KNOWLEDGE AND ATTITUDE TOWARD THE SELECTION OF HEALTH INSURANCE TYPE AFTER RETIREMENT IN RATCHABURI PROVINCE THAILAND

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บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
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ความรู้และเจตคติต่อการเลือกใช้สิทธิ์การรักษาพยาบาลหลังเกษียณ จังหวัดราชบุรี ประเทศไทย

นางสาวสุพิชชา สำเร็จผล

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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต

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| By | Miss Supitcha Sumretphol |
| Field of Study | Public Health |
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สุพิชชา สำเร็จผล : ความรู้และเจตคติต่อการเลือกใช้สิทธิ์การรักษาพยาบาลหลังเกษียณ จังหวัดราชบุรี ประเทศไทย (KNOWLEDGE AND ATTITUDE TOWARD THE SELECTION OF HEALTH INSURANCE TYPE AFTER RETIREMENT IN RATCHABURI PROVINCE THAILAND) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: รศ. ดร. ประเทือง หงสรานากร, 90 หน้า.

งานวิจัยนี้เป็นการศึกษาภาคตัดขวางเกี่ยวกับความรู้และเจตคติต่อการเลือกใช้สิทธิ์การรักษาพยาบาลหลังเกษียณ ในจังหวัดราชบุรี วัตถุประสงค์ในการวิจัยเพื่ออธิบายและตรวจสอบปัจจัยที่มีความสัมพันธ์กับการเลือกใช้สิทธิ์การรักษาพยาบาล กลุ่มตัวอย่างที่ใช้ในการศึกษาครั้งนี้คือกลุ่มประชากรที่มีอายุระหว่าง 50 ถึง 59 ปี และอยู่ภายใต้สิทธ์หลักประกันสุขภาพถ้วนหน้าที่อาศัยอยู่ในจังหวัดราชบุรีจำนวน 430 คน ดำเนินการรวบรวมเก็บข้อมูลโดยใช้แบบสอบถามประกอบไปด้วยข้อมูลเกี่ยวกับลักษณะทั่วไปของบุคคล ข้อมูลเกี่ยวกับแนวความรู้เกี่ยวกับสิทธิ์ประกันสุขภาพถ้วนหน้าและประกันชีวิตภาคเอกชน รวมไปถึงเจตคติและการเลือกใช้สิทธิ์การรักษาพยาบาล ดำเนินการเก็บข้อมูลระหว่างเดือนเมษายนและพฤษภาคม พ.ศ. 2559 สถิติที่ใช้บรรยายข้อมูลใช้สถิติเชิงพรรณนา และวิเคราะห์หาความสัมพันธ์ระหว่างคุณลักษณะทั่วไปส่วนบุคคล คะแนนความรู้และเจตคติต่อการเลือกใช้สิทธิ์การรักษาพยาบาลโดยใช้สถิติไค-สแควร์เพื่อการตรวจสอบ

การศึกษาพบว่า ข้อมูลของกลุ่มตัวอย่างอยู่ในกลุ่มอายุระหว่าง 50 ถึง 53 ปี (ร้อยละ 40.9) เป็นเพศหญิง (ร้อยละ 61.2) จบการศึกษาในระดับประถมศึกษา (ร้อยละ 72.3) มีอาชีพลูกจ้าง (ร้อยละ 36.7) รายได้เฉลี่ยต่อเดือนส่วนบุคคลอยู่ในกลุ่มน้อยกว่า 15,000 บาท (ร้อยละ 54.0) รายได้ครัวเรือนอยู่ในกลุ่ม 15,001 ถึง 20,000 บาท (ร้อยละ 30.0) รายจ่ายเฉลี่ยต่อเดือนอยู่ในกลุ่มน้อยกว่า 10,000 บาท (ร้อยละ 43.3) กลุ่มตัวอย่างส่วนใหญ่สมรสแล้ว (ร้อยละ 71.2) มีบุตร 2 คน (ร้อยละ 46.3) โดยมีระดับความรู้อยู่ในระดับต่ำและ มีเจตคติต่อการเลือกสิทธิ์การรักษาพยาบาลอยู่ในระดับสูง กลุ่มตัวอย่างประมาณครึ่งหนึ่งจะเลือกใช้สิทธิ์ประกันสุขภาพถ้วนหน้าและอีกครึ่งหนึ่งจะใช้ประกันชีวิตภาคเอกชน คะแนนระหว่างความรู้และเจตคติมีความสัมพันธ์กับการเลือกใช้สิทธิ์การรักษาพยาบาล (p-value <0.05) งานวิจัยนี้ให้ข้อสรุปว่าความรู้และเจตคติมีผลต่อการเลือกใช้สิทธิ์การรักษาพยาบาล

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| สาขาวิชา สาธารณสุขศาสตร์ | ลายมือชื่อนิสิต .................................................. |
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| ปีการศึกษา 2558 | ลายมือชื่อ อ.ที่ปรึกษาหลัก .................................. |

# # 5878830653 : MAJOR PUBLIC HEALTH
KEYWORDS: UNIVERSAL COVERAGE SCHEME, PRIVATE HEALTH INSURANCE, RETIREMENT, THAILAND

SUPITCHA SUMRETPHOL: KNOWLEDGE AND ATTITUDE TOWARD THE SELECTION OF HEALTH INSURANCE TYPE AFTER RETIREMENT IN RATCHABURI PROVINCE THAILAND. ADVISOR: ASSOC. PROF. PRATHURNG HONGSRANAGON, Ph.D., 90 pp.

This research was a cross-sectional research aimed at studying the knowledge and attitude toward the selection of health insurance type after retirement in Ratchaburi province. The research objectives were to describe and to find the factors associated with the selection of health insurance type. The research samples were those between 50-59 years old who were under Universal Coverage Scheme (UCS) and had been living in Ratchaburi province. Total samples were 430. Data collection was done by the use of questionnaire incorporating information on general personal data, on knowledge about Universal Coverage Scheme and private health insurance, and on attitude toward the selection of health insurance type. Data was collected during April and May 2016. The statistics in use were descriptive statistics and the Chi-square test to find an association between general personal data, knowledge scores, and attitude scores toward the selection of health insurance type.

The study found that the sample age was between 50 to 53 years old (40.9%), 61.2% were female, 72.3% finished their primary school, 36.7% were occupied as an employee, 54.0% had their personal average monthly income less than 15,000 baht. 30.0% of the samples had their average family monthly income between 15,001-20,000 baht, 43.3% had their average monthly expense less than 10,000 baht. Most of them were married (71.2%) with 2 children (46.3%). The level of knowledge was poor and the attitude level toward the selection of health insurance type was high. About half of the respondents would continue to use UCS after retirement and the other half would also use private health insurance. The result revealed that scores of knowledge and attitude were associated with the selection (p-value <0.05). It was concluded that knowledge and attitude had an effect on the selection of health insurance type.

Field of Study: Public Health Student's Signature ....................................

Academic Year: 2015 Advisor's Signature ....................................

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# ABBREVIATION

| | |
|---|---|
| ADLs | All Activities Daily Lives |
| CSMBS | Civil Servant Medical Benefit Scheme |
| DRGs | Diagnosis-related group |
| FTR | Fertility rate |
| LIC | Low Income Card |
| MoPH | Ministry of Public Health |
| NHSO | National Health Security Office |
| SHI | Social Health Insurance |
| SSS | Social Security Scheme |
| UCS | Universal Coverage Scheme |
| VHC | Voluntary Health Card |

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# CHAPTER I

## INTRODUCTION

### 1.1 Background and rationale

The challenges faced by industrial countries in the west and Japan with the perspective retirement of the “Baby boom” generation are well recognized (Heller, 2006). The enhancement of healthcare program to meet ultimate retirement needs is drawing increased attention in most countries in the world including Thailand in Asia. Despite the population aged over 65 are under 10% of the total population, it is inevitably increasing across Asia and estimates to cross 10% by 2015 in Thailand (Gavin, 2009).

During past several decades, Thailand has been one of the most successful countries in bringing down its fertility level and increased life expectancy at birth from 55.2 years to 69.9 years for men and 61.8 years to 74.9 years for women. But studies projects the rapid fertility reduction will have an inevitable demographic consequences, given the population is aging (UNFPA, 2006). Thailand has now shifted to an “Aging Society”. The older population or the population aged 60 and above increased from 1.5 million in 1960 to approximately 7.4 million in 2008, and is expected to be 17.7 million in 2030 (Siriphanich, 2009). Furthermore, there is large and rapid increase in the extreme age group of 80 years and older (Knodel John & Chayovan, 2008), which during 2000 to 2050, is projected to increase by 686% compared to 227% increase in older adult population (Kespichayawattana & Jitapunkul, 2009).

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The increase in the share of older people entails increase in chronically ill patients having diabetes, hypertension and cardiovascular disease. Hypertension, endocrine nutritional and metabolic disorder and diabetes are found as the first three causes for hospitalization of older people (Siriphanich, 2009). The rapid growth in the population over 80 that are more prone to chronic conditions that lead to disability and the need for healthcare/long-term care (Henderson James W, 2003).

As the numbers of the older population that need healthcare and long-term care services increase, the public health insurance should be adjusted and reformed in order to meet the demands of people after retirement (Kespichayawattana & Jitapunkul, 2009). Currently, Thai citizens have access to public health insurance through one of three programs: the Civil Servant Medical Benefit Scheme (CSMBS), the Social Security Scheme (SSS) or the Social Health Insurance (SHI), and the Universal Coverage Scheme (UCS). The UCS is compulsory for all Thai citizens that are not insured by another public insurance scheme. The UCS replaces all previous government health insurance scheme from 2001, namely the Low Income Card (LIC) scheme for the poor, the Voluntary Health Card (VHC), the disabled, the elderly, and children aged less than 12 years. The CSMBS covers civil servants and their immediate family members, including spouse, parents, and up to three children under the age 20 years. It also cover retirees and their dependents. The SSS provide mandatory coverage for workers in the private business since 1991, when it applied to firms with more than 20 workers, its coverage has increased, and since 2010 it is mandatory for firms with more than one worker and for the self-employed. The number of workers insured increased from 3.2 in 1991 to 9.5 million in early of 2010, excluding dependents (Antos & Taylor, 2007; Kespichayawattana & Jitapunkul,

2009). Presently, there are both public and private healthcare provider providing healthcare services for the older persons. The Ministry of Public Health (MoPH) is the main healthcare provider in Thailand, and provides 62% of the total hospitals and beds followed by other state organizations such as university and state enterprises particularly at the secondary and tertiary healthcare levels. The private sector provides around 25% of total hospital and beds (Kespichayawattana & Jitapunkul, 2009).

In Thailand, since the introduction of universal health coverage in 2001, the government has provided free healthcare for older persons in all government hospitals and health centers provide free medical services to persons aged 60 and above which can be accessed only by elderly who are poor and are under the universal coverage scheme. However, when people get sick or illness, they must went to primary health center first before went to secondary or tertiary hospital. This can led to not got treatment in time. Therefore, private health insurance company come to take the solution from waiting or transferring to receive the treatment.

Recently, civil servants, government and state enterprises' officers are insured for healthcare services after retirement while informal workers, farmers, own account workers, private and government employees are not covered for healthcare and long-term care services. As they grow old, all persons will inherently visit deteriorated health in later life. Working-age people who foresee health risk might be prepared to protect themselves against these risks through the mechanisms of saving, investing in RTM/RMF, buying life annuity insurance, etc. then again, it cannot be guaranteed that these personal mechanisms will work properly. Regardless of well preparedness, people face unexpected hardships; therefore, social protection mechanism that is independent from economic condition and luck is a must (Chandoevwit, 2003).

Studies have projected that Thailand will shift to an aging society in the next ten years. Nowadays, the price of long-term care and healthcare services for the elderly is expensive, they might fall into poverty trap. There also some news reported about Universal Coverage Scheme will be reform again in 2016. Moreover, researcher has been working as a medical claim assessor in one of private health insurance company for few years, researcher have seen that people in variety position, such as government officials, employee, house-wife, or self-employed were willing to do private health insurance. Therefore, the focus of this study is to know whether level of knowledge and level of attitude can influence people to select which health insurance type after retirement or not. Nonetheless, no current studies have been conducted throughout the country.

## 1.2 Research Questions

The study will seek to answer the following questions:

1. What are the socio-demographic background, level of knowledge, level of attitude toward the selection of health insurance type after retirement in Ratchaburi province, Thailand?

2. Do the socio-demographic background, level of knowledge, and level of attitudes, associate with the selection of health insurance system type after retirement in Ratchaburi province, Thailand?

## 1.3 Research Objectives

### 1.3.1 General Objective

To study the level of knowledge, attitude toward the selection of health insurance type after retirement in Ratchaburi province and the relationship among them.

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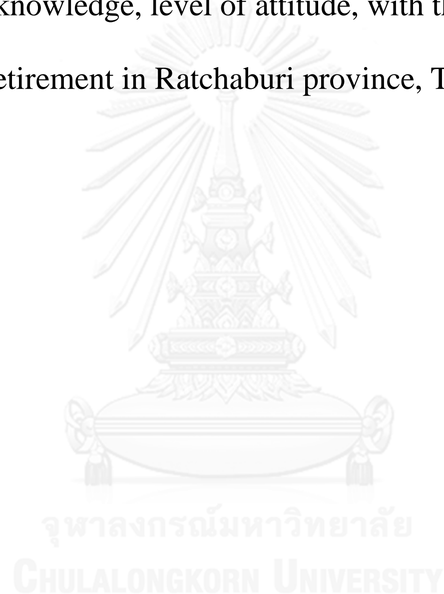
1.3.2 Specific Objectives

1. To study the selection of health insurance system type after retirement in respect of their socio-demographic background in Ratchaburi province, Thailand.

2. To study the level of knowledge and the level of attitudes toward the selection of health insurance type in Ratchaburi province, Thailand.

3. To determine the association among socio-demographic background, level of knowledge, level of attitude, with the selection of health insurance type after retirement in Ratchaburi province, Thailand.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**1.4 Conceptual Framework**

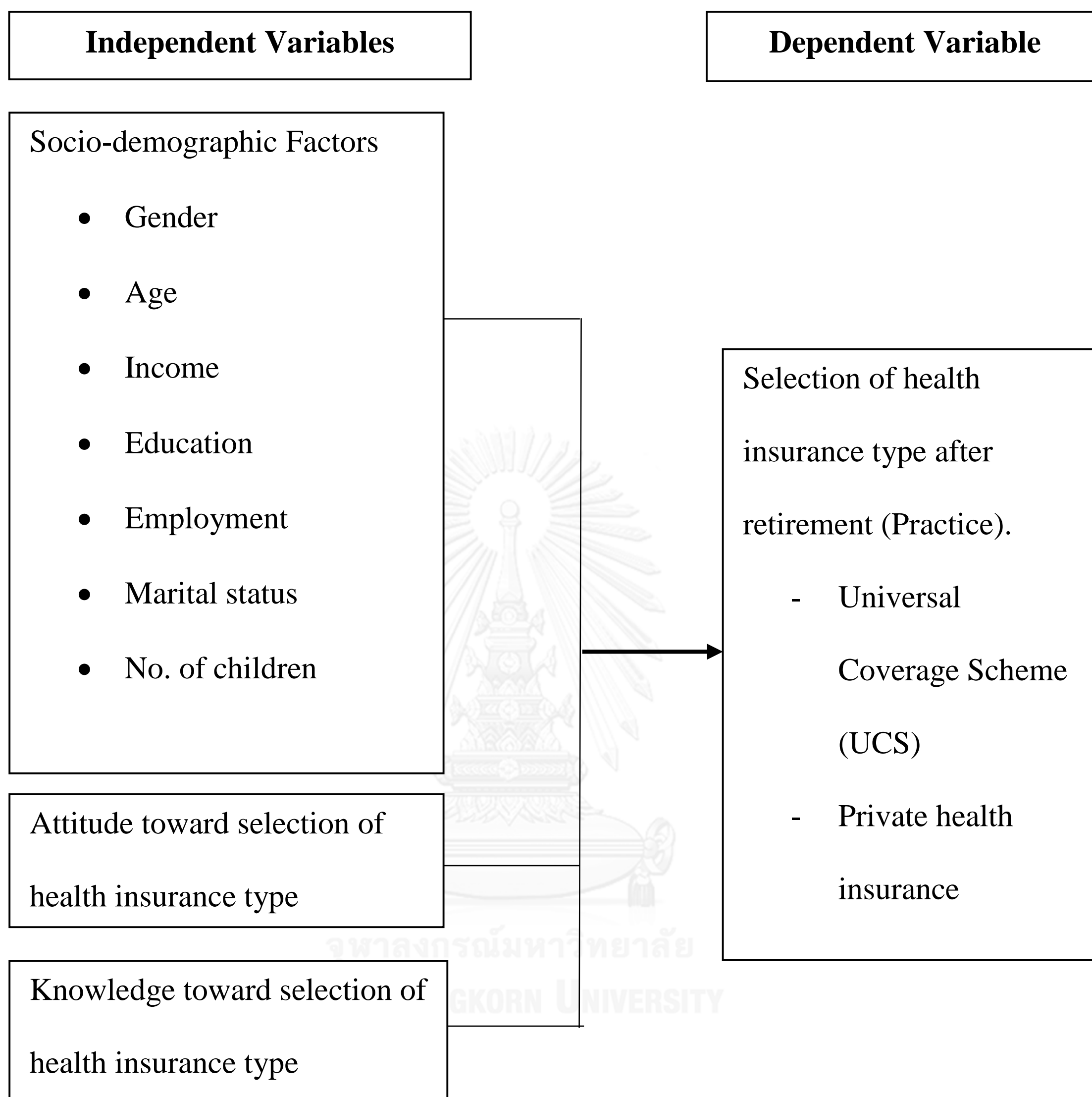


*Figure 1 Conceptual framework of knowledge and attitude toward the selection of health insurance type after retirement in Ratchaburi province.*

**1.5 Operation Definition**

1. **Income:** individual income per capital per month.

2. **Education:** the highest education in each person.

3. **Employment:** individual occupation or job.

4. **Marital status:** status of being single, married, widowed, divorced, or separate.

5. **Knowledge:** better understanding about type of health insurance system

6. **Attitude:** degree of positive or negative thinking, feeling, and expectation towards health insurance system.

7. **Selection (Practice):** the action toward choosing type of health insurance system.

8. **Universal Coverage Scheme (UCS):** health system for all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship.

9. **Private Health Insurance:** health system which is a contract between the insurer and the insured. The insurer is committed to pay the indemnity for hospitalization, surgery, and other expenses from illness or accidents based on conditions in the contract. The insured has to pay out a premium to the insurer.

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# CHAPTER II

## LITERATURE REVIEWS

### 2.1 Aging population

In Thailand, the increase in the number of the elderly population has a direct relationship with the number of retired workers. Under the Social Security Scheme (SSS), unmet healthcare of retired workers, chronic illness among elderly resulting change in healthcare utilization pattern. The fact that the workers under SSS are not covered for healthcare and long-term care services after retirement- there is higher catastrophic risk for this group of workers.

Global demographic trend is shifting toward aging population as a result of reduction in mortality and fertility. In the last several decades, the world's total fertility rate (FTR) has fell by over half, from 5.0 children per woman in 1950 – 1955 to 2.5 children per woman in 2010 – 2015. Moreover, the fertility rate will continue dropping for the next decade, to 2.2 children per woman in 2045 – 2050. In less developed region, particularly Thailand, the total fertility rate has dropped more than a half from 6.1 children per woman in 1950 – 1955 to 2.7 children per woman in 2005 – 2010, and it will drop to 2.3 children per woman in 2045 – 2050.

Another reason behind increase in the older population is increase in life expectancy. The life expectancy of 65 years in developed regions and 42 in less developed regions during 1950 is expected to increase to 78 years and 68 years during 2010-2015 and to 83 years and 75 years during 2045-2050 respectively. This clearly depicts escalation in life expectancy in all regions around the world.

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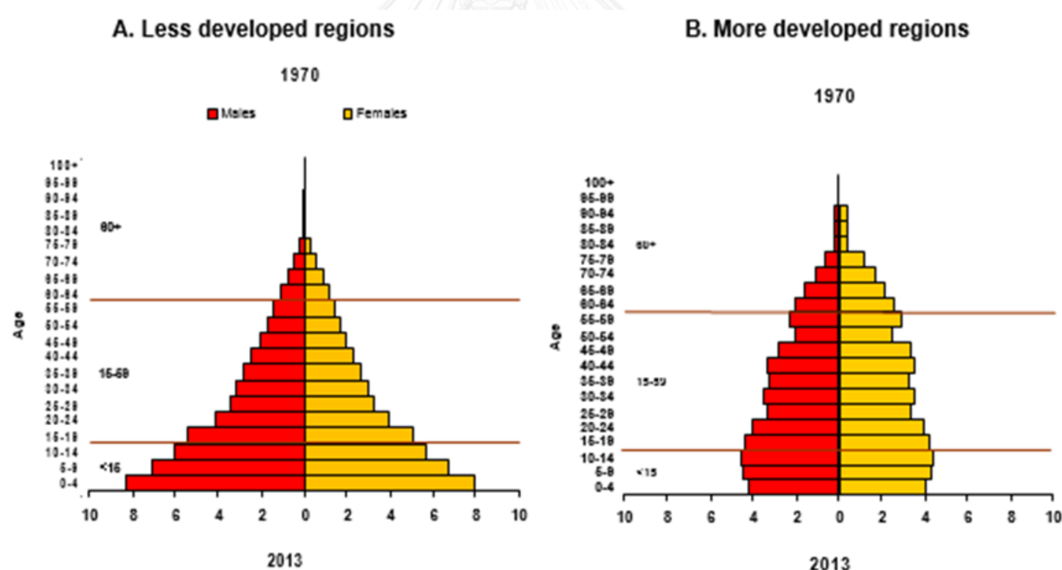
The eventual delineation of significant change in size and age composition of world's population in coming decades is another concern regarding increase in older population followed by aforementioned concomitant impacts. To illustrate, in figure 2.1, the population age structure is showed in 3 major age groups: Youth (aged under 15), Working-age (aged 15-59), and Elderly (aged 60 and over).In 2013, the pyramid for the less developed regions shows a wide base of a youthful population in 1970, to more rectangular in 2050. In the more developed regions, the pyramid in 2013 indicate there is noted of young and middle – aged adult, together with significant volume at aged population in the more developed regions, with more than 30 per cent of older people in 2050.



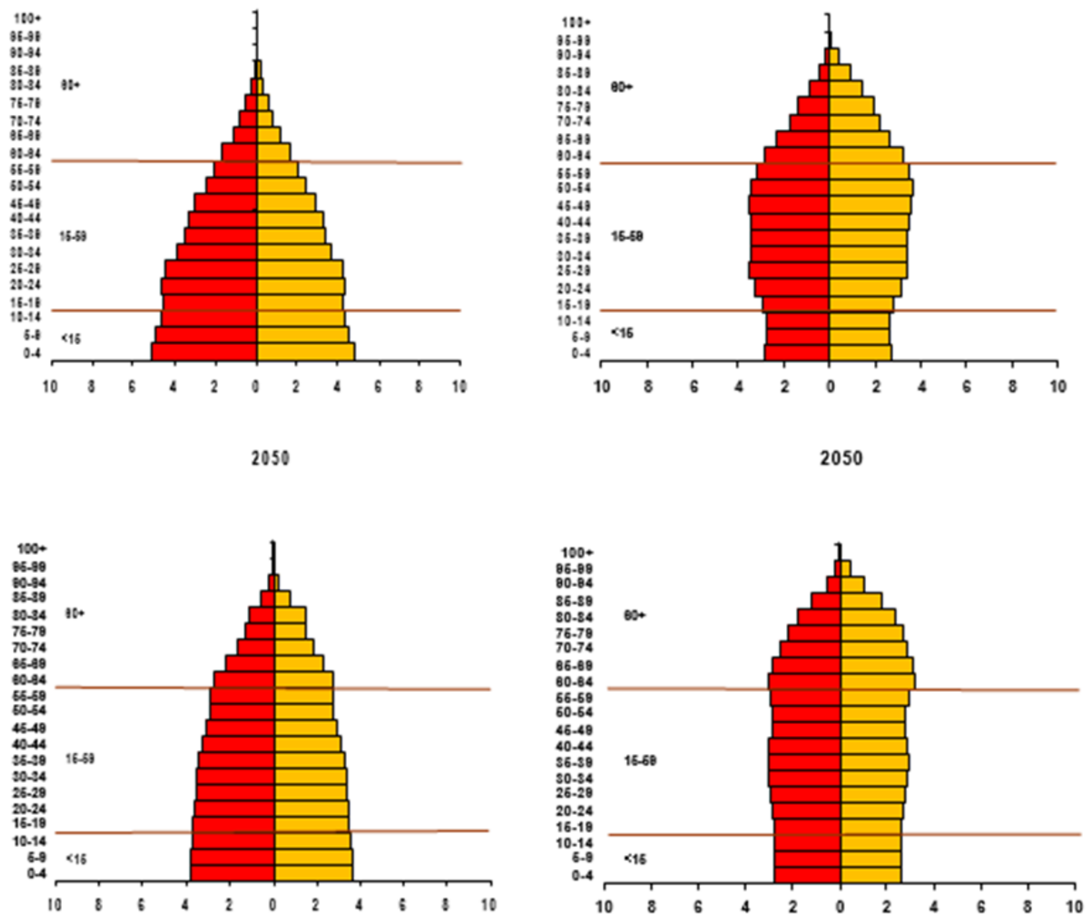



*Figure 2 Population pyramids of the less and more developed regions: 1970, 2013, and 2050*

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*Source:World Population Aging 2013, United Nations*

During 2010-2040 the projection of population in Thailand, indicates that the percentage of the late-elderly (aged 80 and over) population will increase sharply from approximately 12.7 percent to almost one-fifth of the total elderly population as show in Figure 2. The rise is attributable to improved life expectancy in the elderly, which also results in an increasing number of population who are economically, socially, and physically dependent. There is also increasing trend of elderly population in the urban areas. In 2010, 39.7 percent elderly resided in the urban areas

and expected to have increased to 59.8 percent in 2040 in Thailand (United Nations, 2013). Furthermore, there will be reduction in Thai youth and working-age population with gradual rise from 13.2% in 2010 to 32.1% in 2040 among aging population. By 2017, the chasm between youth and elderly will curtail to become equal unexpectedly.

*Table 1 Number and percentage of the elderly, by age group (aged 60-69, 70 79, and over 80), gender, and area of residence during 2010 – 2040*

| Year | 2010 | | 2020 | | 2030 | | 2040 | |
|---|---|---|---|---|---|---|---|---|
| | Number (thousand) | % | Number (thousand) | % | Number (thousand) | % | Number (thousand) | % |
| Total | 8,408.0 | 100.0 | 12,621.7 | 100.0 | 17,578.9 | 100.0 | 20,519.4 | 100.0 |
| Early-elderly (aged 60-69) | 4,629.7 | 55.1 | 7,255.6 | 57.5 | 9,260.4 | 52.7 | 8,958.5 | 43.7 |
| Mid-elderly (aged 70-79) | 2,708.1 | 32.2 | 3,676.6 | 29.1 | 5,897.9 | 33.6 | 7,639.4 | 37.2 |
| Late-elderly (aged 80 and over) | 1,070.2 | 12.7 | 1,689.5 | 13.4 | 2,420.6 | 13.8 | 3,921.4 | 19.1 |
| Male | 3,776.2 | 44.9 | 5,624.3 | 44.6 | 7,739.6 | 44.0 | 8,874.3 | 43.2 |
| Female | 4,631.7 | 55.1 | 6,997.4 | 55.4 | 9,839.4 | 56.0 | 11,645.1 | 56.8 |
| Urban | 3,333.9 | 39.7 | 6,283.9 | 49.8 | 10,422.2 | 59.3 | 11,586.0 | 59.8 |
| Rural | 5,074.1 | 60.3 | 6,337.8 | 50.2 | 7,156.8 | 40.7 | 7,774.6 | 40.2 |

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*Source: Population Projections for Thailand, 2010-2040, Office of the National Economic and Social Development Board*

Besides the increasing elderly population, the increasing chronic diseases among them is yet another menace. There was 53% of elderly reported one or more chronic conditions. The most commonly reported condition was high blood pressure/ cholesterol (17%), followed by diabetes (8%), gout/rheumatoid arthritis/chronic pain in the knees/back/neck (5%), heart disease (2%), and paralysis (1%). It is noteworthy that more females than males reported having one or more of these top five conditions (Siriphanich, 2013). In addition, there also tend to have deteriorated diseases with age

such as vision impairment, hearing impairment, and bowel incontinence (Siriphanich, 2012).

Finally the cost and duration of the treatment and care services for elderly population prone to or having chronic diseases are crucial factors in terms of preparedness both at individual and national level. Even though many related agencies are urgently trying to implement the policies of the 2nd National Plan on the Aging (2002-2021), challenges to achieving the targets across the five strategies of the plan to ensure quality aging and meeting the needs and aspirations for the population in their final stage of life still remains.

## 2.2 Health Scheme in Thailand

According to the 1997 (2007 Amendment) Thai Constitution, rights of citizens to public health services and welfare is defines as:

"A person shall enjoy an equal right to receive standard public health services, and the indigent shall have the right to receive free medical treatment from State infirmaries. The public health service by the State shall be provided thoroughly and efficiently. The State shall promptly prevent and eradicate harmful contagious diseases for the public without charge."

Access to health services for all was also a part of the 8th National Social and Economic Development Plan (1997-2001) (McManus, 2012).

The health insurance system, characterized by fragmentation, duplication and inadequate coverage in some schemes, cannot achieve health systems goals of efficiency and equity. It does not allow collective financing to exert its monopolistic purchasing power and send the right signals to health care providers towards efficiency. Fee for service, a dominant mode of provider payment, exacerbates cost

containment problems, as seen by faster health expenditure growth than GDP growth, even during recession periods. With the lack of effective primary care, most of the poor are taken care of by hospitals which are expensive, have long waiting lines and unsatisfactory services (Pitayarangsarit & Tangcharoensathien, 2002).

2.2.1 Civil Service Medical Benefit Scheme

The Civil Service Medical Benefit Scheme (CSMBS) was introduced in 1980 to deliver health care to government employees, their dependents (children, spouse, and parents), and government retires. CSMBS provides comprehensive medical benefits, including coverage for inpatient and outpatient services, emergency treatment, and pharmaceuticals. The program is fully financed through general tax revenue with no premium payments from the beneficiaries. Beneficiaries are liable for copayments for the room and board charges associated with inpatient care in private hospital, but not for care in public facilities (Kespichayawattana & Jitapunkul, 2009).

The scheme has three inherited problems of inefficiency (reflected by unnecessary admission and longer hospital stay), cost escalation (real term increase of 14 percent per annum during 1988-1997) and inequity of per capita budget subsidy. All players have no cost concerns; public hospitals have incentives to over-charge in order to cross subsidize their MWS patients, for profit private hospitals had motives to overcharge the scheme. When beneficiaries were faced with no price tag, they were not cost conscious and took it for granted. Problems were compounded by the fact that the Department of Comptroller General was neither capable to counter-act overcharging nor able to introduce a reasonable policy intervention (Pitayarangsarit & Tangcharoensathien, 2002).

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On September 13, 2015 there was a reported that government's efforts to lower the cost of the Civil Servant Medical Benefit (CSMB) scheme will mean lower medical benefit expenses for those working in the civil service. The expense that government used is over estimated to be 6,000 million Baht from 3,000 million Baht in 2015. It was the result from older people getting chronic diseases and the healthcare cost is getting expensive and most of chronic diseases need long-term care. Therefore, in near future the government may work with private health insurance company to substitute this problem (Thai PBS NEWS).

2.2.2 Social Security Scheme

The Social Security Scheme (SSS) launched in 1990, is an essential insurance program for private employees. SSS will not covered dependents and retirees. The SSS provides a comprehensive benefit package for non-work-related illness, and separate workers compensation scheme covers work-relate illness and injuries. Coverage is provided through a network of public and private hospitals that are contracted to provide inpatient and outpatient services. Beneficiaries select a hospital contractor of his or her choice, and the SSS pays a fixed capitation rate. Beneficiaries are liable for copayments for some services (Antos & Taylor, 2007). Civil servants, government and state enterprises' officers are insured for healthcare services after retirement. On the other hand, private employees, business owners are not cover for healthcare.

The strength of capitation is cost containment capacity. However, the cost quality trade-off has subsequently become a significant problem, especially when workers have not exercised their right to choose the provider with whom they registered. In addition, they are unlikely to have full information on clinical quality of

care when they exert rights to choose contractor hospitals. In fact they do not know which hospitals to choose. Health benefit is linked with employment and terminated when employment ceases, although a six month grace period is granted (extended to one year after the 1997 crisis). The provision on voluntary enrollment by ex-social security workers was not fully implemented by the Social Security Office, for fear of adverse selection and the financially non-viable (Pitayarangsarit & Tangcharoensathien, 2002)

2.2.3 Universal Coverage Scheme

Universal health coverage go together with social justice, health equity and a nation's responsibility to support 2 basic human rights, first is the right to health and second is the right to social security. Universal Coverage Scheme (UCS) was first launched in 2001, one of the most significant reforms. Thailand accomplished universal coverage in 2002. This meant that all Thais were covered by health insurance ensuring them access to a comprehensive package of health services. During its first year, it covered to 47 million people (75% of the population) 18 million previously uninsured people and members of two existing publicly subsidized schemes (the Medical Welfare Scheme and the Voluntary Health Card Scheme) (McManus, 2012).

The most important goal of Universal Coverage Scheme is "to equally entitle all Thai citizens to quality health care according to their needs, regardless of their socioeconomic status". The Universal Coverage Scheme was a scheme for all Thai citizens, not aims only the poor or vulnerable. The overall objectives of the Universal Coverage Scheme are:

- To focus on health promotion and prevention as well as curative care.

- To emphasize the role of primary health care and the rational use of effective and efficient integrated services.
- To aid proper referrals to hospitals.
- To ensure that grants on public health expenditure are pro-poor, moreover, ensuring all Thais are secure against the financial risks of obtaining health care.

In UCS, beneficiaries register with a primary care provider, which act as gatekeeper to secondary and tertiary care. If beneficiaries go outside the health provider network in which they are registered, they must pay the full cost by themselves. Capitation payments cover outpatient services, disease prevention, and health promotion. Inpatient services are paid prospectively using Diagnosis-related group (DRGs). The UCS is fully funded through general tax revenue with no premium payments from the beneficiaries. Some beneficiaries were initially required to pay 30 baht per visit, but health services are now free of charge to everyone enrolled in UCS (Achara Suksamran et al., 2012).

Under National Security Act (Section 3) the benefit package of health services are as follows:

- Promotive and preventive cares.
- Diagnosis.
- Ante-natal care.
- Curative care.
- Medicine, medical supplies, organ substitutes, and medical equipment.
- Delivery.

- Boarding expense within health care unit.
- Newborn and child care.
- Ambulance or transportation for patient.
- Transportation for disability person.
- Physical and mental rehabilitation.

In curative package, Universal Coverage Scheme provided general examination, curative and rehabilitative services which included as follows:

1. Medical examination, diagnosis, treatment and rehabilitation until the treatment ends, including alternative medical care as recognized by the Medical Registration Committee.
2. Childbirth delivery services, totaling for no more than 2 deliveries.
3. Meals and room charges for inpatients in common rooms.
4. Dental services: extraction, filling, scaling, plastic-based denture, milk-tooth nerve-cavity treatment, and placement of artificial palate in children with harelip and cleft palate.
5. Medicines and medical supplies according to the national essential drug list. Referrals for further treatment among health facilities.

Moreover, the curative package also covered high-cost medical services, including artificial organs and prostheses, and accident and emergency illnesses, any accident or emergency case can go to any health facility (contributing in the scheme) located nearest to the scene.

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Not only benefit package and curative benefits, the Universal coverage also provided a prevention benefits which included:

- Having and using personal health record-books.
- Examination and pre-natal care for pregnant women.
- Services related to child health, child development and nutrition, including immunizations according to the national immunization program.
- Annual physical checkups for the general public and high-risk groups.
- Antiretroviral medications for the prevention of mother-to-child transmission of HIV.
- Family planning services.
- Home visits and home health care.
- Provision of knowledge about health care for patients.
- Counseling and support for people's participation in health promotion.
- Oral health promotion and disease prevention (National Health Security Office).

From National Health Security Act B.E.2545 (A.D.2002) Section 41 stated "The Board shall earmark an amount of money, not exceeding 1 percent of money to be paid to Health care units, as preliminary assistance to reimburse beneficiaries who are subject to damage or injury caused by any service provided by the Health care unit

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and the wrongdoer is non-apparent or the wrongdoer is apparent but such beneficiaries cannot be reimbursed within a period deemed appropriate.

This shall be pursuant to such rules, procedures, and conditions as prescribed by the Board.” (National Health Security Office). This mean if health care provider which include physicians, nurses, technicians, pharmacists, etc. performed malpractice to patients, the beneficiaries can informed the court and sued health care provider. Therefore, they can get the reimbursement from malpractice of health care provider.

On December 24, 2015 there was a news reported in the next year, 2016 Universal Coverage Scheme (UCS) may be reform because the government can’t effort alone. There will be a meeting next year about how to improve UCS as a slogan “SAFE”, Sustainability, Accessibility, Fair, and Efficiency. In other countries which also have UCS, the government didn’t support the fund alone, they had co-partner. In the future, Thailand may need to reform as other countries (MGR Online).

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*Table 2 Social health protection schemes have covered all Thai citizen since 2002*

| Major Schemes | Civil Servants Medical Benefit Scheme (CSMBS) | Social Security Scheme (SSS) | Universal Coverage (UCS) |
|---|---|---|---|
| Introduced in | 1960s | 1990s | 2002 |
| Target beneficiaries | Government employees & dependents, retirees | Private sector employees | Those not covered by CSMBS nor SSS |
| Pop Coverage | 7% | 16% | 75% |
| Funding | Government budget | Payroll contribution, Tripartite | Government budget |
| Payment to health facilities | Fee-for-service for OP, DRG for IP | Capitation for OP & IP, DRG for Adjusted RW >= 2 | Capitation for OP, DRG for IP |

*Source: Thailand: Universal Health Care Coverage Through Pluralistic, Health Insurance System Research Office and Health System Research Institute.*

There was a studied from National Health Security Office (NHSO) reported during year 2008 – 2011 Thai population had a good perception toward Universal Coverage Scheme (UCS). Moreover, in 2013 received the highest perception than before, 95.49%. The result were 88.37%, 89.32%, 89.76%, and 92.75% in 2008 to 2011 respectively. In 2013, National Health Security Office did one studied with ABAC Poll to discovered Thai citizen’s opinion toward Universal Coverage Scheme. The participants were 15 years old and over from 13 province in Thailand, totally 2,730 people. 524 participants from North region, 612 from Central region, 956 from Northeast region, 425 from South region, and 213 from Bangkok. The research asked only the participants who used the service during last 6 moth in 2013, there were 95.49% which were the highest during past 10 years. When looked in detailed, there were 56.6% had high satisfied, followed by 38.9% satisfied, then 3.8% felt neutral,

0.2% not really satisfied, and 0.5% not satisfied. Moreover, there were look at age of participant use this service. Most of satisfied were in aging group, 60 years old and above, followed by 50-59 years old (National Health Security Office).

2.2.4 Private Health Insurance

Although Voluntary private health insurance grew rapidly in Thai economy, previously such financial risk protection trend among private individuals in Thailand was less than 2 percent of the total health expenditures. Health insurance operates under two lines of businesses: as part of life insurance and non-life insurance policies. Life insurance is categorized as ordinal, industrial, and group type. Non-life insurance is categorized as fire, hull, cargo, automobile, and miscellaneous whereby health insurance operates. A private health insurance is a contract between the insurer and the insured. The insurer is committed to pay the indemnity for hospitalization, surgery, and other expenses from illness or accidents based on conditions in the contract. The insured has to pay out a premium to the insurer. The insured have a choices to pay the premium, every month, every 3 month, every 6 month, or annually. Mostly, female premium are higher than male in every period of age (Pitayarangsarit & Tangcharoensathien, 2002). Insured can get the contract since 1 month old, but every contract will end when the insured reach 70 years old (Thai Life Insurance Company Limited).

Most seven significant medical benefit packages covering only inpatient were room and board, ICU bed, general treatment, laboratory and special investigations, consultation fee, emergency care, and surgical fee and operating room. As the payment mechanism is mainly “fee for service”, every item has a maximum limit of charge. Every health insurer has an exclusion list mostly for uninsurable risk persons

who have pre-existing diseases such heart disease, cancer, diabetes, epilepsy and blood pressure disorder, etc.

- Common exclusions

1. Pre-existing disease and congenital disease. If the insured have pre-existing condition, the insured should informed to the insurer before signed the policy. If not, the insurer have rights to deny to pay the claim or terminate the contract.
2. Admissions with no medical reason or not recommended by physician.
3. Health check-up, eye examination, dental treatment except from accident, cosmetic surgery, contraception, abortion, pregnancy and delivery care.
4. Medical treatment that not related to the diagnosis of physician.
5. Self-inflicted injury, suicide attempt, adverse drug reaction or drug overdose, alcoholism, drug abuse, sexually transmitted diseases, HIV/ AIDS related disease and mental disorder
6. The insurer do not cover any disease that occurred during 30 days after signed the policy.

- Uncommon exclusion list

1. Pre-existing disease which has not been cured such as hemorrhoid, sinusitis, peptic ulcer, hepatitis and asthma (Pitayarangsarit & Tangcharoensathien, 2002).

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2. Chronic diseases which occur in the first 120 days (probation period) such as tuberculosis, cancer, hernia, tonsil, adenoid gland, etc. (Thai Life Insurance Company Limited).

3. Vaccines except rabies vaccine and tetanus vaccine.

In life insurance, the common included in the main policy is the compensation due to hospitalization. This cash benefit made unnecessary admissions, a few cases were proved to be moral hazards (Pitayarangsarit & Tangcharoensathien, 2002).

In Thailand, there are totally 25 Health insurance Company, there are 13 Health Insurance Company share their investment with foreigners, while 1 is originated from abroad, and the rest is in the process of finding share investment with other countries. Therefore, in the near future, Thailand will not have Health Insurance Company that own by Thai people 100%. When looked a management aspect, there were only 14 companies that have Thais as a director. Moreover, in next several years all companies may have foreigner's director in the company (Geocities)

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**2.3 Social Health Insurance in other countries**

2.3.1 Singapore

In September 2002, Ministry of Health established ElderShield for Singapore citizens and permanent residents (CPF). Which offer a basic financial risk protection to those who need long term care. When CPF reached 40 years old, they will automatically covered by Eldershield. CPF need to pay S$400 per month for maximum 72 months. Eldershield covers basic financial protection for the severely disabled, defined as the inability to perform at least 3 out of 6 ADLs (All Activities Daily Lives). The ADLs consist of washing, dressing, feeding, toileting, mobility, and

transferring. Ministry of Health has selected 3 private insurers to track Eldershield (Ngee-Choon, Lim, & Angelique, 2008).

2.3.2 Republic of Korea

In July 2008, the government launched a Long-term Care Insurance Program to solve the problem of aging people be a major family burden in South Korea in many areas around the country as a pilot implement study. This social insurance system currently covers 3.8 percent of Korean elderly. It's a program for elderly with serious limitation in performing ADLs. For example, elderly who age 65 years or older, or less than 65 years old but suffer from an age-related disabling condition such as paralysis from stroke, Alzheimer's disease, and Parkinson's disease. It provided medical treatment services as follow: baths, laundry, and nursing care. (Joo, 2009) Poor aging are excused from copayment. Food and private rooms are not included (Sonman, Soo-Jung, & Youn, 2009). The national government expects to expand the program to include coverage of the aging people with less serious limitations in performing ADLs in the future (Joo, 2009).

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2.3.3 Japan

In April 1, 2000, the government has introduced a new health insurance scheme for elderly aged 75 or above. Under this program, people age 65 or above and who need long-term care can receives nursing services. Long-term care insurance is managed by public authorities, it is funded half-and-half by public funds, and insurance premium (Masami, Mieko, & Hisashi, 2010).

2.3.3.1 Long-Term Care Insurance is for all Japanese citizens aged 40 years and above. This program are paid in the form of services that include: home care,

visiting bathing services, visiting rehabilitation services, respite care, and institutional care (Masami et al., 2010).

2.3.3.2 Health Insurance for the Elderly is for elderly aged 75 or above, called old-old person. Each public authority within the region administers healthcare for their old-old. The old-old pay 10 percent copayments, while 30 percent is applies to the high income-person (Hayashi, 2010).

**2.4 Situation in Ratchaburi province**

Ratchaburi is an area in the central region of Thailand, has an enormous aging population that leads the second highest amount in central Thailand, apart from Bangkok, and ranked under Nontaburi province (Chuthong, 2014; Wang, 2014). Official Statistic Registration Systems has shown that population age 50-59 years old in Ratchaburi province has total number of 112,596 people, with 51,787 male and 60,809 female in year 2014. This proportion is constantly increased year by year. The number of people aged 50-59 years old has increased from 99,979 in 2009 to 112,596 in 2014 (Official Statistic Registration Office). The data base of Nongree, Photaram District has reported there are 381 people under Universal Coverage Scheme, age 50-59 years old (information from Nhongree primary health care officer, 18/01/2016).

**2.5 Theory and concepts**

2.5.1 Socio-demographic

For socio-demographic factors, there are 4 variables that can influences selection of health insurance type. First is gender. Gender is a factors that show the different in physiology and role in society, community, and family. Gender makes a difference in ability, for female will have ability in language and arts. For male, have ability in mathematics, history, geography, and sciences. Moreover, Gender is also a

factor that is indicative of the difference in physical ability in dealing with the environment and capability of self-care. Additionally, gender is a factor affecting the receiving the services at the health facility. Gender also affects intelligence and awareness, it's likely that males are capable of learning than females. In addition, gender was a factor influencing the coping, adaptation and attitudes which affect the perception of the individual. Second is age. Age is a factor that indicates the maturity to handle such issues, awareness, understanding, interpretation and judgment. People with more age will have more opportunity to learn and experience to be seen more as model from others. When a person is more mature, they will choose a good choice and make a right decision. Third is education level. Education enables individuals with knowledge, understands in academic, experience and improve personal maturity. Education seems to be correlated with the ability to decide. Education is part of empowering individuals to have better quality of life. Moreover, education is crucial to the development of knowledge, skills and attitude towards self-care. Individuals with higher education can apply their knowledge for their own use easier. Last is occupation. Occupation is a factor that affects lifestyle. The important thing is occupation can affect or determines the revenue. The different in job description result in different revenue.  Individuals with higher socio- economic status are likely to seek better treatment or prevention program than individuals with lower socio-economic status (Socio-demographic concept).

2.5.2 Knowledge, attitude and practice

Concepts and theory with a focus on relationships among 3 variables, knowledge, attitude and practice. It is a concept that describes the relationship of educating the audience, to change attitudes that lead to behavior or practice.

Knowledge means to obtain information on the facts forms the normative practice or event that gain from experience, observation or media. Therefore, knowledge is the ability to use facts or ideas or concepts to associate with the event.

Bloom has split into six levels to assess the level of knowledge as following:

1. Recall level is a level that has the ability to pull data out of memory.
2. Comprehension level is a level that could do something more to remember the content, can write your own words and compare ideas and more.
3. Application level is a level that has ability to change the fact from abstract to concrete.
4. Analysis level a level that can give you an idea of bringing the idea of a separate category or the information to attributed to their own practice.
5. Synthesis level is bringing more ideas to contribute and become a new idea.
6. Evaluation level is the ability to use data to set a threshold effect and measurement data as a standard level to set the level of effectiveness of each activity (Bloom, Hasting, & Madaus, 1971).

Attitude is the link between knowledge and behavior because attitude is inclined to assess the individual, objects, idea, etc. There are 3 level of changing attitude as following:

1. Changing ideas is the changes resulting from receiving new information which may come from the media or individuals.
2. Changes in sensation is the change that come from experience or impression or what causes depression to an individual.

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3. Change behavior is a changed the way of life in society, which affects individuals.

Such changes are related to each other directly. If thoughts, feelings and behavior are affected in any way, there will be a big change of attitude (Rodkumdee, 1989).
Practice is any action of people, most are expression. Normally, practice come from basis of knowledge and attitudes. Individuals behave differently because of the knowledge and attitudes are different. Arising from differences in media exposure and differences in the interpretation of one self. Thus causing the different accumulated experience that affect a person's behavior (Sotnasatien, 1990).
The actions or practice of any of any person are normally caused by attitude. Therefore, Attitude is a virtual machine to control the actions of individuals.
The change of individual's practice or behavior had an important relation among knowledge, attitude and practice in 4 criteria as following:

1. Attitude is the media that cause learning and practice. Therefore, there is a correlation among knowledge, attitude and practice.
2. There is a relation between knowledge and attitude that resulting in practice.
3. Both knowledge and attitude can affect practice but knowledge and attitude may not have any correlation.
4. Knowledge affects practice, both directly and indirectly (Piluntaowat, 2006)

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# CHAPTER III

## METHODOLODY

### 3.1 Research Design

This study was a cross-sectional description for quantitative data which aimed to access the level of knowledge and attitude toward the selection of health insurance type after retirement in Ratchaburi province Thailand. Structured questionnaire was used in part of socio-demographic, knowledge, attitude and selection of health insurance type. Moreover, the study also aimed to quantify the significance of variables and association among them.

### 3.2 Study Area

This study was conducted in Nhongree, Photharam District, Ratchaburi province, Thailand.

### 3.3 Study Population

The study population of this study was population at the age of 50-59 years old under Universal Coverage Scheme in Nhongree, Photharam District, Ratchaburi province, Thailand.

### 3.4 Sampling Method

The samples were selected by purposive selection. The inclusion criteria and exclusion criteria are explained below.

3.4.1 Inclusion criteria

- Male and female who are Thai.

- Samples who were age 50-59 years old.

- Samples who were under Universal Coverage Scheme.

- Samples who have lived in Ratchaburi province for at least 6 month long.

3.4.2 Exclusion criteria

- Sample who did not want to participate.

**3.5 Sample Size**

Sample size of this study was calculated by Daneil's formula as the following (Daniel, 1999):

$$n = \frac{Z^2pq}{d^2}$$

where:

n is the sample size

Z is standard value for 95% confidence interval (1.96)

d is the acceptance error (0.05)

p is proportion of target population (50% = 0.5 with assumption of maximum variance)

q is 1-p (1-0.5 = 0.5)

From the above formula:

$$n= \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2}$$

n= 384

With estimated 10% add-up for non-participation and missing value. Thus, total sample size was 430.

Nhongree primary health center will provide 10 health volunteers to help the researcher collect the data. They will interview the participants to get all information.

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### 3.6 Measurement tool

For socio-demographic, the tool was developed from "An economic analysis of voluntary health insurance after retirement" (Kananurak, 2013). Knowledge, attitude, and practice was constructed by the author from various books and research paper applicable question items.

The researcher divided the questionnaire into 4 parts. Starting with socio-demographic background in part 1. Followed with part 2 on knowledge about health insurance system, part 3 on attitudes on health insurance system, and ended with part 4 on selection of health insurance system.

For part 1, there were 10 questions related to socio-demographic status such as age, gender, income, occupation, and education.

The second part was 30 questions to assess knowledge towards the selection of health insurance type after retirement.

Scoring criteria is as follows:

Correct answer was 1 point

Incorrect answer was 0 point

Don't know answer was 0 point

The total score was classified into 3 levels as follows: (Bloom, 1965)

Poor level (less than 60%) : 0 - 18 score

Middle level (60-80%) : 19 - 24 score

High level (more than 80%) : 25 - 30 score

The third part was 20 questions about attitude towards the selection of health insurance type after retirement.

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Important answer was 3 score

Neutral answer was 2 score

Not important answer was 1 score

Maximum score – Minimum score / Class interval = 3-1 /3 = 0.66

The total attitude score was classified into 3 levels as follows: (Bloom, 1965)

| Level of attitude | Average score |
|---|---|
| High attitude | 2.34-3.00 |
| Medium attitude | 1.67-2.33 |
| Low attitude | 1.00-1.66 |

In the last part on selection of health insurance type after retirement, there were 2 questions.

### 3.7 Data Analysis

For data analysis, SPSS software version 16.0 (licensed for Chulalongkorn University) will be used as follows:

- Descriptive statistic: socio-demographic characteristics, knowledge, and attitude presented by frequency, percentage, mean, standard deviation, minimum and maximum.
- Inferential statistic: the relationship between the independent variables and the dependent variables presented by using chi-square. The level of significance was P-value $< 0.05$

### 3.8 Ethical Consideration

Ethical approval to conduct this study will need to be sought from Ethics Review Committee of "Chulalongkorn University".

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## 3.9 Validity Test

Three experts are consulted for validity review of the questionnaire content with IOC score of 0.67 and 1.

## 3.10 Reliability Test

30 sets of questionnaires will be conducted in Amphoe Muang Kanchanaburi province. The internal consistency of the rating scales will be perform by Kuder Richardson (KR20), the score of cronbach's alpha are 0.876 and 0.932 in attitude part.

## 3.11 Data collection

To approach the villagers at Nhongree district, researcher firstly meet with head of Nhongree primary health center to receive names of health volunteers and number of villagers. Second, head of Nhongree primary health center assigned work for health volunteers. Third, health volunteers were trained with questionnaires item by item. Last, health volunteers went to collect the data. This is the ordinary duty of health volunteer to visit each household every week. During visit villagers, health volunteers can therfore collect the data in the same time.

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## 3.12 Expected benefits

According to the news, Universal Coverage Scheme will be reformed again in 2016 because government cannot subsidize all alone. Therefore, this study can know the attitude of people toward both Universal Coverage Scheme and private health insurance. In the near future, there may be the cooperation between government authorities and private insurance company on providing health insurance policy after retirement.

From this research government can realize wheather people really know their own benefit from Universal Coverage Scheme or not. Government can then improve

the way of communication to spread out correct, clear, and complete benefit they will gain. Additionally, government can use this information to develop or improve the benefit of Universal Coverage Scheme as population needed but it also depending on national budget.

Lastly, due to the fact that this research was conducted in only one area of Ratchaburi province, it might not imply to whole Thai population. Consequently, this kind of study should be conducted in whole country, if possible.

### 3.13 Financial Budget

| Item | Description | Quantity | Unit Price(Baht) | Total Amount (Baht) |
|---|---|---|---|---|
| **A** | **Data collecting process** | | | |
| A-1 | Photocopy | Unit | 4(450/unit) | 2,000.00 |
| A-2 | Research assistance | Unit | 20(430/unit) | 13,000.00 |
| A-3 | Pre-test | Set | 30(20/set) | 600.00 |
| A-4 | Training of research assistance | | 1,500 | 1,500 |
| | Sub-total (A) | | | 17,100.00 |
| **B** | **Field survey** | | | |
| B-1 | Fuel and other expenses | | 2,000 | 2,000.00 |
| | Sub-total (B) | | | 2,000.00 |
| **C** | **Productions** | | | |
| C-1 | Report (Proposal, Progress and Complete paper) and cover | Paper | 2(1,000/paper) | 2,000.00 |
| | Sub-total (C) | | | 2,000.00 |
| | Total | | | 21,100.00 |

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### 3.14 Time Schedule

| **Project procedure** | Sep 15 | Oct 15 | Nov 15 | Dec 15 | Jan 16 | Feb 16 | Mar 16 | Apr 16 | May 16 | Jun 16 | Jul 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.Literature review | | | | | | | | | | | |
| 2.Writing thesis proposal | | | | | | | | | | | |
| 3.Submission for proposal exam | | | | | | | | | | | |
| 4.Proposal exam | | | | | | | | | | | |
| 5.Ethical consideration from Chulalongkorn University | | | | | | | | | | | |
| 6.Pretest questionnaire | | | | | | | | | | | |
| 7.Field preparation and data collection | | | | | | | | | | | |
| 8.Data analysis | | | | | | | | | | | |
| 9.Thesis article writing | | | | | | | | | | | |
| 10.Final thesis exam | | | | | | | | | | | |
| 11.Submission of article for publication | | | | | | | | | | | |
| 12.Submission of thesis and article | | | | | | | | | | | |

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# CHAPTER IV

## RESULTS

The study “knowledge and attitude toward the selection of health insurance type after retirement in Ratchaburi province, Thailand” collected data from 430 respondents who were between 50-59 years old and under Universal Coverage Scheme in Ratchaburi province through structured questionnaire about socio-demographic data, knowledge and attitude toward Universal Coverage Scheme and private health insurance, and the selection of health insurance type after retirement. The results of this study can be divided into 4 parts as follows:

Part I: Description of socio-demographic data

Part II: Description of knowledge, attitude, and selection of health insurance

Part III: Knowledge and attitude level (toward type of health insurance).

Part IV: Association of socio-demographic data, knowledge, and attitude compared with the selection of health insurance type.

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**Part I**: Description of socio-demographic data.

According to socio-demographic data sample, respondents aged group of 50 to 53 years old were (40.9%). Out of 430 samples were males (167 = 38.8 %) and females (263 = 61.2 %) which female was higher about 1.5 times. Most of them graduated from primary school (311 = 72.3 %). Most of them were Buddhist (427 = 99.3%). Their occupation as employee were 158 respondents (36.7%). For their monthly income, it can be divided into 5 groups: less than 15,000 baht, 15,000 to 20,000 baht, 20,001 to 25,000 baht, 25.001 to 30,000 baht, and more than 30,001 baht. Personal income in 232 (54.0%) respondents was less than 15,000 baht. For

family household income in 129 (30.0%) respondents was 15,001 to 20,000 baht. For expense in 185 (43.0%) respondents was less than 10,000 baht. Most of them were married (306 = 71.2%) and have 2 children (199 = 46.3%) as shown in table 3.

**Table 3: Description of socio-demographic data**

| Characteristics | Frequency (Persons) | Percentage (%) |
|---|---|---|
| **Total** | **430** | **100** |
| **1.Gender** | | |
| Male | 167 | 38.8 |
| Female | 263 | 61.2 |
| **2.Age Groups** | | |
| 50-53 | 176 | 40.9 |
| 54-56 | 128 | 29.8 |
| 57-59 | 126 | 29.3 |
| **3.Education Level** | | |
| Primary School | 311 | 72.3 |
| Secondary School | 48 | 11.2 |
| High School | 60 | 14.0 |
| Bachelor's degree | 11 | 2.6 |
| >Bachelor's degree | 0 | 0 |
| **4.Religion** | | |
| Buddhist | 427 | 99.3 |
| Christian | 1 | 0.2 |
| Islam | 2 | 0.5 |
| **5.Occupation** | | |
| Employee | 158 | 36.7 |
| Merchant | 94 | 21.9 |
| Agriculture | 99 | 23.0 |
| Not working | 46 | 10.7 |
| Others | 33 | 7.7 |

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**Table 3: Description of socio-demographic data**

| Characteristics | Frequency (Persons) | Percentage (%) |
|---|---|---|
| **Total** | **430** | **100** |
| **6.Personal income per month** | | |
| < 15,000 Baht | 232 | 54.0 |
| 15,001-20,000 Baht | 140 | 32.6 |
| 20,001-25,000 Baht | 29 | 6.7 |
| 25,001-30,000 Baht | 16 | 3.7 |
| >30,001 Baht | 13 | 3.0 |
| **7.Family income per month** | | |
| < 15,000 Baht | 125 | 29.1 |
| 15,001-20,000 Baht | 129 | 30.0 |
| 20,001-25,000 Baht | 66 | 15.3 |
| 25,001-30,000 Baht | 48 | 11.2 |
| 30,001-35,000 Baht | 32 | 7.4 |
| 35,001-40,000 Baht | 11 | 2.6 |
| >40,000 Baht | 19 | 4.4 |
| **8.Expenditure per month** | | |
| < 10,000 Baht | 185 | 43.0 |
| 10,001-20,000 Baht | 143 | 33.3 |
| 20,001-25,000 Baht | 57 | 13.3 |
| 25,001-30,000 Baht | 36 | 8.4 |
| 30,001-35,000 Baht | 6 | 1.4 |
| 35,001-40,000 Baht | 3 | 0.7 |
| >40,000 Baht | 0 | 0 |
| **9.Marital Status** | | |
| Single | 39 | 9.1 |
| Married | 306 | 71.2 |
| Divorced | 24 | 5.6 |
| Widowed | 45 | 10.5 |
| Separated | 16 | 3.7 |

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**Table 3: Description of socio-demographic data**

| Characteristics | Frequency (Persons) | Percentage (%) |
|---|---|---|
| **Total** | **430** | **100** |
| **10. No. of children in family** | | |
| No children | 62 | 14.4 |
| 1 | 75 | 17.4 |
| 2 | 199 | 46.3 |
| 3 | 84 | 19.5 |
| >3 | 10 | 2.3 |

**Part II**: Description of knowledge, attitude, and practice toward type of health insurance.

**Table 4: Knowledge, attitude, and practice outcome**

| Statements | Scores | Mean | Median | Mode | S.D. | Minimum | Maximum |
|---|---|---|---|---|---|---|---|
| **Knowledge** | 0-30 | 18.67 | 18.00 | 18.00 | 4.56 | 4 | 27 |
| **Attitude** | 20-60 | 56.67 | 60 | 60 | 5.54 | 36 | 60 |
| **Practice** | 0-2 | 1.22 | 1 | 2 | 0.82 | 0 | 2 |

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Range of scores for knowledge, attitude and practice were 0 to 30, 20 to 60, and 0 to 2 respectively. For knowledge, the lowest score of sample was 4 and maximum was 27 scores. Around 18 scores were the mean, median. Minimum and maximum scores of samples' attitude were 36 and 60 respectively included mean and median around 56.67 and 60 respectively. For practice scores, most of them choose to use Universal Coverage Scheme (UCS) and buy private health insurance after retirement as shown in table 4.

In each question of knowledge, attitude, and practice it can provide distribution of numbers of sample and percentage as shown in table 5, 6, and 7 of knowledge, attitude, and practice respectively.

**Table 5: Description of each knowledge question**

| Statements | Correct Answer | | Not Correct Answer | |
|---|---|---|---|---|
| | N | % | N | % |
| **K.1 Knowledge toward Universal Coverage Scheme (UCS)** | | | | |
| 1.Universal Coverage Scheme (UCS) can be used for general illness, emergency illness, and accident. | 306 | 71.2 | 124 | 28.8 |
| 2.Those who are eligible for Civil Service Medical Benefit Scheme (CSMBS) or Social Security Scheme (SSS) is also eligible for Universal Coverage Scheme (UCS). | 337 | 78.4 | 93 | 21.6 |
| 3.People can use ID card as a substitute for the Gold card. | 416 | 96.7 | 14 | 3.3 |
| 4.In case of general illness, patient has to go to primary medical care first. | 322 | 74.9 | 108 | 25.1 |
| 5.Benefit from Universal Coverage Scheme (UCS) is oral health promotion. | 151 | 35.1 | 279 | 64.9 |
| 6.Benefit from Universal Coverage Scheme (UCS) are including anti-retrovirus drug. | 265 | 61.6 | 165 | 38.4 |

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**Table 5: Description of each knowledge question**

| Statements | Correct Answer | | Not Correct Answer | |
|---|---|---|---|---|
| | N | % | N | % |
| 7.Universal Coverage Scheme (UCS) is now free of charge. | 319 | 74.2 | 111 | 25.8 |
| 8.Cataract surgery is not covered by Universal Coverage Scheme (UCS). | 130 | 30.2 | 300 | 69.8 |
| 9.End-stage renal disease is not covered by Universal Coverage Scheme (UCS). | 99 | 23.0 | 331 | 77.0 |
| 10.Normal room and food charges are not covered by Universal Coverage Scheme (UCS). | 213 | 49.5 | 217 | 50.5 |
| 11.According to section 41, if health care provider perform malpractice, patient or beneficiaries can receives the reimbursement. | 258 | 60.0 | 172 | 40.0 |
| 12.Cancer is not cover by Universal Coverage Scheme (UCS). | 153 | 35.6 | 277 | 64.4 |
| 13.Universal Coverage Scheme (UCS) cover only national drug lists. | 357 | 83.0 | 73 | 17.0 |
| 14.When referral, Universal Coverage Scheme (UCS) insurer cannot use full option benefit. | 213 | 49.5 | 217 | 50.5 |
| 15.Heart surgery is covered by Universal Coverage Scheme (UCS). | 338 | 78.6 | 92 | 21.4 |

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**Table 5: Description of each knowledge question**

| Statements | Correct Answer | | Not Correct Answer | |
|---|---|---|---|---|
| | N | % | N | % |
| **K.2 Knowledge toward private health insuranc** | | | | |
| 16.Private health insurance covered pre-existing condition. | 265 | 61.6 | 165 | 38.4 |
| 17.Private health insurance covered dental treatment. | 256 | 59.5 | 174 | 40.5 |
| 18.Insurer can pay premiums by monthly, every 3 month, every 6 month, or annually. | 375 | 87.2 | 55 | 12.8 |
| 19.Private health insurance cover injury from accident. | 391 | 90.9 | 39 | 9.1 |
| 20.Private health insurance pay according to each package. | 392 | 91.2 | 38 | 8.8 |
| 21.Private health insurance do not cover congenital disease. | 278 | 64.7 | 152 | 35.3 |
| 22.There is a compensation during hospitalization. | 365 | 84.9 | 65 | 15.1 |
| 23.Private health insurance do not cover the expense if the insurer get any disease during 30 days after signed policy. | 245 | 57.0 | 185 | 43.0 |
| 24.The policy will end when the insurer reach 70 years old. | 246 | 57.2 | 184 | 42.8 |
| 25.Private health insurance cover treatment from toxin by drink or eat into the body. | 220 | 51.2 | 210 | 48.8 |
| 26.Private health insurance cover treatment related to psychosis. | 226 | 52.6 | 204 | 47.4 |

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**Table 5: Description of each knowledge question**

| Statements | Correct Answer | | Not Correct Answer | |
|---|---|---|---|---|
| | N | % | N | % |
| 27.Private health insurance cover all vaccination. | 194 | 45.1 | 236 | 54.9 |
| 28.If insurer have pre-existing disease, insurer need to inform before sign the contract. If not, insured have rights to terminate the contract. | 334 | 77.7 | 96 | 22.3 |
| 29.Private health insurance do not cover ICU bed. | 178 | 41.4 | 252 | 58.6 |
| 30.Private health insurance cover the treatment from self-inflicted injury. | 187 | 43.5 | 243 | 56.5 |

From table 5, it was found that out of 30 questions, the majority of respondents answer correctly in 20 questions, mostly in knowledge about private health insurance. The significant questions that respondents answer incorrectly were item number 5 (279 = 64.9%), 8 (300 = 69.8%), 9 (331 = 77.0%), 10 (217 = 50.5%), 12 (227 = 64.4%), and 14 (217 = 50.5%). This can show that most of respondents don't know well about the benefit of UCS. From 15 questions, they answer correctly in 9 questions. However, for private health insurance respondents' answer correctly in 12 questions from 15 questions, it can show that most respondent have more knowledge about private health insurance.

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**Table 6: Description of each attitude question**

| Factors | Important | | Neutral | | Not Important | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| **A.1 Attitude toward Universal Coverage Scheme** | | | | | | |
| 1. Coverage of expense | 371 | 86.3 | 58 | 13.5 | 1 | 0.2 |
| 2. Quality of medicine | 368 | 85.6 | 61 | 14.2 | 1 | 0.2 |
| 3. Quality of treatment | 368 | 85.6 | 61 | 14.2 | 1 | 0.2 |
| 4. Quality of service | 300 | 69.8 | 129 | 30.0 | 1 | 0.2 |
| 5. Quality of healthcare personal | 340 | 79.1 | 85 | 19.8 | 5 | 1.2 |
| 6. Waiting time | 310 | 72.1 | 113 | 26.3 | 7 | 1.6 |
| 7. Compensation | 347 | 80.7 | 79 | 18.4 | 4 | 0.9 |
| 8. Choice of access to hospitals | 369 | 85.8 | 61 | 14.2 | 0 | 0 |
| 9. Cost | 359 | 83.5 | 64 | 14.9 | 7 | 1.6 |
| 10.Overall benefit | 363 | 84.4 | 65 | 15.1 | 2 | 0.5 |
| **A.2 Attitude toward private health insurance** | | | | | | |
| 1. Coverage of expense | 357 | 83.0 | 68 | 15.8 | 5 | 1.2 |
| 2. Quality of medicine | 384 | 89.3 | 46 | 10.7 | 0 | 0 |
| 3. Quality of treatment | 379 | 88.1 | 51 | 11.9 | 0 | 0 |
| 4. Quality of service | 368 | 85.6 | 62 | 14.4 | 0 | 0 |
| 5. Quality of healthcare personal | 393 | 91.4 | 37 | 8.6 | 0 | 0 |
| 6. Waiting time | 331 | 77.0 | 98 | 22.8 | 1 | 0.2 |
| 7. Compensation | 372 | 86.5 | 54 | 12.6 | 4 | 0.9 |
| 8. Choice of access to hospitals | 382 | 88.8 | 48 | 11.2 | 0 | 0 |
| 9. Cost | 380 | 88.4 | 50 | 11.6 | 0 | 0 |
| 10.Overall benefit | 375 | 87.2 | 55 | 12.8 | 0 | 0 |

For table 6, there are 10 factors of attitude toward each type of health insurance. Most of respondents answer important to all 10 factors to both Universal Coverage Scheme and private health insurance. In Universal Coverage Scheme (UCS) there were 9 factors which respondents answer not important, except choice of access to hospital. For private health insurance there were only 3 factors which respondents answer not important: coverage of expense (5 = 1.2%), waiting time (1 = 0.2%), and compensation (4 = 0.9%).

**Table 7: Description of each practice questions**

| Statement | Use the right | | Not sure | | Not use the right | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| After retirement, you will use Universal Coverage Scheme (UCS) and buy private health insurance. | 203 | 47.2 | 120 | 27.9 | 107 | 24.9 |

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For table 7 was the question about future practice. As everyone have rights to use Universal Coverage Scheme, 203 respondents (47.2%) will use both Universal Coverage Scheme and buy private health insurance after retirement, 120 respondents (27.9%) were not sure to buy private health insurance after retirement, and 107 respondents (24.9%) will not buy private health insurance after retirement.

**Part III**: Knowledge, attitude, and practice levels

**Table 8: Knowledge and attitude levels**

| Groups | Score | N | % | Mean | Median | Mode | S.D. | Min | Max |
|---|---|---|---|---|---|---|---|---|---|
| **Knowledge** | | | | | | | | | |
| Poor | 0-18 | 221 | 51.4 | 15.09 | 16.00 | 18.00 | 2.90 | 4 | 18 |
| Moderate | 19-24 | 152 | 35.3 | 21.34 | 21.00 | 21.00 | 1.79 | 19 | 24 |
| High | 25-30 | 57 | 13.3 | 25.00 | 25.00 | 25.00 | 0.66 | 25 | 27 |
| **Attitude** | | | | | | | | | |
| Low | 1.00-1.66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Medium | 1.67-2.33 | 32 | 7.4 | 1.99 | 2.00 | 2.00 | 0.14 | 1.75 | 2.30 |
| High | 2.34-3.00 | 398 | 92.6 | 2.90 | 3.00 | 3.00 | 0.15 | 2.40 | 3.00 |

As indicated in table 4, to assess knowledge, attitude, and practice part, the average score (mean) outcome were 19, 57 and 1 respectively. From 30 questions of knowledge part, they were divided, following Benjamin Bloom's criteria, into three groups: poor, moderate, and high. Majority of respondents was in poor group or 221 (51.4%) people. The score of this group was 0 to 18 points. The most frequent score (mode) of moderate group was 18.

The total score of attitude were 60 points. When using criteria of Bloom, we can divide attitude into 3 groups; low, medium, and high. Majority of respondents was in high group or 398 (92.6%) people. The score of this group was 2.34 to 3.00. The most frequent (mode) of high group was 3.00.

**Part IV**: Association of socio-demographic data, knowledge, attitude, and practice.

**Table 9: Relationship between the respondents' socio-demographic data and their practice/selection**

| **Socio-demographic** | **Practice** | | | $\chi^2$ | **p-value** |
|---|---|---|---|---|---|
| | **Use** | **Not sure** | **Not use** | | |
| **1.Gender** | | | | | |
| Male | 74(36.5%) | 55(45.8%) | 38(35.5%) | 3.459 | 0.178 |
| Female | 129(63.5%) | 65(54.2%) | 69(64.5%) | | |
| **2.Age** | | | | | |
| 50-53 | 85(41.9%) | 49(40.8%) | 42(39.3%) | 6.038 | 0.196 |
| 54-56 | 59(29.1%) | 43(35.8%) | 26(24.3%) | | |
| 57-59 | 59(29.1%) | 28(23.3%) | 39(36.4%) | | |
| **3.Educational level** | | | | | |
| Primary School | 145(71.4%) | 83(69.2%) | 83(77.6%) | 8.444 | 0.207 |
| Secondary School | 22(10.8%) | 16(13.3%) | 10(9.3%) | | |
| High School | 29(14.3%) | 21(17.5%) | 10(9.3) | | |
| Bachelor 's degree | 7(3.4%) | 0(0%) | 4(3.7%) | | |
| **4.Religion** | | | | | |
| Buddhist | 200(98.5%) | 120(100%) | 107(100%) | 2.631 | 0.764 |
| Christian | 1(0.5%) | 0(0%) | 0(0%) | | |
| Islam | 2(1.0%) | 0(0%) | 0(0%) | | |

**Table 9: Relationship between the respondents' socio-demographic data and their practice/selection**

| Socio-demographic | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| **5.Occupation** | | | | | |
| Temporary employee | 77(37.9%) | 51(42.5%) | 30(28.0%) | 43.939 | <0.001* |
| Merchant | 39(19.2%) | 33(27.5%) | 22(20.6%) | | |
| Agriculture | 59(29.1%) | 9(7.5%) | 31(29.0%) | | |
| Not working | 23(11.3%) | 8(6.7%) | 15(14.0%) | | |
| Others | 5(2.5%) | 19(15.8%) | 9(8.4%) | | |
| **6.Personal income per month** | | | | | |
| < 15,000 Baht | 107(52.7%) | 81(67.5%) | 44(41.1%) | 26.585 | 0.001* |
| 15,001 – 20,000 Baht | 67(33.0%) | 24(20.0%) | 49(45.8%) | | |
| 20,001 – 25,000 Baht | 17(8.4%) | 7(5.8%) | 5(4.7%) | | |
| 25,001 – 30,000 Baht | 9(4.4%) | 2(1.7%) | 5(4.7%) | | |
| > 30,001Baht | 3(1.5%) | 6(5.0%) | 4(3.7%) | | |
| **7.Family income per month** | | | | | |
| <15,000 Baht | 55(27.1%) | 46(38.3%) | 24(22.4%) | 19.351 | 0.080 |
| 15,001 – 20,000 Baht | 57(28.1%) | 38(31.7%) | 34(31.8%) | | |
| 20,001 – 25,000 Baht | 32(15.8%) | 17(14.2%) | 17(15.9%) | | |

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**Table 9: Relationship between the respondents' socio-demographic data and their practice/selection**

| Socio-demographic | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| 25,001 – 30,000 Baht | 32(15.8%) | 5(4.2%) | 11(10.3%) | | |
| 30,001 – 35,000 Baht | 14(6.9%) | 8(6.7%) | 10(9.3%) | | |
| 35,001 – 40,000 Baht | 5(2.5%) | 3(2.5%) | 3(2.8%) | | |
| > 40,001 Baht | 8(3.9%) | 3(2.5%) | 8(7.5%) | | |
| **8.Expenditure per month** | | | | | |
| Less than 10,000 Baht | 78(38.4%) | 61(50.8%) | 46(43.0%) | 21.222 | 0.020* |
| 10,001 – 20,000 Baht | 68(33.5%) | 31(25.8%) | 44(41.1%) | | |
| 20,001 – 25,000 Baht | 34(16.7%) | 14(11.7%) | 9(8.4%) | | |
| 25,001 – 30,000 Baht | 20(9.9%) | 10(8.3%) | 6(5.6%) | | |
| 30,001 – 35,000 Baht | 2(1.0%) | 4(3.3%) | 0(0%) | | |
| 35,001 – 40,000 Baht | 1(0.5%) | 0(0%) | 2(1.9%) | | |
| **9.Marital status** | | | | | |
| Single | 19(9.4%) | 10(8.3%) | 10(9.3%) | 2.602 | 0.959 |
| Married | 143(70.4%) | 88(73.3%) | 75(70.1%) | | |

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**Table 9: Relationship between the respondents' socio-demographic data and their practice/selection**

| Socio-demographic | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| Divorced | 14(6.9%) | 6(5.0%) | 4(3.7%) | | |
| Widowed | 19(9.4%) | 12(10.0%) | 14(13.1%) | | |
| Separated | 8(3.9%) | 4(3.3%) | 4(3.7%) | | |
| **10.Number of children in family** | | | | | |
| No | 33(16.3%) | 11(9.2%) | 18(16.8%) | 10.692 | 0.220 |
| 1 person | 38(18.7%) | 21(17.5%) | 16(15.0%) | | |
| 2 persons | 95(46.8%) | 56(46.7%) | 48(44.9%) | | |
| 3 persons | 30(14.8%) | 30(25.0%) | 24(22.4%) | | |
| More than 3 persons | 7(3.4%) | 2(1.7%) | 1(0.9%) | | |

(*p-value <0.05)

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The relationship between the independent variables or socio-demographic data and dependent variable or practice is presented by using chi-square test with p-value <0.05. From table 9, gender was the first of socio-demographic data or independent variable. There were 129 female respondents (63.5%) will use UCS and private health insurance after retirement and 74 male respondents (36.5%) will use. Not only using private health insurance, but also not use and not sure to use as well 69 people (64.5%) and 65 people (54.2%) respectively. The result of relation between gender and practice got 3.459 of $\chi 2$ value at p-value >0.05 (p-value = 0.178), therefore gender is not association with practice. For age group, age between 50-53 years old

will use both UCS and private health insurance after retirement 85 respondents (41.9%). The $\chi$2 value of gender was 6.038 at p-value >0.05 (p-value = 0.196), therefore age and practice were not association. In educational level, respondents in primary school 145 (71.4%) will buy private health insurance after retirement and 83 respondents (69.2% and 77.6%) were not sure and will not use. The relation between educational level and practice got 8.444 of $\chi$2 value at p-value>0.05 (p-value = 0.207), there is no association among education level and practice. Most of respondents were Buddhist (200 =98.5%) will buy private health insurance level of 2.631 $\chi$2 value at p-value >0.05 (p-value = 0.764), therefore, religion not significantly association with practice. Most of occupation was employee and agriculture will use private health insurance after retirement, 77 respondents (37.9%) and 59 respondents (29.1%) respectively. Moreover, both of employee and agriculture also choose not to use private health insurance 30 respondents (28.0%) and 31 respondents (29.0%) respectively. The result of relation between occupation and practice got 43.939 of $\chi$2 value at p-value <0.05 (p-value = <0.001), therefore occupation was significantly association with practice. For personal income and family income were different in term of result. Personal income was significant or p-value <0.05 (p-value = 0.001) but the family income showed p-value >0.05 (p-value = 0.080) or was not significantly associated with the practice. Most people had monthly income less than15,000 baht and will use private health insurance or 107 respondents (52.7%) from 232 respondents. For expenditure, the majority group were expenditure less than 10,000 baht and 10,001 to 20,000 baht. Both group will use private health insurance 78 respondents (38.4%) and 68 respondents (33.5%) respectively. The result of $\chi$2 value was 21.222 at p-value <0.05 (p-value = 0.020), there was the association between

expenditure and practice. Both of marital status and number of children were similarly in term of result, not significant associated with practice or p-value >0.05 (p-value = 0.959 and 0.220 respectively).

**Table 10: Relationship between each knowledge question and their practice/selection**

| Statement | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| **K.1 Knowledge toward Universal Coverage Scheme (UCS)** | | | | | |
| 1.Universal Coverage Scheme (UCS) can be used for general illness, emergency illness, and accident. | | | | | |
| **Correct** | 132(65.0%) | 110(91.7%) | 64(59.8%) | 35.027 | <0.001* |
| **Not Correct** | 71(35.0%) | 10(8.3%) | 43(40.2%) | | |
| 2.Those who are eligible for Civil Service Medical Benefit Scheme (CSMBS) or Social Security Scheme (SSS) is also eligible for Universal Coverage Scheme (UCS). | | | | | |
| **Correct** | 168(82.8%) | 85(70.8%) | 84(78.5%) | 6.329 | 0.042* |
| **Not Correct** | 35(17.2%) | 35(29.2%) | 23(21.5%) | | |
| 3.People can use ID card as a substitute for the Gold card. | | | | | |
| **Correct** | 196(96.6%) | 117(97.5%) | 103(96.3%) | 0.376 | 0.884 |
| **Not Correct** | 7(3.4%) | 3(2.5%) | 4(3.7%) | | |
| 4.In case of general illness, patient has to go to primary medical care first. | | | | | |
| **Correct** | 139(68.5%) | 115(85.8%) | 68(63.9%) | 39.744 | <0.001* |
| **Not Correct** | 64(31.5%) | 5(4.2%) | 39(36.4%) | | |
| 5.Benefit from Universal Coverage Scheme (UCS) is oral health promotion. | | | | | |
| **Correct** | 56(27.6%) | 46(38.3%) | 49(45.8%) | 10.952 | 0.004* |
| **Not Correct** | 147(72.4%) | 74(61.7%) | 58(54.2%) | | |
| 6.Benefit from Universal Coverage Scheme (UCS) are including anti-retrovirus drug. | | | | | |
| **Correct** | 118(58.1%) | 66(55.0%) | 81(75.7%) | 12.242 | 0.002* |
| **Not Correct** | 85(41.9%) | 54(45.0%) | 26(24.3%) | | |

**Table 10: Relationship between each knowledge question and their practice/selection**

| Statement | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | **Use** | **Not sure** | **Not use** | | |
| 7.Universal Coverage Scheme (UCS) is now free of charge. | | | | | |
| **Correct** | 140(69.0%) | 94(78.3%) | 85(79.4%) | 5.509 | 0.064 |
| **Not Correct** | 63(31.0%) | 26(21.7%) | 22(20.6%) | | |
| 8.Cataract surgery is not covered by Universal Coverage Scheme (UCS). | | | | | |
| **Correct** | 79(38.9%) | 32(26.7%) | 19(17.8%) | 15.876 | <0.001* |
| **Not Correct** | 124(61.1%) | 88(73.3%) | 88(82.2%) | | |
| 9.End-stage renal disease is not covered by Universal Coverage Scheme (UCS). | | | | | |
| **Correct** | 39(19.2%) | 33(27.5%) | 37(25.2%) | 3.316 | 0.191 |
| **Not Correct** | 164(80.8%) | 87(72.5%) | 80(74.8%) | | |
| 10.Normal room and food charges are not covered by Universal Coverage Scheme (UCS). | | | | | |
| **Correct** | 94(46.3%) | 83(69.2%) | 36(33.6%) | 30.156 | <0.001* |
| **Not Correct** | 109(53.7%) | 37(30.8%) | 71(66.4%) | | |
| 11.According to section 41, if health care provider perform malpractice, patient or beneficiaries can receives the reimbursement. | | | | | |
| **Correct** | 130(64.0%) | 61(50.8%) | 67(62.6%) | 5.887 | 0.053 |
| **Not Correct** | 73(36.0%) | 59(49.2%) | 40(37.4%) | | |
| 12.Cancer is not cover by Universal Coverage Scheme (UCS). | | | | | |
| **Correct** | 71(35.0%) | 51(42.5%) | 31(29.0%) | 4.578 | 0.101 |
| **Not Correct** | 132(65.0%) | 69(57.5%) | 76(71.0%) | | |
| 13.Universal Coverage Scheme (UCS) cover only national drug lists. | | | | | |
| **Correct** | 181(89.2%) | 78(65.0%) | 98(91.6%) | 38.655 | <0.001* |
| **Not Correct** | 22(10.2%) | 42(35.0%) | 9(8.4%) | | |
| 14.When referral, Universal Coverage Scheme (UCS) insurer cannot use full option benefit. | | | | | |
| **Correct** | 111(54.7%) | 47(39.2%) | 55(51.4%) | 7.459 | 0.024* |
| **Not Correct** | 92(45.3%) | 73(60.8%) | 52(48.6%) | | |

**Table 10: Relationship between each knowledge question and their practice/selection**

| Statement | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| 15.Heart surgery is covered by Universal Coverage Scheme (UCS). | | | | | |
| **Correct** | 177(87.2%) | 70(58.3%) | 91(85.0%) | 40.863 | <0.001* |
| **Not Correct** | 26(12.8%) | 50(41.7%) | 16(15.0%) | | |
| **K.2 Knowledge toward private health insurance** | | | | | |
| 16.Private health insurance covered pre-existing condition. | | | | | |
| **Correct** | 140(69.0%) | 53(44.2%) | 72(67.3%) | 21.544 | <0.001* |
| **Not Correct** | 63(31.0%) | 67(55.8%) | 35(32.7%) | | |
| 17.Private health insurance covered dental treatment. | | | | | |
| **Correct** | 143(70.4%) | 51(42.5%) | 62(57.9%) | 24.594 | <0.001* |
| **Not Correct** | 60(29.6%) | 69(57.5%) | 45(42.1%) | | |
| 18.Insurer can pay premiums by monthly, every 3 month, every 6 month, or annually. | | | | | |
| **Correct** | 182(89.7%) | 93(77.5%) | 100(93.5%) | 14.976 | 0.001* |
| **Not Correct** | 21(10.3%) | 27(22.5%) | 7(6.5%) | | |
| 19.Private health insurance cover injury from accident. | | | | | |
| **Correct** | 189(93.1%) | 102(85.0%) | 100(93.5%) | 7.109 | 0.029* |
| **Not Correct** | 14(6.9%) | 18(15.0%) | 7(6.5%) | | |
| 20.Private health insurance pay according to each package. | | | | | |
| **Correct** | 186(91.6%) | 108(90.0%) | 98(91.6%) | 0.279 | 0.870 |
| **Not Correct** | 17(8.4%) | 12(10.0%) | 9(8.4%) | | |
| 21.Private health insurance do not cover congenital disease. | | | | | |
| **Correct** | 148(72.9%) | 69(57.5%) | 61(57.0%) | 11.473 | 0.003* |
| **Not Correct** | 55(27.1%) | 51(42.5%) | 46(43.0%) | | |
| 22.There is a compensation during hospitalization. | | | | | |
| **Correct** | 169(83.3%) | 101(84.2%) | 95(88.8%) | 1.739 | 0.419 |
| **Not Correct** | 34(16.7%) | 19(15.8%) | 12(11.2%) | | |

**Table 10: Relationship between each knowledge question and their practice/selection**

| Statement | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| 23.Private health insurance do not cover the expense if the insurer get any disease during 30 days after signed policy. | | | | | |
| **Correct** | 114(56.2%) | 49(40.8%) | 82(76.6%) | 29.682 | <0.001* |
| **Not Correct** | 89(43.8%) | 71(59.2%) | 25(23.4%) | | |
| 24.The policy will end when the insurer reach 70 years old. | | | | | |
| **Correct** | 121(59.6%) | 47(39.2%) | 78(72.9%) | 27.191 | <0.001* |
| **Not Correct** | 82(40.4%) | 73(60.8%) | 29(27.1%) | | |
| 25.Private health insurance cover treatment from toxin by drink or eat into the body. | | | | | |
| **Correct** | 107(52.7%) | 57(47.5%) | 56(52.3%) | 0.898 | 0.638 |
| **Not Correct** | 96(47.3%) | 63(52.5%) | 51(47.7%) | | |
| 26.Private health insurance cover treatment related to psychosis. | | | | | |
| **Correct** | 111(54.7%) | 49(40.8%) | 66(61.7%) | 10.555 | 0.005 |
| **Not Correct** | 92(45.3%) | 71(59.2%) | 41(38.3%) | | |
| 27.Private health insurance cover all vaccination. | | | | | |
| **Correct** | 108(53.2%) | 39(32.5%) | 47(43.9%) | 13.135 | 0.001* |
| **Not Correct** | 95(46.8%) | 81(67.5%) | 60(56.1%) | | |
| 28.If insurer have pre-existing disease, insurer need to inform before sign the contract. If not, insured have rights to terminate the contract. | | | | | |
| **Correct** | 171(84.2%) | 72(60.0%) | 91(85.0%) | 30.011 | <0.001* |
| **Not Correct** | 32(15.8%) | 48(40.0%) | 16(15.0%) | | |
| 29.Private health insurance do not cover ICU bed. | | | | | |
| **Correct** | 83(40.9%) | 57(47.5%) | 38(35.5%) | 3.391 | 0.184 |
| **Not Correct** | 120(59.1%) | 63(52.5%) | 69(64.5%) | | |
| 30.Private health insurance cover the treatment from self-inflicted injury. | | | | | |
| **Correct** | 92(45.3%) | 62(51.7%) | 33(30.8%) | 10.507 | 0.005 |
| **Not Correct** | 111(54.7%) | 58(48.3%) | 74(69.2%) | | |

(*p-value <0.05)

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The relationship between knowledge question and practice were divided by type of health insurance, Universal Coverage Scheme (UCS) and private health insurance. In first part there were 15 questions about UCS. First 4 questions were about general information of this scheme and most of the respondents answer correctly. From first 4 questions, item 1, 2, and 4 have the same result. Item one was significantly or p-value <0.05 (p-value <0.001), item 2 also associated with practice at p-value <0.05 (p-value = 0.042), and item 4 the result was 39.744 of $\chi2$ value at p-value<0.05 (p-value <0.001). On the other hand, item 3 was about people can use ID card substitute for the gold card. Most of the respondents answer correctly, there were 196 respondents (96.6%) will use both UCS and private health insurance, 117 respondents (97.5%) not sure, and 103 respondents (96.3%) will not use private health insurance. It was not significantly associated with the practice at 0.376 of $\chi2$ level at p-value >0.05 (p-value = 0.884). From item 5 to 15 were about the benefit of this scheme. Most of respondents (147 = 72.4%) didn't know about benefit of oral health promotion and will buy private health insurance level of 10.952 $\chi2$ value at p-value <0.05 (p-value =0.004), therefore it significantly associated. In items 9, respondent answer incorrect about benefit of end-stage renal failure, 164 respondents (80.8%) and will use private health insurance. There was no association or p-value >0.05 (p-value = 0.191) of 3.316 $\chi2$ value. For item 13, 14, and 15 were significant associated with p-value <0.05 (p-value = <0.001, 0.024, and <0.001 respectively. Next, for knowledge about private health insurance, most of the questions were about the exclusion which company will not covered (item 16, 17, 21, 22, 23, 25, 26, 27, 28, and 30). Item 16 and 17 had the same result with p-value <0.05 (p-value <0.001). Respondents knew about private health insurance will not cover congenital disease

and they will buy private health insurance after retirement (148 = 72.9%) at p-value <0.05 (p-value = 0.003). It was significant associated with practice and χ2 value was 11.473. For item 28, respondents answer correct 171 people (84.2%) will use private health insurance and 91 people (85.0%) will not use private health insurance. The result was 30.011 of χ2 value at p-value < 0.05 (p-value <0.001), therefore, it was significantly associated with practice. Respondents also didn't knew well about private health insurance cover ICU bed but still chose to but private health insurance after retirement, 120 respondents (59.1%) at p- value >0.05 (p-value = 0.184). It was not associated with practice. For the last question, private health insurance cover the treatment from self-inflicted injury, the respondent answer incorrect and will use private health insurance 111 respondents (54.7%) and not use 74 respondents (69.2%). There was no association between them as p-value >0.05 (p-value = 0.005) at 10.507 of χ2 value.

**Table 11: Relationship between each part of attitude and the practice/selection**

| **Part of attitude** | **Practice** | | | $\chi^2$ | **p-value** |
|---|---|---|---|---|---|
| | **Use** | **Not sure** | **Not use** | | |
| **A.1 Attitude toward Universal Coverage Scheme** | | | | | |
| 1. Coverage of expense | | | | | |
| **Important** | 192(94.6%) | 92(76.7%) | 87(81.3%) | 26.000 | <0.001* |
| **Neutral** | 11(5.4%) | 27(22.5%) | 20(18.7%) | | |
| **Not Important** | 0(0%) | 1(0.8%) | 0(0%) | | |
| 2. Quality of medicine | | | | | |
| **Important** | 190(93.6%) | 92(76.7%) | 86(80.4%) | 23.069 | <0.001* |
| **Neutral** | 13(6.4%) | 27(22.5%) | 21(19.6%) | | |
| **Not Important** | 0(0%) | 1(0.8%) | 0(0%) | | |

**Table 11: Relationship between each part of attitude and the practice/selection**

| Part of attitude | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| 3. Quality of treatment | | | | | |
| **Important** | 190(93.6%) | 92(76.7%) | 86(80.4%) | 23.069 | <0.001* |
| **Neutral** | 13(6.4%) | 27(22.5%) | 21(19.6%) | | |
| **Not Important** | 0(0%) | 1(0.8%) | 0(0%) | | |
| 4. Quality of service | | | | | |
| **Important** | 154(75.9%) | 72(60%) | 74(17.21%) | 10.669 | 0.012* |
| **Neutral** | 49(24.1%) | 47(39.2%) | 33(7.67%) | | |
| **Not Important** | 0(0%) | 1(0.8%) | 0(0%) | | |
| 5. Quality of healthcare personal | | | | | |
| **Important** | 172(84.7%) | 92(76.7%) | 76(71.0%) | 21.386 | <0.001* |
| **Neutral** | 31(15.3%) | 23(19.2%) | 31(29.0%) | | |
| **Not Important** | 0(0%) | 5(4.2%) | 0(0%) | | |
| 6. Waiting time | | | | | |
| **Important** | 155(76.4%) | 80(66.7%) | 75(70.1%) | 15.951 | 0.002* |
| **Neutral** | 48(23.6%) | 33(27.5%) | 32(29.9%) | | |
| **Not Important** | 0(0%) | 7(5.8%) | 0(0%) | | |
| 7. Compensation | | | | | |
| **Important** | 181(89.2%) | 87(72.5%) | 79(73.8%) | 23.107 | <0.001* |
| **Neutral** | 22(10.8%) | 29(24.2%) | 28(26.2%) | | |
| **Not Important** | 0(0%) | 4(3.3%) | 0(0%) | | |
| 8. Choice of access to hospitals | | | | | |
| **Important** | 186(91.6%) | 99(82.5%) | 84(78.5%) | 11.411 | 0.003* |
| **Neutral** | 17(8.4%) | 21(17.5%) | 23(21.5%) | | |
| 9. Cost | | | | | |
| **Important** | 183(90.1%) | 90(75.0%) | 86(80.4%) | 14.032 | 0.004* |
| **Neutral** | 18(8.9%) | 27(22.5%) | 19(17.8%) | | |
| **Not Important** | 2(1.0%) | 3(2.5%) | 2(1.9%) | | |

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**Table 11: Relationship between each part of attitude and the practice/selection**

| Part of attitude | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| 10.Overall benefit | | | | | |
| **Important** | 186(91.6%) | 91(75.8%) | 86(80.4%) | 17.963 | <0.001* |
| **Neutral** | 16(7.9%) | 28(23.3%) | 21(19.6%) | | |
| **Not Important** | 1(0.5%) | 1(0.8%) | 0(0%) | | |
| **A.2 Attitude toward Private health insurance** | | | | | |
| 1. Coverage of expense | | | | | |
| **Important** | 193(95.1%) | 77(64.2%) | 87(81.3%) | 54.007 | <0.001* |
| **Neutral** | 10(4.9%) | 38(31.7%) | 20(18.7%) | | |
| **Not Important** | 0(0%) | 5(4.2%) | 0(0%) | | |
| 2. Quality of medicine | | | | | |
| **Important** | 197(97.0%) | 94(78.3%) | 93(86.9%) | 28.488 | <0.001* |
| **Neutral** | 6(3.0%) | 26(21.7%) | 14(13.1%) | | |
| 3. Quality of treatment | | | | | |
| **Important** | 194(95.6%) | 91(75.8%) | 94(87.9%) | 28.104 | <0.001* |
| **Neutral** | 9(4.4%) | 29(24.2%) | 13(12.1%) | | |
| 4. Quality of service | | | | | |
| **Important** | 188(92.6%) | 88(73.3%) | 92(86.0%) | 22.731 | <0.001* |
| **Neutral** | 15(7.4%) | 32(26.7%) | 15(14.0%) | | |
| 5. Quality of healthcare personal | | | | | |
| **Important** | 194(95.6%) | 103(85.8%) | 96(89.7%) | 9.594 | 0.008* |
| **Neutral** | 9(4.4%) | 17(14.2%) | 11(10.3%) | | |
| 6. Waiting time | | | | | |
| **Important** | 169(83.3%) | 71(59.2%) | 91(85.0%) | 29.627 | <0.001* |
| **Neutral** | 33(16.3%) | 49(40.8%) | 16(15.0%) | | |
| **Not Important** | 1(0.5%) | 0(0%) | 0(0%) | | |

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**Table 11: Relationship between each part of attitude and the practice/selection**

| Part of attitude | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| 7. Compensation | | | | | |
| **Important** | 196(96.6%) | 86(71.7%) | 90(84.1%) | 43.756 | <0.001* |
| **Neutral** | 6(3.0%) | 31(25.8%) | 17(15.9%) | | |
| **Not Important** | 1(0.5%) | 3(2.5%) | 0(0%) | | |
| 8. Choice of access to hospitals | | | | | |
| **Important** | 191(94.1%) | 96(80.0%) | 95(88.8%) | 15.096 | <0.001* |
| **Neutral** | 12(5.9%) | 24(20.0%) | 12(11.2%) | | |
| 9. Cost | | | | | |
| **Important** | 193(95.1%) | 92(76.7%) | 95(88.8%) | 24.891 | <0.001* |
| **Neutral** | 10(4.9%) | 28(623.3%) | 12(11.2%) | | |
| 10.Overall benefit | | | | | |
| **Important** | 191(94.1%) | 90(75.0%) | 94(87.9%) | 24.688 | <0.001* |
| **Neutral** | 12(5.9%) | 30(25.0%) | 13(12.1%) | | |
| Not Important | | | | | |

(*p-value <0.05)

Each section of attitude questions was significantly associated with the practice. P-value was less than 0.05. Almost all, p-value was less than 0.001 except the item number 4, 6, and 9 of attitude toward Universal Coverage Scheme (UCS) and item number 5 of attitude toward private health insurance were 0.012, 0.002, 0.003, 0.004, and 0.008 respectively. Respondents had an important attitude toward both Universal Coverage Scheme (UCS) and private health insurance in all factors.

**Table 12: Relationships between knowledge, attitude, and practice/selection**

| Levels | Practice | | | $\chi^2$ | p-value |
|---|---|---|---|---|---|
| | Use | Not sure | Not use | | |
| **Knowledge** | | | | | |
| Poor | 103(50.7%) | 59(49.2%) | 59(55.1%) | 23.264 | <0.001* |
| Moderate | 63(31.0%) | 58(48.3%) | 31(29.0%) | | |
| High | 37(18.2%) | 3(2.5%) | 17(15.9%) | | |
| Total | 203(100%) | 120(100%) | 107(100%) | | |
| **Attitude** | | | | | |
| Medium | 1(1.0%) | 19(15.8%) | 11(10.3%) | 25.805 | <0.001* |
| High | 201(99.0%) | 101(84.2%) | 96(89.7) | | |
| Total | 203(100%) | 120(27.91%) | 107(24.88%) | | |

From table 12, the level of knowledge was significant at p-value <0.05 (p-value <0.001) with practice which most of poor group will use both Universal Coverage Scheme (UCS) and private health insurance or 103 respondents (50.7%). Moreover, moderate level knowledge also use both type of health insurance or 63 respondents (31.0%). The $\chi 2$ value was 23.264.

The level of attitude divided from score criteria showed two levels of medium and high attitude. The relationship between attitude group and practice group was significant at p-value <0.05 (p-value <0.001) and the $\chi 2$ value was 25.805. This result founded that the high attitude was associated with use Universal Coverage Scheme (UCS) and will buy private health insurance after retirement or 201 respondents (94.1%) from total 203 respondents (100%).

# CHAPTER V

## SUMMARY, DISCUSSION, AND RECOMMENDATIONS

From this study, the title was knowledge and attitude toward the selection of health insurance type after retirement in Ratchaburi province Thailand. The objectives of this research were listed as follows:

1. To study the selection of health insurance system type after retirement in respect to their socio-demographic background in Ratchaburi province, Thailand

2. To study the level of knowledge, level of attitudes toward the selection of health insurance type in Ratchaburi province, Thailand.

3. To determine the association among socio-demographic background, level of knowledge, level of attitude, with the selection of health insurance type after retirement in Ratchaburi province, Thailand.

The respondents were 430 people at the age of 50-59 years old, lived in Ratchaburi at least 6 month and were under Universal Coverage Scheme's rights. Descriptive statistic using were frequency and percentage on socio-demographic characteristics, questions of knowledge, attitude, and practice parts. Others descriptive statistics were mean, standard deviation, minimum, and maximum values were used with each level of attitude. The inferential statistics was used to test the association between independent and dependent variables by chi-square test and correlation. Independent variables were socio-demographic data, knowledge and attitude level. Selection of health insurance type was the dependent variable.

**5.1 Summary**

Based on data collected, respondents were female (61.2%), aged between 50 to 53 years old (40.9%), 72.3% graduated from primary school and were employees (36.7%). Most of respondents were Buddhist (99.3%). For personal monthly income, a greater number of respondents earned less than 15,000 baht per month (54.0%) and 15,001 to 20,000 baht for family income (30.0%). 43.0% used less than 10,000 baht per month. The respondents were married (71.2%) and had 2 children (46.3%).

For score of knowledge and attitude, the minimum and maximum of knowledge scores were 4 and 27 from 30 of total scores. For attitude score, the minimum scores were 36 and maximum were 60 scores. The average score of knowledge and attitude were 19 and 57 respectively. Corresponding standard deviation was 4.56 and 5.54 for knowledge and attitude. Furthermore, the level of knowledge was divided into 3 levels: poor, moderate, and high. About half of respondents had poor knowledge (51.4%) the average scores and standard deviation of poor knowledge group were 16 and 2.90 respectively. Attitude also divided into 3 groups: low, medium, and high. Most of respondents had high attitude (92.6%) with standard deviation of 0.14. there were 47.2 of respondents will use Universal Coverage Scheme (UCS) and will buy private health insurance after retirement, while 27.9% and 24.9% were not sure and will not buy private insurance after retirement.

The association between independent variable or socio-demographic data, knowledge, and attitude with dependent variable or practice (the selection of health insurance type) were tested by the use of chi-square test as shown in table 9 to 12. Practice was associated with occupation, personal income, and expenditure (socio-demographic part) with statistically significant (p-value<0.05). On the other hand, the

association between each knowledge question and practice compared with correct and not correct answer group of respondents show statistically significant (p-value<0.05) about the general information of insurance type, the benefit, and the exclusion of insurance. The attitude was statistically significant with practice p-value <0.05 as all 10 factors in both UCS and private health insurance of attitude questions were significant associated with practice. Data in table 12 showed the relationship between knowledge, attitude, and practice, it was found the association of both knowledge and attitude with practice with p-value less than 0.05 (p-value<0.001).

## 5.2 Discussion

### 5.2.1 Socio-demographic characteristics

The respondents who participated in this study were mostly female (61.2%), parallel to the result of the survey of public opinion and health provider about universal coverage scheme in 2011 and 2013 y National Health Security Office collaborated with Happiness Community Center, Assumption University that mostly were female participants 52.2% and 51.6% respectively (National Health Security Office, Happiness Community Center, & Assumption University, 2011, 2013). Additionally, this result also similar from Chisapath that were 59.5% were female participants (Chuthong, 2014). 99.3% of respondents were Buddhist, like the study “Factors affecting to health service utilization of people having universal health coverage right” shown 95.7% of participants were Buddhist (Boonkham, 2014). For educational level, 71.4% of respondents finished primary school. The result from National Statistic Office of Thailand shown 65-70% had an elementary school or below. The finding was associated with National Health Security Office that defined the education level in elementary school in 46.0% from year 2011 (National Health

Security Office et al., 2011). Mainly, the occupation of respondents were employee (36.7%) same as National Statistic Office of Thailand described that 62-63% were employee in 2007 and 2012 (national statistic). Furthermore, Chisapath mentioned 31.1% were employee (Chuthong, 2014). Chiefly, respondents' personal income were less than 15,000 baht (54.0%) which Arpirapon mentioned were 62.0% (Deevit, 2011). For the result of marital status, the study showed about 71.2% of the respondents were married, in association with the survey from National Health Security office collaborated with Happiness Community Center, Assumption University which shown the number of married status in year 2011 and 2013 in 69.8% and 66.7% respectively. (National Health Security Office et al., 2011, 2013). Lastly, number of children in family, in this study shown 46.3% had 2 children. The result similar with Chalermpon, 52.0% (Chamchon & Kosuke, 2006).

5.2.2 Knowledge, attitude, practice, and their association

The rationale of this study was an increase of buying private health insurance or increase market share of insurance business while Thai population had the right to use national insurance scheme or universal coverage scheme. Many factors could be related. Knowledge and attitude were the key factors of this study required to learn about better understanding and thinking regarding affected to practice or selection of health insurance type. In line K.Somruedee (2016) who ensured that people understand the benefit of UCS with a great majority, including how to think and to put into action for problem solution.

Comparing of knowledge and practice showed an association at P-value less than 0.05. The majority of respondent were in poor level group of knowledge (51.4%) about general information, benefit, and exclusion of both universal coverage scheme

and private health insurance. There was a study of Sherif Emil (2014) stated only one-third of all respondents demonstrated accurate knowledge of the basic of their own health care system. For example less than 60% of respondents correctly answered the question about patient protection Act (Emil, Nagurney, Mok, & Michael D. Prislin, 2014). Similar to this study, there was 60% of respondents answered question “According to section 41, if health care provider perform malpractice, patient or beneficiaries can receive reimbursement” correctly. From Samitra Pokrel (2013) study stated that health information or knowledge during past 1 year, 70.9% received health information (Pokrel, 2013). On the other hand, study of Chisapath revealed that 45.5% of participants were in moderate level of knowledge regarding access to universal coverage scheme (Chuthong, 2014). Additionally, there was a study from Iran stated that literacy level was not significantly associated with practice. This result may have happened because received information was not sufficient enough to bring awareness about positive impact of good practice (Pokrel, 2013).

Comparing attitude and practice, there was also strong association. Most of respondents got high level of attitude. In line with Sherif Emil (2014), most of respondent were consistently stronger supporters of a right to health care access and universal health care. The study in Chiang Rai also revealed the same result, most of the respondents had high attitude and perception toward universal health coverage. On the other hand, attitude toward private health insurance, “Health care utilization and attitudes toward health insurance. A comparison of privately insured and medical assistance or uninsured patients” shown Patients enrolled in a medical assistance program were less willing to pay for their health care than were private patients. Sixty-two percent of clinic patients responded that they would not be willing to pay

anything at all for their health care coverage. These data suggest that health care and health insurance is a lower priority for the clinic patient (Della Valle CJ, Levitz CL, & Bora FW Jr, 1995). Furthermore, there were more than twice as likely to feel they were healthy and did not need health insurance (18.9 percent versus about 9 percent for persons with private or public health insurance). In addition, about one-third of adults without health insurance felt that it was not worth the cost compared with approximately one-quarter of persons with private or public health insurance. Among adults with health insurance, the percentages who agreed with the attitudinal statements toward health insurance were not significantly different for those with private versus public coverage (Machlin & Carper, 2005)

**5.3 Recommendations**

5.3.1 Recommendation on research outcome

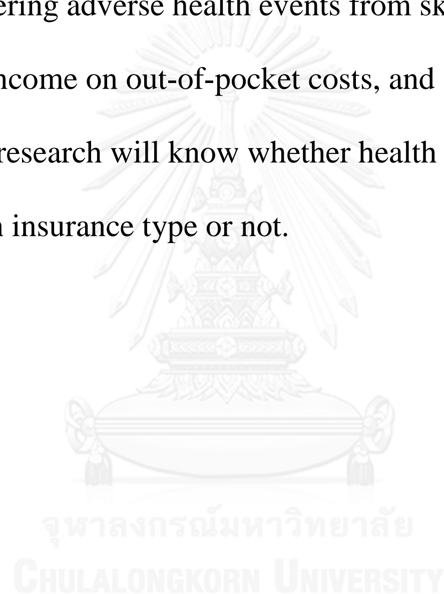
The World Health Report (2010) defined the health financing for universal coverage scheme as the financing systems that "need to be specifically designed to provide all people with access to needed health services of sufficient quality to be effective, and to ensure that the use of these services does not expose the user to financial hardship". This research is only to study about the samples' knowledge and attitude in relation to the selection of health insurance type. The level of knowledge was poor which meaned that there was a lack of common understanding on the benefit or the package of Universal Coverage Scheme. Nearly half of the respondents were willing to buy private health insurance after retirement. Moreover, there were some groups of people who could not make a final decision which might be due to the lack of information about Universal Coverage Scheme. Therefore, the Thai government may not be able to accomplish the goals of the Universal Coverage Scheme. The best

solution perhaps is for the Thai government to do more public relations/socialization campaign to persuade the people through the provision of information about Universal Coverage Scheme so that people can know about their rights and to use their rights as much as possible.

As nearly half of the respondents would buy private health insurance after retirement, this might be similar to some research about the persuasive communication by health insurance agents (Suwannapisit, 2000). The communication process between life insurance agents and the insureds begins with an open-up step. The agents approach the customers through their good relationship. Later on the life insurance agents propose the life insurance policy to the insureds. This is called the selling step. The final step is the case-closing when the agents make/influence the insureds to buy the life insurance policy. The content of the message which life insurance agents use can be divided into the 6 types according to the objectives for buying the life insurance policy: general education, business protection, disability, debt, investment and medical cares. The persuasive strategies of life insurance agents that makes the insureds buy life insurance policy is the compliance-gaining strategies. They are in concordance with the persuasive strategies which the insureds believe that the life insurance agents use (the seven persuasive strategies from all sixteen strategies): expertise (negative), aversive stimulation, debt, moral appeal, self-feeling (positive), altercasting (positive) and altercasting (negative). The insureds perceive that the purchase of a life insurance policy would give good benefit for themselves and their families. When something bad happen, life insurance policy becomes something valuable and this creates the positive attitude of the insureds toward the life insurance policy.

5.3.2 Recommendation to further research

Further research should include health status or health condition as an independent variable. Health status can relate with socio-demographic data and can impact to practice or dependent variable. High rates of chronic health conditions make the elderly high risk in terms of catastrophic health expenditure. Likewise, the price of long-term care and healthcare services for the elderly is expensive. While being uninsured at any age is risky, older persons without adequate health coverage are at particular risk of suffering adverse health events from skipping needed care, spending large shares of their income on out-of-pocket costs, and accumulating medical debt. Therefore, the future research will know whether health status has an association with the selection of health insurance type or not.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# APPENDIX

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# Appendix A

## Questionnaire

**Survey Title**: Knowledge and attitude toward the selection of health insurance type after retirement in Ratchaburi province, Thailand
**Survey Objectives**: To study the distribution of the selection of health insurance system type after retirement in respect to their socio-demographic background in Ratchaburi province, Thailand, to study the level of knowledge, level of attitudes towards the selection of health insurance system type in Ratchaburi province, Thailand, and to determine the association among socio-demographic background, level of knowledge, level of attitude, with level of selection of health insurance system type after retirement in Ratchaburi province, Thailand by the college of Public Health Science Master's degree student, Chulalongkorn University.

Questionnaire Code: […………………………] (Code by Researcher)
Date: ...../…./…. (Code by Researcher)

Information for the respondent:

We wish to know your knowledge and attitude toward the selection of health insurance type after retirement. Your information will be useful for public health service and action.

Your answer will not be released to anyone and will remain anonymous. Your name will be written on the questionnaire or be kept in other records. The presentation of this research result is an overall and does not refer to an individual reporting.

There are 62 questions in this questionnaire, which consists of 4 parts:

| | |
|---|---|
| Part 1 Socio-demographic characteristic | 10 questions |
| Part 2 Knowledge about each type of insurance | 30 questions |
| Part 3 Attitude toward each type of insurance | 20 questions |
| Part 4 the selection of health insurance type | 2 question |

Thank you for your time and kind assistance.

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**Part 1:** Socio-Demographic Characteristics

1.1 Gender

☐ Male ☐ Female

1.2 Age range

☐ 50-53 years old ☐ 54-56 years old

☐ 57-59 years old

1.3 Education level

☐ Primary School ☐ Secondary School

☐ High School ☐ Bachelor 's degree

☐ Higher than Bachelor's degree

1.4 Religion

☐ Buddhist ☐ Christian

☐ Islam ☐ Other, please specify…………….

1.5 Occupation

☐ Temporary employee ☐ Merchant

☐ Agriculture ☐ Not working

☐ Other, please specify………………. .

1.6 Personal income per month

☐ Less than 15,000 Baht ☐ 15,001 – 20,000 Baht

☐ 20,001 – 25,000 Baht ☐ 25,001 – 30,000 Baht

☐ More than 30,001Baht

1.7 Family income per month

☐ Less than 15,000 Baht ☐ 15,001 – 20,000 Baht

☐ 20,001 – 25,000 Baht ☐ 25,001 – 30,000 Baht

☐ 30,001 – 35,000 Baht ☐ 35,001 – 40,000 Baht

☐ More than 40,001 Baht

1.8 Expenditure per month

☐ Less than 10,000 Baht ☐ 10,001 – 20,000 Baht

☐ 20,001 – 25,000 Baht ☐ 25,001 – 30,000 Baht

☐ 30,001 – 35,000 Baht ☐ 35,001 – 40,000 Baht

☐ More than 40,000 Baht

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1.9 Marital Status

□ Single (go to part 2) □ Married

□ Divorced □ Widowed

□ Separated

1.10 Number of children in family

□ 1 person □ 2 persons

□ 3 persons □ more than 3 persons

**Part 2** : Knowledge towards selection of health insurance system type after retirement. For each statement, please check (√) TRUE, FALSE, or DON'T KNOW for your best opinion

"TRUE" means you think the statement is correct.

"FALSE" means you think the statement is not correct.

If you cannot decide, you may answer "DON'T KNOW"

K1. Knowledge about Universal Coverage Scheme (UCS)

| STATEMENT | TRUE | FALSE | DON'T KNOW |
|---|---|---|---|
| 1. Universal Coverage Scheme (UCS) can be used for general illness, emergency illness, and accident. | | | |
| 2. Those who are eligible for Civil Service Medical Benefit Scheme (CSMBS) or Social Security Scheme (SSS) is also eligible for Universal Coverage Scheme (UCS). | | | |
| 3. People can use ID card as a substitute for the Gold card. | | | |
| 4. In case of general illness, patient has to go to primary medical care first. | | | |
| 5. Benefit from Universal Coverage Scheme (UCS) is oral health promotion. | | | |
| 6. Benefit from Universal Coverage Scheme (UCS) are including anti-retrovirus drug. | | | |

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| STATEMENT | TRUE | FALSE | DON'T KNOW |
|---|---|---|---|
| 7. Universal Coverage Scheme (UCS) is now free of charge. | | | |
| 8. Cataract surgery is not covered by Universal Coverage Scheme (UCS). | | | |
| 9. End-stage renal disease is not covered by Universal Coverage Scheme (UCS). | | | |
| 10. Normal room and food charges are not covered by Universal Coverage Scheme (UCS). | | | |
| 11. According to section 41, if health care provider perform malpractice, patient or beneficiaries can receives the reimbursement. | | | |
| 12. Cancer is not cover by Universal Coverage Scheme (UCS). | | | |
| 13. Universal Coverage Scheme (UCS) cover only national drug lists. | | | |
| 14. When referral, Universal Coverage Scheme (UCS) insurer cannot use full option benefit. | | | |
| 15. Heart surgery is covered by Universal Coverage Scheme (UCS). | | | |

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K2. Knowledge about Private health insurance.

| STATEMENT | TRUE | FALSE | DON'T KNOW |
|---|---|---|---|
| 16. Private health insurance covered pre-existing condition. | | | |
| 17. Private health insurance covered dental treatment. | | | |
| 18. Insurer can pay premiums by monthly, every 3 month, every 6 month, or annually. | | | |
| 19. Private health insurance cover injury from accident. | | | |

| STATEMENT | TRUE | FALSE | DON'T KNOW |
|---|---|---|---|
| 20. Private health insurance pay according to each package. | | | |
| 21. Private health insurance do not cover congenital disease. | | | |
| 22. There is a compensation during hospitalization. | | | |
| 23. Private health insurance do not cover the expense if the insurer get any disease during 30 days after signed policy. | | | |
| 24. The policy will end when the insurer reach 70 years old. | | | |
| 25. Private health insurance cover treatment from toxin by drink or eat into the body. | | | |
| 26. Private health insurance cover treatment related to psychosis. | | | |
| 27. Private health insurance cover all vaccination. | | | |
| 28. If insurer have pre-existing disease, insurer need to inform before sign the contract. If not, insured have rights to terminate the contract. | | | |
| 29. Private health insurance do not cover ICU bed. | | | |
| 30. Private health insurance cover the treatment from self-inflicted injury. | | | |

**Part 3** : Attitude towards the selection of health insurance system type after retirement. For each statement, please check (√) IMPORTANT, NEUTRAL, or NOT IMPORTANT for your best opinion

"IMPORTANT" means you think this factor is important.
"NEUTRAL" means you think this factor is neutral.
"NOT IMPORTANT" means you think this factor is not important.

A1. Attitude toward Universal Coverage Scheme (UCS)

| FACTOR | IMPORTANT | NEUTRAL | NOT IMPORTANT |
|---|---|---|---|
| 1. Coverage of expense | | | |
| 2. Quality of medicine | | | |
| 3. Quality of treatment | | | |
| 4. Quality of service | | | |
| 5. Quality of healthcare personal | | | |
| 6. Waiting time | | | |
| 7. Compensation | | | |
| 8. Choice of access to hospitals | | | |
| 9. Cost | | | |
| 10.Overall benefit | | | |

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A2. Attitude toward Private health insurance.

| FACTOR | IMPORTANT | NEUTRAL | NOT IMPORTANT |
|---|---|---|---|
| 1. Coverage of expense | | | |
| 2. Quality of medicine | | | |
| 3. Quality of treatment | | | |
| 4. Quality of service | | | |
| 5. Quality of healthcare personal | | | |
| 6. Waiting time | | | |
| 7. Compensation | | | |

| FACTOR | IMPORTANT | NEUTRAL | NOT IMPORTANT |
| --- | --- | --- | --- |
| 8. Choice of access to hospitals | | | |
| 9. Cost | | | |
| 10.Overall benefit | | | |

**Part 4**: Selection of health insurance system type after retirement.
For each statement, please check (√) USE THE RIGHT, DON'T USE THE RIGHT, or NOT SURE for your best opinion.
"USE THE RIGHT" means you will definitely use the right.
"DON'T USE THE RIGHT" means you don't use the right.
If you cannot decide, you may answer "NOT SURE"

| STATEMENT | USE THE RIGHT | DON'T USE THE RIGHT | NOT SURE |
| --- | --- | --- | --- |
| 1. After retirement, you will use Universal Coverage Scheme (UCS). | | | |
| 2. After retirement, you will use Universal Coverage Scheme (UCS) and buy private health insurance. | | | |

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# Appendix B
# Questionnaire Thai Version

เลขที่แบบสอบถาม .......................................

วันที่ ..../..../....

คำชี้แจง:

แบบสอบถามชุดนี้จัดทำขึ้นเพื่อประเมินความรู้เจตคติต่อการเลือกใช้สิทธิการรักษาพยาบาลหลังเกษียณ และพิจารณาความสัมพันธ์ที่เกี่ยวข้องในจังหวัดราชบุรี ประเทศไทย ผลการศึกษาที่ได้จากการตอบแบบสอบถามในครั้งนี้

ข้อมูลที่เกี่ยวข้องกับท่านจะเก็บเป็นความลับ หากมีการเสนอผลการวิจัยจะเสนอเป็นภาพรวม ข้อมูลใดที่สามารถระบุถึงตัวท่านได้จะไม่ปรากฏในรายงาน

แบบสอบถามมีทั้งหมด 4 หน้า รวมทั้งหมด 62 คำถาม แบ่งออกเป็น 4 ส่วน ดังนี้

| | |
|---|---|
| ส่วนที่ 1 ข้อมูลทั่วไป | จำนวน 10 ข้อ |
| ส่วนที่ 2 ความรู้เกี่ยวกับสิทธิการรักษาพยาบาล | จำนวน 30 ข้อ |
| ส่วนที่ 3 เจตคติต่อสิทธิการรักษาพยาบาล | จำนวน 20 ข้อ |
| ส่วนที่ 4 การเลือกใช้สิทธิการรักษาพยาบาลหลังเกษียณ | จำนวน 2 ข้อ |

ขอบพระคุณในการตอบแบบสอบถาม

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**ส่วนที่ 1**: ข้อมูลทั่วไป

1.1 เพศ

□ ชาย □ หญิง

1.2 อายุ

□ 50-53 ปี □ 54-56 ปี

□ 57-59 ปี

1.3 ระดับการศึกษาสูงสุด

□ ประถมศึกษา □ มัธยมศึกษาตอนต้น

□ มัธยมศึกษาตอนปลาย □ ปริญญาตรี

□ สูงกว่าปริญญาตรี

1.4 ศาสนา

□ พุทธ □ คริสต์

□ อิสลาม □ อื่นๆ โปรดระบุ ................

1.5 อาชีพ

□ ลูกจ้างชั่วคราว □ ค้าขาย

□ เกษตรกร □ ไม่ได้ทำงาน

□ อื่นๆ โปรดระบุ ....................

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1.6 รายได้เฉลี่ยต่อเดือน (บาทต่อเดือน)

□ < 15,000 บาท □ 15,001 – 20,000 บาท

□ 20,001 – 25,000 บาท □ 25,001 – 30,000 บาท

□ > 30,001 บาท

1.7 รายได้เฉลี่ยของครอบครัวต่อเดือน (บาทต่อเดือน)

□ < 15,000 บาท □ 15,001 – 20,000 บาท

□ 20,001 – 25,000 บาท □ 25,001 – 30,000 บาท

□ 30,001 – 35,000 บาท □ 35,001 – 40,000 บาท

□ > 40,001 บาท

1.8 รายจ่ายเฉลี่ยต่อเดือน (บาทต่อเดือน)

□ < 10,000 บาท　　□ 10,001 – 20,000 บาท

□ 20,001 – 25,000 บาท　　□ 25,001 – 30,000 บาท

□ 30,001 – 35,000 บาท　　□ 35,001 – 40,000 บาท

□ > 40,000 บาท

1.9 สถานภาพสมรส

□ โสด (ไปส่วนที่ 2)　　□ แต่งงาน

□ หย่าร้าง　　□ หม้าย

□ แยกกันอยู่

1.10 จำนวนบุตร

□ 1 คน　　□ 2 คน

□ 3 คน　　□ มากกว่า 3 คน

**ส่วนที่ 2** : ความรู้ต่อการใช้สิทธิการรักษาพยาบาลหลังเกษียณ กรุณาทำเครื่องหมาย √ ในช่องคำตอบที่ท่านเลือก

K1. ความรู้เกี่ยวกับสิทธิประกันสุขภาพถ้วนหน้า

| รายการคำถาม | ถูก | ผิด | ไม่ทราบ |
|---|---|---|---|
| 1. สิทธิประกันสุขภาพถ้วนหน้า สามารถใช้สิทธิ์เมื่อเจ็บป่วยทั่วไป เจ็บป่วยฉุกเฉิน กรณีอุบัติเหตุ | | | |
| 2. ผู้ที่มีสิทธิข้าราชการ หรือ สิทธิประกันสังคม สามารถใช้สิทธิประกันสุขภาพถ้วนหน้าได้ | | | |
| 3. ประชาชนสามารถใช้บัตรประจำตัวประชาชนแทนบัตรทองได้ | | | |
| 4. ในกรณีเจ็บป่วยทั่วไป ผู้ป่วยต้องเข้ารับบริการที่โรงพยาบาลส่งเริมสุขภาพตำบลหรือโรงพยาบาลที่ได้ลงทะเบียนเป็นสถานบริการหลักในสิทธิประกันสุขภาพถ้วนหน้าก่อน | | | |
| 5. สิทธิประกันสุขภาพถ้วนหน้าคุ้มครองการส่งเสริมป้องกันสุขภาพช่องปาก เช่นฟันปลอมฐานพลาสติก | | | |
| 6. สิทธิประกันสุขภาพถ้วนหน้าคุ้มครองยาต้าไวรัสในผู้ติดเชื้อ | | | |
| 7. สิทธิประกันสุขภาพถ้วนหน้าไม่ต้องเสียค่าใช้จ่ายใดๆทั้งสิ้น | | | |
| 8. สิทธิประกันสุขภาพถ้วนหน้าไม่คุ้มครองการผ่าตัดต้อกระจก | | | |

| รายการคำถาม | ถูก | ผิด | ไม่ทราบ |
|---|---|---|---|
| 9. สิทธิประกันสุขภาพถ้วนหน้าไม่คุ้มครองการรักษาไตวายเรื้อรังระยะสุดท้าย | | | |
| 10. ค่าห้องสามัญและค่าอาหารไม่ถูกคุ้มครองในสิทธิประกันสุขภาพถ้วนหน้า | | | |
| 11. จากมาตรา 41 หากบุคลากรทางการแพทย์ให้การรักษาไม่เหมาะสมหรือผิดพลาด ผู้ป่วยหรือญาติสามารถเรียกร้องค่าชดเชยได้ | | | |
| 12. สิทธิประกันสุขภาพถ้วนหน้าไม่คุ้มครองการรักษาเกี่ยวกับโรคมะเร็ง | | | |
| 13. สิทธิประกันสุขภาพถ้วนหน้าคุ้มครองเฉพาะยาในบัญชีหลักแห่งชาติ | | | |
| 14. สิทธิประกันสุขภาพถ้วนหน้าไม่ครอบคลุมกรณีส่งต่อผู้ป่วย (มีค่าใช้จ่ายหากมีการส่งต่อ) | | | |
| 15. สิทธิประกันสุขภาพถ้วนหน้าคุ้มครองการผ่าตัดหัวใจ | | | |

K2. ความรู้เกี่ยวกับประกันชิวิตภาคเอกชน

| รายการคำถาม | ถูก | ผิด | ไม่ทราบ |
|---|---|---|---|
| 16. ประกันสุขภาพภาคเอกชนคุ้มครองโรคที่เป็นมาก่อนการทำประกัน | | | |
| 17. ประกันสุขภาพภาคเอกชนคุ้มครองการรักษาด้านทัตกรรมทุกประเภท | | | |
| 18. ผู้ประกันตนสามารถจ่ายเบี้ยประกันแบบรายเดือน ราย 3 เดือนราย 6 เดือน หรือ รายปี | | | |
| 19. ประกันสุขภาพภาคเอกชนคุ้มครองการบาดเจ็บที่เกิดจากอุบัติเหตุ | | | |
| 20. ประกันสุขภาพภาคเอกชนจะจ่ายตามผลประโยชน์ตามกรมธรรม์ | | | |
| 21. ประกันสุขภาพภาคเอกชนไม่คุ้มครองโรคที่เป็นมาแต่กำเนิด | | | |
| 22. ประกันสุขภาพภาคเอกชนมีค่าชดเชยจากการนอนโรงพยาบาล | | | |
| 23. ประกันสุขภาพภาคเอกชนจะไม่คุ้มครองการเจ็บป่วยใดๆในระยะ 30 วันหลังจากการทำประกัน | | | |
| 24. กรมธรรม์จะสิ้นผลบังคับเมื่อผู้ประกันตนอายุครบ 70 ปีบริบูรณ์ | | | |
| 25. ประกันสุขภาพภาคเอกชนคุ้มครองการรักษาที่เกิดจากการดื่ม หรือกินสารพิษเข้าร่างกาย | | | |
| 26. ประกันสุขภาพภาคเอกชนคุ้มครองการรักษาเกี่ยวกับโรคจิตเวท | | | |

| รายการคำถาม | ถูก | ผิด | ไม่ทราบ |
|---|---|---|---|
| 27. ประกันสุขภาพภาคเอกชนคุ้มครองการฉีดวัคซีนทุกชนิด | | | |
| 28. หากผู้ประกันตนมีโรคที่เป็นมาก่อนการทำประกัน ต้องแถลงในใบเซ็นสัญญา มิฉะนั้นบริษัทมีสิทธิ์บอกเลิกสัญญาได้ | | | |
| 29. ประกันสุขภาพภาคเอกชนไม่คุ้มครองการนอนในห้องไอ.ซี.ยู. | | | |
| 30. ประกันสุขภาพภาคเอกชนคุ้มครองการรักษาจากการทำร้ายร่างกายตัวเอง | | | |

**ส่วนที่ 3** : เจตคติต่อการใช้สิทธิการรักษาพยาบาล กรุณาทำเครื่องหมาย √ ในช่องคำตอบที่ท่านเลือก

A1 เจตคติต่อสิทธิ์ประกันสุขภาพถ้วนหน้า

| ปัจจัย | สำคัญ | ปานกลาง | ไม่สำคัญ |
|---|---|---|---|
| 1. ครอบคลุมค่าใช้จ่ายในการรักษา | | | |
| 2. คุณภาพของยา | | | |
| 3. คุณภาพของการรักษา | | | |
| 4. คุณภาพของการบริการ | | | |
| 5. คุณภาพของบุคลากรทางการแพทย์ | | | |
| 6. ระยะเวลาในการรอรับการรักษา | | | |
| 7. ค่าชดเชย | | | |
| 8. การเลือกสถานพยาบาลในการเข้ารับการรักษา | | | |
| 9. ค่าใช้จ่ายในการทำประกัน | | | |
| 10. ประโยชน์โดยรวม | | | |

A2 เจตคติต่อประกันชีวิตภาคเอกชน

| ปัจจัย | สำคัญ | ปานกลาง | ไม่สำคัญ |
|---|---|---|---|
| 1. ครอบคลุมค่าใช้จ่ายในการรักษา | | | |
| 2. คุณภาพของยา | | | |

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| ปัจจัย | สำคัญ | ปานกลาง | ไม่สำคัญ |
|---|---|---|---|
| 3. คุณภาพของการรักษา | | | |
| 4. คุณภาพของการบริการ | | | |
| 5. คุณภาพของบุคลากรทางการแพทย์ | | | |
| 6. ระยะเวลาในการรอรับการรักษา | | | |
| 7. ค่าชดเชย | | | |
| 8. การเลือกสถานพยาบาลในการเข้ารับการรักษา | | | |
| 9. ค่าใช้จ่ายในการทำประกัน | | | |
| 10. ประโยชน์โดยรวม | | | |

**ส่วนที่ 4**: การเลือกใช้สิทธิต่อการรักษาพยาบาลหลังเกษียณ กรุณาทำเครื่องหมาย √ ในช่องคำตอบที่ท่านเลือก

| รายการคำถาม | ใช้สิทธ์ | ไม่ใช้สิทธิ์ | ไม่แน่ใจ |
|---|---|---|---|
| 1. หลังเกษียณท่านจะยังใช้สิทธิประกันสุขภาพถ้วนหน้า | | | |
| 2. หลังเกษียณท่านจะใช้สิทธิประกันสุขภาพถ้วนหน้าและซื้อประกันชีวิตจากภาคเอกชนเพิ่มเติม | | | |

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