ความแตกต่างของคุณภาพของการดูแลสุขภาพในระดับปฐมภูมิและทุติยภูมิ ตามประสบการณ์ของผู้ประกันและไม่ประกันสุขภาพ : กรณีศึกษาเทศบาลกุพังเมืองหลวงนูซาเต็งการาตะวันออก ประเทศอินโดนีเซีย

นางยุสตินา ยุดดา นิต้า

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต
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DIFFERENCES IN QUALITY OF PRIMARY AND SECONDARY CARE EXPERIENCED BY THE INSURED AND THE UNINSURED - A CASE STUDY OF KUPANG MUNICIPALITY, CAPITAL OF EAST NUSA TENGGARA, INDONESIA

Mrs. Yustina Yudha Nita

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science Program in Health Economics
Faculty of Economics
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Thesis Title	DIFFERENCES IN QUALITY OF PRIMARY AND SECONDARY CARE EXPERIENCED BY THE INSURED AND THE UNINSURED – A CASE STUDY OF KUPANG MUNICIPALITY, CAPITAL OF EAST NUSA TENGGARA, INDONESIA
By	Mrs. Yustina Yudha Nita
Field of Study	Health Economics
Thesis Advisor	Associate Professor Paitoon Kraipornsak, Ph.D.
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ยุสตินา ยุดดานิต้า:ความแตกต่างของคุณภาพของการดูแลสุขภาพในระดับปฐมภูมิและทุติยภูมิ ตามประสบการณ์ของผู้ประกันและไม่ประกันสุขภาพ: กรณีศึกษาเทศบาลกุพัง เมืองหลวงนูซาเต็งการาตะวันออก ประเทศอินโดนีเซีย (DIFFERENCES IN QUALITY OF PRIMARY AND SECONDARY CARE EXPERIENCED BY THE INSURED AND THE UNINSURED – A CASE STUDY OF KUPANG MUNICIPALITY, CAPITAL OF EAST NUSA TENGGARA, INDONESIA) อ. ที่ปรึกษาวิทยานิพนธ์หลัก : รศ. ดร. ไพฑูรย์ ไกรพรศักดิ์ อ. ที่ปรึกษาวิทยานิพนธ์ร่วม : รศ. นพ. จิรุตม์ ศรีรัตนบัลล์, 157 หน้า.

จุดประสงค์ของการศึกษานี้คือเพื่อวิเคราะห์ความแตกต่างในด้านคุณภาพของการดูแลขั้นปฐมภูมิและทุติยภูมิในกลุ่มผู้ป่วยที่มีประกันสุขภาพและไม่มีประกันสุขภาพโดยได้ทำการวิเคราะห์ความแตกต่างระหว่างกลุ่มประกันสุขภาพและได้วิเคราะห์ปัจจัยที่ส่งผลต่อคุณภาพการให้บริการในส่วนของปฐมภูมิ และทุติยภูมิ

คุณภาพของการรักษาได้ใช้ ปัจจัยนำเข้า กระบวนการ และผลลัพธ์ ของผู้ป่วยนอกในศูนย์ให้บริการระดับปฐมภูมิและทุติยภูมิ เป็นปัจจัยในการศึกษา ปัจจัยนำเข้าได้ใช้ ลักษณะของแพทย์ และการรับรู้ของผู้ป่วยเกี่ยวกับความสามารถของแพทย์และการรักรู้เกี่ยวกับสิ่งอำนวยความสะดวกจากผู้ป่วย เป็นปัจจัยในการศึกษา กระบวนการได้ใช้ รูปแบบของการเขียนใบสั่งยาทั้งการรักษาตามมาตรฐาน และข้อบ่งชี้ทั่วไป เป็นปัจจัยในการศึกษา และความพึงพอใจของผู้ป่วยได้ถูกใช้เป็นตัวชี้วัดผลลัพธ์

สำหรับศูนย์ให้บริการระดับทุติยภูมิ มีความแตกต่างอย่างมีนัยสำคัญระหว่างกลุ่มผู้มีประกันสุขภาพ และไม่มีในแง่ของปัจจัยนำเข้ากลุ่มผู้ไม่มีประกันได้รับการบริการมากกว่าจากแพทย์ผู้เชี่ยวชาญและต้นทุนในส่วนของผู้ให้บริการจะสูงกว่าในกลุ่มผู้มีประกัน ในแง่ของกระบวนการ ร้อยละของการให้การรักษาตามมาตรฐานในกลุ่มผู้มีประกันจะสูงกว่าผู้ไม่มีร้อยละของการจ่ายยาที่จำเป็นและเป็นยาชื่อสามัญในกลุ่มผู้ไม่มีประกันจะสูงกว่าผู้มีประกันในแง่ของผลลัพธ์กลุ่มผู้ไม่มีประกันจะมีความพึงพอใจมากกว่ากลุ่มผู้มีประกันแต่โดยรวมความแตกต่างไม่แสดงความมีนัยสำคัญมี5ปัจจัยที่แสดงความแตกต่างอย่างมีนัยสำคัญคือ ต้นทุนในแง่ผู้ให้บริการ เวลาในการรอ เวลาในการให้คำปรึกษา ความสามารถของแพทย์ในมุมมองของผู้ป่วย และขั้นตอนการให้การรักษา

สำหรับศูนย์ให้บริการระดับปฐมภูมิในส่วนของภาครัฐ มีความแตกต่างอยู่บ้างระหว่างกลุ่มผู้มีประกัน และไม่มีความแตกต่างนั้นได้คือกลุ่มผู้ป่วยที่ไม่มีประกันสุขภาพจะได้รับบริการจากแพทย์ในการตรวจร่างกายมากกว่าและในแง่การให้การรักษาตามมาตรฐานนั้นในกลุ่มผู้ที่มีประกันสุขภาพจะได้รับมากกว่าและยังมีอีก2ปัจจัยที่ส่งผลต่อความแตกต่างในด้านความพึงพอใจอย่างมีนัยสำคัญคือการศึกษาและการบำบัดตามมาตรฐานสำหรับศูนย์บริการระดับปฐมภูมิในส่วนของภาคเอกชนความแตกต่างมีเพียงแค่ในแง่ของต้นทุนของผู้ให้บริการซึ่งในกลุ่มผู้ไม่มีประกันจะสูงกว่า

งานวิจัยนี้ได้ให้ข้อมูลในแง่ของความแตกต่างในเชิงคุณภาพการให้บริการในกลุ่มผู้ป่วยที่มีประกันสุขภาพและไม่มีประกันสุขภาพจากทั้งในแง่มุมของผู้ให้บริการและผู้รับบริการความแตกต่างส่วนใหญ่มีความสัมพันธ์กับเชิงกระบวนการซึ่งผู้ป่วยได้ประสบโดยตรงผลลัพธ์นี้มีความสำคัญต่อการนำไปใช้ของทั้งรัฐบาล และบริษัทประกันสุขภาพ เพื่อที่จะพัฒนาคุณภาพการให้บริการโดยเฉพาะอย่างยิ่งในแง่ของกระบวนการ

สาขาวิชา เศรษฐศาสตร์สาธารณสุข ลายมือชื่อนิสิต.....

ปีการศึกษา 2552 ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก.....

ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์ร่วม.....

5185699229 : MAJOR HEALTH ECONOMICS
KEYWORDS : DIFFERENCES / QUALITY / PRIMARY CARE/ SECONDARY CARE/ INSURED/ UNINSURED

YUSTINA YUDHA NITA : DIFFERENCES IN QUALITY OF PRIMARY AND SECONDARY CARE EXPERIENCED BY THE INSURED AND UNINSURED - A CASE STUDY OF KUPANG MUNICIPALITY, CAPITAL OF EAST NUSA TENGARA. THESIS ADVISOR : ASSOC. PROF. PAITOON KRAIPORNSAK, Ph.D. THESIS CO-ADVISOR : ASSOC. PROF. JIRUTH SRIRATANABAN, M.D., Ph.D.,157 pp.

The general objective of this study is to analyze the differences in quality of primary and secondary care experienced by the insured and uninsured. The specific objectives are to analyze the differences in quality of care between different type of health insurance and to analyze factor affecting quality of care in primary and secondary care.

The quality of care was assessed by the input, process and outcome approach of outpatient care in primary and secondary health facilities. Input of care was assessed by analyzing physician characteristic and perception of patient on the capacity of the physician. The medical procedures, standard treatment and prescribing pattern were used to access the process of care. To evaluate outcome of care patient satisfaction was used as the indicator. .

For secondary care there were some significant differences between insured and insured. In term of input aspect uninsured patient get service more from specialty physician and cost form provider perspective for uninsured is higher than insured. Regarding process aspect, the percentage conforming to standard therapy of insured patient is higher than the uninsured, the percentage of essential drugs and generic drugs of uninsured are higher than the insured. For outcome aspect the uninsured patients were more satisfied than the insured but the result is not significant. There are five significant variables affecting satisfaction of patient which are cost from provider perspective, waiting time, consultation time, and capacity of physician from perspective of patient and medical procedures.

For public primary care there were some differences between insured and uninsured patient. The differences which identified s on private. For private all the respondents are satisfied with the services. In term of process prescribing pattern (such as no of drugs, percentage of generic drugs and antibiotic) and standard treatment have significant different between insured and uninsured. Factor affecting patient satisfaction for public primary care is there are no significant different between uninsured and insured group for all variable of process. Only one significant variable affecting satisfaction of patient which is percentage conforming standard treatment.

This research provides information regarding quality of care under health insurance scheme from different perspectives. Factor affecting the quality of care which have significant result is related with services directly receive by the patients. It means that Government of East Nusa Tenggara province should focus on that matter for improving quality of care and health status.

Field of Study Health Economics Student's Signature.....

Academic Year 2009 Advisor's Signature.....

Co-Advisor's Signature.....

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AIP	Australia Indonesia Partnership
ARI	Acute Respiratory Infection
ASKES	Asuransi Kesehatan (Health Insurance)
ASKESKIN	Asuransi Kesehatan Miskin (Insurance for poor people)
ANC	Ante Natal Care
AUSAID	Australia Aid Development
DF	Degree of Freedom
GDP	Gross Domestic Product
GTZ	German Technical Cooperation
IDR	Indonesian Rupiah
INRUD	International Rationale Drug Therapy
JAMKESMAS	Jaminan Kesehatan Masyarakat (Pro Poor Scheme)
MCH	Maternal and Child Health
MMR	Maternal Mortality Rate
NTB	Nusa Tenggara Barat (West Nusa Tenggara)
NTT	Nusa Tenggara Timur (East Nusa Tenggara)
OPD	Outpatient care department
PCSP	Percentage Conforming with Standard Procedures
PCSD	Percentage Conforming with Standard Drug
PER	Public Expenditure Review
PHO	Provincial Health Office
PUSKESMAS	Pusat Kesehatan Masyarakat (Health Center)
SDKI	Survey Demografi Kesehatan Indonesia/ Demography Health Indonesia Survey
SKTM	Surat Keterangan Tanda Miskin (Letter for poor ststus)
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1. Rationale

Being in healthy condition is important in our life. Even if we have a lot of money, it become nothing if we are in the poor health. Good health is also required for economic and social development (WHO 2000). Our live will be more valuable if we and our family are in the healthy condition. But, now a days many poor people can not afford it around the world, especially in the low and middle income country. WHO macroeconomic health commission had declared the effort of improvement of investing in health (Investing in health, WHO 2007). The question now is, when will the world can achieve the goal of MDG if the poor still can not access to health care?

Government of Indonesia has been done a great effort in improving the health status of the people through improving the access of health care especially for the poor. But in the last 2 decades the improvement of health status was slow due to many factors such as low education, low income, difficult geographical access, cultural barriers, and low health expenditures. It is stated in the World Health Report 2000 that health care financing is the most important element in the achievement of health improvement. The level of health care expenditures affects the availability of human resources, medical supplies, distribution of health care facilities, quality of health services, and other important process of health care delivery. Therefore, many studies uncover a strong relationship between health status of a population and health care financing. Data from the WHO 2000 Report shows clearly that health care expenditures, both in terms of nominal amount and in term of percentage of gross domestic product, are lower in developing countries than those in developed countries.

Through some programs the Government of Indonesia has been tried to improve the access of poor people to get health care. Since monetary crisis 1998 through some safety net programs government of Indonesia was tried to improve the access of the poor people to health care. The safety net program was changed several time, in 2007 called Askeskin and mid 2008 changed into Jamkesmas (pro poor health

insurance). This effort made the access to health care for poor people increased (table 1). But how about the non poor people or middle income? There are several insurance scheme to cover the non poor people such as civil servant insurance scheme, scheme for pirate employee and voluntary scheme.

East Nusa Tenggara Province is as one of the most poor province in Indonesia. The number of population below poverty line is more than half of the population and among them only 54% covered by the pro poor health insurance (Jamkesmas). After the decentralization implemented in 2000, more than one-third of East Nusa Tenggara's (Nusa Tenggara Timur/ NTT) population was classified as poor, makes the province (along with Papua and Maluku) as one of the poorest province in Indonesia. Another challenge facing by the province was that NTT's low fiscal capacity. Although per capita regional spending (consisting of spending by provincial, district and central governments) was in the mid range compared with other provinces in Indonesia, per capita regional Gross Domestic Product (GDP) was the lowest in Indonesia. East Nusa Tenggara province is very depended on the budget from central level as the own resource revenue is low compared by other provinces. In 2007, PAD (own resources revenue) represented 7 percent of total sub-national revenue, which was much lower than the Indonesian sub-national average (20%) (World Bank , AIP AusAID 2008)

Based on the report of public expenditure analysis 2008, there is an increasing of health spending for health in the health sector, Approximately 9 percent of total regional expenditure is spent in the health sector, a proportion that remained relatively stable during the period. In per capita terms, regional health spending increased by 87 percent in this period, from IDR 84,000 in 2003 to IDR 157,000 in 2007 (PER analysis). The utilization of health service was increasing, in line with the increasing of the health spending. In 2006, 14 percent of people who were sick utilized a public health facility either as an outpatient or an inpatient. These public health facilities are public hospitals, public health centers (*Puskesmas*), or supporting public health centers (*Pustu*). This utilization rate is higher than the national rate (5 percent) and that of the neighboring provinces of NTB (9 percent) and Maluku (5 percent). (World Bank, AIP, 2008)

In the last 3 years the number of poor people in East Nusa Tenggara province is increasing from 28% in 2005 to 47% in 2007 and 58,8 in 2008. Starting in 2007 poor people get free health services through national program called ASKESKIN and in 2009 the name is changed become JAMKESMAS. All the mechanism is the same with the previous scheme except the payment mechanism. If compared with national rate the number of people get free services in NTT is almost three times higher (national rate is 15%) and higher than its neighbouring provinces of NTB (31 percent) and Maluku (14 percent) (PER analysis). In the pro poor scheme, the poor people can get the form of free basic health services in public health facilities, providing insurance to the poor (*Askeskin/ Jamkesmas*), Health Cards (*Kartu Miskin*), or other health privileges for the poor. Access to these free services is also pro-poor because approximately half of the lowest income group utilizes free services and the level of utilization rate decreases as income levels increase.

There are other insurance scheme beside the health insurance scheme for poor people which is insurance scheme covering non poor people in the province. There are two scheme, first is compulsory scheme for civil servants (Askes Social) namely civil servant scheme (Askes Social) and private employee scheme (Jamsostek,) and the second is voluntary scheme namely Askes Komersial. Most people in East Nusa Tenggara Province is rely on the government health insurance as NTT is poor province where the income of the people is low.

In East Nusa Tenggara Province the people covered by health insurance scheme is increasing (see table 1)

Table 1 Coverage of Health Insurance in East Nusa Tenggara Province

2004	**2005**	**2006**	**2007**	**2008**
16,61%	24,65%	25,49%	64,13%	77%

Source: Annual Health Profile of Provincial Health Office

Started from 2007 the coverage is most increasing due to increase of pro poor scheme. Many study said that the increasing of the health insurance coverage will improve the accessibility of the people to get health services which showed by the

improvement of utility of the health facilities, below are the health seeking behavior of the people.

Table 1.1. Health Seeking Behavior

	Diarrhea (%) D	ARI (%)	Malaria (%)
Did Nothing	4,6	4,5	2,6
Self Treatment	31,4	26,8	34,7
Seek treatment	64	68,7	62,7

Source: House Hold Survey 2007, GTZ

From data on care seeking behavior it is shown that almost 50% of people seek health treatment at the health facilities if they get sick. But the data did not see the differences between insured and uninsured, or poor and non poor. To support the data on care seeking behavior we can also see the cost of transportation to health facilities. In the same household survey, the cost of transportation overall the province is almost similar (less than US $ 1) probably this was related to the distance as a consequence of quite well distributed facilities throughout the island. But there are some district with high cost even US $ 3 this was related to geographical barrier as well that was existed in almost all areas in NTT.

Table 1.2. Types of health facilities used for seeking treatment

No	Type of Health facilities	% Kupang	% Province
1	Government Hospital	43,4	27,2
2	Puskesmas (Health Center)	35,0	37,3
3	Government Clinic	0	0,3
4	Private hospital	2,1	3,4
5	Private clinics	5,0	2,7
6	Private practice of doctor	13.3	11.5
7	Private practice of midwife	0.1	0.4
8	Village midwife	0	2,9
9	Polindes/ Pustu (sub-health center)	0	2,4

No	Type of Health facilities	% Kupang	% Province
10	Posyandu (Integrated health post)	0,1	0,4
11	Nurse	0	0,1
12	Traditional Healer	0	3,0

Source: House Hold Survey 2007, GTZ

Table 1.3 shows type of health facilities which most visited by people in Kupang municipality is hospital and health centre. In order to improve the health outcome it is important to assess the quality of care of health facilities which mostly visited by the people.

Based on data of insurance coverage and utilization we can assume that people will use the insurance scheme if they utilize the health services. But the data of payment source for health services shown that the highest financial source is from out of pocket.

Based on the data of survey, in East Nusa Tenggara province % of out pocket is high (47,2%). High out of pocket payment source for health services shown that people do not cover by health insurance or do not use the health insurance scheme although they covered by health insurance. This related to the middle income people which covered by government insurance as utilization of pro poor scheme is quite high (31%). The question now is why they do not want to use the health insurance? Accessibility is not the answer as health seeking behavior is quite high (see table 3). It might related to other cause such as lacking of quality health services. It is already become a common issue in Indonesia that most of civil servant do not want to use the civil servant scheme due to low quality of service.

In the case of East Nusa Tenggara province, we can see that the health spending was increased and resulted the improvement of access to health care, but up to now the health outcome not yet shown significant improvement especially on maternal and child health (see table 4). Due to this reason government should not only focus on improving accessibility to health care but also should evaluate the quality of health care especially in primary care as primary care have more impact on health outcome. There is a strong relation between health insurance and improving access to health care (see table 2) and also type of insurance where have influence on

the primary care. Although the accessibility of people to get health services is improved but the health outcome of the province is not shown

In order to improve the health outcome it is needed to assess the quality of health care as the access and utilization of health care already improved. Many other studies done within countries, both industrialized and developing, show that areas with better primary care have better health outcomes, including total mortality rates, heart disease mortality rates, and infant mortality, and earlier detection of cancers such as colorectal cancer, breast cancer, uterine/cervical cancer, and melanoma. The opposite is the case for higher specialist supply, which is associated with worse outcomes. (Starfield, Shi, and Mocinko,2005). Improving primary care also related with lower cost and greater equity in health (Starfield et al, 2005) while it is necessary to look at the secondary level also as a referral which can show more outcome differences among insured and uninsured.

Primary care is the provision of first contact, person-focused, ongoing care over time that meets the health-related needs of people, referring only those too uncommon to maintain competence, and coordinates care when people receive services at other levels of care. Secondary care is an intermediate level of health service/ care, which is concerned with the provision of specific technical, therapy or diagnosis of services. The category of secondary services are specialist consultation procedures and hospital admissions. These services are episodic and usually focused on a particular health problem. Continuity of care is less critical. Secondary Health Care is provided to a larger group of people from a larger geographic area than those served by Primary Health Care.

Health center as a primary care facilities take an important role in providing basic cases especially for people leave in the rural area. Hospital services in East Nusa Tenggara province are very important as this is the only public hospital which deliver services to all insured patients including the pro poor scheme. The provincial public hospital is the referral hospital for province level. Most of the provincial local budget allocated for the hospital (75%).

East Nusa Tenggara province need to allocate budget effectively as the province is poor province with budget limitation. In order to do that it is need to know

why the health outcome is stagnant although the access of health facility is improving recently. One of the reasons is the quality of primary and secondary care. That is why it is need to do analysis on the quality of care where were only few study on quality of care in Indonesia while in East Nusa Tenggara Province there is none.

The area of the study is Kupang municipality, the capital of East Nusa Tenggara province. The study will be conducted in the capital of the province is because of some reason as follows:

1. Have all health insurance type (voluntary and compulsory)
2. All primary health care facilities at Kupang municipality (public and private) have physician as the provider. So, it is comparable. While at other districts not all primary care facilities has physician, sometimes only nurse or midwife.
3. All poor people at Kupang municipality are covered by health assurance.
4. Access of people to health facilities (hospital and health centers) is the same average is about 10 minute from their home (Household MCH survey, 2007).

1.2. Research questions

- Is there any difference of quality of care between insured and un-insured patient in Kupang Municipality, East Nusa Tenggara province, Indonesia ?
- If the differences exists, what are factors associated with that difference?

1.3. Objectives of the study

1.3.1. General objective

To analyze the differences in quality of primary and secondary care experienced by the insured and the uninsured.

1.3.2. Specific objectives

1. To analyze the differences in quality of care between type of health insurance in primary and secondary care.
2. To analyze factors affecting quality of care in primary and secondary care.

1.3.3. Hypotheses

1. There are differences of quality of care between insured and uninsured patient at primary and secondary care.
2. There are difference of quality of care among difference type of health insurance.

1.4. Scope of the study

The study will do the analysis on the secondary care at Provincial Public Hospital and 2 health center and private practitioners nearby the hospital to analyze the primary care.

The study will focus on the outpatient services at health facilities which provide primary and secondary care. The health facilities include in the study are province public hospital, 2 public primary health services (health centers) and 2 private practitioner which provide services to insured and un-insured patients in Kupang municipality.

The insurance scheme to be included in the study is the government health insurance for poor people (JAMKESMAS) and the type of insured people are as follows:

- Voluntary Health Insurance (Askes Komersil)
- Compulsory Health Insurance namely Askes Sosial (for civil servant).
- Health Insurance for poor people (JAMKESMAS)

There are two agency of health insurance included in the study, first is Government (Ministry of Health)for Jamkesmas and the others are PT. ASKES for civil servant scheme and voluntary scheme. PT ASKES is a state enterprise. The study will exclude other private insurance provider (Prudential, Allianz) as the number is very small as only rich people can afford it and can not illustrate the whole of province.

The data were collected in February – March 2010 and related to 3 most common diseases at secondary care such as hypertension, dyspepsia and ante natal care while for primary care are diarrhea, malaria and ARI and ante natal care

1.5. Back ground of Indonesia

Indonesia is a big country located in South East Asia consisted of 33 provinces, 98 municipalities, 397 districts, 6,579 sub-districts and 76,546 villages. The whole area of Indonesia is 1,919,440 square kilometers. Indonesia shares common boundary with Malaysia and Brunei Darusalam in the north, Papua Nugini and Timor Leste in the East part. Indonesia is known as island country where total number of the islands is 17, 504 islands and among those 9,870 islands are recognized. The Population of Indonesia in 2000 based on the national census is 205,000,000 people and in 2009 based on the projection is 231,369,500 people and 57,9% of the population are live in Java Island.

The health sector in Indonesia is comprised of the mainly public sector especially in the poor provinces which have 6 levels: central, province, district, sub-district, village and sub-villages. At province level there is one provincial hospital where at district level there are one public hospital owned by Government (local government). The province hospital is the highest referral level hospital at province level and district hospital is the highest referral level hospital at district level. Each sub-district in Indonesia has at least one health centre where some headed by doctor and some headed by senior nurse. Health centre usually supported by 15 sub-health centre of village delivery hut. Sub-health centre is headed by nurse where village delivery head is by midwife. Health centre mainly provides six basic programs with some additional supporting programs. Health centre get annual budget from district health office (local government) and also from the insurance and assurance scheme.

Indonesia now still struggling in improving the health indicators as some important indicators are still low compared with its neighboring countries. Table1 show some health indicator of Indonesia.

Table 2 Health Indicator of Indonesia

No	Indicators	2003	2007
1	**Infant Mortality Rate**	**35**	**34**
2	Under Five Mortality Rate	46	44
3	Maternal Mortality Rate	307	228

No	Indicators	2003	2007
4	Total Fertility Rate	2.3	2.4 (2006)
5	Malnourished Children Under Five Year	30	30
6	% of population use clean water supply	78 (2001)	80 (2005)
7	% of population using health sanitation	52 (2001)	52 (2005)
8	Life expectancy	67	69
69	% of poor people	17.4	16.6

Source: Ministry Of Health Indonesia: National Health Demographic survey and internal survey.

In term of health financing, from National Health Account data it is revealed that out of pocket payment for health services is still high : 69.9% (Table 5). Although government of Indonesia since 1997 up to know has been increasing the coverage of pro poor scheme and there are other insurance scheme such as civil servant scheme, private employee scheme and voluntary scheme but from the data it is shown that people still pay from their pocket for getting health services. Means that the coverage development of health insurance is slow. The slow progress is due to demand and supply. From the demand site because health is not the first priority and supply is due to quality and lack of human resources.

Table 2.1. National Health Account Indonesia

Selected Ration Indicators For Expenditures on health	2006	2007
Total exp on health as % GDP	2,5	2,5
General government expenditure on health (as % of total Health Budget)	50.5	51.5
Private Health Expenditure as % of Total health Account	49.5	48.7
General Government Health Expenditure as % Gen Govt Exp	6.2	6.7
Social Security Expenditure as % General Government Health Expenditure	17.3	16.0

Selected Ration Indicators For Expenditures on health	2006	2007
Prepaid & risk pooling as % of Private Health Expenditure	8.4	8.6
Out of Pocket Payment as % of Private Health Expenditure	70.4	69.9

Source: WHO, National Health Account Indonesia

1.6. Health Insurance in Indonesia

There are four main type of health insurance in Indonesia as follows:

- Community based insurance system. This system in not formal and based in the village or sub-village and developed by community initiative and usually supported by non government organization. This scheme is voluntary scheme with some contribution depend on the agreement of the community.
- Social security insurance scheme which covered civil servant, Armed force and police, and private formal worker. This scheme is with contribution which deducted from monthly salary. The name of the insurance as follows:
  - ASKES SOSIAL, compulsory scheme for civil servant.
  - ASKES ABRI, compulsory scheme for Armed force and Police.
  - JAMSOSTEK, compulsory scheme for private formal worker
- Private Health Insurance Scheme. There are many private health Insurance in Indonesia, but the coverage is very low as the contribution is quite high. The most affordable private insurance scheme is scheme run by stated owned company namely ASKES KOMERSIL, which include in this study.

  Pro Poor Scheme (JAMKESMAS). A non contribution scheme for poor people. Pro poor scheme is an insurance scheme for poor people. This pro poor scheme is non contribution scheme meaning government will pay the cost for the medical services. Pro poor scheme was started since economic crisis in 1997 and still exist up to now only name and payment mechanism was changed several time. The biggest covered of health insurance in Indonesia is pro poor scheme and civil servant scheme.

The oldest and largest health insurance scheme in Indonesia is scheme for civil servant (ASKES) established in 1968. This scheme covers all civil servants, retired

civil servants, retired armed force and police and their family (2 generations, maximal 2 children). The premium is two percent of monthly basic salary or pension that is deducted by the payroll offices. The second largest health insurance scheme is the social security for private employee (JAMSOSTEK) established in 1992. (Thabrany, 2008). The other scheme is private insurance scheme which usually with high premium. At present there are 67 private insurance companies in Indonesia (Thabrany, 2008). National security system act already approved and signed on 2004, this act will make Indonesia move forward for universal coverage. But there is no further action on following up the act.

The number of people covered by private health insurance is low especially for poor province where mostly people cover by civil servant scheme and pro poor scheme.

The payment method from insurance agency to the provider is as follows (for out patient department):

- Jamkesmas (pro poor health insurance – non contribution scheme): capitation payment, MoH pay to health centers and hospital. The amount is 5000/ person
- Askes Social (civil servant scheme – contribution scheme): Capitation payment to, health centre and private practitioners (amount of premium is 5500 rupiah/ month/person). The private practitioners can manage by them self but for health center and hospital arranged by the health office.
- Askes Komersial (voluntary scheme – contribution scheme): Capitation payment to hospital, health centre and private practitioners (amount of premium for OPD is 30,000 rupiah/ month/person but the capitation to hospital is 1,750 rupiah/ person. For hospital the hospital receive the capitation in monthly basis based on the registered participants.

In all facility physician, nurse and midwife get incentive but the incentive is a as a whole performance of their work and do not count based on the type of patient. In the public facility government who manage the money but for private they manage by them self.

Benefit package of the insurance scheme:

- Pro poor scheme:

  Patient can get all medical services at all level without pay. The first level of service is primary public care (healthcenter). They should have referral letter if need to get services to upper level.

- Civil servant scheme

  Patient can get medical services at all level. The first level is primary public and private care (health center and private practitioners). Patient should have referral letter if need upper level medical services. For the referral patient can only get from public secondary care. Patient do not have to pay anything unless they need drugs which not included in the drug list.

- Voluntary scheme

  Patient can get medical services at all level, similar with civil servant scheme. The difference is patient covered by this scheme can get secondary care from private facility. So they have more other choice in term of facilities. The choice of the drugs also difference. This scheme have more list of drugs especially non generics drugs. Patient should pay additional cost of they need drugs not in the drugs list.

Figure 1. Map of Indonesia

1.7. Background of East Nusa Tenggara Province

1.7.1. Socio-economy situation of East Nusa Tenggara Province

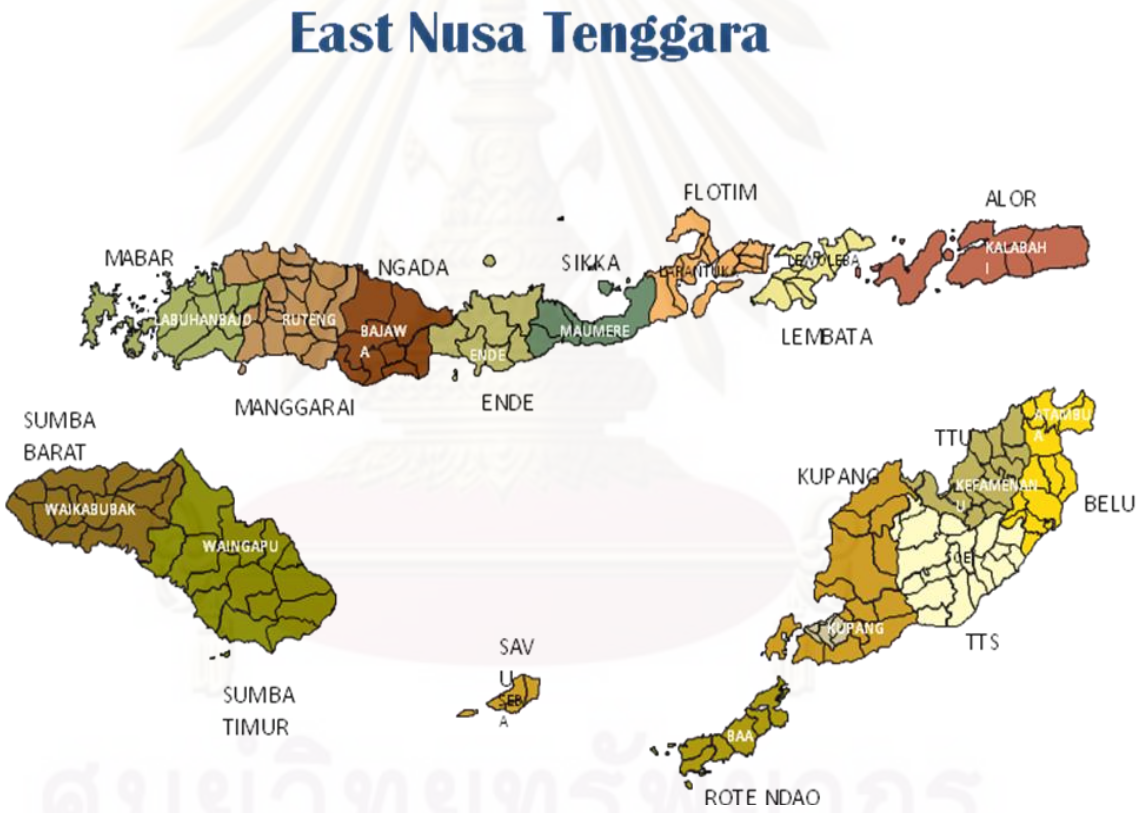
East Nusa Tenggara province is located in the eastern part of Indonesia and one of the biggest island of the province called Timor Island is shared border with Timor Leste. The total population of the province is 4,552,100, it is only 2% of total population of Indonesia.

East Nusa Tenggara Province is classified as a semi-arid region because of low rainfalls and intermediates between desert climate and humid climate. The province has short period of rainy season (average is 3 month/ year) especially in the main Island (Timor Island). East Nusa Tenggara province consists of many islands therefore access and transportation are become significant issues. Combination of dry climate and isolation made East Nusa Tenggara provinces have limited access to natural resources. In 2006 40% GDP was from agriculture together with quarrying

and mining employed 72% and 68% of male and female workers in NTT. (World Bank, AIP, 2008).

In 2007 within the country East Nusa Tenggara province is in the 31 rank of human development index with result 65.36. The life expectancy is 66.7 year, literate is 87.25%, mean of year schooling is 6.42 year and purchasing power parity 594.280 rupiah

Figure 2. Map of East Nusa Tenggara Province



1.7.2. Health Financing and Health Insurance in East Nusa Tenggara Province

East Nusa Tenggara province is highly rely on the budget from central level as the province is poor province with very low natural resources. Health sector get in average 9 to 10% of local government budget every year where 75% from that is allocated for provincial hospital. Beside from local government, health sector also get

budget directly from central level mainly for program implementation. Health sector in East Nusa Tenggara province get additional fund for pro poor scheme where in 2009 the amount is 33,586,452,000 rupiah.

In term of insurance scheme, mostly people in the province covered by pro poor scheme or civil servant and few covered by voluntary scheme. The figure of source of financing for health services in the province is shown in the table 3.

Table 3 People with type of source of financing for health service in East Nusa Tenggara Province

District/ Municipality	Out of Pocket	Askes/ Jamsostek	Askeskin/ SKTM	Dana sehat	Others
Sumba Barat	32.2	3.5	57.7	1.0	8.4
Sumba Timur	30.0	5.4	27.0	44.5	1.0
Kupang	32.0	32.7	30.6	2.1	6.7
TTS	57.8	6.8	28.1	10.3	1.6
TTU	50.5	5.1	28.9	13.4	2.6
Belu	46.9	8.0	33.2	10.5	6.8
Alor	29.2	6.9	48.8	14.4	1.3
Lembata	39.5	4.3	50.9	2.5	1.4
Flores Timur	81.3	4.7	9.7	4.5	1.1
Sikka	18.3	4.5	18.2	43.9	16.9
Ende	58.0	5.4	38.7	6.6	1.0
Ngada	69.9	5.5	22.4	1.3	2.4
Manggarai	45.2	2.6	51.6	3.3	2.8
Rote Ndao	57.9	3.8	7.0	35.5	3.2
Manggarai Barat	63.7	3.1	33.2	.5	.5
Kota Kupang	54.4	24.0	20.2	2.0	1.8
East Nusa Tenggara	**47.2**	**7.6**	**32.9**	**11.8**	**4.3**

Source: Indonesia Basic Health survey 2008

The health insurance type in the province are the shame with the national scheme. The payment mechanism and benefit package also the same as it is national program.

1.7.3. Health problem in East Nusa Tenggara Province

If compared with other provinces in Indonesia the health outcome of East Nusa Tenggara province is not shown good improvement in the last three years as shown in table 7.

Table 3.1. Maternal and Child Health Indicator, East Nusa Tenggara Province

Mortality Rates	**2006**	**2007**	**2008**	**Remarks/ Source**
Maternal Mortality Rate MMR (per 100,000 live births)	-	230	224	From Routine data of PHO/DHO, Presentation Dir. Maternal Health, MoH
Maternal Mortality Rate MMR (per 100,000 live births)	268.5	246.97	329.81	Provincial Health Profile 2008
Neonatal mortality Rate NMR (per 10,000 live birth)	146,67	146.81	159.96	Provincial Health Profile 2008
Infant Mortality Rate (per 10,000 live birth)	-	62	57	SDKI 2007, Child Health Directorate
Infant Mortality Rate (per 10,000 live birth)	135.31	114.04	127.95	Provincial Health Profile 2008

There are 3 major diseases and 1 maternal service in primary care that influences the maternal child health in East Nusa Tenggara and have major contribution to the achievement of health outcome, which are Acute respiratory Infection, Diarrhea, Malaria and ante natal care service. The national standard for getting ANC is at least 4 times during the pregnancy period (once in first and second semester of pregnancy and twice in third pregnancy semester. The coverage of ANC (first visit) of East Nusa Tenggara Province is high and almost achieve the national target (86,61%) but the ANC for the forth visit is lower (65,56%). We can say the quality of ANC good (meet the national guideline) if the coverage of first visit is the same with forth visit. If the forth visit lower than first visit, means that there is a lacking on quality of ANC. This will be as one answer of why maternal and neonatal mortality are still

high in East Nusa Tenggara Province. For hospital, the most common diseases for outpatient services are Hypertension and Dyspepsia.

1.7.4. Primary and Secondary Health Facilities in East Nusa Tenggara Province

East Nusa Tenggara Province has one Provincial Public Hospital as Provincial referral. There are two private hospital which are belong to ARMY and Police. Almost all districts in the province have Public District Hospital.

The Provincial Hospital namely Prof. DR. W.Z. Johannes is a Type B hospital according to Indonesian Hospital accreditation with 329 beds. Below are the 10 highest diseases in the Provincial Hospital:

Table 3.2. Out of patient Main diseases in 2009

NO	Diseases	CODE ICD X	No of cases
1	Essential (primary) hypertension	I10	5128
2	Dyspepsia	K30	4164
3	Non-Insulin-dependent diabetes mellitus	E11	3621
4	Attention to surgical dressings and sutures	Z48.0	2157
5	Fever, unspecified	R50.9	1678
6	Urinary tract infection, site not specified	N39.0	1566
7	Influenza, virus not identified	J11	1228
8	Supervision of normal pregnancy	Z34	1157
9	Other and unspecified abdominal pain	R10.4	1140
10	Open wound of unspecified body region	T14.1	1066

Source: Prof. W.Z. Johannes Hospital 2009

Province Public Hospital, health center and private clinics in Kupang municipality give services to the insured and uninsured patients. Below is the type of patient in OPD in 2008 (hospital and health center).

Table 3.3. Type of patient in OPD in 2008 (Hospital and Health Center)

2008	**Type of patient**					
	Non insured	Askes (Social and komersil)	Poor people	Other insurance	Free	**Total**
Number of visit	**26,777**	**38,681**	**28,437**	**948**	**822**	**95,665**

Source: Kupang Municipality Health office annual profile 2008

The W.Z. Johannes Hospital take an important role in providing secondary services to the people in the province especially people in the Capital (Kupang municipality) as hospital of Kupang municipality not yet operated. Below is the data on referral cases from health centers, private practitioners and other hospital to the W.Z. Johannes hospital.

Table 3.4. Referral cases to W.Z. Johannes Hospital 2009

Year	**Total**
2004	27,798
2005	36,406
2006	39,418
2007	50,364
2008	54,885
2009	60,904

Source: W.Z. Johannes Hospital annual profile (2009)

From the data on the referral cases it is revealed that the number of referral cases is increasing every year, hospital should deliver good quality of care in order to improve the health status of the community.

Below is the data of number of out patient visits based on the type of insurance in 2009.

Table3.5. Out of patient visit in Prof. W.Z. Johannes, 2009

Patient					
No insurance	Civil Servant	Jamkesmas	Other Insurance	Free	Total
16.726	34.546	23.791	1.041	691	76.79

Source: Prof. Dr. W.Z. Johannes Hospital profile 2009

CHAPTER II

LITERATURE REVIEW

2.1. Health Financing and Health Insurance

2.1.1. Principles and practice

In improving performance of health sector, there are 5 knobs to evaluate, the 5 knobs are the following: Financing, payment, organization, regulation and individual behavior. Financing take an important role in improving health sector performance as it will determine the delivery of the health service. There are many health financing approach to be chosen, and it will effects funds availability and distribution of burdens. Different approaches change who has authority over the system and what services are available and to whom. (Robert, Hsiao, Berman, Reich, 2004).

Health care financing systems that enable the entire population to be covered could, in general, include two main funding mechanisms: financing from general tax revenues and through social health insurance (SHI). Before universal coverage is reached in most countries, voluntary social health insurance schemes have played an important role in expanding coverage. Of the two main funding mechanisms, social health insurance as the main source of health care funding is gaining greater attention in developing countries. (WHO, 2005)

Health problem is a condition which we can not predict when it will occur, but will almost be happened in human being cycle of life. In other word, health problem is a risk which should be faced by human being and will have impact on cost as nothing free in this world. The cost will be vary depending on the severity of health problems. The cost will have another impact on the financial risk. The role of health insurance is important here as a payer agency.

Health insurance serve multiple constituencies and purposes. The purpose of individuals and families have insurance is to promote health and access to care and to protect against exceptional health care costs. “Insurance pools the risks and resources of a group of people so that each is protected from financially disruptive medical

expenses and each may plan ahead or budget for health care. In contrast with many other insurance products, such as automobile or homeowner's insurance, health insurance has evolved as a mechanism for financing routine health care expenses and encouraging the use of preventive services, in addition to protecting against uncommon events and expenses. As the scope and effectiveness of health care interventions have grown, so have consumers' expectations for coverage and benefits through health insurance." (Institute of Medicine, September 2001). "The role of insurance in health financing is twofold, one to raise revenues for health care services, and two, to pool these resources so that health risks can be effectively shared among the members of the insurance scheme" (Ekman, 2007). Improving health outcome and quality of life are the ultimate goal of health insurance coverage from the point of view of individual, community. But in the other hand there are many study stated that the causal effect of health insurance on health is doubtable because might be driven by other factors. Many study can not establish a causal relationship between health insurance and health (Levy, Melzer, 2004).

Health insurance has two major aspects which effect on the health outcome, first is about the financing services as health insurance will increase the health fund and the second is on securing the provision of services. Health insurance have some advantage in raising money such as easy to collect contribution other than tax. In term of provision services, as there is a competitive market each insurance agency will ensure the quality of care under the provider and only make contract to the qualified health provider. Currently many developing countries trying to introduce compulsory health insurance because of two reason, first is because it will increase budget for health sector and the second reason is because of un-satisfaction with existing services due to poor staffs motivation, not use resource efficiently and effectively and patients are not treated sufficiently (Abel-Smith, 1992). For the first reason it is no doubt that the health budget will increase but the second reason is still in arguing especially in the developing country due to still facing many problem in term of human resource and facilities.

Major problem faced by health insurance scheme is inefficiency due to third party system will effect on moral hazard and asymmetry information. As result of that problem, there four characteristic which can have effect on the health sectors which

are cost escalation, resource allocation and referral, medical technology incentives and access and equity. Provider and patients mostly do not concern on the cost of medical services as the expense will cover by the insurance, and sometimes patients get or even ask unnecessary medical services. This make the cost is escalated. In term of equity, partial insurance type will create equity problems because the insured also tend to have higher incomes. Referral mechanism have positive and negative effect on the health system. The positive effect is patient will follow the referral mechanism means they have to seek health services to the primary care than to the next level because if not than the insurance will not pay. The negative effect is from the provider side where the primary care facilities tend to refer the patient to the next level. (Kutzin, J and Barnum, H, 1992)

2.1.2. Payments methods of health Insurance

From the economic theory and common sense we know that the way people or institution paid will have affects on their working patterns (Gosden, Pedersen, Torgerson, 1999). The same with health insurance where payment method to health provider will affect the orientation of health services, location of healthcare facilities, level of technology used, quality and quality care provided, allocation of resources and the cost of health care (Phua, 1990). Abel-Smith in 1992 conducted study on reviewing the payment method of health insurance and resulted that every system have potential disadvantages in securing the payment to providers. According to him there is no right answer on what is the best payment method. Kutzin and Barnum (1992) in his study mentioned that the reimbursement system of insurance classified into two major type: third party retrospective reimbursement and prepaid capitation health organization.

Currently there are three payment methods are common to be used which are fee for services, capitation and diagnosis. Each method has its own advantage and disadvantage. Fee for service has advantage on doctors to raise income to deliver advance treatment to patients while form patients it is more free to get more higher quality of care (Abel-Smith, 1992). But the disadvantage of this method is difficult to control the cost and will result cost escalation.

By using capitation and diagnosis method cost containment can be obtained. Capitation is a method of payment according to the number of patients without regards to the units of services provided. With this method cost can be controlled and easier administration for insurance agency. But the major problem of capitation is on the quality of care due to inadequate services due to overuse. Payment by diagnosis is based on the category of diseases regardless the quantity of the services received . According to Siriwanarangsun (1996) this method was not suitable for developing country. Robert et al described in their book that provider will get the financial risk. Many studies showed how incentives under capitation have affected the behavior of provider as stated in the book. One of the studies is study in Norwegia where general practitioner under capitation payment tend to refer the patient to specialist, reduce the average number of visit per register patient and increased number of registered patient. Under capitation provider can minimize their exposure to risk (risk selection).

Payment method of health insurance included in this study is capitation with different mechanism and amount of premium which will have impact on the services.

2.2. Primary and Secondary Care

Health services is consist of two groups as follows:

- Primary Health Care or community health services is in the lead/ front services which needed by community when they have health problem. Primary health care focus on promotion, prevention and curative.
- Secondary and tertiary health care is a hospital when people need a follow up health care (referral).The meaning of secondary care in most countries is usually when a primary care person such as a doctor refers a patient to a specialist. Secondary care providers typically do not have the type of continuous contact with patients that primary care providers do). Tertiary care is the more complete of specialist consultation or care. Usually the the regional hospital (not local hospital)

The definition of Primary Health Care by WHO is that primary health care is as a strategy to reach the goal of "health for all by the year 2000". Than at the Alma

Ata conference “primary health care” was defined more clearly as as: *"Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community by means acceptable to them at a cost that the community and the country can afford to maintain at every stage of their development in a spirit of self-reliance and self-determination* (De Maeseneer, 2007).

The Institute of Medicine as quoted by Leisyu Shi, 2000 defined primary health care as “ the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing sustained partnership with patients, and practicing in the context of family and the community”.

(Starfield et al, 2005) described in their study that primary care helps prevent illness and death, regardless of whether the supply of primary care physician is adequate or not or a relationship with a source of primary care, or the receipt of important features of primary care. The evidence also shows that primary care is associated with a more equitable distribution of health in populations. It is in contrary with specialist care. Means that primary care improves health have been identified, thus suggesting ways to improve overall health and reduce differences in health across major population subgroups. Primary care should be available to all people regardless of who they are, where they live, what their income is or what health or social problems they may have and should be to the benefit of the consumer in terms of better quality, better outcome and better cost-effectiveness and better health status. Starfield et all (2005) reviewed some studies on primary care which shown the impact of primary care on the health outcome. “Primary care improves health by showing, first, that health is better in areas with more primary care physicians; second, that people who receive care from primary care physicians are healthier; and, third, that the characteristics of primary care are associated with better health”.

Osungbade, K. Oginni, S and Olumide, A.(2008) studied on ante natal care at the secondary care facilities which have affect on the maternal and child health outcome. The result of the study showed that content of ante natal care have implication on the quality of secondary care.

2.3. Quality of Care

2.3.1. Definition

There are no literature explicitly mention the definition of quality of primary or secondary care. What available is the definition of quality of health care and student take that definition in to quality of primary care. What emphasize here is the what is the meaning of quality while the primary care is a matter of place or level of services.

According to Lohr and Donabedian as quoted by Mainz (2003) , the definition of health care is "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" and can be divided into different dimensions according to the aspects of care being assessed.

The most important agenda in the health care system is quality of health care. The interesting on quality of health care has developed in response to the dramatic transformation on health care system, also due to organization structure and reimbursement strategies which affected quality of care. But there not many evidence based on the quality of care as the information on quality of care only lately was collected (Mainz, 2003).

Eight element of good quality of care stated by Donabedian (1988) are as follows:

1. produce optimal improvement in the patient's health.
2. emphasize the promotion of health and the prevention of diseases.
3. Be provided in a timely manner.
4. Seek to achieve the patient's informed cooperation and participation in the care process and decisions concerning it
5. Be based on accepted principles of medical science.
6. Be provided with sensitivity and concern for the patient's welfare
7. Make efficiently documented to allow continuity of care and peer evaluation.

The components of good quality of are is as a basis in developing indicators to assess quality of care.

2.3.2. Assessment of quality of care

According to Donabedian, 1988 there are three aspect to measure the quality of care, as follows:

- Structure, is attributes of material resources such as facilities, equipment, and money
- Process, is what actually done during the process in the delivering the health care (from patient and practitioners point of view)
- Outcome, is effect of health care on the heath status of the patient or population. The improvement of patient knowledge and patient satisfaction is included.

The measurement of structure is not difficult as we can get data or information regarding the list of attributes of material resources. According to Donabedian the measurement of structure is rather blunt in assessing quality. On the other hand measure process indicator is rather difficult if not observed directly as sometimes the medical record is not completed. Information regarding process of health care delivery that we can get from the medical record is treatment and medical procedure. For measuring outcome, according Donabedian we can use patient satisfaction. In her study on Effects of health insurance on perceived quality of care among Latinos in the US Debra Perez (2009) mentioned that perception of patient on quality of care have been increasingly accepted as valid and important measures for health care quality. Nguyen Puong (1996) quoted from Indraratna that "perception of quality of care from the consumers perspective is crucial and positive, as the reaction to this can help sustain a reasonable health sector performance". We have to be aware in determining unit analysis of all aspects which should be comparable. This study will use patient as unit analysis where for structure and process although the measurement are from providers aspect but we see it from the angle of how patient expose to the services. Munoz (2002) in his dissertation used physician characteristic (age, experience, training), site (workload and location) and access to resources (ownership, equipment and supplies) as measurement of structure. This study will use physician characteristic, equipment and cost to measure structure aspect.

Donabedian emphasize the important linkage between structure and process and also between process and outcome. Good structure will increase the likelihood of

good process as well as good process will increases the likelihood of a good outcome. There are some critics on the using of process and outcome approach. The critics is whether process data is a good predictor in measuring quality of care, for example the cost of health care might increase without producing any improvement in health care. For outcome approach maybe will have different result due to patient characteristic. In fact, process and outcome both are have strength and weaknesses, we can not say which one in better (Donabedian, 1988). Donabedian concluded that it is best to include any system of assessment elements of structure, process and outcome. By doing this we can combine the strength with the weaknesses. This present study will use all three element of quality of care suggested by Donabedian.

It is crucial to specify criteria and standard in the assessment of quality of care which representing the attributes of structure, process and outcome. There are two main approach to specify criteria which are implicit and explicit. In implicit approach, we can use unstated criteria suggested by expert practitioners based on personal knowledge and experiences. The explicit approach is more clear and easy as standard and criteria for each category are developed and specified in advance.

Tracer methodology used "to measure changes in the health status of a given population" (Geyndt, 1995). "Tracers are a "specific health problem, that, when combined in sets, allow health care evaluators to pinpoint the strengths and weaknesses of a particular medical practice setting or an entire health service network by examining the interaction between providers, patients, and their environments" (Kessner, 1973 as quoted by Geyndt, 1995). Tracer method can be used to categorized the selected diseases which should have some criteria as follows:

1. A tracer should have a definite functional impact.
2. A tracer should be relatively well defined and easy to diagnose.
3. Prevalence rates should be high enough for collection of adequate data from limited population sample.
4. The natural history of the condition should vary with utilization and effectiveness of medical care.
5. The medical management techniques should be well defined for more than one of the following process: prevention, curative, treatment and rehabilitation.

6. the effects on the non medical component on the tracer should be understood.

Tracer method is applied in this study to assess the quality of care in term of medical procedures, prescribing pattern and patient satisfaction.

Prescribing practice is a major element in curative care which reflect process indicator and potential influence the quality and efficiency of health care delivery (Gilson , Jaffar , Samuel, Thomas . 1993). There are two steps included in the study of Gilson et al , first is analyze retrospective data – randomly select prescription, used WHO INRUD indicator. Second is evaluate the patient care and the level of conforming with national standard. Gilson conclude that assessment of drug use should be a key of any strategy to maintain or improve quality of care in pursuing greater efficiency in resource use.

Donabedian also mentioned that the sampling technique should be used sample or stratified random sampling as the cases classified by diseases or condition.

Model used for analyze patient satisfaction is SERVQUAL model which developed by Parasuraman et al (1988) which also used by Andaleeb (2008) and Tangcharoensathien et al (1999) in their study. SERVQUAL can be used to measure the level of costumer satisfaction using 5 dimension: assurance, tangible, empathy, responsiveness and communication and classified in to satisfied and unsatisfied.

2.4. Quality of care under health insurance

There are three aspect should be considered if we want to evaluate the health financing system. Those three aspect are equity, efficiency and cost effectiveness (Phua, 1990). Nowadays often there are some question were asked whether health insurance have impact on the health, and the answer are not yet satisfying as mentioned by Levy et all, 2005. According to Phua the emphasis now is on the quality of health care under insurance scheme.

There is a significant challenge to health care establishment around the world as there is a need in delivering quality healthcare, while increasing access and lowering costs continues also prioritized. (Andaleeb, 2008). The Commission on Macroeconomics and Health, the Millennium Development Goals, the World Development Report, and the Human Development Report, all address health as a

major policy prerogative. Their assessment of service provision in the health sector, however, is not very savory. According to the World Development Report, 2003: "Services are failing because . . . they are inaccessible and prohibitively expensive. But even when accessible, they are often dysfunctional, extremely low in technical quality, and unresponsive to the needs of a diverse clientele."

There are some studies focusing on the quality of care under health insurance system. Study by Zhang, Huang, Drum, Kirchhoff, Schlichting, Schaefer, Heuer, and Chin (2009) on Insurance status and quality of Diabetes Care in community health center stated that it is less known what is the effect of public health insurance on the quality of care for patients. Community health centers are the excellent setting to study the role of insurance in quality of care. Tangcharoensathien, Bennett, Khongswatt, Supaticul and Mills (1999) studied on the impact of hospital ownership and patient payment status which influence patient satisfaction in Bangkok. The result of the study is that there is clear and significant differences of patient satisfaction among difference owner hospital and type of insurance. Rating for outpatient care is public hospital got lower rating than the private hospital while among insurance scheme, social security scheme get the lowest rating as the payment method is on capitation basis. Study in the US on Insurance and quality of care for adult with Acute Asthma showed that uninsured patient get poorer quality of care than the insured. There is no difference of quality care among type of insurance which included in the study (Ferris, et al. 2002). In the study Ferris et all mentioned that Insurance organization give more attention on the problems of low quality and increase cost of medical for asthma patient as evidence proof that there is a problem on efficacious medication. Supachutikul (1995) review quality of care of the health insurance in Thailand and commented that there are very few studies on quality of services across various financing schemes while the equity, efficiency and quality of care seem to be the universal goal for every developed country . Siriwanarangsun (1996) conduced evaluation of care in MEDSEC network, by using three approach: structure, process and outcome. Both network were compared in term of process approach: drug prescription in outpatient and inpatient care. Data were collected from questionnaires sent to hospitals and clinics. Tracer method was used by siriwanarangsun in assessing process of care. Drug prescription analysis was done based on the prescribing

indicator of WHO (1993), and compared the detail treatment in each tracer to the standard treatment. Eisenberg and Power (2000) mentioned in their study that the high quality of care not because of high coverage of health insurance. There is 7 transitions which potential for quality of care may be lost. This transitions is a cascade from insurance to quality are the following: "1. Many Americans do not have access to affordable health insurance. 2. Even when they are offered insurance, some do not enroll. 3. ven if they have health insurance, some needed services or providers may not be covered. 4. Even if services and oviders are covered,patientsmaynotbeabletochoose among plans, institutions, or clinicians, and thus cannot exercise their power in the market to select the care they prefer. 5. Even if people have a choice of plan or provider, a onsistent source of primary care may not be accessible. Even if primary care is available and accessible, appropriate referral services may not be. 7. Even if people have access to both primary and referral services, there may be gaps between the quality of care that can and should be provided and the quality of care that is delivered".

Study from developed country shown that uninsured patient get less quality of care compared with insured patient, where fact shown in developing countries (there no study yet regarding this topic) that the insured people (Pro poor and civil servant scheme) get worse quality of care than the uninsured. This maybe as an answer why although the insurance covered is quite high but the out pocket is still high.

CHAPTER III

RESEARCH METHODOLOGY

3.1. Research design and conceptual framework:

This study is a cross sectional study using primary data from medical record of out patient department, interview of patient and purchaser.

This study looks for the quality of health care of insured and un-insured patients from the perspective of consumer, provider and purchaser (Health Insurance Company). The quality of health care will be measured with three aspect : input/ structure, process and outcome. Input/ structure aspect are measure with medical cost , equipments, man power which will be seen from the patient perception. This measurement is from provider perspective based on the patient exposure during the service delivery. Process aspects are seen from provider perspective based on patients exposure by health services which will be measured by prescribing pattern and medical procedures based on WHO indicator (INRUD) and National guideline from primary care and National essential drug. The outcome aspect is seen from customer perspective which is measured with patient satisfaction. The unit analysis of 3 aspect of quality of care is the same (patient) to make those aspects comparable.

The health facilities to be studied are hospital as secondary care and for primary care are health center and private practitioner nearby the hospital which provide out patient services to insured and un-insured patients. The private and public primary care facilities are comparable as both are first line care services which provided primary care services. The medical cost of insured patients are paid by the insurance company with or without contribution from the patients.

The quality of care both insured and un-insured patient will be assessed within each type of facilities (primary and secondary care). This study also will assess factors affecting quality of care within insured patients such as amount of premium, payment method of health insurance. Quality of care will be measured using structure, process and outcome indicator. Structure indicator will measure

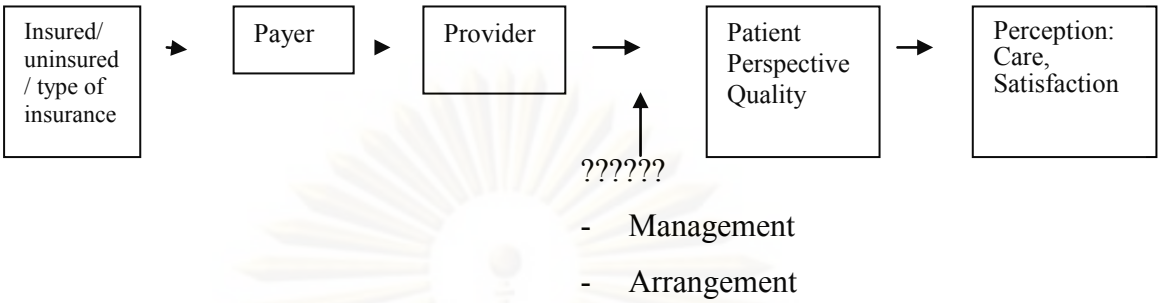
equipments, physician characteristic and cost of services (fee, drug and supporting services such as laboratory test), process indicator will measure prescribing pattern and medical procedures and outcome will measure patient satisfaction. Payment methods of the insurance scheme also will be measured to compare the quality of care within the insured group so that the result may reveal what is the better payment method resulted better quality of care.

To assess the process and outcome indicators of care this study will apply tracer method. For primary care patients will be separated by the type of diseases (ARI and diarrhea) and ante natal care. Based on the selection of criteria for tracer, two diseases (diarrhea, ARI) and one maternal services (antenatal care) were chosen to analyze quality of primary care. Those diseases are common diseases and have impact on the health outcome while antenatal care have impact on the maternal child health indicator. The same for secondary care, two most common diseases were chosen are Hypertension, dyspepsia and ante natal care.

For analyzing quality of care in term of structure, this study will measure patient perception on the input of the care : physician and facility (excellent, good, fair, poor) and standard equipment for and also medical cost. WHO INRUD guideline will be used for analyzing quality of care in term of process, prescribing pattern and primary care standard therapy will be used for medical procedures. The guideline of drug use and medical procedures for conforming standard drug and procedures, this study will use guideline for primary care and not for the complication cases. A survey will be conducted to get the degree of patient satisfaction as outcome indicator measurement.

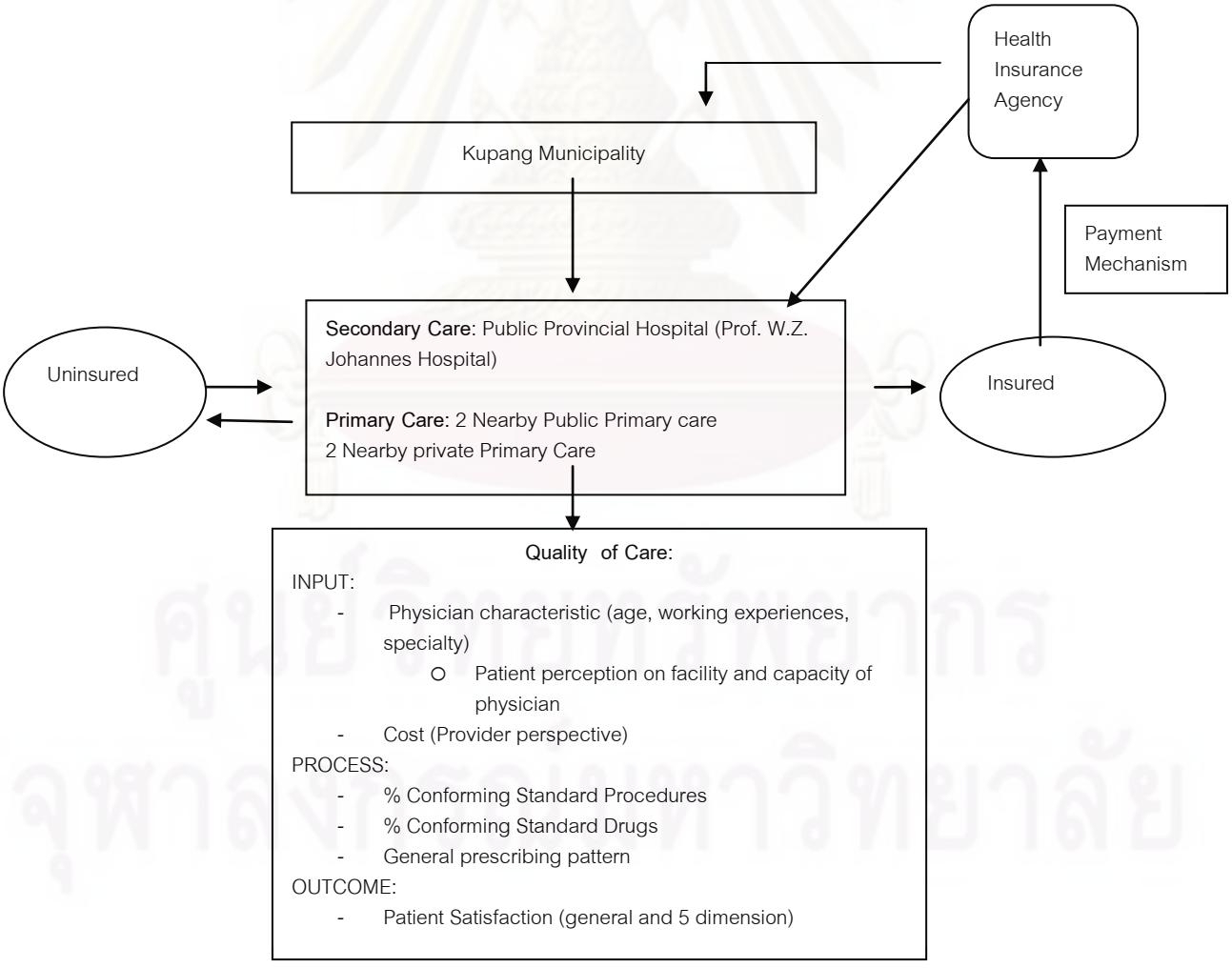
In the framework of health insurance there is a cause and effect analysis which explaining result of quality of care. As there are many aspects involving in quality of care of the insured patient especially for process and outcome aspect which do not directly have effect on the quality of care. Below is the framework of insured patient in term of quality of care from both side of perspective (provider and patient perspective).

Figure 3. Health Insurance Framework



Below is the **conceptual framework** of this study

Figure 4. Conceptual Framewrok



3.2. Data Collection

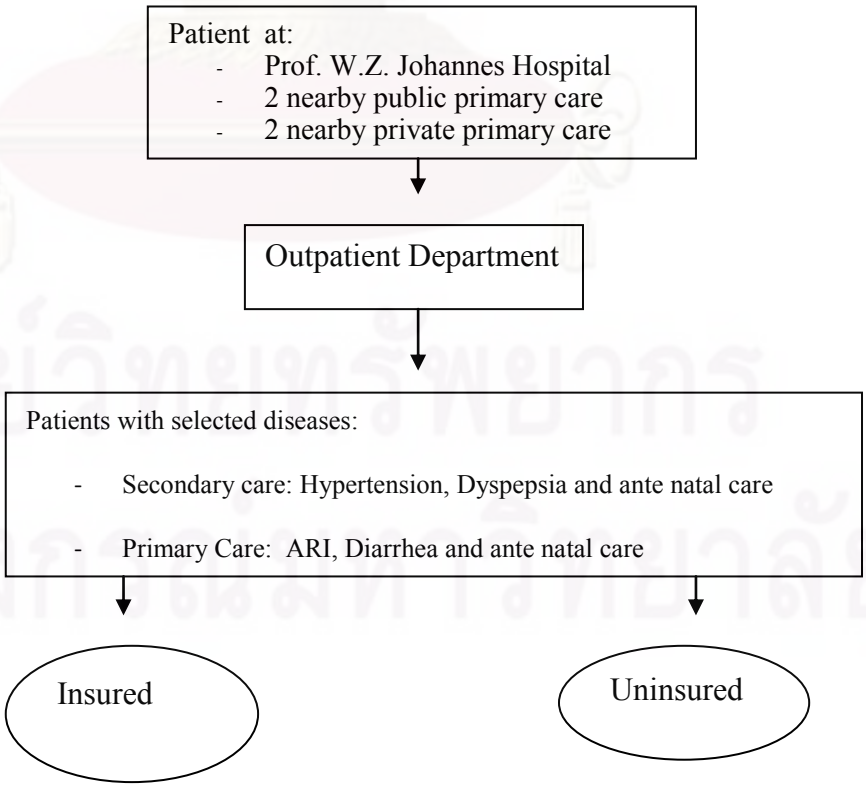
The target population of the study is people in Kupang municipality, East Nusa Tenggara province, Indonesia and population to be sampled are patients at W.Z. Johannes Hospital, 2 health centers and 2 private practitioners nearby the hospital in the Kupang municipality.

The sample of the study are insured and un-insured patient who get services from primary and secondary care

Exit interview will be conducted to collect data on the level of patient satisfaction, patients perspective on health facilities structure and general information such as age, gender, education, income, resident area, etc. Document survey (medical record) will be conducted to collect data on the prescribing pattern and medical procedures.

The sampling technique for this study is stratified random sampling, where tracer method will be use to categorized the patient into 4 tracer based on the selected diseases. Below are the figure of stratified random sampling technique

Figure 5. Stratified Random Sampling Technique



Variables of the study are as follows:

- Dependent variable: quality of primary care

- Independent variable: Health insurance, Payment method, amount of premium, waiting time, general information (age, education, income, area of residence, sex, cost), Structure (Physician characteristic and Equipment), process aspect (prescribing, medical procedures).

Eligibility criteria for the study are:

- Inclusion criteria: Patient with age >15 year for ARI, diarrhea, hypertension, dyspepsia and ante natal care cases, only cases without complication, pregnant women for ANC, first visit of patient and only Insurance company of government
- Exclusion criteria: patient below 15 years for ARI, diarrhea, dyspepsia, cases with complications, private insurance company

3. 3. Sample size

The unit sample of the study is patient for outcome indicator and medical record for process indicator (prescribing and medical procedures). It is need to determine sample size for the patient and medical record.

Sample of this study will reflect the whole population in Kupang municipality so that the sample calculation use a simplified formula for proportion (Israel, G -)

Below is the sample design:

$$n = \frac{N}{1 + N\,(e)^2}$$

N = Population = 286,306

n = sample size

e = level of precision = 5%

Based on the Sample design, the sample size for the study is the following:

$$n = \frac{286{,}306}{1 + 286{,}306\ (0{,}05)^2} = 399{,}44 \quad \rightarrow \underline{400}$$

Considering that many variables included in this study collected more sample up to 950 in order to make the distribution of variable have significant result. The sample will be divided as follows:

- Hospital : 429 (consist of 3 tracer)
- 2 Public Health Center/ 2 private practitioners:521

3.4. Sampling procedures

Total sample of this study are 950 patients from 1 provincial hospital, 2 health centers and 2 private practitioners. The total sample divided into two part primary and secondary care. For secondary care (hospital) the sample are 429 patients and medical records while for primary care is 521 patient/ medical records. By using tracer method we will select sample based on the tracer. For secondary care the tracer are Hypertension, Dyspepsia (Gastric Disturbance) and ante natal care, which selected based on the highest cases of OPD at W.Z. Johannes Hospital. While for primary care the tracer are ARI, Diarrhea and ANC. For public primary care (health center) the sample collected were 300 and for private primary care were 221 samples.

We took the sample randomly by interview all patients with hypertension, dyspepsia, diarrhea, ARI, and ANC than we randomly selected which patient are included in the sample. After that we looked at the medical record of the selected patients.

3.5. Measurement of indicator:

Structure aspect:

- Medical cost : calculate each cost of prescription and medical procedures (including fee for physician / midwife).

- Man: Physician characteristic (age, length of working experience and specialty) and patient perception on capacity of physician
- Facility: Patient perception on facility (very good, good, fair, poor, very poor)

Process aspect

- Medical procedures:

To measure the medical procedures of out patient services at both facilities this study will look at the services received by patients (physical examination, laboratory test) using national guideline of standard therapy of primary and secondary care facility. The result is percentage of conforming standard procedures, which classified into excellent (above 90%), good (70-89%), medium (40-69%), and poor (<40%).
Below is the analysis for medical procedures:

$$\% \text{ CSP} = \frac{\text{Number of actual standard procedures}}{\text{Number of total standard procedures in the guideline}}$$

The standard procedures is the standard procedures for primary care for 2 selected diseases (ARI and diarrhea). For Ante natal care the standard of procedures is the standard procedures which should deliver every ante natal care visit which depend on the age of the pregnancy. While for secondary care will use standard procedures of 2 selected diseases (hypertension and dyspepsia) and ante natal care for secondary care.

- Drug prescription :

For drug prescription, there two standard used to analyze the prescribing pattern. First is the WHO indicator (International Rational Used of Drugs) and second is the national guideline on standard therapy. By using WHO indicator this study will analyze the general prescribing pattern. Indicator will be used are : Average number of medicines prescribed per patient encounter, Percentage of medicines prescribed by generic name, Percentage of encounters with an injection prescribed, Percentage of encounters with an antibiotic prescribed, percentage of drugs prescribed from essential drugs and average For ante natal prescribing the indicator are percentage of pregnant women get sulfas ferrous.

The second one is compare each prescription with the national guideline therapy for each kind diseases and ante natal care. The measurement will be based on the degree conformity, and the result is percentage of conforming standard prescription and classified into good (above 66.6%), medium >33.3 – 66.6%), and poor (<33.3%).

Below are the model

$$\% \text{ CSD} = \frac{\text{Number of actual standard drug prescribed}}{\text{Number of total standard drugs in national guideline}}$$

% CSD= percentage conforming standard drug prescription.

Outcome aspect

- Patient satisfaction

Interview to patients was conducted after receiving drugs to investigate the level of patient satisfaction regarding the health services provided. There are two measurement of patient satisfaction:

- Overall satisfaction which classified into two levels: satisfied and not satisfied. The unit measurement is % percentage of patient satisfied with the health services.
- Patient satisfaction with specific dimension : tangible, reliability, empathy, responsiveness , and assurance. The unit measurement is % of patients satisfied with each dimension. Other aspect which analyzed are payment method of each insurance.

3.6. Questionnaires development

Before the interview take place the questionnaire has been tested by using 30 sample in one health center. There are three part of the questionnaires: general information on consumer behavior, perception toward the quality of care and personal data or demographic profile. The interview will be done by trained interviewers. Interview for patient satisfaction will be carried out at the time of waiting of drugs. The most effective way to assess patient satisfaction is by postal questionnaires but it have not yet be done in East Nusa Tenggara province and can be predict the response will be low. The questionnaire will contain information about:

1) General information such as age, education, area of residence, sex, income, occupational, insurance enrolment, payment status, type of insurance.
2) Waiting time, consultation time
3) Medical cost
4) Five dimension of patient satisfaction (Tangible, Assurance, Responsiveness, Empathy and Communication).

3.7. Data analysis

For data analysis this study used two method of analysis as follows:

- Descriptive analysis to analyze three aspect of quality of care of insured and uninsured patients at each facility (primary and secondary care)
- Logistic regression to find factors affecting or associated with patient satisfaction at each facility (primary and secondary care).

The detail of analysis are as follows:

<u>- Physician characteristic</u>

This study will use three variable to measure physician characteristic : age, specialty and length of working experience. Each variable compare by insured and un-insured group and within insured group for type of insurance scheme.

Hypothesis: There is a difference between insured and uninsured and between type of insured regarding age, specialty and length of working experiences of physician.

Ho: there is no differences between the groups.

<u>- Equipment and facilities</u>

Analysis was done by asking perception of patient on the facilities by comparing insured and uninsured patient. The result of measurement are Very good, good, fair, poor, and very poor

Hypothesis: There is a difference between insured and uninsured and between type of insured regarding patient perception on facility and capacity.

Ho: there is no differences between the groups.

- Medical procedures

In analyzing medical procedures this study will use percentage of conforming standard procedures as proxy indicator and classified into four level excellent, good, medium and bad. Then the result will be compared between insured and un-insured patient using logistic regression.

The hypothesis for medical procedures is that the % conforming standard procedures of un-insured patient is higher than insured patient.

Hypothesis: There is a difference between insured and uninsured and between type of insured regarding medical procedures

Ho: there is no differences between the groups.

- Prescribing pattern

For prescribing pattern this study analyzed two indicators first is general analysis of prescription and second is percentage of conforming standard guideline with classification excellent, good, medium and bad.

The result of both indicator compared between insured and un-insured patient

Test for significant was done to analyze the significant difference between insured and un-insured patient.

The hypothesis for prescribing is that % conforming standard drug for insured patient is higher that un-insured patient.

Hypothesis: There is a difference between insured and uninsured and between type of insured regarding conforming standard treatment

Ho: there is no differences between the groups.

- Payment method

To analyze the effect of payment method this study compared the payment method with outcome aspect which is patient satisfaction.

The hypothesis is payment method have relation with patient satisfaction.

- Patient satisfaction

The analysis of patient satisfaction was based on the questionnaires collected from patients at the primary care facilities after receiving drug. The questionnaires include

general information which give general characteristic of patients such as gender, age, education, cost of medical services, waiting time for consultation, area of residence, occupational and insurance enrollment and also competency of providers which classified into competent and not competent. The analysis will be on the general characteristic of patients, overall satisfied responses and the percentage of satisfied responses to specific dimension. These results are compared between insured and un-insured patients, as patient satisfaction depends not only on insurance enrollment. Logistic regression is used to analyze the association of general characteristic and insurance enrollment. To test the significant difference of overall patient satisfaction between two group this study use Chi square test.

The hypothesis of the study is the un-insured patient is more satisfied than the insured patient.

To analyze association factor affecting patient satisfaction this study use logistic regression. The model of the analysis is the following:

Model 1

$Pi1 = 1/ 1 + e^{-zi}$

$Zi1 = \ln (Pi1/ 1-Pi1) = a0 + a1INS + a2\ INC + a6\ COST + a7EDU1 + a8EDU2 + a9\ EDU3 + a10TIME + a11RES + a13Phyage + a14PhyWR + a15PhyTR + a16EQP + a17PRES + a18MED + a\ INSTYPE + aPAYMEC$

Where Pi: Probability of outpatient satisfaction.

The expected associations of these variables are based on the previous studies and theory.

Below is the expected sign of the study:

Table 3.6. Description of Variables in Logistic Regression

Variables	Description of variables	Expected sign
Pi1	Probability of patient satisfaction	
Z2	Linear predictor	

Variables	Description of variables	Expected sign
INS	Insurance enrolment; dummy variable INS=1: having health insurance INS=0: not having health insurance	-
INC	Income of patient(monthly income)	+/-
COST	Medical cost	-
TIME	Waiting time for consultation	-
RES	RES=1: urban. RES=0: otherwise	-
Phy	Physician characteristic PHYage=1:age<30, = 2age>30 PHYWE1=1: work<10,=2:w>10	+
EQP	Equipment EQP=1: met standard EQP=0 Not met standard	+
PRES	Prescribing pattern (excellent, good, medium, poor)	+
MED	Medical procedures (excellent, good, medium, poor)	+
PYM	Payment method PYM=1=Total Capitation PYM=2=otherwise	
INSTYPE	Type of insurance: 1= pro poor scheme (Jamkesmas) 2= ASKES Sosial (for civil servant) 3 = Askes komersil (voluntary scheme)	
PAYMEC	1= Capitation only for medical services	
	2=Capitation for medical services and drugs	

3.8. Hypothesis Testing

3.8.1. The Chi Square (χ^2) – test for independence of variables

To compute a sample statistic for testing the hypothesis that the row and column categories are independent this study used expected and observed frequencies. The main idea is that the observed frequencies should be closed to the frequencies that would be expected if the categories are independence. The test is called sample χ^2. Large value of the sample χ^2 lead to rejecting the independence hypothesis. This can be explained by the formula as follows:

$$\text{Sample } \chi^2 = \Sigma \frac{(\text{fobs} - \text{f exp})^2}{\text{f exp}}$$

The distribution of the sample χ^2 computed from a contingency table is approximated by a chi square distribution with v degrees of freedom, where: v (r-1)(c-1).

The higher the expected cell frequencies the more satisfactory the chi square approximation. We should aware on the rule that each expected frequency value must be at least 5. If the value less than 5 we should adjust the row and column in the contingency table to get at least more than 5.

The hypothesis are stated in terms of independence. The hypothesis are:

Ho: The row and column categories are independent

H1: The row and column categories are not independent.

Significantly large values of the samples χ^2 statistic lead to the rejection of Ho.

Reject Ho if sample $\chi^2 > \chi^2 \alpha,v$

Where α = significant level of test.

3.8.2. Test for differences of groups of samples

To test whether there are differences between insured and uninsured groups and between type of insurance group this study use t and Anova test

The hypothesis are stated based on the differences/ independences between samples of insured and uninsured and also type of insurance group.

3.9. Operational definition:

Below is table describe the some term used in this study

Table 3.7. Description on operational definition

No	Term	Definition
1	Structure aspect	Input of health facilities: Man (physician characteristic) , material (standard equipment) and money (cost of medical care)
2	Process aspect	Process of care delivery in the health facility. This study use 2 indicator to measure the quality of care: medical procedures and prescribing pattern
3	Outcome aspect	Outcome of quality of care measured by patient satisfaction, using five dimension of satisfaction and categorized as satisfied and unsatisfied
4	Physician characteristic	-Age: less than 30 years or more than 30 years -Training: got training or not last year (clinical training) -Working experiences: years of practice)
5	Equipment	Standard equipment which should have by primary and secondary care. Classified by met standard and not met standard.
6	Prescribing pattern	-General prescribing, measured by WHO INRUD indicators. -% conforming standard Drugs (National guideline)
7	Medical procedures	-% conforming standard therapy (based on the national guideline for primary and secondary care)
8	Cost	Medical cost from provider perspective: cost of medical services and drug (<10,000; 10,000-30,000; 30,000-50,000, >50,000

No	Term	Definition
9	Patient satisfaction	Level of patient satisfaction which measured by using two indicators: - Patient satisfaction (according to 5 dimension) classified into satisfied and unsatisfied
10	Amount of premium	Amount of premium per month per person (in rupiah) paid by purchaser to the health provider, classified into: less than 5000, 5001 – 10,000, 10,001-15,000, >15,001
11	Payment mechanism	The payment mechanism of the insurance scheme from purchaser (Insurance agency) to the provider (health centers and private practitioners).
12	General characteristic	• Income per month (<250,000, 250 – 500,000. 500,000-1,000,000, > 1000,000) • Education (elementary school, Junior high, Senior High, and higher than Senior High School • Area of residence (rural/ Urban) • Occupational • Age (0-5), (5,1-10), (10,1-15), >15 (pregnant women) • Waiting time for consultation in minutes (<15 , 16-30, 30-60, > 60) • Gender (Male/ Female)

3.10.Possible Benefits

The result of this study is hoped can contribute to describe the quality of primary care of Kupang municipality as a benchmark for other districts in the province. Having enough resources in health facilities in Kupang municipality, the capital of the province should have good quality of primary care. If it is not than

government should find a way to improve the quality of care not just focus on increasing the coverage of health insurance.

Result of this study is very useful for the government of East Nusa Tenggara province to develop strategy in improving the quality of primary care as a main contribution in improving health outcome. So the limited resource can be use effectively in achieving improvement of health outcome. Government of East Nusa Tenggara can used the result of this study as a based in developing the health financing system in the province which will be adopted by the districts.

CHAPTER IV

RESULTS AND DISCUSIONS

Primary data were collected from one public hospital for secondary care and from two public primary care (health center) and two private primary care in Kupang Municipality, East Nusa Tenggara Province, Indonesia. 429 data were collected from secondary care and 521 data are from primary care. Out of 521 data from primary 300 are from public primary care and 221 are from private primary care. Total data are 950. The interviewer team is consist of 6 people which have experiences in conducting interview for health project. The data collection was carried out from February 22 to March 22, 2010 at both type of facilities (secondary and primary care). This chapter provides the results achieved regarding the quality of care of insured and uninsured patient by analyzing of input, process and outcome of health services provided at both secondary and primary care.

4.1. Analysis of Secondary Care

4.1.1. General status of patient

Using methodology described in the previous chapter, 429 interviews were conducted and medical record of 429 respondents were collected. From 429 respondents, 195 are patient with hypertension, 108 are patients with dyspepsia and 126 are patient having ante natal care. The ratio between insured and uninsured patients were 4.6 : 95.4 for hypertension, 15.7 : 84.3 for dyspepsia and for ante natal care 22.2:77.7. The proportion of males and females are 27.9 : 72.02 as for ante natal care cases are only for female. Female patients were more than male patients. The mean of age of patients is 46.22 years. The age of patient for both uninsured and insured patients are mostly at age 30 – 50 years where 50% for uninsured and 40,8 for insured. It is similar also within insurance group where mostly the age of patient are in group 30-50 years (46.9 % for pro poor scheme, 34.6% for civil servant scheme and 47,6 for voluntary scheme. Table 4 and Table 4.1. shows mean of age of insured

group is 47.5 and uninsured group is 37.8. Minimum age of insured group is 18 and 21 for uninsured group while maximum age for both group is the same = 81

Table 4.1.Mean of age and insurance enrollment

Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum
Uninsured	37.8	54	13.772	21	81
Insured	47.5	375	14.98	18	81
Total	46.2	429	15.206	18	81

t= 4.73 df=427 p=0.000

In term of gender, number of female is higher for both group which are 87% for uninsured and 69,9% and number of male for uninsured is 13% and insured 30.1%. The result are also applied for type of insurance where the number of female is higher for all type of insurance (75.9% for pro poor scheme, 63.3% for civil servant scheme and 78.6% for voluntary scheme). This result shows that inured group have more male patient. For total number, female is higher this due to for ante natal care only female are eligible.

Based on the residence area it is shown that mostly all patients are leave in the urban are which is 80.4%. Uninsured patient leave in urban is 81.5% and insured is 80.3%. The result between both group is similar and we can say that there is no different between insured and uninsured regarding area of residence. This result also applied to the type of insurance where urban is more higher than rural . Most of patients are from urban area because access of rural people are less compared to urban people. Detail result is in the appendix A. (table 1.6 and 1.7).

According to education level, mostly the education level of the patient are Junior and Senior High school group for both group insured and un-insured where uninsured is 68.5% and insured 53.3%. But the insured patient have more patient with elementary (26.9%) and below compared with uninsured (14.8).The meaning of the result is that insured group have more patient with lower education compared with the uninsured. The insured patients have more patient with lower education is due to there are many patient under pro poor scheme have low education (45.5%) where for civil servant is only 13.8 % and for voluntary is 21.4%. Overall education

level the highest education is in the group of civil servant (High school above=32.45) and followed by voluntary scheme (High school above=14.3) and the last is pro poor scheme with patients education high school above only 4.8%. There is a significant different between type of insurance and education level with chi square 64.7 and p value less than 0.05 (0.000) Detail result can be seen in the appendix A (table 1.8 and 1.9).

As shown in table 4.2. regarding income level there is a slightly difference between insured and un-insured group. For income level less than 500,00 rupiah insured group is higher than un-insured group which is 89.47 compare to 10.52%. Within income level group insured group is higher than un-insured as the ratio of sample of un-insured and insured in 1:7 . Within insured group the pro poor patient is higher in the first, second and third group (lower income) and civil servant scheme is higher in income level 3, 5. From the test of significance there is a significant correlation of income level between insured and uninsured group where χ^2= 64.7 p= 0.000 and df = 4. Regarding type of insurance and income it is shown that for poor people the highest income group of less than 500,000, 1,000,001 - 1,500,000 significant different where for people covered by civil servant scheme the income are mostly are in group 1,500,000 above. The result of analysis shown that there is a significant correlation of income level between pro poor scheme, civil servant and voluntary scheme where χ^2= 196.56, p= 0.000 and df=10.

Table 4.2. Income level and insurance enrollment

Income level	**Insurance enrollment**		
	Uninsured	Insured	Total
Do not have or do not know	4	34	38
% within Income level	7.4%	9.1%	8.9%
Less than 500,000 rupiah	11	90	101
% within Income level	20.4%	24.0%	23.5%
500,000 – 1,000,000 rupiah	22	105	127
% within Income level	40.7%	28.0%	29.6%
1,000,001 – 1,500,000	5	43	48
% within Income level	9.3%	11.5%	11.2%
1,500,001 – 2,000,000 rupiah	5	58	63

Income level	Insurance enrollment		
	Uninsured	Insured	Total
% within Income level	9.3%	15.5%	14.7%
More than 2,000,000 rupiah	7	45	52
% within Income level	13.0%	12.0%	12.1%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2= 64.7 p= 0.000 and df = 4

Table 4.3. Income level and type of health insurance

Do not have or do not know	Type of insurance			
	Pro-poor	Civil	voluntary	Total
Do not know/ Have	20	7	7	34
% within Income level	13.8%	3.7%	16.7%	9.1%
Less than 500,000 rupiah	74	8	8	90
% within Income level	51.0%	4.3%	19.0%	24.0%
500,000 – 1,000,000	48	41	16	105
% within Income level	33.1%	21.8%	38.1%	28.0%
1,000,001 – 1,500,000	3	34	6	43
% within Income level	2.1%	18.1%	14.3%	11.5%
1,500,001 – 2,000,000	0	55	3	58
% within Income level	.0%	29.3%	7.1%	15.5%
More than 2,000,000	0	43	2	45
% within Income level	.0%	22.9%	4.8%	12.0%
Total	145	188	42	375
% of Total	145	188	42	375

χ^2= 196.56, p= 0.000 and df=10

Table 4.4.Mean of income and insurance enrollment

Insurance	Mean	N	Std.	Minimum	Maximum
Uninsured	1,190,555.56	54	13,772	0	7,000,000
Insured	1,111,130.40	375	94,497	0	7,000,000
Total	1,121,127	429	962,266.3	0	7,000,000

t= -0.567 df= 27 p=0.571

Mean of income of uninsured group is 1,190,55 while for insured is 1,111,130.40. Based on the for differences it is revealed that there is no significant

differences between insured and uninsured group in term of income with t= -0.567 df=427 p= 0.57 (accept Ho, Ho= There is no difference between two groups). We can not say that the income of uninsured is higher than the inured.

From 429 patients, 195 patients are patients with hypertension, 108 are with dyspepsia and 126 are patient with ante natal care. Within insured group hypertension patients are the highest number (49.4%) than followed by ANC (26.1% and the lowest is dyspepsia 24.2%. While for the uninsured the highest is patient with ANC (51.8%), than followed by Dyspepsia 31.5% and hypertension is 16.6% only. Based on the statistic test, there is a significant correlation between variable diseases and insurance enrollment with χ^2= 24.49 , df=2 p= 0.000, as well as between diseases and type of insurance with χ^2= 63.58 , df=6 p= 0.000.

Table 4.5. Diseases of patient and insurance enrollment

Diseases	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Hypertension	9	186	195
% within Diseases	4.61	95.38	100
Dyspepsia	17	91	108
% within Diseases	15.74	84.26	100
Ante Natal Care	28	98	126
% within Diseases	22.2	77.7	100`
Total	54	375	429
% of Total	12.59	87.41	100

χ^2= 24.49 , df=2 p= 0.000

Table 4.6. Diseases and type of health insurance

Diseases	**Type of insurance**			
	Pro-poor	**Civil**	**voluntary**	**Total**
Hypertension	44	127	15	186
% within Diseases	23.7%	68.3%	8.1%	100.0%
Dyspepsia	39	41	9	91
% within Diseases	42.9%	45.1%	9.9%	100.0%
Ante Natal Care	62	20	15	98
% within Diseases	63.3%	20.4%	15.3%	100.0%
Total	145	188	39	375
% of Total	38.7%	50.1%	10.4%	100.0%

χ^2= 63.58 , df=6 p= 0.000

4.1.2. Input of health services

For measuring input of the secondary care/ hospital this study used perspective from provider and patient. Indicators from patient perspective are facility and capacity of physician according to patient while from providers perspectives are physician characteristic such as age, working experiences and specialty. The hypotheses are there are differences regarding this indicators between insured and uninsured and between type of health insurance.

Result of input of care of insured and uninsured and also with type of insurance are shown in the table 5; 5.1.; 5.2.; 5.3.;5.4.;5.5;5.6;5.7;5.8;5.9;5.10 . According to table 5 mostly both group insured and uninsured get services from physician age above 30 year, 57.4% for uninsured and 53.6 % for insured. There is no correlation between age of physician and insurance enrollment with χ^2=0.27, p value =0.6 and df=1. But result of age of physician and type of insurance shown a correlation between age of physician and type of insurance with χ^2=7.022 , p=0.03 and df=2. Poor people get services more from physician age less than 30 while the civil servant and voluntary scheme more get from physician age above 30 years(55.5% and 71.4%).

Hypothesis testing:

Ho: There is no difference on age of physician received by patients within type of insurance.

H1: There is a difference on age of physician received by patients within type of insurance.

Result test between pro poor and civil servant is t = -0.985 df=331 p=0.326, means we should accept Ho. While test between pro poor scheme and voluntary scheme: t=-2.666 df=185 p=0.008, means we should reject Ho and stated there is a significant difference between type of insurance in term of age of physician. Result between civil servant and voluntary scheme is t= -2.16 df=228 p=0.036 which means that we should reject Ho. In conclusion there is a significant differences of age of physician which delivered services to the difference type of insurance but this result does not reflect that patient got service from physician age below than 30 years got low quality.

Table 5. Age of physician and insurance enrollment

Age of Physician	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
30 years and below	23	174	197
% within insurance enrolment	42.6%	46.4%	45.9%
Above 30 years	31	201	232
% within insurance enrollment	57.4%	53.6%	54.1%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2=0.27 df=1 p=0.6

Table 5.1.. Age of physician and type of insurance

Age of Physician	**Type of insurance**			
	Pro-poor	**Civil**	**voluntary**	**Total**
30 years and below	75	87	12	174
% within type of ins	51.7%	46.5.0%	28.5%	46.4%
Above 30 years	70	101	30	201
% within type of ins	48.3%	55.5%	71.4%	53.6%
Total	145	188	42	375
% of Total	100%	100%	100%	100.0%

χ^2=7.022 df=2 p=0.03

For working experiences, mostly the patients of both group got from physician with experiences less than 5 years , 85.5 % for insured group and 14.4. for uninsured group. It means that mostly the physician who deliver the services is a fresh graduate specialist doctor or general practice physician who have been working at the internal medicine and obstetric gynecology less than 5 years. If we look at the type of insurance pro poor scheme get more services from physician working experience less than 5 years compared with other 2 scheme. The result of correlation shown that the difference is no correlation between working experiences and insurance enrolment with χ^2=2.2 p=0.13 df=1 and as well between age of physician and type of insurance with χ^2=0.3 p=0.2 df=2. Detail result available in appendix A (table 2.2 and 2.3.)

Another indicator for input aspect is physician specialty in internal medicine or obstetric gynecology. According to table 5.4. both group mostly got services from physician hold specialty , the percentage is 87.1% for poor people uninsured and insured is 69.6%. Based on the test, there is a correlation between specialty of physician and insurance enrollment with χ^2=7.08 p=0.0077 df=1, as well as between specialty and type of insurance with χ^2=17 p=0.000 df=2. Based on the the test we should reject Ho also and accept H1 as the p value is less than 0.05 (the confidence interval). Means there is significant different between specialty and insurance enrollment. The difference exist not because the specialty prefer to give service to certain group but it was just co incident that the insured group got service more from non specialist physician although this will affect the quality of care for the patient. The administration at the hospital do not give a chance for doctor to choose which patient they prefer to give services. In conclusion for specialty there is a correlation between physician specialty with insurance enrollment and between type of insurance. There are significant difference between physician specialty with insurance enrollment and also between type of insurance. Based on the test we can conclude that uninsured get service more from specialty physician which normally it will lead to better quality but sometimes this is not happened as there are some cases where the service of general practitioner is better especially in term of outcome. Some patient satisfy with services from general practitioners due to usually general practitioner have more time specialty physician.

Table 5.2. Specialty of physician and insurance enrollment

Specialty of physician	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Do not have specialty (GP)	7	114	121
% within insurance	13.0%	30.4%	28.2%
Specialist doctor	47	261	308
% within insurance	87.0%	69.6%	71.8%
Total	54	375	429
% of Total	100%	100%	100

χ^2=7.08 df=1 p=0.008

Table 5.3. Specialty of physician and type of insurance

Specialty of physician	Type of insurance			
	Pro-poor	Civil	Voluntary	Total
Do not have specialty (GP)	33	75	6	114
% within insurance type	22.8%	39.9%	14.3%	30.4%
Specialist doctor	112	113	36	261
% within insurance type	72.2%	60.1%	92.3%	69.6
Total	145	188	39	375
% of Total	100%	100%	100%	100%

χ^2=17 df=2 p=0.000

Other inputs aspect of quality of care measured in this study are perception of patient on the facility received and capacity of the health personnel in delivering the services. The result shown that mostly both group have perception that the facility received is good or medium, only few say poor or very poor. From the result only one indicator has significant different which is perception on capacity according to type of insurance where poor people feel the capacity of the physician is better compared with the perception of civil servant scheme. The perception of people with voluntary scheme is rather similar with pro poor scheme. Overall civil servant perception on facility and capacity is lower than other two scheme. The result of chi square test shown that there is no correlation between perception on facility and insurance enrollment (χ^2=3.8 p=0.43 df=4). , between different type of insurance (χ^2=10.06 p=0.26 df=8) and also between perception on physician capacity and insurance enrollment (χ^2=32.5 p=0.46 df=3). The detail result available in appendix A (table 2.6, 2.7 and 2.8). Below is table 5.6. which shown there is correlation between perception on capacity of physician and type of insurance with χ^2=13.9 p=0.03 df=6. The test for testing the hypothesis that there is a different between capacity physician perception and type of insurance is as follows: t=3.06 df=331 p=0.002 (between pro poor scheme and civil servant scheme); t= 1.04 df=285 p=0.132 (between pro poor and voluntary scheme) and t= -0.895 df=228 p=0.372. We should reject Ho for pro poor scheme and civil servant while for the other we should accept Ho. The meaning is there is significant difference between pro poor scheme and civil servant scheme in term of perception on capacity but there is no significant difference between pro poor and voluntary scheme and between civil servant and voluntary.

Table 5.4. Patient perception on capacity of physician and type of insurance

Perception on capacity	Type of insurance			
	Pro-poor	Civil	Voluntary	Total
Poor	11	23	6	40
% within type of insurance	7.6%	12.2%	14.3%	10.7%
Medium	31	61	7	99
% within type of insurance	21.4%	32.4%	16.7%	26.4%
Good	93	99	28	220
% within type of insurance	64.1%	52.7%	66.7%	58.7%
Very Good	10	5	1	16
% within type of insurance	6.9%	2.7%	2.4%	4.3%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2=13. df=69 p=0.03

This study included cost as one of input indicator. Cost was measured from provider perspective which consist of fee for doctor, drugs and laboratory test. The analysis of cost was done by each diseases as the tracer in explicit method. Table 5.7. is the result. We can see that there is a significant correlation between cost and insurance enrollment for hypertension patient with p value is 0,034 and chi square 82.6. But cost for dyspepsia and ante natal care there are no correlation with p value > 0.05 (0.56 and 0.24). As shown in the table minimum cost for hypertension for insured group is 20,000 rupiah while for uninsured group is 21,500 rupiah. And the maximum for insured is 180,000 rupiah and uninsured is 167,500. The result shows that cost of hypertension is higher than two others. This is due to drugs for hypertension is more expensive. The testing for hypothesis for hypertension is t= -1,87 df=193 p=0.852, as p > 0.05 we should accept Ho (Ho= there is no difference between sample). For hypertension there is no significant difference between insured and uninsured. It is applied also for dyspepsia and ANC where the test revealed that there is no significant difference between both group in term of dyspepsia (t= -0.50 df=106 p=0.612) and ANC (t= -1.76 df=124 p=0.079). But if look at within group of insurance there is a significant difference between civil servant and voluntary scheme for dyspepsia with t=2.158 df=41.63 p=0.037. Based on the t test we should reject Ho and stated there is

a differences between civil servant and voluntary scheme in term of cost for dyspepsia patient.

Table 5.5. Cost from provider perspective and Insurance enrollment

Diseases	Ins Enrol	N	Min	Max	Mean	Std.	t test
Hyp	**Uninsured**	9	21500	167500	60722.22	47780.168	-1.8(0.85)
	Insured	186	20000	180000	55750.00	32965.758	
	Total	195	20000	180000	55979.49	33638.690	
Dyspepsia	**Uninsured**	17	20000	74000	34794.12	19308.401	-1.8(0.85)
	Insured	91	17700	94000	31265.93	15308.024	
	Total	108	17700	94000	31821.30	15953.654	
ANC	Uninsured	28	20000	42500	23750.00	4689.429	-0.5(0.612)
	Insured	98	20000	76000	26520.41	8490.115	
	Total	126	20,000	76,000	25,904.7	7875.45	

4.1.3. Process of health services

Process of medical care was assessed by analyzing the conformity of medical procedures with Indonesia Internal Medicine Association standard and analyzing prescribing pattern using % conforming national standard treatment and WHO International Rational Drugs indicators. For the analysis of process aspect of quality of care this study used explicit method to compare medical record with the standard procedures and treatment.

4.1.3.1. Medical procedures

For medical procedures this study used percentage conformity standard of national guideline to measure the quality of care in term of process as already described in the previous chapter. As in Indonesia up to now there is no national guideline in term of hypertension and dyspepsia diseases than this study used standard form Internal Medicine Association of Indonesia which commonly used. The data were from medical record of patient whom just have been interviewed before. The standard for hypertension is blood pressure measurement, weighing, physical examination, laboratory test and electrocardiograph for patient more than 45 years. For dyspepsia the standard procedures are blood pressure, weighing, physical examination and USG for sever and chronic cases. For Ante Natal care the standard is

an International standard of WHO which already adapted and commonly used, the standard are: measurement of Fundus Uteri, Weight, blood pressure, upper right arm, give Sulfas ferrous, TT immunization for women have not yet pregnant in the last 5 years, and hear beat of fetus. The classification of compliance with the standard procedures are excellent (>90%), good (70-89%), medium (40-69) and poor (less than 40). The hypothesis for this indicator are there is a difference between insured and uninsured group and between type of insurance, where the uninsured will have better result and among the insured group the pro poor scheme will get worse.

We can see from the result (table 4.10) that there is no excellent result of percentage conforming standard procedures (PCSP) for both group for hypertension cases. Within insured group the highest result is medium (69.3%) and for un-insured is the same (66.7%). The result shows that there is no significant difference between insured and un-insured group in term of conforming with standard procedures with χ^2 5.140, p = 0.077 , df=2. We should accept Ho, which imply that there is no difference between insured and uninsured group ins term of medical procedures. If we compared the percentage uninsured group have better result of %CSP.

While within insured group only, for pro poor scheme the highest number of PCSP is medium (63.6%), for civil servant is also the same where medium is the highest (69.3%) and for voluntary scheme is the same (86.6%). Among this three type of insurance civil servant scheme is better as the PCSP for good scale is higher that the others (12.6%). But the chi square test shows that there is no correlation between %CSP and insurance enrollment. The result of differences between type of insurance is we should accept Ho means there is no difference between type of insurance in term of % conforming to standard guideline (confidence interval 0.05). The result of the test are: χ^2=9.516, p=0.141 and df=6 for hypertension and χ^2=1.041, p=0.5 and df=2 for dyspepsia while for ANC the test did not conducted as the result is exactly the same.

Table 6. Conforming to standard procedures (CSP) for hypertension by insurance enrollment

% Conforming standard procedures	Insurance enrollment		
	Uninsured	Insured	Total
Good (70 – 89%)	3	21	24
% within Insurance enrollment	33.3%	11.3%	12.3%
Medium (40 – 69%)	6	129	135
% within insurance enrollment	66.7%	69.3%	69.2%
Poor (< 40%)	0	36	36
% within insurance enrollment	-	19.3.0%	18.4%
Total	9	186	195
% within type of insurance	100%	100%	100.0%

χ^2 5.140, p = 0.077 , df=2.

Table 6.1. % Conforming standard procedures (CSP) for hypertension by type of insurance

% Conforming standard procedures	Type of insurance			
	Pro-	Civil S	Voluntary	total
Excellent (> 90%)	-	-	-	
% within Insurance enrollment				
Good (70 – 89%)	4	16	1	21
% within Insurance enrollment	9.1%	12.6%	6%	11.3%
Medium (40 – 69%)	28	88	13	129
% within insurance enrollment	63.6%	69.3%	86.6%	69.3%
Poor (< 40%)	12	23	1	36
% within insurance enrollment	27.3%	18.1%	6%	19.4%
Total	44	127	15	186
% within type of insurance	100%	100%	100%	100.0%

χ^2=9.516, p=0.141 and df=6.

It is the same with PCSP for dyspepsia, there is no excellent result for both group. Both group is similar where the highest is medium 82.3 for un insured and 78% for insured than the second high is good (11.7 and 11%) and the smallest is poor, 9.1% and 9.9 %. Within insured group it is the same for three type of insurance where result of PCSP mostly is medium than for pro poor scheme number second is poor (12.8%), civil servant is good (14.6) and voluntary scheme both good and poor have same percentage (11%). The results of hypothesis testing are as follows χ^2=0.4089, p=0.915 and df=2 for insurance enrollment and χ^2=1.041, p=0.5 and df=2 for type of

insurance. Based on this result we should accept Ho, and stated that there is no difference between insured and uninsured regarding this indicator although If we compared the percentage the uninsured group get better result than the insured .

Table6.2. % Conforming standard procedures (CSP) for dyspepsia by insurance **enrollment**

% Conforming standard procedures	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Good (70 – 89%)	2	10	12
% within Insurance enrollment	11.7%	11%	11%
Medium (40 – 69%)	14	71	85
% within insurance enrollment	82.3%	78%	78.7.0%
Poor (< 40%)	1	10	11
% within insurance enrollment	9.1%	9.9%	10.0%
Total	17	91	108
% within type of insurance	100%	100%	100.0%

χ^2=0.4089, p=0.915

Table 6.3. Conforming to standard procedures (CSP) for dyspepsia by type of insurance

% conforming standard procedures	**Type of insurance**			
	Pro-	**Civil S**	**Voluntary**	**total**
Good (70 – 89%)	3	6	1	10
% within Insurance enrollment	7.7%	14.6%	9.0%	10.9%
Medium (40 – 69%)	31	31	9	71
% within insurance enrollment	79.5%	75.6%	81.8%	78.0%
Poor (< 40%)	5	4	1	10
% within insurance enrollment	12.8%	9.7%	9.0%	10.9%
Total	39	41	11	91
% within type of insurance	100%	100%	100%	100.0%

χ^2=1.041, p=0.5 and df=2

For ante natal care it is clearly shows that there is no different between two group or type of insurance as the result of PCSP and PCST is similar which is 100% . Detailed figures were showed in the table. This good result is due to now the Government of

East Nusa Tenggara Province focusing on maternal and child program in order to decrease the ,maternal death and infant death which supported by some external agencies worked in the province such as WHO, UNICEF and AUSAID.

Table 6.4. Conforming standard procedures (CSP) for ante natal care by insurance enrollment

% conforming standard procedures	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Good (70 – 89%)	28	98	126
% within Insurance enrollment	100%	100%	100.0%
Total	28	98	126
% within type of insurance	100%	100%	100.0%

Table 6.5. Conforming standard procedures (CSP) for ante natal care by type of insurance

% conforming standard procedures	**Type of insurance**			
	Pro-	**Civil S**	**Voluntary**	**total**
Good (70 – 89%)	62	20	16	98
% within type of Insurance	100%	100%	100%	
Total	62	20	16	98
% within type of insurance	100%	100%	100%	100.0%

Overall, there was not enough evidence to define that PCSP and PCST are different between insured and uninsured group as well as between type of insurance. In other words the quality of care regarding to compliance with standard procedures is the same between insured and uninsured as well as between type of insurance. This was happened due to that process aspect will not directly affect the insurance status of patient as here are other things which will influence the process aspect of quality of care.

4.1.3.2. Prescribing pattern

Another indicator to measure quality of care in term of process aspect is prescribing pattern. This study use two indicator : percentage conforming standard drugs and general pattern of prescribing based on the International Rational use of drugs (WHO).

4.1.3.2.1. % Conforming with standard drugs

Regarding compliance with standard treatment we can see that the insured group get better result than uninsured as good category of inured is highest than uninsured (30.6) while the result of poor category is higher in the uninsured group (33.3%). Insured more comply with the standard treatment as the there is a guideline for insured patient treatment which use standard treatment, if not base on the guideline the insurance will not pay claim. So that is the reason why insured group have better compliance to standard treatment. Based on the test there is a correlation between insured and uninsured where $\chi^2 = 9.306$, p = 0.01 and df=2. It is also the same for the group of insurance type where there is a correlation between pro poor scheme civil servant and voluntary scheme where $\chi^2 = 14.188$, p= 0,007 and df=4. But if we see the percentage we can see that the voluntary scheme have better result that two other scheme as the category good of voluntary scheme is higher (66.7%) and less poor category (20%)

Table 6.6. Conforming standard drug (CSD) for hypertension and insurance enrollment

% Conforming Standard Drug	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Good (>66.6%)	2	57	59
% within insurance enrollment	22.2%	30.6%	30.3%
Medium (>33.3 – 66.6%)	4	79	83
% within insurance enrollment	44.4%	42.5%	42.6%
Poor (0 – 33.3)	3	50	53
% within insurance enrollment	33.3%	26.9%	27.2%
Total	9	186	195
% within insurance enrollment	100.0%	100.0%	100.0%

$\chi^2 = 9.306$, p = 0.01 and df=2.

Table 6.7. % Conforming Standard Drug(CSD) for hypertension and type of insurance

% Conforming Standard Drug	Type of insurance			
	Pro-	Civil S	Voluntary	total
Good (>66.6%)	17	30	10	57
% within insurance enrollment	38.6%	23.6%	66.7%	30.6%
Medium (>33.3 – 66.6%)	18	59	2	79
% within insurance enrollment	40.9%	46.5%	13.3%	42.5%
Poor (0 – 33.3)	9	38	3	50
% within insurance enrollment	20.5%	29.9%	20.0%	26.9%
Total	44	127	15	186
% within insurance enrollment	100.0%	100.0%	100.0%	100.0%

χ^2= 14.188, p= 0,007 and df=4.

To determine whether there is a significant difference between those group t test was used and the result is as follows:

Table 6.8. Mean of %CSD of Hypertension patient.

Enrollment of health insurance	N	Mean	Std. Deviation	Std. Error Mean	Min	Max
Uninsured	186	66.63	24.517	1.798	33	100
Insured	9	62.92	26.067	8.689	33	100

t= 0.442 df=193 p=0.659

As p -value is less than the probability with confident interval 0,05, we should accept Ho which stated there is no difference between inured and uninsured group in term of %CSD for hypertension.

For dyspepsia PCSD of both group is the same where medium is the highest in both group (41.2 % and 49.5%) than followed by good and poor have same percentage for un-insured (29.4%). For Insured group the second highest is poor (31.8) and followed by good (18.7). From further analysis result it shows that there is no significant correlation of PCSD between insured and uninsured group for dyspepsia cases where χ^2=1.041, p=0.59 and df=2. The result also applied for group f of insurance type where there is no differences between those groups where there is no correlation between those groups with χ^2=2.32, p=0.6 and df=4.

Table 6.9. % Conforming Standard Drug (CSD) for dyspepsia by insurance enrollment

% Conforming Standard Drug	Insurance enrollment		
	Uninsured	Insured	Total
Good (>66.6%)	5	17	22
% within insurance enrollment	29.4%	18.7%	20.3%
Medium (>33.3 – 66.6%)	7	45	52
% within insurance enrollment	41.2%	49.5%	48.1%
Poor (0 – 33.3)	5	29	34
% within insurance enrollment	29.4%	31.8%	31.5%
Total	17	91	108
% within insurance enrollment	100%	100%	100.0%

χ^2=2.32 df=4, p=0.6

Table 6.10. % Conforming Standard Drug (CSD) for dyspepsia by type of insurance

% conforming standard treatment	Type of insurance Pro-	Civil S	Voluntary	total
Good (>66.6%)	10	6	1	17
% within type of insurance	25.6%	14.6%	9%	18.7%
Medium (>33.3 – 66.6%)	18	21	6	45
% within type of insurance	46.1%	51.2%	54.6%	49.4.0%
Poor (0 – 33.3)	11	14	4	29
% within type insurance	28.2%	34.1%	36.4%	29.9%
Total	39	41	11	91
% within type insurance	100%	100%	100%	100.0%

χ^2=4.07 df=6, p=0.67

Below is the hypothesis testing for the differences between groups:

Table 6.11 Mean of %CSD of Dyspepsia patient

Enrollment of health insurance	N	Mean	Std. Deviation	Std. Error Mean	Min	Max
Uninsured	91	61.12	22.923	2.403	33	100
Insured	17	64.66	24.929	6.046	33	100

t= -5.77 df=106 p=0.565

As the p – value is greater than 0.005 we should accept Ho, means there is no difference between insured and uninsured patient regarding % CSD for dyspepsia

For ante natal the result is similar where medium is the highest and followed by good (28.6% and 15.3%). Un-insured group do not have poor result where insured group poor category is 12.2%. As there result is similar between two group, it is confirm that there is no correlation between two group where χ^2=4.725, p=0.94 and df=2. Result for PCST of insurance type group is also the same there is no significant correlation between those three scheme where χ^2=3.694, p=0.449 and df=4. Detail result available in appendix A (table 3.10 and 3.11)

Below is hypothesis testing for differences on the PCSD of ANC patient

Table 6.12. Mean and insurance enrollment of ANC patient

Enrollment of health insurance	N	Mean	Std. Deviation	Std. Error Mean	Min	Max
Uninsured	98	87.17	23.235	2.347	33	100
Insured	28	96.43	13.113	2.478	33	100

t= 0.446 df-124 p=0,046

Based on the result we should reject Ho as p value is less than probability (0.05), means that there is significant different within insurance enrollment group.

Overall result for compliance to standard is only patient with ante natal care have a significant different between inured and uninsured and also between type of insurance. The result are insured patient have higher compliance and among insurance the voluntary have higher compliance.

4.1.3.2.1. General indicators of prescribing pattern

Table 6.13.; 6.14. and 6.15. describes the general indicators of prescribing pattern for each tracer (hypertension, dyspepsia and ante natal care). For hypertension There is no significant correlation and different for both group regarding prescribing pattern as based on the chi square we should accept the Ho which is there is no

correlation between both group and based on the t test we should accept Ho which is there is no difference between both group. There are 5 indicators included in this study to measure the prescribing pattern which are : number of drugs, no of generic drugs, % of generics drugs, number essential drugs and % of essential drugs.

Table 6.13. General indicators of prescribing pattern for hypertension by insurance status

Indicators	Un-insured	Insured	χ (p value)	t test (p
No of drugs	2.37 (0.808)	3.28 (1.22)	0.207	1.26 (0.207)
No of Generic Drugs	2.1 (0.78)	2.8(1.25)	0.1	1.63 (0.103)
% of Generic drugs	76.85 (23.48)	83.57 (22.27)	0.35	0.925 (0.35)
No of Essential drugs	1.78 (0.883)	2.36 (1.1)	0.13	1.5 (0.1340
% of Essential drugs	64.8 (26.92)	71.48 (25.3)	0.446	1.68 (0.09)

Table 6.14 shows that there is correlation between insurance enrollment with some of the general prescribing indicators such as % generic drugs, essential drugs and % of essential drugs (star marked). And based on the t test there is a significant difference between insurance enrollment with some of general prescribing indicators : No of generic drugs, essential drugs and % of essential drugs. It is shown that uninsured got more generic drugs and essential drugs. Uninsured got more essential drugs might be due to sometimes drugs for insured patient is out of stock and insured patient should give additional pay for the drugs but mostly insured patient do not want to give additional pay so the doctor will not give the drugs although it is an essential drugs.

Table 6.14. General indicators of prescribing pattern for dyspepsia by insurance status

Indicators	Un-insured	Insured	χP-value	t test (p
No of drugs	2.82 (1.07)	2.35 (0.99)	0.79	1.77(0.079)
No of Generic Drugs	2.76 (1.47)	2.21 (0.91)	0.6	2.2(0.029)*
% of Generic drugs	97.06 (12.27)	95.7 (12.58)	0.03*	-0.41(0.68)
Essential drugs	2.42 (0.99)	1.66 (0.97)	0.005**	2.7(0.007)**
% of essential drugs	84.12 (18.86)	69 (30.8)	0.049*	-3.9(0.000)**

For ante natal care the result is quite different with two previous group as the result for ante natal care is almost homogen where percentage of generic drugs for both group is almost 100% and percentage of essential drugs is 100% for both group.

Table 6.15. General indicators of prescribing pattern for ante natal care by insurance status

Indicators	Insured	Un-insured	χtest (p)	t test (p)
No of drugs	1.87 (0.397)	1.96 (0.89)	0.214	-1.2 (0.21)
No of Generic Drugs	1.86 (0.38)	1.96 (0.02)	0.15	-1.49(0.15)
% of Generic drugs	99.9 (3.36)	100	0.59	-0.53(0.59)
Essential drugs	1.87 (0.397)	1.96 (0.189)	0.181	-1.25(0l21)
% of essential drugs	100%	100%	0	-0.006

Note: Number in the bracket under column insured and uninsured is standard deviation

4.1.4. Outcome of health services

The indicators for analyzing outcome of health service as a measurement of quality of care is patient satisfaction. Below are the result of general satisfaction of the patients with and without insurance and between type of health insurance.

Table 7. shows the general satisfaction of both group and type of insurance where 60.6% patient were satisfied and 39.4% were not. Out of 60.6% satisfied patient, 72.2% were from uninsured and 58.9 were from insured group. In the contrary, the percentage of dissatisfied is higher from inured than uninsured patient. For group of insurance type the most high patient satisfaction if from civil servant scheme and for dissatisfied the most was from civil servant also. According to table 7 uninsured patient are more satisfied compared with insured this reflect the reality that there are many people cover by insurance (government insurance) but do not want to use it due to they feel more comfortable and satisfy if come under uninsured patient. But based on the statistic test : χ^2=3.491, p=0.06 and df=1, we should accept Ho and stated there is no difference between both group in term of satisfaction. The results for type of insurance in term of differences between insurance enrollment and satisfaction is similar with previous analysis where there is no differences between type of insurance and satisfaction with χ^2= 4.357 p= 0.113 df=2. Although the percentage of insured

patient which satisfied is higher but we can not say that the uninsured patient is more satisfy as the result is not significant.

Table 7 General satisfaction and insurance enrollment

General Satisfaction	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Satisfied	39	221	260
% within Insurance enrollment	72.2%	58.9%	60.6%
Dissatisfied	15	154	169
% within Insurance enrollment	27.8%	41.1%	39.4%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2= 3.49, p = 0.06; df=

Table 7.1 Patient satisfaction and type of health insurance

General Satisfaction	**Type of insurance**			
	Pro-poor	**Civil**	**Voluntary**	**Total**
Satisfied	50	84	20	154
% within Insurance	34.5%	44.6%	47.6%	41.10%
Dissatisfied	95	104	22	221
% within Insurance	65.5%	55.4%	52.4%	58.9.0%
Total	145	188	42	375
% of Total	100%	100%	100%	100.0%

χ^2= 4.357 p= 0.113 df=2

To see whether there is correlation between satisfaction with perception of waiting time, capacity of physician and perception of consultation time of insured patient we did further analysis. The results shows that the more people think very long to wait the more dissatisfied the patient and this result is significant where χ^2=59.9 p=0.000 df=4. The same also for perception on capacity of physician the more patient think the physician is good the more satisfied the patient, with significant result: χ^2= 164.7 p= 0.000 df=3. Detail results available in appendix A (table 4.2. and 4.3.)

As there are many dimension on the satisfaction this study also included analysis the differences on the satisfaction dimension between insured and uninsured and type of insurance. There are five dimension of satisfaction which are tangible, reliability, responsiveness, empathy and assurance. Only one dimension has differences result between insurance enrollment which is responsiveness where the uninsured less satisfied (51.9%) than the insured (74.4%). Detail result available in the appendix C (table 4). This result is in the contrary with general satisfaction result where uninsured is more satisfied.. although not statistically significant difference. Regarding differences of satisfaction dimension between type of insurance it is similar with insurance enrollment where only one has significant differences which is responsiveness with χ^2= 2.15 p= 0.001 df=6. Civil servant scheme is more satisfied in responsiveness compared with two others scheme. Detail table available in appendix C (table 9). In summary only responsiveness has significant difference between insured and uninsured and type of insurance this is might be due to the nurse or physician were more aware and response to the civil servant as usually they more brave to criticize the health personnel compare to other scheme. But this is need to be proved trough a qualitative survey.

Table 4.4., 4.5., 4.6., 4.7. in the appendix A shows the relation between satisfaction and perception on waiting time, capacity of physician and consultation time. The result shows that there are correlation between satisfaction with perception on waiting time, perception on capacity of physician and consultation time but there is no correlation between satisfaction and perception of consultation time as people may have many dimension to stated whether the time is too long or to short.

There are two additional indicators which in some theory of reality there is a difference regarding waiting time and consultation time for insured and uninsured group or between difference type of insurance. If we compare waiting time of inured and uninsured group we can see that there is no significant correlation with χ^2= 9.48 p=0.09 df=5 and if we compare the mean and do the t test it shows that there is no difference between both group in term of waiting time (t= 1.198 df=427 p=0.232). This result reveals that the waiting time for inured or uninsured is the same. So there will be no difference on waiting time if you come to the hospital under insurance or

not. If we see the number the waiting time is very long (maximum 300 minutes) and it might be will affect the satisfaction.

Regarding consultation time the result shows a significant correlation between inured and uninsured group t where χ^2= 31.9 p=0.01 df=4. According to table 7.3the insured people get less time for consultation compared with the uninsured., where for category 1 and 2 of insured people are higher than uninsured. This is shows that uninsured people get services or consultation longer than insured patient. The test for differences shows that there is a significant differences between inured and uninsured group in term of consultation time with t= -2.234 df=427 p=0.026. It means that we should reject Ho (Ho= There is no differences). In conclusion, uninsured patient get consultation more compared with insured. It is need to do quality research to revealed the reason behind this result as based on the medical ethics the physician should treat the insured and uninsured in the same way. But this might be related with the incentive to doctor whether it is deferent or not for giving service to both group. In the practice sometimes the physician will do all the request or question of uninsured patient as the patient pay more than the insured. But it is depend also on the qualification of the physician whether they follow the standard of procedures. Or maybe because there were many patient so the physician just give short services. A qualitative survey was needed to answer all these question.

Table 7.2. Insurance enrollment and waiting time

Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum
Uninsured	85.56	54	72.39	10	240
Insured	97.41	375	67.3	1	300
Total		429		1	300

χ^2= 9.48 p=0.09 df=5 t= 1.198 df=427 p=0.232

Table 7.3. Insurance enrollment and consultation time

Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum
Uninsured	12.59	54	6.8	2	30
Insured	10.61	375	5.975	1	40
Total		429		1	40

t= -2.234 df=427 p=0.026

Results of type of insurance regarding waiting time and consultation shows that there is a significant correlation between type of insurance and waiting time with χ^2= 3.04, p= 0,011 df=10 and there is a significant different between pro poor and civil servant scheme only with t=-4.072 df=331 p=0.000. Most of civil servant have to wait longer than the pro poor scheme. For consultation time result shows that there is a significant correlation between type of insurance with χ^2= 15.8 df=8 p= 0,044. And only pro poor and civil servant scheme have a significant difference in term of consultation time with t=3.22 df=331 p=0.001. Most of the civil servant got less consultation time. Detail result is available in the appendix A (table 4.8, 4.9, 4.10, 4.11).

Result of waiting time did not reflects that the pro poor scheme should wait more long time than the other type of insurance. What is shown here is pro poor scheme got better services compare with civil servant in term of waiting time and consultation time. We can not get the reason why this is happened as it is need further study to revealed by this could happen. There are many factors influences waiting time and consultation time. Waiting time is more dealing with the management of the hospital as the place for delivery the service for both group is the same. Mostly the reason why patient should wait too long is because the physician have not yet arrived or have other urgent thing to do. During the survey it was observed that sometime the physician late almost for 3 or 4 hours. Although there are two or three doctor in the internal medicine outpatient department but if one or two physician late it will affect the waiting time as there many patient in this OPD (200/ day). Regarding consultation time it is more dealing with the physician deliver the service. Some study or theory mention that the physical examination should be done at least 15 minutes but if we see the result the mean is only 10 – 12 minutes. It is under the recommendation. Improvement the skill of the physician is as on way out.

Waiting time and consultation time is more have affect on the satisfaction of patient and in order to know whether have effect or not this study did another analysis using logistic regression.

To analyze the factor affecting patient satisfaction as the outcome of quality of care the Logistic regression was use and the result is on table 7.2.

Table 7.5. Logistic regression of patient satisfaction

Variable	Coefficient	Z statistic	P - value
C	-0.30322	-0.19882	0.8424
RES	0.166083	0.601465	0.5475
DEDUC1	0.029695	0.069638	0.9445
DEDUC2	0.003448	0.008919	0.9929
INC	-1.26E-08	-0.065126	0.9481
INSE	-3.11074	-0.838499	0.4018
DINST1	1.184529	1.029734	0.3031
DINST2	1.01865	0.916605	0.3593
DINST3	1.070009	0.290846	0.7712
PAYMEC1	1.87184	0.529126	0.5967
PAYMEC2	0.873165	0.248631	0.8036
COSTPRV	1.97E-05	2.936244	0.0033
WAITM	-0.0061	-2.454399	0.0141
CONSTM	0.071316	1.968914	0.049
DCAPPERS1	-3.1699	-2.763235	0.0057
DCAPPERS2	-3.54723	-3.186223	0.0014
DCAPPERS3	-0.56405	-0.518084	0.6044
MEDPROCS	0.033681	3.308215	0.0009
STDTRPS	-0.00153	-0.229701	0.8183
DPAGE	-0.21161	-0.47297	0.6362
DWORKEXP	0.44362	1.085164	0.2778
DSPEC	-0.2968	-0.590508	0.5548
McFadden R-squared	0.473464		
Obs with Dep=0	169		
Obs with Dep=1	260	Total obs	**429**

The result of logistic regression shows that there are five variable which have significant result in affecting satisfaction of the patients. Those variable are waiting time, consultation time, cost form provider perspective, capacity of physician from patient perception and medical procedures/ compliance with standard procedures. The results shows that most of the variables which affecting the satisfaction is factors that directly expose to the patient and categorized as input and process aspects.

In improving efficiently this study tried to exclude some of in significant variables and the result are those variable are more significant. Result is in the table below:

Table 7.12. Logistic regression of patient satisfaction

Variable	Coefficient	Z statistic	P - value
C	-1.18243	-1.8441	**0.0652**
WAITM	-0.00644	-2.70879	**0.0068**
CONSTM	0.070591	2.053402	**0.04**
MEDPROCS	0.032081	3.58646	**0.0003**
DCAPPERS1	-2.51959	-5.37435	**0.0000**
DCAPPERS2	-2.87304	-8.48142	**0.0000**
COSTPRV	2.05E-05	3.443082	**0.0006**
McFadden R-squared	0.458773		

Obs with Dep=0	169	Total obs	429
Obs with Dep=1	260		

The meaning of the result is the more long the waiting time the probability to be satisfy is less. In the contrary with consultation time , the more longer the consultation time the probability to be satisfy is more. For compliance the standard procedures, the more comply with standard procedures the more satisfy will be. Also the same with cost from provider perspective, the higher the cost the probability to be satisfy is more. This might be relate with drugs, means more drugs is more expenses and lead to satisfaction for the insured patient. And it is applied for the uninsured where there are some of them are rich means they willing to pay more as they think more cost is more high quality of care. And regarding perception on capacity of physician the more the physician in category 1 (poor) and 2 (fair) the probability to be satisfy is lesser, means the more people think the capacity is poor the less satisfied the patient will feel.

It shows that the insurance enrollment and type of insurance not give significant result with satisfaction. It means that satisfaction of patient do not depend on whether the patient insured or not. This is might as an answer why the coverage of voluntary insurance is low One to be considered is that there are many interpretation regarding satisfaction.

4.2. Analysis of Primary care facilities.

This study also analyze the quality of care at primary care as there is referral link between secondary and primary care. The insurance scheme included in the analysis for public primary care is only two: pro poor scheme and civil servant.

4.2.1. Public primary Care (Health Center/ Puskesmas)

4.2.1.1. General description

From general descriptive it shows that for public primary care the highest age group is less than 30 years for insured (46.7%) and uninsured (65.8%) group. Within insured group, for pro poor scheme the highest is age less than 30year while civil servant the highest is age between 30-50 years. Detail result shown in appendix B (table 1).

In term of gender, percentage of female is higher than male in both group, 78.3% for uninsured and 72.8% for insured. Within group of insurance, 79.2% are female for pro poor scheme and 65.5 are female for civil servant. Male percentage is higher in civil servant (34.5) compared to pro poor scheme (20.8%). There is significant correlation between gender and type of insurance with $\chi 2=4.23$ df=1 p=0.04 .

Education level insured patient is similar where for insured 64.1% is Junior and senior high school as well as for insured patient 67.8%. Within type of insurance, for pro poor scheme mostly the education level is junior and senior high school (68.8) , it is applied also for civil servant scheme (65.1%). There is no significant correlation between insured and uninsured with education level, but there is a significant different between type of insurance and level of education where $\chi^2=24$ p=0.000 df=5. Detail result is in the appendix B (table 1.20).

In term of area residence area whether it is rural or urban, the result shows that only few people from rural area (Insured 1.1% and uninsured 0%). This is due to people in rural area will go to health center near their house. They will go to the capital if need further treatment at secondary care. (referral).

According to table 8.1. which shows the relation of income level with insurance enrollment and type of insurance. From the result we can see that insured

patient mostly have income less than 500,000 (30.6%) and uninsured patient mostly have income 500,00-1,000,000 (35.0%).Within insured group, the income of people covered by pro poor scheme mostly is below 500,00 rupiah where for civil servant mostly is above 500,00. This result reflects the reality that pro poor scheme id for poor people which have low income. There is a significant correlation between insured and uninsured patient where χ^2= 15.34 p= 0.009 df=5. And also there is a significant correlation between type of insurance and level of income where χ^2= 80.01 p= 0.000 df=5

Table 8.1. Income level with insurance enrollment and type of insurance

Income level	**Insurance enrollment**			**Type of Insurance**		
	Uninsure	Insured	Total	Pro	Civil	Total
Don't have/ know	22	28	50	14	14	28
% within Income	18.3%	15.6%	16.7%	14.6%	16.7%	15.6%
Less than 500,000	31	55	86	52	3	55
% within Income	25.8%	30.6%	28.7%	54.2%	3.6%	30.6%
500,000 –1,000,000	42	37	79	22	15	37
% within Income	35.0%	20.6%	26.3%	22.9%	17.9%	20.6%
1,000,001-1,500,000	15	22	37	6	16	22
% within Income	12.5%	12.2%	12.3%	6.3%	19.0%	12.2%
1,500,001 –2,000,000	8	21	29	0	21	21
% within Income	6.7%	11.7%	9.7%	.0%	25.0%	11.7%
More than 2,000,000	2	17	19	2	15	17
% within income	1.7%	9.4%	6.3%	2.1%	17.9%	9.4%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

χ^{22}= 15.34 p= 0.009 df=5 χ^2= 80.01 p= 0.000 df=5

Table 8.2 shows type of diseases with insurance enrollment and type of insurance. Percentage of ARI of insured patient is higher (55.6%) than uninsured (50%). Within type of insurance percentage of ARI of pro poor scheme is higher (63.5%) compared to civil servant scheme (46.45). For diarrhea, civil servant scheme has higher percentage (39.3) compared to pro poor scheme 15.6%). And for ante natal care uninsured is higher (30.8%) compared to insured patient (17.8%), within insured group pro poor scheme has higher percentage (20.8%) compare to civil servant

(14.3%). There is a significant correlation between type of diseases with type of insurance where χ^2= 12.787 p= 0.001 df=2

Table 8.2. Diseases with insurance enrollment and type of insurance

Diseases / Services	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Pro	Civil	Total
ARI	60	100	160	61	39	100
% within insurance	50.0%	55.6%	53.3%	63.5%	46.4%	55.6%
Diarrhea	23	48	71	15	33	48
% within insurance	19.2%	26.7%	23.7%	15.6%	39.3%	26.7%
Ante Natal Care	37	32	69	20	12	32
% within insurance	30.8%	17.8%	23.0%	20.8%	14.3%	17.8%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=7.46 p=0.04 df=2				χ^2= 12.787 p= 0.002 df=2		

4.2.1.2. Input aspect of quality of care

The indicators of input aspect of quality of care are working experiences of examiner, health examiner (physician, nurse or midwife), cost from provider perspective, facility and capacity of provider from perception of patient. Regarding working experiences there is no significant correlation between insurance enrollment group and type of insurance group. Where mostly both group got service from physician/ nurse/ midwife with working experiences more than 70% (insured= 83.9% and uninsured= 80,8%). It is similar with the age of examiner where mostly were form age above 30years.(Detail tables are available in the appendix B). But there is a significant difference between health examiner and insurance enrollment where insured patient get higher percentage of physician with χ2= 8.85 p=0.012 df=2 as shown in table 8.3. It shows that the uninsured got service more from physician while the insured mostly got from nurse or midwife. This result will effect the conforming to standard procedures as sometimes nurse only did the anamneses without doing the physical examination. And in the health center mostly nurse and midwife who did the physical examination as doctor usually as head of health center and busy with management matter.

Table 8.3. Health Examiner with insurance enrollment and type of insurance

Health Examiner	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Pro	Civil	Total
Physician	23	29	52	16	13	29
% within health ex	19.2%	16.1%	17.3%	16.7%	15.5%	16.1%
Nurse	60	119	179	60	59	119
% within health ex	50.0%	66.1%	59.7%	62.5%	70.2%	66.1%
Midwife	37	32	69	20	12	32
% within health ex	30.8%	17.8%	23.0%	20.8%	14.3%	17.8%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ 2= 8.85 df=2 p=0.012				χ 2= 1.5 df=2 p= 0.466		

In term of cost from provider perspective as shown in table 8.4, there are no significant different between insured and uninsured group off all three kind of diseases. This result is already expected as health center only give primary care services and all the drugs are generic. The hypothesis testing are as follows.

Ho= There is no difference between two groups

H1= There is differences between two groups.

Result of t test for cost of ARI patient between insured and uninsured is t= -9.11 df=158 p=0.364, we should accept Ho as p > 0.05. Result for diarrhea t=-1.225 df=69 p=0,225, we should accept Ho as p>0.05. For ANC t=-0,594 df=69 p=0.55, we should accept Ho as p>0.05. In summary there is no significant difference between insurance enrollment and provider cost.

Table 8.4. Cost of provider perspective Mean, Minimum and Maximum

Diseases	**Insurance enrollment**	Mean	N	Std. Deviation	Minimum	Maximum	P value
ARI	Uninsured	11898	60	2368.5	7000	15,500	
	Insured	11225	100	2356.3	6000	15,000	
	Total	11145.3	160	2384.3	6000	15,500	0.37
Diarrhea	**Uninsured**	12,195.65	23	1934.9	9000	15000	
	Insured	11,614.6	48	1839.9	7000	15000	
	Total	11,802.8	71	1871.45	7,000	15,000	0.54

Diseases	Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum	P value
ANC	Uninsured	8000	37	1263.8	7000	15000	
	Insured	7,828	32	1118.8	6000	12,500	
	Total	7,920.3	69	1193.2	6000	15000	0.27

The other indicators regarding input aspect for quality of care are perception of patient on the facility and capacity of examiner. Based on the result there are no correlation between insurance enrollment with perception of patient on the facility and capacity of examiners ($\chi 2$= 4.3 p=0.227 df=3). But there is a significant correlation between type of insurance with perception on facility($\chi 2$= 19.6 p= 0.021 df=3), but the test shown that we should accept Ho means that there is no difference (t=-1.363 df=298 p=0.174). Detail result available in appendix B (Table 2.2). For perception on capacity of examiner there are no significant correlation between inured and uninsured and also between type of insurance with chi square result as follows: χ 2= 4.6 p=0.197 df=3 and $\chi 2$= 3.2 p= 0.35 df=3). Detail can be seen in appendix B (table 2.3).

In summary regarding input aspect there is no significant difference between insured and uninsured. For cost of health services it shows that uninsured get higher cost than insured but the result is not significant. These result already expected as public primary care is own by the government an have some standard should be followed.

4.2.1.3. Process aspect of quality of care

Process of quality was measure by percentage of conforming with standard procedures, standard treatment and WHO INRUD indicators. For primary care there is a national standard for both standard and it is become a regulation that these guideline should be applied at the primary care facilities. The analysis were done by analyze PCSP and PCST within each diseases.

The result shown that the PCSP between insured and uninsured is almost similar where for ARI category good above only 10% for uninsured and 11% for insured and there is no significant correlation between both group ($\chi 2$= 0.84 p= 0.933

df=4). For diarrhea is similar for uninsured and insured where category good above is 39.1% for uninsured and 31.3% for insured. There is no significant correlation between both group ($\chi2$=0.65, p=0.72, df=2) .But it is a slightly difference for ANC where uninsured patient get better result (good= 100%, see table 8.5). The difference of the result due to at the health center the examiner is not only physician but nurse and midwife also delivery service which sometime have different compliance with standard. Based on the statistic test there is a significant correlation between both groups ($\chi2$= 4.91 p=0.027 df=1) – see table 8.5. For testing the hypothesis that there is a difference t test was done with result t=2.26 df=67 p=0.027. As $p < 0.05$ we should reject Ho ads stated there is difference between insured and uninsured in term of compliance to standard procedures for ANC. Within insurance group there is no correlation between type of insurance regarding PCSP ($\chi2$=0.30 p=0.58 df=1) where the result is almost similar (pro poor 90% is good, civil servant 83.3% good).

Table 8.5. PCSP with insurance enrollment and type of insurance within ANC

Percentage	**Insurance enrollment**			**Type of Insurance**		
conforming standard	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Excellent (>90)	0	4	4	2	2	4
% within insurance	.0%	12.5%	5.8%	10.0%	16.7%	12.5%
Good (70-89)	37	28	65	18	10	28
% within insurance	100.0%	87.5%	94.2%	90.0%	83.3%	87.5%
Fair (40-69)						
% within insurance						
Poor (<40%)						
% within insurance						
Total	37	32	69	20	12	32
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
$\chi2$= 4.91 p=0.027 df=1				$\chi2$=0.30 p=0.58 df=1		

Regarding percentage conforming to standard drug there is a significant correlation between insured and uninsured with PCSD but only for diarrhea cases ($\chi2$=11.7 p=0.008 df=3, table 8.6). While result for ARI and ANC are not significant correlated ($\chi2$= 3.58 p=0.465 df=4 and $\chi2$=3.65 p=0.056 df=1, detail are in the appendix B (table 3.2 and 3.3). Result of t test for PCST and insurance enrollment t= -3.57 df=69

p=0.001. As p value < 0.05 we should reject Ho and accept H1= there is a significant difference between insured and uninsured with PCSD where uninsured got better compliance to standard drugs

Table 8.6. PCSD with insurance enrollment and type of insurance within diarrhea

Percentage	**Insurance enrollment**			**Type of Insurance**		
conforming Standard	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Excellent (>90)	4	1	5	1	0	1
% within insurance	17.4%	2.1%	7.0%	6.7%	.0%	2.1%
Good (70-89)	13	18	31	6	12	18
% within insurance	56.5%	37.5%	43.7%	40.0%	37.5%	37.5%
Fair (40-69)	5	14	19	6	8	14
% within insurance	21.7%	29.2%	26.8%	40.0%	24.2%	29.2%
Poor (<40%)	1	15	16	2	13	15
% within insurance	4.3%	31.3%	22.5%	13.3%	40.6%	31.3%
Total	23	48	71	15	33	48
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
$\chi 2$=11.7 p=0.008 df=3				$\chi 2$= 5.3 p=0.42 df=3		

In term of general indicator only % of essential drug of ARI have significant result of correlation and difference between insured and uninsured where insured patient have high compliance with p value 0.000. (table 8.7). And based on the t test there is a significant difference between insured and uninsured patient means that we should reject Ho. We can conclude that people with insured get higher essential drugs. In term of number of drugs, based on the t test there is a significant difference between insured and uninsured , uninsured get higher number of drugs.

Table 8.7. General indicators of prescribing pattern for ARI by insurance status

Indicators	**Un-insured**	**Insured**	**χ^2(p val)**	**t test (p value)**
No of drugs	4.19 (0.9)	3.86 (0.7)	0.125	-2.3(0.02)*
% of Generic drugs	100	100		
Antibiotic	41.3%	58.70%	0.986	-1.46(0.150
Essential drugs	3.71 (0.9)	3.66 (0.76)	0.57	-0.42(0.63)
% of essential drugs	1.79 (13.74)	95.13 9(12.03)	0.000	2.44(0.016)*

(*) <0.05

According to table 8.8 number of drugs of diarrhea patient have significant correlation between insured and uninsured where mean of insured patient is higher than uninsured with p value 0.041. But based on the t test this result is not significant difference. The result of % generic drugs is similar between insured and uninsured as at health center all the drugs are generic base on the regulation. Table 8.9 shown the general indicator for prescribing pattern for ANC and the result shows that there is no correlation and difference between inured and uninsured and type of insurance. The result of general prescribing is already expect as the all the drugs usually are generic. And treatment for non complex diarrhea and ANC is already known and followed, so the result between the group is similar. One of possible reason why there are similar result between insured and uninsured and between type of insurance because the number and type of drugs in the public primary care is limited so the health staffs can not do much if they want to give more and also there incentive scheme in the public primary care is not balance between physician and nurse/ midwife. There is no incentive from the health provider to deliver difference services (drugs).

Table 8.8. General indicators of prescribing pattern for Diarrhea by insurance status

Indicators	Insured	Un-insured	χ2(P val)	t test (p)
No of drugs	3.69 (0.7)	3.48 (0.9)	0.041	1.03(0.3)
% of Generic drugs	100	100		
Antibiotic	68.5%	31.5%	0.77	0.28(0.773)
Essential drugs	3.66 (0.76)	3.09 (0.73)	0.577	0,67(0,5)
% of essential drugs	95.13 (12.03)	88.7 (19.08)	0.322	-0.995(0,32)

Table 8.9. General indicators of prescribing pattern for ANC by insurance status

Indicators	Insured	Un-insured	χ2(p val)	T test (p val)
No of drugs	2.1 (0.590	2.27 (0.45)	0.15	0.29(0,77)
% of Generic drugs	100	100		
Antibiotic	68.5%	31.5%	0.77	0.31(0.75)
Essential drugs	2.16 (0.57)	2.29 (0.435)	0.15	0.55(0.58)
% of essential drugs	98.96 (5.8)	99.1 (5.48)	0.917	0.65(0.59)

The result of general indicators of type of insurance shows that there is no significant difference between the insurance type. Detail number is available in the summary table. This result already expected, similar with previous reason where almost all drugs of public primary care are generics.

4.2.1.4. Outcome aspect of quality of care

This study use satisfaction of patient as indicator to measure quality of care from outcome aspect. Table 8.10 shows that the percentage of dissatisfy if insured people is higher than uninsured . It means that uninsured are more satisfy. different where both the satisfy patient is more higher than dissatisfied although the result of correlation is not significant (χ^2=5.0 p=0.08 df=2) and the same also for type of insurance with level of satisfaction χ^2= 5.3 p=0.68 df=2.

The hypothesis testing is as follows:

Ho= There is no difference,

H1= there is a difference.

t test result: t=000 df=298 p=1. We should accept Ho as p > 0.05. Means that there is no significant difference between insured and uninsured and type o of insurance in term of satisfaction.

Table 8.10.. General satisfaction and insurance enrollment

GENERAL SATISFACTION	Insurance enrollment		
	Uninsured	Insured	TOTAL
Dissatisfied	20	30	50
% within SATIS	40.0%	60.0%	100.0%
Satisfied	100	150	250
% within SATIS	40.0%	60.0%	100.0%
Total	120	180	300
% of total	40%	60.0%	100.0%

χ^2=5.0 p=0.08 df=2

Table 8.11. General Satisfaction and type of insurance

GENERAL SATISFACTION	Type of health insurance		
	Pro poor scheme	Insured	Total
Dissatisfied	17	13	30
% within SATIS	56.7%	43.0%	100.0%
Satisfied	79	71	150
% within SATIS	52.7%	47.3%	100.0%
Total	96	84	180
% within SATIS	53.3%	46.6%	100.0%

χ^2= 5.3 p=0.68 df=2

If we analyze patient satisfaction using the five dimension of patient satisfaction (tangible, Reliability, empathy, Responsiveness and assurance) only one dimension has significant different between inured and uninsured where the inured is more satisfied on the empathy dimension (77.2%)with χ^2=6.3 p=0.042 df=2. If look at the satisfaction dimension with type of insurance, the result is there is no significant difference between type of insurance means that the satisfaction between type of insurance is similar.

Table 8.12. Average of Empathy with enrollment and type of insurance

Level of satisfaction	Empathy			Empathy		
	Uninsured	Insured	Total	Pro Poor	Civil Ser	Total
Dissatisfied						
% within Insured						
Less satisfied	24	23	47	9	14	23
% within Insured	20.2%	12.8%	15.7%	9.4%	16.7%	12.8%
Satisfied	76	139	215	76	63	139
% within Insured	63.9%	77.2%	71.9%	79.2%	75.0%	77.2%
Very satisfied	19	18	37	11	7	18
% within insured	16.0%	10.0%	12.4%	11.5%	8.3%	10.0%
Total	119	180	299	96	84	180
% within Insured	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=6.3 p=0.042 df=2 χ^2=2.4 p=0,30 df=2

There are other indicators measured in these study which are waiting time and consultation time. Table 8.13 and 8.15 shows that there is no significant correlation between two group in term of waiting time as well as the consultation time. The t test result also shown that we should accept Ho (there is no difference between two group in term of waiting time and consultation time). The result of t test for insurance enrollment and waiting time is t=1.837 df=298 p=0.067 and consultation time is t=-0.377 df=298 p=0.706. The result of within type of insurance is similar where there is no significant difference between type of insurance and waiting time, t= -2.124 df=178 p=0.35. Means that we should accept Ho and stated that there is difference between type of insurance and waiting time. The reason why there are no significant different on the waiting time is due to the primary care started the services mostly was on time so that the patient who came first will get service immediately so the next patient will do not have to wait. It is different with the secondary as usually the services was late started and made long queue and long waiting time.

Table 8.13.Waiting time and consultation time of insured patient

Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum
Uninsured	8.8	120	6.9	1	30
Insured	9.52	180	7.03	1	30
Total	9.25	300	7.004	1	30

t=1.837 df=298 p=0.067

Table 8.14. Insurance enrollment and consultation time

Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum
Uninsured	6.05	120	4.28	1	30
Insured	6.4	180	4.19	1	30
Total	6.3	300	4.225	1	30

t=-0.377 df=298 p=0.706

In order to analyze factor affecting patient satisfaction this study use regression analysis, as shown in table 8.15.

Table 8.15. Logistic regression of patient satisfaction

Variable	Coefficient	Z statistic	P – value
C	21.08636	0.000318	0.9997
DEDUC1	2.528883	2.160614	0.0307
DEDUC2	0.121752	0.574787	0.5654
INC	-5.53E-07	-1.928367	0.0538
INSE	-24.31252	-0.000293	0.9998
DINST1	-0.631958	-0.404397	0.6859
DISNT2	25.91782	0.000229	0.9998
COSTPRV	0.000123	1.103363	0.2699
WAITM	-0.013207	-0.491048	0.6234
CONSTM	0.10141	1.600237	0.1095
DFACPER1	-1.116322	-0.590154	0.5551
DFACPER2	-1.534655	-0.807267	0.4195
DCAPPERS1	-24.84118	-0.000374	0.9997
DCAPPERS2	-22.39609	-0.000337	0.9997
DMED1	0.844291	0.446131	0.6555
DMED2	1.27896	0.696668	0.486
DMED3	0.437466	0.238679	0.8114
DSTDTRP1	3.01926	1.775678	0.0758
DSTDTRP2	3.354735	2.008044	0.0446
DSTDTRP3	2.952759	1.804859	0.0711
DEXAMNR1	-0.028965	-0.033446	0.9733
DEXAMNR2	-1.299719	-0.891176	0.3728
DPAYMEC1	-0.474922	-3.39E-06	1
McFadden R-squared	0.273826		
Total Obs with Dep=0	**52**		
Total obs with Dep =1	**248**	**Total Obs**	**300**

From the result above only income, education level and standard treatment have significant result. Enrollment of insurance is not have significant result in affecting satisfaction of patient. Means that status of insurance enrollment do not make people more satisfy. This condition will not support the effort of government in Indonesia in enlarging the coverage of health insurance across the country.

4.2.2. Private primary care (Private practitioners)

This study also analyze the quality of care of insurance and uninsured patient at private clinics as a benchmark for primary public health care (health center) and also

secondary care (hospital). But the insurance scheme of the clinics are different with public primary care (health center)

4.2.2.1. General Information

According to age, for uninsured patient mostly the patient is in the group of age less than 30 years while for the insured patient the age group mostly is 30-50 years. Means that the age group get services is older in insured group compared with uninsured group. In term of gender as shown in table 9.1. female patient is more than male for both insurance and uninsured. In term of level education most of patient is in group 2 (junior and high school) for both group 40.3% for uninsured and 59.7% for insured . Both insured and uninsured group almost all patient leave in urban area where 1005 for uninsured and 99.5 for insured.

Table 9.1 shows comparison of income level between two group and the result is there is significant different of income level where χ^2 =44.25 p=0.000 df=5. But if we compare type of insurance and income level, there is no significant different (χ^2=12.2 p= 1.016 df=4)

Table 9.1. Income level with with insurance enrollment and type of insurance

Income level	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
Don't have/ know	10	18	28	14	4	18
% within Income	15.6%	11.5%	12.6%	77.8%	22.2%	100.0%
Less than 500,000	2	0	2	9	10	19
% within Income	3.1%	.0%	0.9%	47.4%	52.6%	100.0%
500,000 – 1,000,000	30	19	49	23	8	31
% within Income	46.8%	12.1%	22.2%	74.2%	25.8%	100.0%
1,000,001 –	7	31	38	46	7	53
% within Income	10.9%	19.7%	17.2%	86.8%	13.2%	100.0%
1,500,001 –	6	53	59	28	8	36
% within Income	9.3%	33.7.8%	26.7.0%	77.8%	22.2%	100.0%
More than 2,000,000	9	36	45	120	37	157
% within income	14.1%	22.90%	20.3.0%	76.4%	23.6%	100.0%
Total	64	157	221	14	4	18
% of Total	100.%	100.%	100.0%	77.8%	22.2%	100.0%
χ^2 =44.25 p=0.000 df=5				χ^2=12.2 p= 1.016 df=4		

As shown in table 9.2 that for both group mostly the diseases is ARI where percentage of ARI in insured is higher (66.2%) compared to uninsured (54.6%).

Table 9.2. Disease/ health services with insurance enrollment and type of insurance

Diseases / Services	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Civil Ser	Voluntary	Total
ARI	35	104	139	81	23	104
% within dis /	54.6%	66.2%	62.9.0%	67.5.9%	62.1%	66.2%
Diarrhea	29	53	82	39	14	53
% within dis /	45.3%	33.7%	37.1.0%	32.5%	37.8%	33.8.0%
Total	64	157	221	120	37	157
% of total	100.0%	100%	100.0%	100%	100%	100.0%
χ^2=2.6 p=0.11 df=1				χ^2=0.36=0.54df=1		

4.2.2.2. Input aspect of quality of care

In term of input of quality of care for private primary care it is similar that all get services from general practitioners and same standard of equipment. The only different are the cost from provider perspective, and perception patient on the facility and capacity of the physician. So the analysis for input aspect of private primary care is cost from provider perspective which can be seen in the table 9,3. The result is there is a significant different in term of cost where uninsured patient have higher cost as they get more non generic medicine. For perception on facility and capacity of physician are in the table 9.4 and 9.5.

Based on table 9.3 there is significant correlation between insured and insured with the p value less the 0.05, while the result of t test: -16.759 df=137 p=0.000 (ARI) and -7.9 df= 102 p=0.000 (Diarrhea). The meaning of both t test is we should reject Ho and accept H1 means there is a difference between insured and uninsured in term of general prescribing. The mean shown that the cost of uninsured patient is 50% higher than insured. The explanation of this result is because usually physician prescribed non generic drugs for uninsured and sometime the patients who ask to get non generics drugs. The non generics drugs is more expensive compare to the generic that is why the cost is higher.

Table. 9.3. Cost perspective provider with insurance

Diseases	Insurance enrollment	Mean	N	Std. Deviation	Minimum	Maximum	P value
ARI	Uninsured	79,971.4	35	22971.2	34,000	120,000	
	Insured	37,769.2	104	6833.6	30,000	60,000	
	Total	48,395.7	139	22423.9	30,000	120,000	0.000 (114)
Diarrhea	**Uninsured**	65,637.9	29	19888.5	30.000	100.000	
	Insured	39,037	53	9214.25	27,500	67,500	
	Total	48,445.1	82	18840.8	27,500	100,000	0.000 (59)

Table 9.4 and 9.5 (appendix) shows the perception of facility and capacity of health services with insurance status and type of insurance. The result shows that mostly both group feel that the facility and the capacity is good or very good. 100% of uninsured patient said that the facility is good while insured 82.2%. Based on the correlation test there is a significant correlation between insured and uninsured with $\chi 2= 8.8$ $p=0.003$ $df=1$. T test : $t= 1.72$ $df=219$ $p=0.87$, as $p>0.05$ we should accept Ho, there is no difference between two group. Within type of insurance it is shown that poor patient mostly said that the facility ifs goo (88.3) while civil servant only 62.2% said good. Detail result is in the appendix C. ($\chi 2= 14.4$ $p= 0.06$ $df=3$)

Regarding perception on capacity of examiner 95.3% uninsured patient said the capacity is good while only 79% of insured patient say good. Based on the independent test there is a correlation between perception on capacity and both group with $\chi 2= 13.07$ $p=0.001$ $df=2$ and within type of insurance there is no correlation ($\chi 2= 4.4$ $p= 0.108$ $df=2$). Result of t test for insurance enrollment and perception on capacity: $t= 3.03$ $df = 219$ $p=0.003$. As $p < 0.05$ we should reject Ho and accept h1 which stated there is a difference between two group in term of capacity perception. We can say that the uninsured patient more confidence got services from the physician or have more positive thinking about the physician .

4.2.2.2. Process aspect of quality of care

In term of compliance with standard procedures there is no significant different between two group. We can see that the compliance to standard procedures of both

group mostly are good or fair. There is no poor or excellent result. Only PCSD of ARI between insured and uninsured group have significant correlation where χ^2=10.42 p=0.005 df=2 and the insured has better result as the excellent criteria is higher than the insured group (28.85) for inured and 14.3 for uninsured). The reason why insured more comply with standard treatment is due to the physician should follow the guideline form the insurance company which based on the national standard treatment. If the physician did not followed the insurance will not reimbursed the cost. But based on the test (t=-0.7 df=137 p=0.944) there is no significant difference between both groups.

The result of PCSP insured have higher on excellent category (10.1) while uninsured 8.6%, but this result is not significant

Table 9.4. PCSD with insurance enrollment and type of insurance within ARI

Percentage	**Insurance enrollment**			**Type of Insurance**		
conforming standard	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
Excellent (>90)	5	30	35	24	6	30
% within insurance	14.3%	28.8%	25.2%	29.6%	26.1%	28.8%
Good (70-89)	29	55	84	42	13	55
% within insurance	82.9%	52.9%	60.4%	51.9%	56.5%	52.9%
Fair (40-69)	1	19	20	15	4	19
% within insurance	2.9%	18.3%	14.4%	18.5%	17.4%	18.3%
Poor (<40%)						
% within insurance						
Total	35	104	139	81	23	104
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=10.42 p=0.005 df=2 χ2= 0.164 p=0.92 df=2

According to table 9,5 regarding general indicator pattern for ARI, uninsured got more drugs, got less generic drugs, got more antibiotic and essential drugs compared with insured patient. Based on the t test there is significant difference between insured and uninsured. This result reflect that physician tends to give more drugs, more antibiotics and more branded name. This result is link with cost where the cost of uninsured is 80% higher than insured.

Table 9.5. General indicators of prescribing pattern for ARI by insurance status

Indicators	Insured	Un-insured	χ2 (p)	t test (p)
No of drugs	3.6 (0.88)	4.2 (0.99)	0.012	-3.27(0.001)**
% of Generic drugs	218 (33.4)	3.9 (16.7)	0.000**	3.05(0.003)**
Antibiotic	63.5%	85.7%	0.014	-2.5(0.014)*
Essential drugs	2.66 (0.9)	2.49 (0.88)	0.34	1.0(0.316)
% of essential drugs	73.6 (19.3)	60.05 (21.77)	0.001**	3.5(0.001)**

Table 9.6. General indicators of prescribing pattern for Diarrhea by insurance status

Indicators	Insured	Un-insured	χ2 (p)	t test (p)
No of drugs	3.23 (1.27)	4.03 (0.94)	0.056	-7.5(0.45)
% of Generic drugs	11.94 (21.6)	14.52 (30.8)	0.000**	-
Antibiotic	37.7%	72.4 %	0.003*	0.29(0.773)
Essential drugs	2.43 (1.2)	2.7 (0.99)	0.506	-9.7(0.334)
% of essential drugs	73.2 (26.75)	66.78 (17.3)	0.14	-1.1(0.27)

From the result of process aspect of private primary care it shows that there is no different in term of compliance with medical procedures but there is significant different in compliance with standard treatment as uninsured patient get more non generic drugs. Between type of insurance, voluntary scheme got higher number of drugs, % of generic drugs, and essential drugs but the result is not significant therefore we can not conclude that the voluntary scheme got better result. Detail numbers are available in the summary table (table 9.9).There are many factors can influence achievement of general indicator of drugs as sometime patient request to physician their own drugs.

Table 9.7 shows result of waiting time and consultation time and there is no significant correlation between insured and uninsured group. t test shown that there is no significant difference between inured and inured where t=1.102 df=219 p=0.272 (accept Ho) and for consultation time the result of t test: t= 0.6 df=219 p=0.522. If

we see the waiting time in primary care is better than hospital as the maximal waiting time in primary care only 30 minutes while in hospital is 300 minutes.

Table 9.7. Description waiting time and consultation time

		N	Min	Max	Mean	Std. Deviation	P Value
Waitm	Uninsured	64	5	30	14.31	5.445	0.56
	Insured	157	1	30	8.68	4.871	
	Total	221	3	60	15.18	7.482	
Const	Uninsured	64	1	20	8.25	3.577	0.805
	Insured	157	3	60	15.54	8.157	
	Total	221	1	30	8.56	4.531	

4.2.2.3. Outcome aspect of private primary care

The result of patient satisfaction of private primary care is 100% satisfied with the services given. So there is no further analysis in term of satisfaction of private primary care.

In conclusion for private primary care, the only significant difference between uninsured and insured groups are cost from input aspect and standard treatment from process aspect. These two indicators are related each other, means treatment received by the patient have effect on the cost. The uninsured got higher cost as the drugs mostly are non generic drugs which are more expenses than generic drugs.

Table 9.8 . Summary of Secondary Care result – Insurance enrollment

Variable	Overall Findings	Insurance Enrollment		p Value	Type of Insurance			p Value
		Uninsured	Insured		Pro Poor	Civil Servant	Voluntary	
INPUT								
Age (above 30years)	There is no significant correlation and difference between age of physician and insurance enrollment, while between Type of insurance voluntary scheme patient get service more from physician age above 30 years	57.40%	53.60%	0.60	48.30%	55.50%	71.40%	0.03*
Work experience (Above 5 years)	There is no significant correlation and difference between work experience of physician with insurance enrollment. Voluntary scheme patient get service more from physician with working experience above 30 years, but result not significant difference and correlated	27.70%	38.40%	0.13	33.10%	41%	48.70%	0.2
Specialty (Have specialty)	Uninsured patient get service more from physician with specialty with significant correlation and difference. Voluntary scheme patient get service more from physician with specialty with significant different	87.10%	69.60%	0.008 **	72.20%	60.10%	92.30%	0.000***
Cost (Provider)								
- Hypertension	There is no significant difference between insured and uninsured group. But between type of insurance, civil servant got higher cost.	60,722.22	55,750.95	0.85	53,433.1	56,889.7	52,866.67	0.788
- Dyspepsia		33,970.59	31,710.95	0.612	26,410.26	36,341	29,563	0.012*
- ANC		22,946.43	22,275.5	0.079	24,766.1	32,800	25,468	0.001**
Perception of facility (above good)	Both group have similar result no significant difference as well as between type of insurance	79.60%	76%	0.43	80%	72.30%	78%	0.26
Perception of capacity (Above good)	There is no significant difference on perception on capacity between two groups, but there is a significant difference between type of insurance where voluntary scheme is the highest	74%	62.90%	0.46	93.00%	55.30%	69.00%	0.03*

Variable	Overall Findings	Insurance Enrollment		p Value	Type of Insurance			p Value
		Uninsured	Insured		Pro Poor	Civil Servant	Voluntary	
PROCESS ASPECT								
1. PCSP								
- Hypertension (Above good)	There is no significant difference between insurance enrollment and between type of insurance and both group have similar PCSP.	33.30%	11.30%	0.077	9.10%	12.60%	6%	0.35
- Dyspepsia (Above good)	Uninsured and insured have similar compliance, and no significant difference PCSP and insurance enrollment, as well as between type of insurance	11.70%	11%	0.91	7.70%	14.60%	9%	0.642
- Ante Natal Care	All the same: 100%	100	100	-	100%	100%	100%	
2. PCSD								
- Hypertension (> good)	Insured and voluntary scheme have better compliance, significant different	22.20%	30.60%	0.01*	38.60%	23.60%	66.70%	0.013*
- Dyspepsia (> good)	Both groups got similar compliance on PCSD	29.40%	18.70%	0.59	25.60%	14.60%	9%	0.439
- Ante Natal Care (> good)	Uninsured have better compliance with significant difference	28.60%	15.30%	0.04*	71%	80%	81.30%	0.931
3. General prescribing								
a. Hypertension								
- No of drugs	There are no significant difference between insurance enrollment both group got similar result. But there is significant difference on % generic drugs between type of insurance where pro poor scheme got is the highest.	2.37	3.28	0.207	3.18	3.34	3.33	0.763
- No of generic drugs		2.1	2.8	0.1	2.89	2.8	2.53	0.643
- % of generic drugs		76.85%	83.57%	0.35	90.64%	82.64%	75.44%	0.035*
- No of essential drugs		1.78	2.36	0.13	2.36	2.35	2.47	0.929
- % of essential drugs		64.80%	71.48%	0.45	38.78%	33.6%	43.67%	0.868
b. Dyspepsia								
- No of drugs	Uninsured got higher result of these indicators (except for number of drugs) with significant difference. But between type of insurance only one indicator has significant difference: % of essential drugs where voluntary scheme is the highest.	2.82	2.35	0.79	2.26	2.5	2.09	0.338
- No of generic drugs		2.76	2.21	0.029*	2.13	2.13	1.9	0.262
- % of generic drugs		97.06%	95.7%	0.03*	96.4%	94.84%	92.4	0.652
- No of essential drugs		2.42	1.66	0.007**	1.67	1.64	1.55	0.154
- % of essential drugs		84.12%	69%	0.049*	22.04%	21.43%	30.3%	0.038*
c. Ante Natal Care								
- No of drugs	Both group have similar result , no significant difference as well as between type of insurance	1.96	1.87	0.214	1.89	1.8	1.88	0.697
- No of generic drugs		1.96	1.86	0.15	1.87	1.8	1.88	0.756
- % of generic drugs		100%	99.90%	0.59	99.46%	100	100	0.752
- No of essential drugs		1.96	1.87	0.181	1.89	1.8	1.88	0.415
- % of essential drugs		99.6%	100%	0.595	17%	19.8%	19,87%	0.697

Variable	Overall Findings	Insurance Enrollment		p Value	Type of Insurance			p Value
		Uninsured	Insured		Pro Poor	Civil Servant	Voluntary	
OUTCOME ASPECT								
General satisfaction (Satisfied)	Percentage uninsured satisfied is higher than insured. But this result not significant difference statistically. Between type of insurance, voluntary scheme of highest percentage of satisfied but the result is no significant difference means the satisfaction between type of insurance is similar.	77.2%	58.9%	0,06	34.5%	44.6%	47.6%	0.113
Responsiveness (Satisfied above)	Only one dimension of satisfaction has significant difference between inured and uninsured and between type of insurance. The dimension is responsiveness	53.7%	74.6%	0.003	70.4%	82.$%	54.8%	0.001
Assurance (Satisfied above)		88.9%	93.6	0.39	92.8%	95.2%	85.7%	0.131
Tangible (Satisfied Above)		59.3%	64.5	0.54	70.4%	60.1%	64.3%	0.09
Reliability (Satisfied above)		67.9%	82.9	0.57	83.5%	83.5%	78.6%	0.83
Empathy (Satisfied above)		79.6%	81.1%	0.85	82.1%	83%	69%	0.45
Other								
Waiting time	Waiting time of uninsured and insured is the similar, there is no significant difference . But between type of insurance there is a significant difference where civil servant scheme has longest waiting time.	85.56	87.41	0.23	82.83	110.72	88.12	0.001**
Consultation time	Uninsured patient got longer consultation time than insured patient.	12.59	10.61	0.026*	11.7	6.178	11.1	0.006**

(*) Statistically significant - $p < 0.05$
(**) Statistically significant – $p < 0.01$
(***) Statistically significant – $p < 0.001$
p value : Correspond chi square, t and Anova test

Table 9.9 . Summary of Primary Care Result – Public

Variable	Overall Findings	By Insurance		p value	Type of Insurance		p –value
		Uninsured	Insured		Pro poor	Civil servant	
Input							
Age (above 30 yr)	The insured and uninsured , type of insured got similar services in term of age of examiner.	80.8%	83.9%	0.49	83.3%	84.5%	0.83
Work experience (> 5 yr)	The insured and uninsured , type of insured got similar services in term of work experiences	80.8%	83.9%	0.49	83.3%	84.5%	0.83
Examiner (physician)	Uninsured got services from physician higher than insured	19.2%	16.1%	0.012	16.7%	15.5%	0.466
Cost	Cost between the insured and uninsured is similar as well as between type of insurance	11,898	11,225	0.364	11,163.9	11,320.5	0.757
- ARI		12,195	11,614	0.225	12,033.3	11,424.23	0.069
- Diarrhea		8,000	7,828	0.55	7,550	8,291.6	0.29
- ANC							
Perception of facility (> good)	Perception of facility between insured and uninsured is similar but pro poor scheme perception on facility is better.	85%	81.7%	4.3(0.227)	89.5%	72.6%	0.021*
Perception of capacity(> good)	Perception on capacity between insured and uninsured and between type of insurance are similar.	91.7%	83.3%	4.6(0.197)	87.5%	78.6%	0.35
Process							
1. % CSP							
- ARI (> good)	Result of PCSP between insured and uninsured	10.0%	11.0%	0.93	11.5%	10.3%	0.720
- Diarrhea (> good)	are similar except for ANC where Uninsured	39.1%	31.3%	0.68	33.3%	30.3%	0.95
- Ante Natal Care (> excellent)	got better result with significant difference. Between type of insurance result are similar, no significant difference.	0	12.5%	0.027*	10%	17%	0.58
2. % CSD							
- ARI (>good)	Similar between both group and type of	27%	30%	0.465	36.1%	23.1%	0.29
- Diarrhea (>good)	insurance is similar except cost of diarrhea the	73.90%	39.50%	0.008**	46.70%	37.50%	0.42
- Ante Natal Care	uninsured got higher cost.	91.90%	75.%	0.056	70.0%	83.3%	0.4
3. General prescribing							
ARI							
- No of drugs	Insured got better higher number of drugs and	4.19	3.86	0,02*	3.89	3.82	0.67
- % of generic drugs	essential drugs with statistically significant result.	100.00%	100.00%		100%	100%	
- Antibiotics		41.3	58.70	0,15	14.7%	64%	0.986

Variable	Overall Findings	By Insurance		p value	Type of Insurance		p –value
		Uninsured	Insured		Pro poor	Civil servant	
- No of essential drugs		3.71	3.66	0.63	3.64	3.69	0.73
- % of essential drugs		89.89	95.13%		93.96	96.97	0.225
Diarrhea							
- No of drugs	Insured got better result of all indicator but	3.48	3.69	0.3	3.73	3.67	0.77
- % of generic drugs	there are no significant different statically	100%	100%		100%	100%	
- Antibiotics		31.50%	68.50%	0.77	26%	77%	0.72
- No of essential drugs		3.09	3.66	0.577	3.33	3.18	0.58
- % of essential drugs		88.7	95.13	0.322	89.3	88.26	0.51
Ante Natal Care							
- No of drugs	Uninsured got better result except for generic	2.27	2.1	0.77	2.1	2.33	0.288
- % of generic drugs	drugs got similar result, not significant	100	100		100	100	
- No of essential drugs		2.29	2.16	0.75	2.05	2.33	0.181
- % of essential drugs		99.1	98.96	0.58	98.3	100	0.448
Outcome							
General Satisfaction	Satisfaction between insured and uninsured and type of insurance are the similar.	40%	60%	0.08	52.7%	47.3%	0.68
Empathy (satisfied above)	Only one dimension has significant difference which is empathy (insurance enrollment). But for type of insurance is similar	63.9%	77.2%	0.042	79.2%	75.0%	0.030
Others							
Waiting Time	Similar result between type of insurance and type of insurance, there is no significant difference.	8.92	9.52	0.464	9.01	10.11	0.3
Consultation time		6.08	6.46	0.451	6.23	6.75	0.413

(*) Statistically significant - $p < 0.05$
(**) Statistically significant – $p < 0.01$
(***) Statistically significant – $p < 0.001$
p value : Correspond chi square, t and test

Table 9.10 . Summary of Primary Care result – Private

Variable	Overall Findings	By Insurance		p –value	Type of Insurance		(p –val)
		Uninsured	Insured		Civil Servant	Voluntary	
Input							
Cost							
- **ARI**	Uninsured got higher cost than insured, and voluntary scheme got higher cost than civil servant scheme. Both statistically significant	37,769.23	79,971.43	0.000***	35,555.56	45,565.22	0.000***
- **Diarrhea**		65,637.9	39,037.74	0.000***	36,384.62	46,428.57	0.000***
Perception of facility (> good)	Perception on facility of uninsured is higher, statistically significant while between type of insurance is similar.	100%	95.6%	9.8(0.0030*	97.6%	90%	0.06
Perception of capacity(> good)	Perception on capacity is similar between the uninsured and insured and between type of insurance.	100%	100%	13.07(0.001)	100%	100%	0.108
P							
1. % CSP							
- ARI	Similar result between insured and uninsured and between type of insurance	57.20%	61.60%	0.2 (0.87)	58.00%	74%	0.266
- Diarrhea		65.50%	66%	2.3 (0.31)	74.40%	43%	0.073
2. % CSD							
- ARI	Uninsured got higher result. Type of insurance got similar result.	97.20%	81.70%	10.42 (0.005)**			
- Diarrhea		93.10%	92.40%	1.99 (0.9)	97.4%	78.5%	0.072
3. General prescribing							
- ARI							
- No of drugs	Uninsured got higher no of drugs antibiotic, but for % of generic drugs and essential drugs got lesser. Between type of insurance are similar result except for diarrhea, voluntary scheme got higher result on these indicators	4.2 (0.99)	3.6 (0.88)	0.002**	3.58	3.74	0.45
- % of generic drugs		3.9 (16.7)	21.8 (33.4)	0.003**	18.83%	32.646%	0.088
- Antibiotics		85.70%	63.50%	0.014**	54.1%	56.7%	0.782
- No of essential drugs		2.49 (0.88)	2.66 (0.9)	0.316	2.62	2.83	0.334
- % of essential drugs		60.05 (21.77)	73.6 (19.3)	0.001**	72.57	77.61	0.271
- Diarrhea							
- No of drugs		4.03	3.23	0.004**	2.9	4.14	0.001**
- % of generic		14.52	11.94	0.66	6.69	26.57	0.002**

drugs							
- Antibiotics		72.40%	37.70%	0.003	72.4%	37.7	0.003**
Variable	**Overall Findings**	**By Insurance**		**p –value**	**Type of Insurance**		**(p –val)**
		Uninsured	**Insured**		**Civil Servant**	**Voluntary**	
- No of essential drugs		2.7	2.43	0.271	2.08	3.43	0.000***
- % of essential drugs		66.78	73.2	0.245	69.23	84.40	0.68
Others							
Waiting Time	Waiting time and consultation time between insured and uninsured and type of group are similar. There is no significant difference	14.31	15.54	0.27	15.89	13.94	0.207
Consultation time		8.25	8.68	0.522	8.28	9.86	0.86

(*) Statistically significant - $p < 0.05$
(**) Statistically significant – $p < 0.01$
(***) Statistically significant – $p < 0.001$
p value : Correspond chi square and t test

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The quality of care is the most important aspect in improving health outcome which means improving quality of life especially people in East Nusa Tenggara province the poorest province in Indonesia with low health indicators.

Health care problem is the main issue in the policy of government to reduce the mortality rate and morbidity rate, especially in East Nusa Tenggara Province as the achievement of Health Indicators still low. Central Government already have an effort in increasing the number of poor people cover by health insurance as well as civil servant scheme and voluntary scheme. But increasing the coverage only will not solve the problem as there are other aspect which have impact on the health status which is quality of care. It is necessary for local government to make a priority to overcome the health problems and one of the priority is allocate budget in improving quality of care which neglected recently. As the number of people cover by health insurance increasing what government should do is focusing on the quality of care under health insurance.

5.1.1. The quality of care

For analyzing quality of care in term of structure, this study measure characteristic of physician and patient perception on health facilities and capacity of physician and also cost from provider perspective. WHO INRUD guideline was used for analyzing quality of care in term of process, prescribing pattern. Other process indicator measured are conformity to standard medical procedures and therapy. The guideline from Internal Medicine association for hypertension and dyspepsia were used to compare with medical record while for ANC standard from WHO was used.

This study analyze 3 aspect of quality of care which are input, process and outcome and compare between insured and uninsured and also compare between type of insurance at primary care (public and private) and secondary (public hospital). In term of insurance scheme at hospital there are three insurance scheme included (pro

poor, civil servant and voluntary) while for public primary care is only pro poor and civil servant and private is only civil servant and voluntary.

The quality of care of insured and uninsured patient at Prof. W.Z. Johannes Hospital in Kupang municipality were analyzed use tracer method. As a benchmark analysis on two public primary care and 2 private primary care nearby the hospital were done. The tracer for secondary care (hospital) are hypertension, dyspepsia and ante natal care while for primary acre are acute respiratory infection, diarrhea and ante natal care. The quality of care were assessed from perspective of patients and provider but all exposed to patients. The explicit method was applied in evaluating the process aspect of quality of care. Outcome aspect of quality of care used patient satisfaction as indicator.

This study analyze the quality of care from perspective patient and provider. But there is one aspect did not measure which is management care process and arrangement between the provider and payer. Below is the diagram of process of service delivery for insured patient. This condition may reflect that there is no difference between the group due to the heterogeneity of the groups.

5.1.2. General Information of patients

The data were collected by conducting interview to patient who got medical services at hospital for secondary care and health center and private clinics for primary. Information regarding medical procedures ad treatment where collected from medical record of the interviewed patients

From hospital 429 respondents were interview while form health center is 300 respondents and for private clinics are 221 respondents. Total respondents are 950 respondents. For secondary care 375 are insured and 54 uninsured. Hypertension cases are 195, dyspepsia are 108 and ante natal care are 126. Regarding public primary care 120 are uninsured and 180 are insured; among 300 respondents 160 are with ARI cases, 71 with diarrhea and 96 are ante natal care. For private primary care , the number of insured are 157 and uninsured are 64. Among 221 patient 139 are with ARI and 82 are diarrhea. There are no ANC for private primary care. Type of insurance of public primary care are pro poor scheme and civil servant scheme while for private primary are civil servant and voluntary scheme.

General description of the study included age, area of residence, gender, level of education and income level. Most of the respondents from primary and secondary are female due to for ante natal care only female got the services. In term of education level most of the respondents are have education level junior high and senior high school. But people with civil servant scheme and voluntary have education level above high school. For area of residence mostly the patient are from urban areas as the area of the survey is the capital of the province. Regarding income level there is a significant different between insured and uninsured where mostly the insured patient have income in group 1 and 2 while the uninsured in group 3 above.

5.1.3. Result of the analysis

For secondary care there are some significant different between insured and uninsured in term of input, process and outcome aspect. Regarding input there are two indicator have a significant different between insured and uninsured which are specialty of doctor and cost from provider perspective. The result shows that uninsured patient got services more from specialty doctor with χ^2=7.08, p=0.0077, and t= 3.06 p=0.002while in term of cost there is significant correlation between cost and insurance enrollment. There are more significant result between input aspect and type of insurance. Voluntary scheme got highest services from specialty and pro poor scheme has highest compare to civil servant scheme. For process aspect of secondary care only one significant different between two group which is in term of general indicator of drugs where pro poor scheme got highest number of generic drugs. This result is already expected where most of the drugs list of pro poor scheme is generic drugs (drugs list of civil servant and voluntary scheme consist of brand name drugs also). In term of correlation there is a correlation between variable PCSD with type of insurance χ^2 = 9.306 p=0.01 df=2 and between type of insurance is χ^2 = 14.188 p=0.007 df=4 . But there is no significant difference between three type of insurance with t 1.95(0,053). For medical procedures the result is the percentage of compliance on standard procedures of uninsured have higher than insured but the result is not significant with p value 0.053. Regarding consultation time there is significant deferent between two group while for waiting time is not significant. Comparison of

patient satisfaction with inured and uninsured is uninsured is more satisfied but the result is not significant with p value 0.06.

The analysis on the satisfaction was carried out to evaluate the outcome of quality of care of outpatient patients. The result shows that there is no significant different between insured and un-insured patient related to satisfaction for primary and secondary care. The same result also for type of insurance where there is no significant different between three types of health insurance.

Result of factors affecting satisfaction of patient there are five significant variables which are cost from provider perspective, waiting time, consultation time, and capacity of physician from perspective of patients and standard medical procedures. Four of those significant variables are related to services felt/ received by the patients. It means that patient satisfaction is strongly related with experiences of patient in term of medical services. Patient satisfaction will not influence by something that not directly expose to them.

For primary care the analysis was separated between public and private. For private all the respondents are satisfied with the services, there are no difference between insured and non insured in term of satisfaction.

For public primary care in term of input there is no difference between insured and uninsured. But for process aspects there are significant difference between insured and uninsured in term of compliance with standard procedures where uninsured have higher compliance with p value 0.027 for ANC. For compliance with standard treatment uninsured patient have higher compliance with p value 0.008 for diarrhea. Regarding outcome aspect which satisfaction of patient the result is insured more satisfied within the group more dissatisfied within the group, but the test is not significant. For factor affecting satisfaction only education level, income level and standard treatment have significant result.

For private primary care the only difference between insured and uninsured is cost from provider perspective and compliance to standard therapy where uninsured have better result with p value 0.005. In term of cost the uninsured got more higher cost compare with insured with p value 0.000 both for ARI and diarrhea. The higher cost is due to doctor tend to prescribe non generic drugs but sometimes the

patients them selves ask the doctor to prescribe non generic drugs. For outcome (patient satisfaction) the result is 100% satisfy with the services.

As for process aspect of quality of care mainly used medical record there are other factors that can be give impact on the result such as qualification of health professional, availability of equipment and drugs, relation between doctors and patient which lead the health professional to act not based on the standard. One major issues should overcome is regarding influence promotion from pharmaceutical industry which affect the behavior of health professional in some extend.

In summary, only some of the variable have significant result on the difference between group of insured and uninsured and between type of insurance. This is due to there are other aspects which influence the quality of care in the insurance framework but did not measure as already mention in the beginning of this chapter (management and arrangement between provider and payer). Reason why this study did not include those aspect is due to difficulties in getting the information as the location of the study is in the municipality while the information usually at province or even at national level. Heterogeneity is become one cause of why the result shows only limited indicators have significant difference. There is a gap between the insured and uninsured in term of income and how they perceived on the service received as mostly in Indonesia the insured people is people with low income (pro poor scheme) and civil servant with low rank. The uninsured people is people with middle and high income and also near poor people which not eligible for pro poor scheme but can not afford to pay the premium for voluntary scheme. There is also another gap between insured people as this study combine the non contribution with contribution. The non contribution is poor people with low income while civil servant and voluntary are with contribution. Different type of insurance resulting difference perception on the quality they received.

Input aspect is directly effects the quality of care while process and outcome have not as there are other aspect will influence.

5.2. Recommendation

The results shows that the uninsured got better quality of care in term of input, process and outcome, although not all indicator. But this reflects how poor the

quality of care for the insured patient. This result is a contradiction of the purpose of the insurance where it is hoped people within insurance will get better quality of care. With this condition government of East Nusa Tenggara Province now should focus in improving this aspects which will contribute to the improvement of health status of the people.

One aspect to improve the quality of care is on the arrangement and management of the health insurance as this will effect on the behavior of the provider. Government should evaluate the arrangement and management of the health insurance which in some cases effects on the quality of care especially in term of process and outcome. It is hoped that with arrangement and management which accommodate and give benefit to provider , the quality of care will be better.

Factor affecting satisfaction of patient are factors which directly expose by the patient such as waiting time, consultation time, capacity of physician. Based on this result it is need to improve management and administration aspect of the hospital to improve those factors.

As Kupang municipality is the capital of the province this result can be used by other districts as a benchmark but each district need similar study to analyze the quality of care.

Health authority need to do more campaign on the use of generic drugs especially in private clinics and also the use of essential drugs. As the result of PCSP and PSCT is only medium and few good (non are excellent) it is need to do refresher training for doctor .

As the result of quality of care in term of process are not quite good it is need to form quality assurance in hospital and also primary care where for primary care hospital or province/ municipality health office can supervise.

5.3. Limitation of the study

This study can not avoid from certain limitation due to several reasons. First is regarding satisfaction as there are many perception from people to stated whether he/ or she satisfied or not. For poor people they can simply just say satisfied as they do not have to pay, means they will satisfy as long as do not have to pay

although they have to wait for along time or do not satisfy with the performance of the doctors. But in the other way around people who pay they will have higher expectation in stated satisfied or not.

There is limitation in term of sample where the difference is more than 50% (insured 375, uninsured 54). This reflects the result of analysis. It is possible because of this sample that almost of the result is not significant correlated and difference.

Management and arrangement aspect between provider and payer which did nit included in this analysis are as one of the weakness of the study. As the management and arrangement can affect the behavior of the provider.

There is a gap between the insured and uninsured and within insured group which effects the results.

In addition because limited budget and time for this study so that this study only use explicit method to analyze the quality of care. Implicit method using expert perspective are more accurate .

Finally there are barrier in culture which made the result bias as many Indonesian people especially in eastern part where they do not feel comfortable if say something bad about the services they got. They also sometimes can not say the truth as the interview place is still in the health facilities. They feel uncomfortable to say something not good.

5.4. Suggestion for further study

For further study, the measure of outcome should be more specified to avoid different perception. It is suggested not only stated general satisfaction but should mention satisfy from which dimension as the aspect of satisfaction of people is various.

This study only use patient satisfaction as the indicator, for further study ii is need other indicator as measurement of outcome aspect. One of indicator can be used is index of QALY (Quality Adjusted Life Years) as a final and complex measurement of outcomes of care on the health status of patient.

In order to get more accurate result it is necessary to limit the dap between the sample of the group especially within insured group it might be better to separate the contribution and non contribution to make similar perspective of point of views of patient regarding the services.

The methodology of this could be implemented to analyze the quality of care at other hospital especially at the district of the province. The result will be use for local government as their strategy in improve g the health status of their people.

However in order to make the result more accurate and really reflects the condition of quality of care it is need to use implicit method for the analysis.

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APPENDICES

Appendix A. Complete Tables of Secondary Care

I. General Information

Table1.1. Age group of patient and insurance status of patient

Age group of patient	Insurance enrollment		
	Uninsured	Insured	Total
Less than 30 year	18	54	72
% within insurance enrollment	33.3%	14.4%	16.8%
30 – 50 years	27	153	180
% within insurance enrollment	50.0%	40.8%	42.0%
51 – 60 years	5	91	96
% within insurance enrollment	9.3%	24.3%	22.4%
More than 60 years	4	77	81
% within insurance enrollment	7.4%	20.5%	18.9%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2= 20.09; P=0.00 ; DF=3

Table 1.2. Age group of patient and type of insurance

Age group of patient	Type of insurance			
	Pro-poor	Civil	voluntary	Total
Less than 30 year	40	8	6	54
% within insurance	27.6%	4.3%	14.3%	14.4%
30 – 50 years	68	65	20	153
% within insurance	46.9%	34.6%	47.6%	40.8%
51 – 60 years	19	62	10	91
% within insurance	13.1%	33.0%	23.8%	24.3%
More than 60 years	18	53	6	77
% within insurance	12.4%	28.2%	14.3%	20.5%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2 = 58.68 ; p= 0.000, df=6

Table 1.4.Gender of patient and insurance status

Gender	Insurance enrollment		
	Uninsured	Insured	Total
Male	7	113	120
% within Insurance	13.0%	30.1%	28.0%
Female	47	262	309
% within Insurance	87.0%	69.9%	72.0%
Total	54	375	429
% within Gender	100.0%	100.0%	100.0%

χ^2= 6.9 ; P= 0.009 ; DF=1

Table 1.5.Gender of patient and type of insurance

Gender	**Type of insurance**			
	Pro-poor	Civil	voluntary	Total
Male	35	69	9	113
% within Type of ins	24.1%	36.7%	21.4%	30.1%
Female	110	119	33	262
% within type of ins	75.9%	63.3%	78.6%	69.9%
Total	145	188	42	375
% Total	100.0%	100.0%	100.0%	100.0%

χ^2= 7.84 ; p=0.02; df= 2

Table 1.6.Resident and insurance enrollment

Area of resident	**Insurance enrollment**		
	Uninsured	Insured	Total
Urban	44	301	345
% within Insurance	81.5%	80.3%	80.4%
Rural	10	74	84
% within Insurance	18.5%	19.7%	19.6%
Total	54	375	429
% Total	100.0%	100.0%	100.0%

χ^2= 0.04; p= 0.833 ; df= 1

Table 1.7. Resident and type of insurance

Area of resident	**Type of insurance**			
	Pro-poor	Civil	voluntary	Total
Urban	103	166	32	301
% within Type of Ins	71.0%	88.3%	76.2%	80.3%
Rural	42	22	10	74
% within Type of Ins	29.0%	11.7%	23.8%	19.7%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2= 15.89 ; p= 0.000 ; df= 2

Table 1.8. Education level and insurance enrollment

Education Level	**Insurance enrollment**		
	Uninsured	Insured	Total
Elementary school and below	8	101	109
% within Insurance enrollment	14.8%	26.9%	25.4%
Junior and Senior high School	37	200	237

Education Level	**Insurance enrollment**		
	Uninsured	Insured	Total
% within Insurance enrollment	68.5%	53.3%	55.2%
Above Senior high school	9	74	83
% within Insurance enrollment	16.7%	19.7%	19.3%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2= 4.9 ; p= 0,085; df= 2

Table 1.9. Education level and type of insurance enrollment

Education Level	**Type of insurance**			
	Pro-poor	Civil	voluntary	Total
Elementary school and	66	26	9	101
% within Type of ins	45.5%	13.8%	21.4%	26.9%
Junior and Senior high	72	101	27	200
% within Type of ins	49.7%	53.7%	64.3%	53.3%
Above Senior high	7	61	6	74
% within Type of Ins	4.8%	32.4%	14.3%	19.7%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2= 64.7 ; p = 0.000, df= 4

II. **Input Aspects**

Table2. Working Experiences of physician and insurance enrollment

Working experiences of Physician	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
5 years and below	39	231	270
% within insurance	72.2%	61.6%	62.9%
Above 5 years	15	144	159
% within insurance	27.7%	38.4%	37.1
Total	54	375	429
% of Total	100%	100	100

χ^2=2.2 p=0.13 df=1

Table 2.1. Working Experiences of physician and type of insurance

Working experiences of physician	**Type of insurance**			
	Pro-poor	**Civil**	**voluntary**	**Total**
5 years and below	97	111	23	231
% within type of insurance	66.9%	59.0%	58.9%	61.6%
Above 5 years	48	77	19	144
% within type of insurance	33.1%	41%	48.7%	38.4%
Total	145	188	39	375
% of Total	100%	100%	100%	100.0%

χ^2=0.3 p=0.2 df=2

Table 2.2. Patient perception on facility and insurance enrollment

Perception on facility	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Very Poor	0	1	1
% within insurance enrollment	.0%	.3%	.2%
Poor	1	9	10
% within insurance enrollment	1.9%	2.4%	2.3%
Medium	10	80	90
% within insurance enrollment	18.5%	21.3%	21.0%
Good	41	282	323
% within insurance enrollment	75.9%	75.2%	75.3%
Very Good	2	3	5
% within insurance enrollment	3.7%	.8%	1.2%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2=3.8 p=0.43 df=4

Table 2.3. Patient perception on facility and type of insurance

Perception of facility	**Type of insurance**			
	Pro-poor	**Civil**	**Voluntary**	**Total**
Very Poor	0	1	0	1
% within insurance type	.0%	.5%	.0%	.3%
Poor	1	7	1	9
% within insurance type	.7%	3.7%	2.4%	2.4%
Medium	28	44	8	80
% within insurance type	19.3%	23.4%	19.0%	21.3%
Good	113	136	33	282

Perception of facility	Type of insurance			
	Pro-poor	Civil	Voluntary	Total
% within insurance type	77.9%	72.3%	78.6%	75.2%
Very Good	3	0	0	3
% within insurance type	2.1%	.0%	.0%	.8%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2=10.06 p=0.26 df=8

Table 2.4. Patient perception on capacity of physician and insurance enrollment

Perception on capacity	Insurance enrollment		
	Uninsured	Insured	Total
Very Poor			
% within insurance			
Poor	4	40	44
% within insurance	7.4%	10.7%	10.3%
Medium	10	99	109
% within insurance	18.5%	26.4%	25.4%
Good	37	220	257
% within insurance	68.5%	58.7%	59.9%
Very Good	3	16	19
% within insurance	5.6%	4.3%	4.4%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2=32.5 p=0.46 df=3

III. Process aspects

1. Compliance to standard procedures

Table 3.1. % CSP for hypertension by type of insurance

% CSP	Type of insurance			
	P Poor	Civil S	Voluntary	total
Good (70 – 89%)	4	16	1	21
% within Insurance enrollment	9.1%	12.6%	6%	11.3%
Medium (40 – 69%)	28	88	13	129
% within insurance enrollment	63.6%	69.3%	86.6%	69.3%
Poor (< 40%)	12	23	1	36
% within insurance enrollment	27.3%	18.1%	6%	19.4%
Total	44	127	15	186
% within type of insurance	100%	100%	100%	100.0%

χ^2=9.516, p=0.141 and df=6.

Table3.2. % CSP for dyspepsia by insurance **enrollment**

% CSP	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Good (70 – 89%)	2	10	12
% within Insurance enrollment	11.7%	11%	11%
Medium (40 – 69%)	14	71	85
% within insurance enrollment	82.3%	78%	78.7.0%
Poor (< 40%)	1	10	11
% within insurance enrollment	9.1%	9.9%	10.0%
Total	17	91	108
% within type of insurance	100%	100%	100.0%

χ^2=0.40 , p=0.91 and df=2

2. Compliance to standard drugs

Table 3.10. % CSD for ante natal care by insurance enrollment

% conforming standard drug	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
Good (>66.6%)	8	15	23
% within insurance enrollment	28.6%	15.3%	18.3%
Medium (>33.3 – 66.6%)	20	71	91
% within insurance enrollment	71.4%	72.4%	72.2%
Poor (0 – 33.3)	0	12	12
% within insurance enrollment	-	12.2%	9.5%
Total	28	98	126
% within insurance enrollment	100%	100%	100.0%

χ^2=4.725, p=0.94 and df=2.

Table 3.11. % Conforming standard cdrug (CSD) for ANC by type of insurance

% Conforming standard treatment	Type of insurance			
	Pro-	Civil S	Voluntary	total
Good (>66.6%)	44	16	13	73
% within type of insurance	71%	80%	81.3%	74.5%
Medium (>33.3 – 66.6%)	14	2	1	17
% within type of insurance	22.6%	10%	6.3%	17.3%
Poor (0 – 33.3)	4	2	2	8
% within type of insurance	6.45%	10.0%	12.5%	8.2.0%
Total	62	20	16	98
% within type of insurance	100%	100%	100%	100.0%

χ^2=3.694, p=0.449 and df=4.

IV. Outcome aspects

Table 4 General satisfaction and insurance enrollment

General Satisfaction	Insurance enrollment		
	Uninsured	Insured	Total
Satisfied	39	221	260
% within Insurance enrollment	72.2%	58.9%	60.6%
Dissatisfied	15	154	169
% within Insurance enrollment	27.8%	41.1%	39.4%
total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2= 3.49, p = 0.06; df=1

Table 4.3. Satisfaction and perception of physician capacity

Satisfaction	Perception of capacity the Physician				
	Bad	Fair	Good	Very good	Total
Dissatisfied	34	82	37	1	154
% within satisfaction	22.1%	53.2%	24.0%	.6%	100.0%
Satisfied	6	17	183	15	221
% within satisfaction	2.7%	7.7%	82.8%	6.8%	100.0%
Total	40	99	220	16	375
% within satisfaction	10.7%	26.4%	58.7%	4.3%	100.0%

$\chi 2$= 164.7 p= 0.000 df=3

Table 4.4. Satisfaction and consultation time

Satisfaction	Perception of consultation time					
	very long	long	Fair	short	very short	Total
Dissatisfied	7	13	40	85	9	154
% within satisfaction	4.5%	8.4%	26.0%	55.2%	5.8%	100.0%
Satisfied	1	37	102	80	1	221
% within satisfaction	.5%	16.7%	46.2%	36.2%	.5%	100.0%
Total	8	50	142	165	10	375
% within satisfaction	2.1%	13.3%	37.9%	44.0%	2.7%	100.0%

$\chi 2$=38.9 p=0.00 df=4

Table4.5. Satisfaction and perception of waiting time

Satisfaction	Perception of waiting time				
	very	long	Fair	short	Total
Dissatisfied	13	1	1	0	15
% within satisfaction	86.7%	6.7%	6.7%	.0%	100.0%
Satisfied	7	14	15	3	39
% within satisfaction	17.9%	35.9%	38.5%	7.7%	100.0%
Total	20	15	16	3	54
% within satisfaction	37.0%	27.8%	29.6%	5.6%	100.0%

$\chi 2$= 21.9 p=0.000 df=3

Table 4.6. Satisfaction and perception of capacity physician

Satisfaction	Perception of capacity the Physician				
	Bad	Fair	Good	Very good	Total
Dissatisfied	2	9	4	0	15
% within satisfaction	13.3%	60.0%	26.7%	.0%	100.0%
Satisfied	2	1	33	3	39
% within satisfaction	5.1%	2.6%	84.6%	7.7%	100.0%
Total	4	10	37	3	54
% within satisfaction	7.4%	18.5%	68.5%	5.6%	100.0%

χ^2= 26.7 p=0.00 df=3

Table 4.7. Satisfaction and perception of consultation

Satisfaction	Perception of consultation time				Total
	long	Fair	short	short	
Dissatisfied	2	4	7	2	15
% within satisfaction	13.3%	26.7%	46.7%	13.3%	100.0%
Satisfied	11	19	8	1	39
% within satisfaction	28.2%	48.7%	20.5%	2.6%	100.0%
Total	13	23	15	3	54
% within satisfaction	24.1%	42.6%	27.8%	5.6%	100.0%

χ2= 7.6 p=0.06 df=3

Table 4.8 Waiting time

Waiting time	**Insurance enrollment**		
	Uninsured	**Insured**	**Total**
0 - 30 minutes	15	77	92
% within Insurance	27.8%	20.5%	21.4%
31 - 60 minutes	17	94	111
% within Insurance	31.5%	25.1%	25.9%
61 - 90 minutes	5	14	19
% within Insurance	9.3%	3.7%	4.4%

Waiting time	Insurance enrollment		
	Uninsured	Insured	Total
91 - 120 minutes	9	122	131
% within Insurance	16.7%	32.5%	30.5%
121 - 180 minutes	4	29	33
% within Insurance	7.4%	7.7%	7.7%
more than 180	4	39	43
% within Insurance	7.4%	10.4%	10.0%
Total	54	375	429
% of Total	100.0%	100.0%	100.0%

χ^2= 9.8 p=0.09 and df=5

Table 4.9. waiting time type of insurance

Waiting time	Type of insurance			
	Pro-	Civil S	Voluntary	total
0 - 30 minutes	39	29	9	77
% within Insurance enrollment	26.9%	15.4%	21.4%	20.5%
31 - 60 minutes	41	42	11	94
% within Insurance enrollment	28.3%	22.3%	26.2%	25.1%
61 - 90 minutes	8	3	3	14
% within Insurance enrollment	5.5%	1.6%	7.1%	3.7%
91 - 120 minutes	42	67	13	122
% within Insurance enrollment	29.0%	35.6%	31.0%	32.5%
121 - 180 minutes	5	21	3	29
% within Insurance enrollment	3.4%	11.2%	7.1%	7.7%
more than 180 minutes	10	26	3	39
% within Insurance enrollment	6.9%	13.8%	7.1%	10.4%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2= 23.04, p= 0,011and df=10

Table 4.10 Consultation time and insurance enrollment

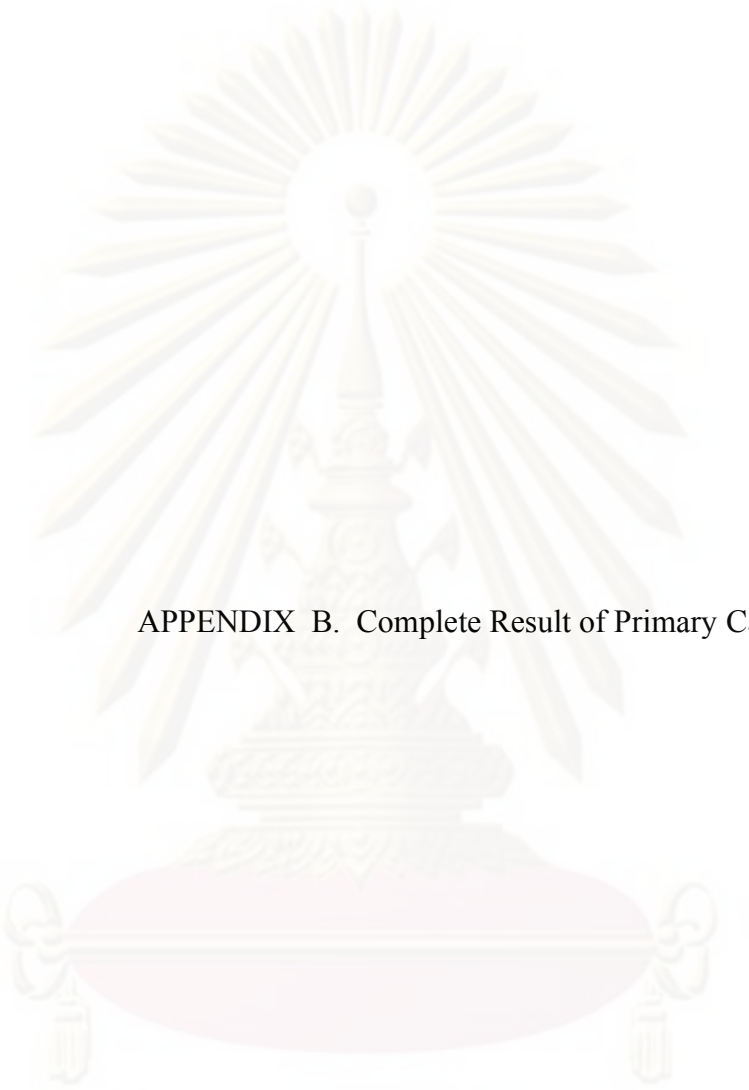
Consultation time	Enrollment of health insurance		Total
	Do not have health insurance	have health insurance	
0 - 5 mnt	13	116	129
% within insurance	24.1%	31.0%	30.0%
6 - 10 mnt	15	126	141
% within insurance	27.8%	33.6%	32.8%
11 - 15 mnt	14	102	116
% within insurance	26.0%	27.2%	27.0%
16 - 20 mnt	10	22	32
% within insurance	18.5%	5.9%	7.4%
> 20 mnt	2	9	11
% within insurance	4.0%	2.4%	2.6%
Total	54	375	429
% of total	100.0%	100.0%	100.0%

χ^2= 31.9, p= 0,011and df=4

Table 4.11

Consultation time	Type of insurance			
	Pro-	Civil S	Voluntary	total
0 - 5 mnt	35	68	13	116
% within insurance	24.1%	36.2%	31.0%	30.9%
6 - 10 mnt	51	63	12	126
% within insurance	35.2%	33.5%	28.6%	33.6%
11 - 15 mnt	39	50	13	102
% within insurance	26.9%	26.6%	31.0%	27.2%
16 - 20 mnt	15	5	2	22
% within insurance	10.3%	2.7%	4.8%	5.9%
> 20 mnt	5	2	2	9
% within insurance	3.4%	1.1%	4.8%	2.4%
Total	145	188	42	375
% of Total	100.0%	100.0%	100.0%	100.0%

χ^2= 15.8, p= 0,044and df=8



APPENDIX B. Complete Result of Primary Care

PUBLIC PRIMARY CARE

I. General Information

Table 1.Age group of patient with insurance enrollment and type of insurance

Age group of patient	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Pro	Civil servant	Total
Less than 30 year	**79**	**84**	**163**	**54**	**30**	**84**
% within Insurance	65.8%	46.7%	54.3%	56.3%	35.7%	46.7%
30 – 50 years	39	76	115	39	37	76
% within Insurance	32.5%	42.2%	38.3%	40.6%	44.0%	42.2%
51 – 60 years	0	13	13	3	10	13
% within Insurance	.0%	7.2%	4.3%	3.1%	11.9%	7.2%
More than 60 years	2	7	9	0	7	7
% within Insurance	1.7%	3.9%	3.0%	.0%	8.3%	3.9%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

$\chi 2$= 16.49 p= 0.01 df=3 $\chi 2$=16.9 p=0.001 df=3

Table 1.1. Gender with insurance enrollment and type of insurance

Gender	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Uninsured	Pro	Civil	Total
Male	26	49	75	20	29	49
% within gender	21.7%	27.2%	25.0%	20.8%	34.5%	27.2%
Female	94	131	225	76	55	131
% within gender	78.3%	72.8%	75.0%	79.2%	65.5%	72.8%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

$\chi 2$ 1.1.85 p=0.27 df=1 $\chi 2$=4.23 p=0.04 df=1

Table 1.2.Education with insurance enrollment and type of insurance

Education Level	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Elementary school and	17	20	37	18	2	20
% within ins	14.1%	11.1%	12.3%	18.8%	2.4%	11.1%
Junior and Senior high	77	122	199	66	54	120
% within ins	64.1%	67.8%	66.3%	68.8%	65.1%	66.6%
Above Senior high school	26	38	64	12	28	40
% within ins	45.0%	21.1%	21.3%	12.5%	33.3%	22.2%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100%	100.0%	100.0%	100.0%
χ^2=1,24 p=0.94 df=5				χ^2=24 p=0.000 df=5		

Table 1.3. Area of residence with insurance enrollment and type of insurance

Area of Residence	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Insured	Uninsured	Insured
Urban	120	178	298	96	82	178
% within area of res	100.0%	98.9%	99.3%	100.0%	97.6%	98.9%
Rural	0	2	2	0	2	2
% of area of res	.0%	1.1%	.7%	.0%	2.4%	1.1%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ 2= 15.342 p= 0.247 df=1				χ 2=2.31 p=0.12 df=1		

II. Input Aspect

Table 2 Working Experiences with insurance enrollment and type of insurance

Working Experiences	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Pro	Civil	Total
Less/ = than 5	23	29	52	16	13	29
% within work	19.2%	16.1%	17.3%	16.7%	15.5%	16.1%
> 5 years	97	151	248	80	71	151
% within work	80.8%	83.9%	82.7%	83.3%	84.5%	83.9%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2= 0.46 p= 0.49 df= 1 χ^2= 0.047 p=0.83 df=1

Table 2.2. Perception of facility and insurance enrollment and type of insurance

Facility perception	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Pro poor	Civil	Total
Poor	0	1	1	0	1	1
% within	.0%	.6%	.3%	.0%	1.2%	.6%
Medium	18	32	50	10	22	32
% within	15.0%	17.8%	16.7%	10.4%	26.2%	17.8%
Good	98	146	244	85	61	146
% within	81.7%	81.1%	81.3%	88.5%	72.6%	81.1%
Very Good	4	1	5	1	0	1
% within	3.3%	.6%	1.7%	1.0%	.0%	.6%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

χ2= 4.3 p=0.227 df=3 χ 2= 19.6 p= 0.021 df=3

Table 2.3 perception on capacity of examiner with insurance enrollment and type of insurance

Capacity of examiner	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Pro	Civil	Total
Poor	0	1	1	0	1	1
% within insurance	.0%	.6%	.3%	.0%	1.2%	.6%
Medium	10	29	39	12	17	29
% within insurance	8.3%	16.1%	13.0%	12.5%	20.2%	16.1%
Good	104	143	247	80	63	143
% within insurance	86.7%	79.4%	82.3%	83.3%	75.0%	79.4%
Very Good	6	7	13	4	3	7
% within insurance	5.0%	3.9%	4.3%	4.2%	3.6%	3.9%
Total	120	180	300	96	84	180
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ 2= 4.6 p=0.197 df=3				χ 2= 3.2 p= 0.35 df=3		

Process Aspect

Table 3 PCSP within ARI

Percentage conforming standard	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Good (70-89)	6	10	16	7	4	11
% within insurance	10%	11.0%	10.0%	11.5%	10.3%	11.0%
Fair (40-69)	13	19	32	13	6	19
% within insurance	22.0%	19.0%	20.0%	21.3%	15.4%	19.0%
Poor (<40%)	41	71	112	41	29	70
% within insurance	69.5%	70.0%	70.0%	67.2%	74.4%	70.0%
Total	60	100	160	61	39	100
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ2= 0.84 p= 0.933 df=4				χ2=0.65, p=0.72, df=2		

Table 3.1. PCSP with insurance enrollment and type of insurance within diarrhea

Percentage conforming standard procedures	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Good (70-89)	9	15	24	5	10	15
% within insurance	39.1%	31.3%	33.8%	33.3%	30.3%	31.3%
Fair (40-69)	5	9	14	3	6	9
% within insurance	21.7%	18.8%	19.7%	20.0%	18.8%	18.8%
Poor (<40%)	9	24	33	7	17	24
% within insurance	39.1%	50.0%	46.5%	46.7%	53.1%	50.0%
Total	23	48	71	15	33	48
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2= 0.75 p=0.68 df=2				χ^2= 0.97 p=0.95 df=2		

Table 3.2. PCSD with insurance enrollment and type of insurance within ARI

Percentage conforming standard Treatment	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Good (70-89)	16	30	46	22	9	31
% within insurance	26.6%	30.0%	28.8%	36.1%	23.1%	31.0%
Fair (40-69)	29	45	74	24	21	45
% within insurance	49.2%	45.0%	46.3%	39.3%	53.8%	45.0%
Poor (<40%)	15	24	1	15	9	24
% within insurance	25.4%	24.0%	100.0%	24.6%	23.1%	24.0%
Total	60	100	160	61	39	100
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ2= 3.58 p=0.465 df=4				χ2=2.43 p=0.29 df=2		

Table 3.3. PCSD with insurance enrollment and type of insurance within ANC

Percentage conforming standard Treatment	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Good (70-89)	34	24	58	14	10	24
% within insurance	91.9%	75.0%	84.1%	70.0%	83.3%	75.0%
Fair (40-69)	3	8	11	6	2	8
% within insurance	8.1%	25.0%	15.9%	30.0%	16.7%	25.0%
Total	37	32	69	20	12	32
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
$\chi 2=3.65$ p=0.056 df=1				$\chi 2=0.71$ p=0.399 df=1		

PRIVATE PRIMARY CARE

Table 4.Age group of patient with insurance enrollment and type of insurance

Age group of patient	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	**Total**	Civil	Voluntary	**Total**
Less than 30 year	32	33	65	24	9	33
% within insurance	50.%	21%	29.4.0%	20%	24.3%	21.0%
30 – 50 years	26	89	115	64	25	89
% within insurance	40.6%	56.6%	52.0%	53.3%	67.5.1%	56.7.0%
51 – 60 years	5	15	20	13	2	15
% within insurance	7.80%	9.5.0%	9.0%	10.8%	5.4%	9.5%
More than 60 years	1	20	21	19	1	20
% within insurance	1.5%	12.7%	9.5%	15.8%	2.7%	12.7%
Total	64	157	221	120	37	157
% of Total	100 %	100.0%	100.0%	100%	100%	100.0%
$\chi^2= 21.36$ p=0.000 df=3				$\chi^2= 5.9$ P=0,113 DF=3		

Table 4.1. Gender with insurance enrollment and type of insurance

Gender	**Insurance enrollment**			**Type of Insurance**		
	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
Male	28	55	83	42	13	55
% within gender	33.7%	66.3%	100.0%	76.4%	23.6%	100.0%

Gender	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
Female	36	102	138	78	24	102
% within Female	26.1%	73.9%	100.0%	76.5%	23.5%	100.0%
Total	64	157	221	120	37	157
% of Total	29.0%	71.0%	100.0%	76.4%	23.6%	100.0%
$\chi 2$=1.4 p=0.225 df=2				$\chi 2$=0.00 p=0.98 df= 1		

Table 4.2.Table education with insurance enrollment and type of insurance

Education Level	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Civil	Voluntary	Total
Elementary and	2	22	24	15	7	22
% within education	8.3%	91.7%	100.0%	68.2%	31.8%	100.0%
Junior and Senior	52	77	129	59	18	77
% within education	40.3%	59.7%	100.0%	76.6%	23.4%	100.0%
Above Senior high	10	58	68	46	12	58
% within education	14.7%	85.3%	100.0%	79.3%	20.7%	100.0%
Total	64	157	221	120	37	157
% of Total	29.0%	71.0%	100.0%	76.4%	23.6%	100.0%
$\chi 2$= 19.7 p=0.000 df=2				$\chi 2$=1.11 p=0.577 df=2		

Table4.3. Area of residence and with insurance enrollment and type of insurance

Area of Residence	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Insured	Uninsured	Insured
Urban	64	156	220	119	37	156
% within area of res	100%	99.3%	99.5%	99.2%	100%	99.4.0%
Rural	0	1	1	1	0	1
% of area of res	.0%	6.36.0%	4.5%	0.8%	.0%	0.4.0%
Total	64	157	221	120	37	157
% of Total	100.0%	100.0%	100.0%	100%	100%	100.0%
χ^2= 0.4 p=0.52 df=1				χ^2=0.3 p=0.577 df=1		

Table 4.4 Perception of facility and insurance enrollment and type of insurance

Facility perception	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Pro poor	Civil Servant	Total
Medium	0	7	7	4	3	7
% within Insurance	.0%	4.5%	3.2%	3.3%	8.1%	4.5%
Good	64	129	193	106	23	129
% within Insurance	100.0%	82.2%	87.3%	88.3%	62.2%	82.2%
Very Good	0	21	21	10	11	21
% within Insurance	.0%	13.4%	9.5%	8.3%	29.7%	13.4%
Total	64	157	221	120	37	157
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
$\chi 2$= 8.8 p=0.003 df=1				$\chi 2$= 14.4 p= 0.06 df=3		

Table 4.5. perception on capacity of examiner with insurance enrollment and type of insurance

Capacity of examiner	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	CV	Voluntary	Total
Good	61	124	185	99	25	124
% within Insurance	95.3%	79.0%	83.7%	82.5%	67.6%	79.0%
Very Good	3	33	36	21	12	33
% within Insurance	4.7%	21.0%	16.3%	17.5%	32.4%	21.0%
Total	64	157	221	120	37	157
% of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
$\chi 2$= 13.07 p=0.001 df=2				$\chi 2$= 4.4 p= 0.108 df=2		

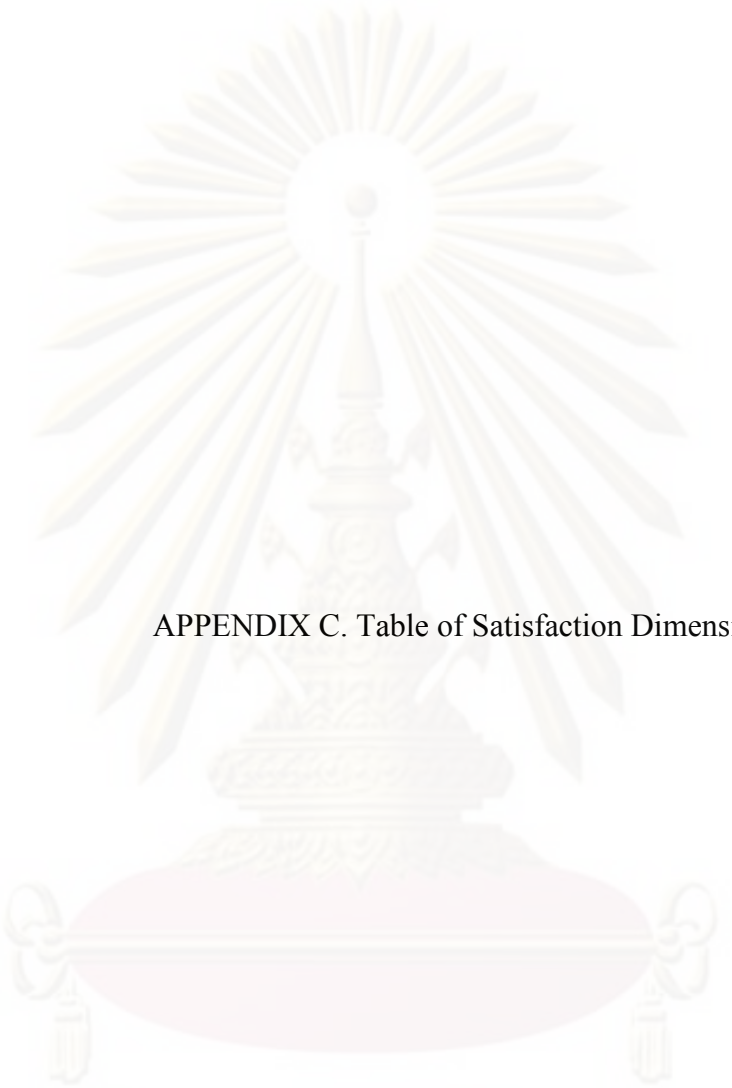
Table 4.6. PCSP with insurance enrollment and type of insurance ARI

Percentage conforming	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
Excellent (>90)	3	11	14	7	4	11
% within insurance	8.6%	10.6%	10.1%	8.6%	17.4%	10.6%
Good (70-89)	17	53	70	40	13	53
% within insurance	48.6%	51.0%	50.4%	49.4%	56.5%	51.0%
Fair (40-69)	15	40	55	34	6	40

Percentage conforming	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
% within insurance	42.9%	38.5%	39.6%	42.0%	26.1%	38.5%
Total	35	104	139	81	23	104
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=0.2 p=0.87 df=2				χ2=2.6 p=0.266 df=2		

Table 4.7. PCSP with insurance enrollment and type of insurance within diarrhea

Percentage conforming	Insurance enrollment			Type of Insurance		
	Uninsured	Insured	Total	Civil Serv	Voluntary	Total
Excellent (>90)	0	4	4	4	0	4
% within insurance	.0%	7.5%	4.9%	10.3%	.0%	7.5%
Good (70-89)	19	31	50	25	6	31
% within insurance	65.5%	58.5%	61.0%	64.1%	42.9%	58.5%
Fair (40-69)	10	18	28	10	8	18
% within insurance	34.5%	34.0%	34.1%	25.6%	57.1%	34.0%
Total	29	53	82	39	14	53
% within insurance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=2.3 p=0.31 df=2				χ2= 5.2 p=0.073 df=2		



APPENDIX C. Table of Satisfaction Dimension

I. Insurance enrollment and satisfaction dimension of Hospital

Table 1. Insurance enrollment and Tangible dimension

Insurance Enrollment	Tangible			Total
	Less satisfied	Satisfied	Very satisfied	
Uninsured	22	31	1	54
% within Enrollment of health insurance	40.7%	57.4%	1.9%	100.0%
% within Enrollment of health insurance	14.2%	11.5%	25.0%	12.6%
Insured	133	239	3	375
% within Enrollment of health insurance	35.5%	63.7%	.8%	100.0%
% within Enrollment of health insurance	85.8%	88.5%	75.0%	87.4%
Total	155	270	4	429
% within Enrollment of health insurance	36.1%	62.9%	.9%	100.0%
% within Enrollment of health insurance	100.0%	100.0%	100.0%	100.0%

χ^2=1,2 p=0.542 df=2

Table 2. . Insurance enrollment and Reliability dimension

Insurance Enrollment	Reliability				Total
	Dissatisfied	Less satisfied	Satisfied	Very satisfied	
Do not have health insurance	0	18	36	0	54
% within Enrollment of health insurance	.0%	33.3%	67.9%	.0%	100.0%
% within R average	.0%	22.5%	10.5%	.0%	12.4%
have helath insurance	1	63	308	3	375
% within Enrollment of health insurance	.3%	16.8%	82.1%	.8%	100.0%
% within R average	100.0%	78.8%	89.5%	100.0%	87.6%
Total	1	81	344	3	429
% within Enrollment of health insurance	.2%	18.8%	80.2%	.8%	100.0%
% within R average	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=7.5 p=0.57 df=3

Table 3 . Insurance enrollment and Empathy dimension

Enrollment of health insurance	Empathy				Total
	Dissatisfied	Less satisfied	Satisfied	Very satisfied	
Do not have health insurance	0	11	43	0	54
% within Enrollment of health insurance	.0%	20.4%	79.6%	.0%	100.0%
% within E average	.0%	13.6%	12.5%	.0%	12.6%
have health insurance	1	70	300	4	375
% within Enrollment of health insurance	.3%	18.7%	80.0%	1.1%	100.0%
% within E average	100.0%	86.4%	87.5%	100.0%	87.4%
Total	1	81	343	4	429
% within Enrollment of health insurance	.2%	18.9%	80.0%	.9%	100.0%
% within E average	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=0.7 p=0.851 df=3

Table 4 . Insurance enrollment and Responsiveness dimension

Enrollment of health insurance	Responsiveness				Total
	Dissatisfied	Less satisfied	Satisfied	Very satisfied	
Do not have health insurance	0	25	28	1	54
% within Enrollment of health insurance	.0%	46.3%	51.9%	1.9%	100.0%
% within RS average	.0%	21.2%	9.1%	50.0%	12.6%
have health insurance	2	93	279	1	375
% within Enrollment of health insurance	.5%	24.8%	74.4%	.3%	100.0%
% within RS average	100.0%	78.8%	90.9%	50.0%	87.4%
Total	2	118	307	2	429
% within Enrollment of health insurance	.5%	27.5%	71.6%	.5%	100.0%
% within RS average	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=14.1 p=0.003 df=2

Table 5 . Insurance enrollment and Assurance dimension

Enrollment of health insurance	Assurance			Total
	Less satisfied	Satisfied	Very satisfied	
Do not have health insurance	6	46	2	54
% within Enrollment of health insurance	11.1%	85.2%	3.7%	100.0%
% within A Average	20.0%	11.9%	16.7%	12.6%
have helath insurance	24	341	10	375
% within Enrollment of health insurance	6.4%	90.9%	2.7%	100.0%
% within A Average	80.0%	88.1%	83.3%	87.4%
Total	30	387	12	429
% within Enrollment of health insurance	7.0%	90.2%	2.8%	100.0%
% within A Average	100.0%	100.0%	100.0%	100.0%

χ^2=1,8 p=0.39 df=2

II. Type of insurance and satisfaction dimension of Hospital

Table 6. Type of health insurance and Tangible dimension

Type of health insurance	Tangible			Total
	Less satisfied	Satisfied	Very satisfied	
Pro poor scheme (JAMKESMAS)	43	99	3	145
% within Type of health insurance	29.7%	68.3%	2.1%	100.0%
% within T average	32.3%	41.4%	100.0%	38.7%
Civil Servant scheme (Askes Sosial)	75	113	0	188
% within Type of health insurance	39.9%	60.1%	.0%	100.0%
% within T average	56.4%	47.3%	.0%	50.1%
Voluntary scheme (Askes Komersil)	15	27	0	42
% within Type of health insurance	35.7%	64.3%	.0%	100.0%
% within T average	11.3%	11.3%	.0%	11.2%
Total	133	239	3	375
% within Type of health insurance	35.5%	63.7%	.8%	100.0%
% within T average	100.0%	100.0%	100.0%	100.0%

χ^2=.8.03 p=0.09 df=4

Table 7. Type of health insurance and Reliability dimension

Type of health insurance	Reliability				Total
	Dissatisfied	Less satisfied	Satisfied	Very satisfied	
Pro poor scheme (JAMKESMAS)	0	24	119	2	145
% within Type of health insurance	.0%	16.6%	82.1%	1.4%	100.0%
% within R average	.0%	38.1%	38.6%	66.7%	38.7%
Civil Servant scheme (Askes Sosial)	1	30	156	1	188
% within Type of health insurance	.5%	16.0%	83.0%	.5%	100.0%
% within R average	100.0%	47.6%	50.6%	33.3%	50.1%
Voluntary scheme (Askes Komersil)	0	9	33	0	42
% within Type of health insurance	.0%	21.4%	78.6%	.0%	100.0%
% within R average	.0%	14.3%	10.7%	.0%	11.2%
Total	1	63	308	3	375
% within Type of health insurance	.3%	16.8%	82.1%	.8%	100.0%
% within R average	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=2,8 p=0.83 df=6

Table 8. Type of health insurance and Empathy dimension

Type of health insurance	Empathy				Total
	Dissatisfied	Less satisfied	Satisfied	Very satisfied	
Pro poor scheme (JAMKESMAS)	0	26	118	1	145
% within Type of health insurance	.0%	17.9%	81.4%	.7%	100.0%
% within E average	.0%	37.1%	39.3%	25.0%	38.7%
Civil Servant scheme (Askes Sosial)	1	31	153	3	188
% within Type of health insurance	.5%	16.5%	81.4%	1.6%	100.0%
% within E average	100.0%	44.3%	51.0%	75.0%	50.1%
Voluntary scheme (Askes Komersil)	0	13	29	0	42
% within Type of health insurance	.0%	31.0%	69.0%	.0%	100.0%
% within E average	.0%	18.6%	9.7%	.0%	11.2%
Total	1	70	300	4	375
% within Type of health insurance	.3%	18.7%	80.0%	1.1%	100.0%
% within E average	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=6.75 p=0.344 df=6

Table 9. Type of health insurance and Responsiveness dimension

Type of health insurance	Responsiveness				Total
	Dissatisfied	Less satisfied	Satisfied	Very satisfied	
Pro poor scheme (JAMKESMAS)	0	43	101	1	145
% within Type of health insurance	.0%	29.7%	69.7%	.7%	100.0%
% within RS average	.0%	46.2%	36.2%	100.0%	38.7%
Civil Servant scheme (Askes Sosial)	2	31	155	0	188
% within Type of health insurance	1.1%	16.5%	82.4%	.0%	100.0%
% within RS average	100.0%	33.3%	55.6%	.0%	50.1%
Voluntary scheme (Askes Komersil)	0	19	23	0	42
% within Type of health insurance	.0%	45.2%	54.8%	.0%	100.0%
% within RS average	.0%	20.4%	8.2%	.0%	11.2%
Total	2	93	279	1	375
% within Type of health insurance	.5%	24.8%	74.4%	.3%	100.0%
% within RS average	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=21.5 p=0.001 df=6

Table 10. Type of health insurance and Assurance dimension

Type of health insurance	Assurance			Total
	Less satisfied	Satisfied	Very satisfied	
Pro poor scheme (JAMKESMAS)	9	133	3	145
% within Type of health insurance	6.2%	91.7%	2.1%	100.0%
% within A Average	37.5%	39.0%	30.0%	38.7%
Civil Servant scheme (Askes Sosial)	9	172	7	188
% within Type of health insurance	4.8%	91.5%	3.7%	100.0%
% within A Average	37.5%	50.4%	70.0%	50.1%
Voluntary scheme (Askes Komersil)	6	36	0	42
% within Type of health insurance	14.3%	85.7%	.0%	100.0%
% within A Average	25.0%	10.6%	.0%	11.2%
Total	24	341	10	375
% within Type of health insurance	6.4%	90.9%	2.7%	100.0%
% within A Average	100.0%	100.0%	100.0%	100.0%

χ^2=7 p=0.131 df=4

III. **Satisfaction dimension and insurance enrollment of health center (public primary care)**

Table 8.20. Average of Tangible and reliability with enrollment of insurance

Level of satisfaction	Tangible and insurance enrollment			reliability		
	Uninsured	Insured	Total	Uninsured	Insured	total
Less satisfied				13	20	33
% within Ins				10.8%	11.1%	11.0%
Satisfied	53	68	121	100	149	249
% within Ins	44.2%	37.8%	40.3%	83.3%	82.8%	83.0%
Very satisfied	67	112	179	7	11	18
% within Ins	55.8%	62.2%	59.7%	5.8%	6.1%	6.0%
Total	120	180	300	120	180	300
% within Ins	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=1.2 p=0,26 df=2				χ^2=0.017 p=0,992 df=2		

Table 8.21. Average of Empathy and responsiveness with enrollment of insurance

Level of satisfaction	Empathy and insurance enrollment			Responsiveness		
	Uninsured	Insured	Total	Uninsured	Insured	total
Less satisfied	24	23	47	7	14	21
% within Ins	20.2%	12.8%	15.7%	5.8%	7.8%	7.0%
Satisfied	76	139	215	106	153	259
% within Ins	63.9%	77.2%	71.9%	88.3%	85.0%	86.3%
Very satisfied	19	18	37	7	13	20
% within ins	16.0%	10.0%	12.4%	5.8%	7.2%	6.7%
Total	119	180	299	120	180	300
% within Ins	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=6.3 p=0.04 df=2				χ^2=0.6 p=0.7 df=2		

Table 8.22. Average of Assurance with enrollment of insurance

	Assurance and insurance enrolment		
	Pro poor scheme	Insured	Total
Less satisfied	8	16	24
% within Tangible	6.7%	8.9%	8.0%
Satisfied	87	133	220
% within Tangible	72.5%	73.9%	73.3%
Very satisfied	25	31	56
% within Tangible	20.8%	17.2%	18.7%
Total	120	180	300
% within Tangible	100.0%	100.0%	100.0%
χ^2=0.9 p=0.617 df=2			

Table 8.23. Average of Tangible and reliability with enrollment of insurance

Level of satisfaction	Tangible and insurance enrollment			reliability		
	Pro Poor	Civ Serv	Total	Pro Poor	Civ Serv	total
Less satisfied				10	10	20
% within Ins				10.4%	11.9%	11.1%
Satisfied	32	36	68	82	67	149
% within Ins	33.3%	42.9%	37.8%	85.4%	79.8%	82.8%
Very satisfied	64	48	112	4	7	11
% within Ins	66.7%	57.1%	62.2%	4.2%	8.3%	6.1%
Total	96	84	180	96	84	180
% within Ins	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=1.7 p=0,18 df=2				χ^2=1.5 p=0,462 df=2		

Table 8.24. Average of Empathy and responsiveness with enrollment of insurance

Level of satisfaction	Empathy and insurance enrollment			Responsiveness		
	Pro Poor	Civ Serv	Total	Pro Poor	CV	total
Less satisfied	9	14	23	6	8	14
% within Ins	9.4%	16.7%	12.8%	6.3%	9.5%	7.8%
Satisfied	76	63	139	82	71	153
% within Ins	79.2%	75.0%	77.2%	85.4%	84.5%	85.0%
Very satisfied	11	7	18	8	5	13
% within ins	11.5%	8.3%	10.0%	8.3%	6.0%	7.2%
Total	96	84	180	96	84	180
% within Ins	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=2.4 p=0.3 df=2				χ^2=0.97 p=0.61 df=2		

Table 8.25. Average of Assurance with enrollment of insurance

	Assurance and insurance enrolment		
	Pro poor scheme	Civil Servant	Total
Less satisfied	8	8	16
% within Tangible	8.3%	9.5%	8.9%
Satisfied	70	63	133
% within Tangible	72.9%	75.0%	73.9%
Very satisfied	18	13	31
% within Tangible	18.8%	15.5%	17.2%
Total	96	84	180
% within Tangible	100.0%	100.0%	100.0%
χ^2=0.37 p=0.828 df=2			

IV. PRIVATE PRIMARY CARE : Satisfaction dimension and insurance enrollment

Table 8.26. Average of Tangible and reliability with enrollment of insurance

Level of satisfaction	Tangible and insurance enrollment			reliability		
	Uninsured	Insured	Total	Uninsured	Insured	total
Less satisfied	26	71	97			
% within Ins	26.8%	73.2%	100.0%			
Satisfied	38	86	124	57	140	197
% within Ins	30.6%	69.4%	100.0%	28.9%	71.1%	100.0%
Very satisfied				7	17	24
% within Ins				30.4%	69.6%	100.0%
Total	64	157	221	64	157	221
% within Ins	29.0%	71.0%	100.0%	29.0%	71.0%	100.0%
χ^2=0.29 p=0,5 df=2				χ^2=0.43 p=08 df=2		

Table 8.27. Average of Empathy and responsiveness with enrollment of insurance

Level of satisfaction	Empathy and insurance enrollment			Responsiveness		
	Uninsured	Insured	Total	Uninsured	Insured	total
Less satisfied	1	1	2	6	8	14
% within Ins	50.0%	50.0%	100.0%	6.3%	9.5%	7.8%
Satisfied	53	126	179	59	142	201
% within Ins	29.6%	70.4%	100.0%	29.4%	70.6%	100.0%
Very satisfied	10	30	40	5	15	20
% within ins	25.0%	75.0%	100.0%	25.0%	75.0%	100.0%
Total	64	157	221	64	157	221
% within Ins	29.0%	71.0%	100.0%	29.0%	71.0%	100.0%
χ^2=0.77, p =0.68 df=2				χ^2=0.168 p=0.68 df=2		

Table 8.28. Average of Assurance with enrollment of insurance

	Assurance and insurance enrolment		
	Uninsured	Insured	Total
Less satisfied			
% within Tangible			
Satisfied	49	117	166
% within Tangible	29.5%	70.5%	100.0%
Very satisfied	15	40	55
% within Tangible	27.3%	72.7%	100.0%
Total	64	157	221
% within Tangible	29.0%	71.0%	100.0%

χ^2=0.101 p=0.75 df=2

Table 8.29. Average of Tangible and reliability with Type of insurance

Level of satisfaction	Tangible and insurance enrollment			reliability		
	Civ Servant	Voluntary	Total	Civ Servant	Voluntary	total
Less satisfied	39	32	71			
% within Ins	44.8%	45.7%	45.2%			
Satisfied	48	38	86	111	29	140
% within Ins	55.2%	54.2.%	54.7%	92.5%	20.7%	89.2%
Very satisfied				9	8	17
% within Ins				7.5%	50.0%	10.8%
Total	87	70	157	120	37	157
% within Ins	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

χ^2=0.22 p=0,63 df=2 χ^2=7.1 p=0.028 df=2

Table 8.30. Average of Empathy and responsiveness with type of insurance

Level of satisfaction	Empathy and insurance enrollment			Responsiveness		
	Civ Servant	Voluntary	Total	Civ Servant	Voluntary	total
Less satisfied	1	0	1			
% within Ins	.8%	.0%	.6%			
Satisfied	96	30	126	111	31	142
% within Ins	80.0%	81.1%	80.3%	92.5%	83.8%	90.4%
Very satisfied	23	7	30	9	6	15
% within ins	19.2%	18.9%	19.1%	7.5%	16.2%	9.6%
Total	120	37	157	120	37	157
% within Ins	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2=0.31, p =0.885 df=2				χ^2=2.4 p=0.11 df=1		

Table 8.31. Average of Assurance with type of insurance

	Assurance and insurance enrolment		
	Civ Servant	Voluntary	Total
Less satisfied			
% within Tangible			
Satisfied	87	30	117
% within Tangible	74.4%	25.6%	100.0%
Very satisfied	33	7	40
% within Tangible	82.5%	17.5%	100.0%
Total	120	37	157
% within Tangible	76.4%	23.6%	100.0%
χ^2=1.0 p=0.295 df=1			

APPENDIX D Questionnaire for Secondary Care

Questionnaire
For Hospital

Patients's No :……..

1. Age (years) :…….

2. Sex : 1. Male 2. Female

3. Educational status:
   a. Elementary school and below
   b. Junior and Senior High school
   c. Above Senior High School

4. Area of residence:
   1. Rural 2. Urban

5. Monthly Income (rupiah):…….

6. Insurance enrolment:
   1. Insured:
      a. Jamkesmas
      b. Askes Sosial
      c. Askes komersil
   2. Un-insured

7. What kind of illness or service do you get today?
   1. Hypertension
   2. Dyspepsia
   3. Ante Natal Care

5. How much do you pay by yourself?.....rupiah

6. How long did you wait for consultation?.....minutes

10. What do you think about the waiting time?

1. Very Long
2. Long
3. Medium
4. Short
5. Very Short

11. How long did the doctor spend time for your consultation?.....minutes

12. What do you think about the consultation time?

1. Very Long
2. Long
3. Medium
4. Short
5. Very Short

13. Did you satisfy with the service? Yes/ NO

.14. What do you feel about the facility and equipment of this hospital?

- Very Bad
- Bad
- Fair
- Good
- Very Good

13. What do you feel about the capacity of the doctor who give services to you?

- Very Bad
- Bad
- Fair

- Good
- Very Good

II. Satisfaction Dimension

1. Tangible

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Buidling of the hospital	1	2	3	4
2	Equipment (chair, desk)	1	2	3	4
3	Medical equipment	1	2	3	4
4	Room clean and neat	1	2	3	4
5	Comfortable of waiting room	1	2	3	4
6	Toilet clean?	1	2	3	4
7	Apperance of staffs	1	2	3	4
8	Direction sign	1	2	3	4
9	Availability of drugs	1	2	3	4

2. Reliability

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Medical recors storage	1	2	3	4
2	Timely in give services	1	2	3	4
3	Service delivery as promised	1	2	3	4
4	Explain celarly on medical procedures will be taken	1	2	3	4
5	Services effective solve the problem	1	2	3	4

3. Emphaty

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Staff give expresion to patients	1	2	3	4
2	Staff have attention to patient	1	2	3	4
3	The needed of patient is	1	2	3	4
4	Patient in give services	1	2	3	4
5	Staff understand the need of the patient	1	2	3	4
6	Capacity of staffs in handling patients problems	1	2	3	4
7	Give opportunity to ask	1	2	3	4

4. Responsiveness

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Information on opening of the locket	1	2	3	4
2	Timely in give services	1	2	3	4
3	Give prompt services	1	2	3	4
4	Prompt in delivery drugs	1	2	3	4
5	Give services when needed	1	2	3	4
6	Know what is needed by patient	1	2	3	4
7	Respons on the problems of patients	1	2	3	4

5. Assurance

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Give feel safe to patient in dealing with the hospital	1	2	3	4
2	Capacity in answer the question	1	2	3	4

3	Staf politely behave	1	2	3	4
4	Skilled in delivering services	1	2	3	4
5	Infomed concent	1	2	3	4
6	Explanation on drugs	1	2	3	4
7	Physician always give services	1	2	3	4
8	Patience in delivery services				

III. Note from Medical record:

1. Medical procedures (Physical Examination, Laboratorium)

Score:

2. Therapy

Score:

APPENDIX E Questionnaire for Primary care

Questionnaire

For primary Care (Public and private)

Patients's No :……..

1. Age (years) :…….

2. Sex : 1. Male 2. Female
3. Educational status:
   d. Elementary school and below
   e. Junior and Senior High school
   f. Above Senior High School
4. Area of residence:
   1. Rural 2. Urban
5. Monthly Income (rupiah):…….
6. Insurance enrolment:
   1. Insured:
      a. Jamkesmas
      b. Askes Sosial
      c. Askes komersil
   2. Un-insured

7. What kind of illness or service do you get today?
   1. ARI
   2. Diarrhea
   3. Ante Natal Care

8.How much do you pay by yourself?.....rupiah

9. How long did you wait for consultation?.....minutes

10. What do you think about the waiting time?
    1. Very Long

2. Long
3. Medium
4. Short
5. Very Short

12. How long did the doctor spend time for your consultation?.....minutes

13. What do you think about the consultation time?

1. Very Long
2. Long
3. Medium
4. Short
5. Very Short

14.Did you satisfy with the service? Yes/ NO

15. What do you feel about the facility and equipment of this hospital?

- Very Bad
- Bad
- Fair
- Good
- Very Good

13. What do you feel about the capacity of the doctor who give services to you?

- Very Bad
- Bad
- Fair
- Good
- Very Good

II. Satisfaction Dimension

Tangible

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Buidling of the facility	1	2	3	4
2	Equipment (chair, desk)	1	2	3	4

3	Medical equipment	1	2	3	4
4	Room clean and neat	1	2	3	4
5	Comfortable of waiting room	1	2	3	4
6	Toilet clean?	1	2	3	4
7	Apperance of staffs	1	2	3	4
8	Direction sign	1	2	3	4
9	Availability of drugs	1	2	3	4

Reliability

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Medical recors storage	1	2	3	4
2	Timely in give services	1	2	3	4
3	Service delivery as promised	1	2	3	4
4	Explain celarly on medical procedures will be taken	1	2	3	4
5	Services effective solve the problem	1	2	3	4

Emphaty

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Staff give expresion to patients	1	2	3	4
2	Staff have attention to patient	1	2	3	4
3	The needed of patient is	1	2	3	4
4	Patient in give services	1	2	3	4
5	Staff understand the need of the patient	1	2	3	4
6	Capacity of staffs in handling patients problems	1	2	3	4
7	Give opportunity to ask	1	2	3	4

Responsiveness

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Information on opening of the locket	1	2	3	4
2	Timely in give services	1	2	3	4
3	Give prompt services	1	2	3	4
4	Prompt in delivery drugs	1	2	3	4
5	Give services when needed	1	2	3	4
6	Know what is needed by patient	1	2	3	4
7	Respons on the problems of patients	1	2	3	4

Assurance

NO	Description	Dissatisfied	Les satisfied	Satisfied	Very satisfied
1	Give feel safe to patient in dealing with the hospital	1	2	3	4
2	Capacity in answer the question	1	2	3	4
3	Staf politely behave	1	2	3	4
4	Skilled in delivering services	1	2	3	4
5	Infomed concent	1	2	3	4
6	Explanation on drugs	1	2	3	4
7	Physician always give services	1	2	3	4
8	Patience in delivery services				

III. Note from Medical record:

3. Medical procedures (Physical Examination, Laboratorium)

Score:

4. Therapy

Score:

BIOGRAPHY

Name : Yustina Yudha Nita

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Marriages status : Married

Nationality : Indonesia

Educational Qualification : Medical Faculty, 1998. University of Atma Jaya, Jakarta, Indonesia

Designation : General Practitioner and Short term consultant

Work Experiences :

1. Head Of Health Center, Kupang District, NTT, Indonesia
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