						
6. Elderly caregivers must have at least 1 year of experience in caring for and must be trained in elderly care.						
7. There is a medical specialist for the elderly.						
8. There are physical therapists take care of the elderly.						

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority
3. Financial Management	1. Budget allocation for the elderly health service system			The size of the problem 4 3 2 1
	2. There is control, supervision and follow-up of the performance according to the specified cycle.			Severity 4 3 2 1
	3. Satisfaction of service recipients and service providers			Ease of development 4 3 2 1
	4. There is a systematic financial reporting. And reported at least twice a year			Awareness 4 3 2 1
	5. There are internal and external audit agencies to monitor the use of funds in accordance with the regulations.			
	4. Health care planning	1. There is control, supervision and follow-up of the performance according to the specified cycle.		
2. Satisfaction of service recipients and service providers.				Severity 4 3 2 1
3. Promote health care and involve families in health planning.				Ease of development 4 3 2 1
4. Health care is accurate, up-to-date and up to date and requires consent for care.				Awareness 4 3 2 1
5. Promote health care and involve families in health planning.				
6. Health care is accurate, up-to-date and up to date, and care must be obtained.				

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority				
5. Health care practices	1. There is control, supervision and monitoring of the performance in the specified cycle.			<table border="1"> <tr> <td>The size of the problem 4 3 2 1</td> </tr> <tr> <td>Severity 4 3 2 1</td> </tr> <tr> <td>Ease of development 4 3 2 1</td> </tr> <tr> <td>Awareness 4 3 2 1</td> </tr> </table>	The size of the problem 4 3 2 1	Severity 4 3 2 1	Ease of development 4 3 2 1	Awareness 4 3 2 1
	The size of the problem 4 3 2 1							
	Severity 4 3 2 1							
	Ease of development 4 3 2 1							
	Awareness 4 3 2 1							
	2. Satisfaction of service recipients and service providers							
	3. There is a good rehabilitation program with strong evidence.							
	4. There is a system for referring the elderly to health services at the primary care level. Secondary care in a nearby hospital and can pass information for continued treatment							
	5. There is a team of doctors to give advice 24 hours a day.							
6. There are activities in social relations. In collaboration with multidisciplinary								
7. There are activities to promote health, prevent disease, cure and restore health.								
8. There are religious activities And important day activities								
9. There is a healthy rehabilitation with a strong evidence.								

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority				
6. Drug Administration	1. There is control, supervision and follow-up of the performance according to the specified cycle.			<table border="1"> <tr> <td>The size of the problem 4 3 2 1</td> </tr> <tr> <td>Severity 4 3 2 1</td> </tr> <tr> <td>Ease of development 4 3 2 1</td> </tr> <tr> <td>Awareness 4 3 2 1</td> </tr> </table>	The size of the problem 4 3 2 1	Severity 4 3 2 1	Ease of development 4 3 2 1	Awareness 4 3 2 1
	The size of the problem 4 3 2 1							
	Severity 4 3 2 1							
	Ease of development 4 3 2 1							
	Awareness 4 3 2 1							
	2. Satisfaction of service recipients and service providers							
	3. There is a service system for obtaining prescription drugs according to medical practice standards.							
4. There is a system to monitor the safety of drug use.								
5. Providers provide accurate dosing information to elderly and relatives.								
6. The elderly are receiving prescription drugs according to the professional practice standards.								
7. Elderly and relatives have accurate understanding of drug use information.								



Standard	the future should be	The current elderly health service system	Comment Towards development	Priority				
7. Patient rights and benefits	1. There is control, supervision and follow-up of the performance according to the specified cycle.			<table border="1"> <tr> <td>The size of the problem 4 3 2 1</td> </tr> <tr> <td>Severity 4 3 2 1</td> </tr> <tr> <td>Ease of development 4 3 2 1</td> </tr> <tr> <td>Awareness 4 3 2 1</td> </tr> </table>	The size of the problem 4 3 2 1	Severity 4 3 2 1	Ease of development 4 3 2 1	Awareness 4 3 2 1
	The size of the problem 4 3 2 1							
	Severity 4 3 2 1							
	Ease of development 4 3 2 1							
	Awareness 4 3 2 1							
	2. Satisfaction of service recipients and service providers							
	3. There is a timely assistance system in the event of an emergency while entering the hospital.							
	4. There is a system to notify expenses and obtaining consent for treatment voluntarily.							
	5. Seniors and their relatives are entitled to an appointment with a team of doctors and nurses to plan the care and refer to continuing care.							
6. The elderly are aware of health care news and provide information about the illness conditions that come to the hospital in languages that are easy to understand.								
7. Elderly and relatives have the right to be appointed with the medical and nursing team in order to plan the treatment and refer further care.								
8. The elderly should be fully rescued in an emergency.								
9. In an emergency, the elderly should be fully rescued.								

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority				
8. Privacy and Human Dignity	1. There is control, supervision and follow-up of the performance according to the specified cycle.			<table border="1"> <tr> <td>The size of the problem 4 3 2 1</td> </tr> <tr> <td>Severity 4 3 2 1</td> </tr> <tr> <td>Ease of development 4 3 2 1</td> </tr> <tr> <td>Awareness 4 3 2 1</td> </tr> </table>	The size of the problem 4 3 2 1	Severity 4 3 2 1	Ease of development 4 3 2 1	Awareness 4 3 2 1
	The size of the problem 4 3 2 1							
	Severity 4 3 2 1							
	Ease of development 4 3 2 1							
	Awareness 4 3 2 1							
	2. Satisfaction of service recipients and service providers							
	3. The care system is based on privacy and the needs or willingness of the elderly.							
4. There is a confidentiality system for the elderly and should only provide information to direct relatives. Spouse and children								
5. Care is based on privacy and the needs or willingness of the elderly.								
6. The elderly are kept a secret. Should provide information only to direct relatives. Spouse and children								
7. Caregiver staff should be trained to have knowledge on rights protection and to provide protection for the elderly.								

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority	
9. Environment and Safety	1. There is control, supervision and follow-up of the performance according to the specified cycle.			<table border="1"> <tr> <td>The size of the problem 4 3 2 1</td> </tr> </table>	The size of the problem 4 3 2 1
	The size of the problem 4 3 2 1				
	2. Satisfaction of service recipients and service providers. The elderly are safe without accidents.			<table border="1"> <tr> <td>Severity 4 3 2 1</td> </tr> </table>	Severity 4 3 2 1
	Severity 4 3 2 1				
	3. There are regulations forbidding the elderly to carry valuables with them.			<table border="1"> <tr> <td>Ease of development 4 3 2 1</td> </tr> </table>	Ease of development 4 3 2 1
	Ease of development 4 3 2 1				
	4. There is a development in the design of the place where the bed is safe, objects are placed, convenient appliances, sufficient light, safe everywhere, especially the bathroom. There is a handrail to help walk to different places. Has a clean, ventilated place			<table border="1"> <tr> <td>Awareness 4 3 2 1</td> </tr> </table>	Awareness 4 3 2 1
Awareness 4 3 2 1					
5. Development of exercise and leisure places for the elderly.					
6. Ramps and ramps are developed, clearly marked with signs or symbols.					

Standard	the future should be	The current elderly health service system	Comment Towards development	Priority		
10. Service quality assurance system	1. There is control, supervision and follow-up of the performance according to the specified cycle.			<table border="1"> <tr> <td>The size of the problem</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	The size of the problem	4 3 2 1
	The size of the problem					
	4 3 2 1					
	2. Satisfaction of service recipients and service providers.			<table border="1"> <tr> <td>Severity</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	Severity	4 3 2 1
	Severity					
	4 3 2 1					
	3. There is a policy and put emphasis on the development of service quality for the elderly.			<table border="1"> <tr> <td>Ease of development</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	Ease of development	4 3 2 1
	Ease of development					
	4 3 2 1					
	4. There is an operating system for quality assurance of service according to the specified system.			<table border="1"> <tr> <td>Awareness</td> </tr> <tr> <td>4 3 2 1</td> </tr> </table>	Awareness	4 3 2 1
Awareness						
4 3 2 1						
5. There are minutes of the committee on the elderly.						
6. There are modern standard equipment and a system to borrow to the elderly.						
7. There is continuous improvement in service quality and reporting to the committee on the elderly.						
8. Developing an information system to support service quality.						
9. There is a network to exchange knowledge on the development of service quality between various institutions.						
10. There is research and innovation in the development of the elderly.						

## **BIOGRAPHY**

### **NAME**

LCDR.BENJAPAK SANGHUAIPRAI

### **ACADEMIC**

1992 School of Nursing, Educational Division,  
Naval Medical Department

### **BACKGROUND**

2001 Psychiatric Nursing Naval Medical Department  
2004 Bachelor of Nursing Science Burapha University  
2004 Education English Language Intensive Course for  
Overseas Students, Curtin University  
2009 Master of Nursing Science  
(Community Nurse Practitioner),  
Faculty of Nursing Burapha University  
2014 Occupational Health Nursing, Faculty of  
Public Health Mahidol University

### **EXPERIENCES**

1992 Nurse of the Emergency Ward 2-3,  
Somdej Phra Pinklao Hospital  
1993 Flight attendant Utapao Airport  
1995 Nurse of the Special Patient Building 3  
Abhakornkiatiwong Hospital  
1997 Nurse of the Psychiatric Treatment Department  
Abhakornkiatiwong Hospital  
2000 Nurse of the Medical Examination Department  
Abhakornkiatiwong Hospital  
2002 Nurse of the Male Surgical Ward  
Somdej Phra Pinklao Hospital  
2004 Nurse of the Female Medical Ward  
Queen Sirikit Hospital  
2006 Nurse of the Orthopedic Ward  
Queen Sirikit Hospital  
2008 Nurse of Obstetrics and Gynecology Ward  
Queen Sirikit Hospital  
2009 Head of Occupational Health Department and  
Occupational Medicine Clinic Queen Sirikit Hospital  
2016 Public Health Technical Officer,  
Preventive Medicine Division  
Naval Medical Department  
2020 Instructor of Faculty of Nursing Science  
St Theresa International College