

Inequity in the Quality of Care in the Thai Health Care Reform

Context: The Consumer's Perspective

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Abstract

Inequities in health status and access to health care among different socioeconomic groups in the Thai population have been increasingly documented during the past decade, but little is known about inequities in the quality of care. This paper examines inequities in the quality of care in the context of Thai health care reform, particularly the 30 Baht Universal Coverage Program that was introduced in 2001. To provide information about the impact of health care reform on the quality of care, data were collected in Nakhonpathom province by means of a questionnaire survey. Six hundred and fifty individuals aged 18 years or more were interviewed concerning their perceived health status, their utilization of health care services and the quality of care received. The consumer's perspective was measured in terms of satisfaction with health care services, choice of available health care services, ability to understand the written instructions on medical prescriptions and the printed information distributed by health care personnel, and, lastly, the quality of communication between physicians and patients. The findings are that lower income groups rated their health status more negatively than did the higher income groups, utilized more health care services than the higher income groups, had fewer choices in terms of where to go for medical care, and rated their understanding of the information distributed by health care personnel and the instructions written by pharmacists on prescription medicines more negatively. Moreover, their understanding of what the physician said was rated more negatively and they had fewer opportunities to ask questions and to become involved in decision making with the physician. Despite the coverage of preventive services of the Universal Coverage Program, the lower income groups utilized these services significantly less than their counterparts in the higher income groups. These results indicate that although improvements in the quality of health care in the context of the Universal Coverage Program in general may be necessary, such improvements are not sufficient to guarantee equity in the quality of care between different socioeconomic subgroups.

Background

During the past few decades, the health status of the Thai population has been gradually improving as can be seen from the IMR, which reduced from 125 in 1960 to 30.5 in 1995. Life expectancy has increased from 66.4 in 1990 to 66.9 in 1995 for males and from 70.8 to 71.7 for females (Health Statistics, 1999). However, inequities in health status between urban and rural areas, low and high income groups, males and females, and different regions have been noted (Kakwani & Phothong (1999), Pannarunothai & Mills (1997), Pannarunothai (2001)). Inequities in health care utilization and health care expenditure (Makinen et al (2001), Pannarunothai (2000)) have also been reported. These studies showed large differences in health care utilization between people who live in urban and rural areas. They also documented that people in the lower income groups paid a larger proportion of their income for health care compared to those in the higher income groups. Although government health policies have tried to reduce these inequities, more efforts are needed to identify which interventions will be most effective and in which areas.

Several health insurance programs had been developed in Thailand for different population groups such as the Civil Servants Medical Benefits Scheme (CSMBS), which covers all civil servants and some of their family members, the Social Security Scheme (SES), which covers employees working in the formal sector, the Voluntary Health Card Scheme (VHCS) and the Low Income Card Scheme (LICS) and private health insurance. Although all these health insurance schemes only covered approximately three quarters of the Thai population, individuals who are not covered by any scheme can ask for a fee waiver from the health care facilities they visit.

However, there are some problems with these existing health insurance schemes regarding coverage and eligibility as well as the quality of care in LICS, the rapid increase of expenditure in CSMBS etc (Suphachutikul, 1995). The Universal Coverage Scheme was introduced in 2001 and expanded to all health facilities in 2002. Now VHCS and LICS have changed into the 30 Baht (.7US\$) Universal Health Insurance Coverage Program which is generally referred to simply as the 30 Baht Scheme.

All those who are not covered by any other health insurance scheme are eligible for the Universal Coverage Program. Each individual registers with a public or private health

facility that has joined this initiative with the government and then they receive a gold card to use when seeking health care services from the facility. Those living in rural areas and wishing to utilize health services have to start from the local health center or the nearby hospital and then follow a referral system if they wish to use the services of a provincial or tertiary-care hospital. But those living in urban areas can register directly with a provincial or tertiary-care hospital. In case of emergencies, the card holders can access any public health care facility. Each visit to a health care facility requires a co-payment of 30 baht. This 30 Baht Scheme includes most health care services except cosmetic surgery, treatment of drug addiction and chronic psychological illness, hemodialysis, organ transplants, obstetric delivery beyond two pregnancies, infertility treatment and some other very expensive treatments (NaRanong & NaRanong, 2002). The Ministry of Public Health will provide a budget to co-operating health care facilities by capitation according to the number of individuals registered with them. Currently, the annual per capita payment rate is 1,404 Baht.

One of the main focuses of the 30 Baht Scheme is the provision of quality health care for all users. So far, however, there have been very few studies of the quality of care in Thailand. Most studies have focused on improvements in health care or the quality of care in terms of clinical components. But consumers want more from health care facilities than simply better technical or clinical components. They want trustworthy information on their conditions, treatment options etc. From the consumer's perspective, good quality means providing care and information in a way that works for them at the time they want it (Davis (2002; Collins et al 2002)). In order to achieve a high quality of care from both the health care personnel's and the consumers' points of view a good understanding of the existing situation of the quality of care is necessary. This study was designed to explore inequities in the quality of health care services and describe the inequities in terms of health status and health service utilization in order to assess the impact of the Universal Coverage Program.

Methods

Nakhonpathom Province, located in the central region of Thailand, and on the perimeter of Bangkok, was purposively selected as the site of this study. In order to cover respondents both in the urban and rural areas, all districts in the province were classified according to their economic characteristics, population density and infrastructure into 2 groups. A district has been selected from each group. The same procedure has been employed

to sampling subdistricts and villages. Households were selected by systematic proportional sampling in order to get 10 percent of the population from 2 selected districts. In total, 650 households were interviewed. From each household, only one individual, the head or the representative of the household was interviewed. Interviews were conducted by means of a structured questionnaire. The questionnaire was pretested in 2 villages with characteristics similar to those of the selected districts, but these villages were not included in the study. It was then adjusted, refined and tested for reliability (Alpha-Cronbach = .7). The interviewers consisted of 6 health officers and post-graduate students from the Faculty of Social Sciences and Humanities, Mahidol University. All were trained in field survey and interview techniques before going to the field. The interviews were conducted between August and September 2002. Before the start of the fieldwork, village health volunteers and community leaders were **contacted to coordinate the visits** of the interviewers with the heads or representatives of the households that would be interviewed.

The data collected consist of general socioeconomic characteristics of the respondents, self-reported health status, utilization of health care services in the past year (classified into OPD visit and hospital admission), regular utilization of other types of health care facilities and utilization of preventive care services. Perception of quality of health care is measured in terms of satisfaction with health care services utilized in the past 2-5 years; confidence in the quality of future health care; **having regular doctors** and a choice of available health care services; utilization of alternative medicine in the past 2 years; understanding of the written instructions on **prescription medicines** and printed information distributed by health care personnel; non-compliance with the physician's instructions; belief that they would receive better treatment if their socioeconomic status was higher; having experience or knowledge of any medical errors. Quality of communication with physicians was measured in terms of whether the doctor was thought to be a good listener, whether they were given the opportunity to ask questions and be involved in decision making, being treated with respect, being given sufficient time explanation as needed by physicians and understanding what the physician said, and confidence in the physician. Data were entered and checked for errors. Analysis was carried out using SPSS version 11. Descriptive statistics and Chi-square techniques have been used in the analysis.

Results

Sixty-four percent of those interviewed in this study are female. The majority of respondents are in the age range 30-49 years and three-fourths are married. Sixty-seven percent of the respondents have completed primary education. Most of them are owners of small businesses and employees. Fourteen percent are housewives and 9 percent are unemployed. Twenty percent have no income and almost half have an income less than 5,000 baht per month. Fifty-four percent of the interviewees reside in urban areas whereas 46 percent reside in rural areas. Ninety-five percent of respondents are covered by some health insurance scheme. The majority is under the Universal Coverage Program. However, 5 percent of the sample had no insurance. (Table 1)

Health Status and Health Care Utilization

More respondents in the highest income quintile group rated their health status “Excellent/good” compared to any other quintile. Surprisingly, respondents in the second lowest income quintile gave a more negative rating of health status than did respondents in the lowest quintile. Differences in self-reported health status were significant at the 0.00 level. In terms of utilization of health care services, the low income quintiles used Out-Patient Department (OPD) services more than did the higher income quintiles ($\alpha = 0.01$). The same picture was found for the rate of admissions to hospitals ($\alpha = .05$), Fifteen percent of the two lowest income quintiles reported having used inpatient services whereas only 5 percent of the highest quintile used these services. The types of health facilities that have been regularly used by each income quintile group also demonstrated differences in accessibility to different levels of quality of services. The lower income quintile groups tended to use services in health stations and district hospitals, and the utilization rate for these types of health facilities is highest in the second lowest quintile. The highest income quintile reported regular use of health facilities such as private hospitals and private clinics although the rate of service utilization for these facilities in the lowest income quintile is the second largest. The difference in choice of health facilities was significant at the 0.00 level. (Table 2)

Quality of Care

The perceived quality of care will influence the consumer’s decision to seek care. If we look from the supply side, the quality of services offered to consumers with the same needs may vary systematically with social groups. The perception of quality of care, therefore, reflects the opinion of each social group of their health care services. Table 3 shows that respondents in the low income quintile groups tend to be more satisfied with the health

care services they utilize than the high income quintiles, although there is no significant difference. When asked about their confidence in the quality of care that they are likely to receive in the future, positive responses ranged from 54.7-69.6 percent of all respondents in each quintile. Although the third income quintile had the lowest positive response rate, the difference between this group and other groups is not so great. **Having a regular doctor** was taken as an indicator of how good accessibility to health care services is in each social group. When we asked about this, it was found that less than 20 percent of all respondents in all income quintiles had regular doctors. Although there is no significant difference, it can be noted that few respondents make regular visits to doctors. When asked about the choice of health care services available to them, the richest group of respondents (the fifth quintile) reported more positively than any other group and respondents in the second quintile responded more negatively than any other group. ($\alpha = 0.00$).

Utilization of alternative medicine may indicate some cultural belief or preference to stay away from prescription medications and other modern medical practices. It was noteworthy therefore that it is about 20 percent of all respondents reported some use of alternative medicine services. Although there is no significant difference among income groups, more respondents in the higher income groups reported use of alternative medicine compared to the lower income quintiles. It is noteworthy that all groups used herbal medicine.

An important factor that can influence the outcome of health care is the patient's understanding of the instructions **written by pharmacists on prescription medicines**. It was found that there is a significant difference in understanding among social groups ($\alpha = 0.00$). More respondents in the highest income group compared to any other group responded positively when they were asked if they understood the instructions on prescriptions. The second quintile had the lowest number of positive respondents. The results were similar for understanding of printed information and health care instructions distributed by health care personnel ($\alpha = 0.01$). When asked about non-compliance with the physician's instructions, there is no significant difference among income quintile groups, but 12-23 percent of respondents in all groups reported non-compliance. More than half of the respondents believed that they would receive better treatment if their socioeconomic status was higher, although there is no significant difference among income quintile groups. Regarding medical errors related to prescriptions or hospital treatment, 9-16 percent of respondents reported that they had personally experienced medical errors, or their family members had experienced

them or they had heard of someone in their community having experienced them. There is no significant difference among income groups.

Good quality of care should include preventive care. When asked if they had been screened for cervical cancer, had received a physical check-up and had their cholesterol levels tested before the Universal Coverage Program was introduced, there were significant differences in the rates reported ($\alpha = 0.01$, $\alpha = 0.00$ and $\alpha = 0.05$, respectively). Forty-three percent of the females in the highest income quintile reported having undergone cervical cancer screening, which is 2 times higher than the figure for the lowest income quintile. For cholesterol screening, 25 percent of the highest income quintile received this service, which is almost the same rate as the lowest income quintile (24 percent). Although more respondents in the higher quintiles reported utilizing this service compared to the lower quintiles it is notable that respondents in the second quintile made least use of this service. The second quintile also made least use of physical check-up services whereas 53 percent of the fifth income quintile and 39 percent of the lowest quintile reported using them.

Although the number of respondents in each quintile who reported utilizing prevention services seemed to be fewer after the introduction of the Universal Coverage Program, a significant difference among the different income quintiles has been found for utilization of cervical cancer screening, physical check-up, cholesterol and dental screening and blood examination. Surprisingly, fewer respondents in the second, third and fourth quintiles utilized cervical cancer screening services compared to the lowest quintile (14 percent). The corresponding figure for the highest quintile is 26 percent. Respondents in the third quintile reported the lowest rate for physical check up (18 percent), whereas the figure for the fifth quintile was 38 percent, followed by the first quintile (31 percent), the fourth quintile (24 percent) and the second quintile (22 percent). A similar picture was found for cholesterol screening. In this case the figure for the fifth quintile was 20 percent, whereas the figure for the first quintile was 16 percent. The figures for the second, third and fourth quintiles were 8.0, 7.3 and 11.5 percent, respectively. With regard to dental screening, the utilization rate for the fifth quintile was 23 percent, twice the rate for the first quintile. The rates for the second, third and fourth quintiles were 8.8, 13.1 and 13.0 percent, respectively. For utilization of blood examination services, the rate for the first quintile was higher than that of any other quintile (30.5 percent). The figures for the other quintiles were as follows: fifth quintile (23.2 percent),

fourth quintile (21.4 percent), third (16.8 percent) and second quintile (15.9 percent). (Table 4)

From the consumer's point of view, quality of care implies more than the technical competency of health professionals. What consumers also want is information about their health conditions, and the available treatment options. Thus good communication between physician and patient is essential. The results of the survey show that more respondents in the fifth income quintile were given an opportunity by their physicians to be involved in treatment decision making compared to the lower quintiles, although the difference is only slight. When asked if they understood what their physician had said and whether their physician gave them the opportunity to ask questions, more respondents in the highest income quintile answered positively compared to lower quintiles. However, the figure for respondents in the second and third quintiles was lower than that for the first quintile. When asked about other components of the quality of communication between physicians and patients - whether the physician was a good listener, having confidence in the physician, being treated with respect, and the physician spending sufficient time and explaining as necessary - there was no significant difference among respondents in the different socioeconomic groups, although more respondents in higher income quintiles responded positively.

Discussion

Very little research has been carried out in Thailand related to the quality of care from the consumer's viewpoint. This study demonstrates that health care intervention programs that aim to increase accessibility by reducing of financial barriers may still face problems of equity in the quality of care.

Although perceived health status has been considered a personal perception (Evans et al, 2001) that may have limited value as an indicator of health status, it has frequently been used in studies related to the issue of health equity (Manderbacka (1998), Gao et al (2002)). This paper demonstrates that perceived health status can be used as an indicator to identify differences in health status among different social groups. This study corroborates the finding of earlier researchers that Thai people in the lower income groups tend to perceive their health status more negatively than do higher income groups (Pannarunothai & Mills, 1997). If the rate of health care utilization is used as an indicator of health status, the findings from this

study also show the same picture that the poor tend to have a more negative opinion of their health and use more outpatient and inpatient services than do higher income groups. The large majority of the poor use the services of health stations and district hospitals whereas the rich use the services of private clinics and private hospitals. If equity in the quality of care is one of the goals of government health policy, then the findings of this study suggest that the way the Universal Coverage Program is being implemented may make the policy unrealizable, particularly for rural people. People living in rural areas have to register with rural health stations and district hospitals that may not be able to provide the same quality of health services as those found in urban areas. The Universal Coverage Program should therefore allow consumers to register with any health facilities they choose as this may reduce inequity in quality of care. Moreover, as more respondents in the low income quintiles reported that they have fewer choices for health care visits compared to respondents in the higher quintiles, improvement in choices of health care facilities, which is a component of quality of care, should, be a target of the Universal Coverage Program.

Good communication between physicians and patients can lead to good health outcomes. The findings from this study demonstrated that respondents in different income quintiles reported differently in terms of their understanding of what physician said and in terms of having the opportunity to ask questions and be involved in decision making. The findings suggest that quality of care in terms of communication between physician and patients can be improved not only in terms of the quality of communication itself, but also in terms of the quality of communication with each specific subgroup of the population.

Quality of care also means comprehensive care, including preventive care services. Accessibility and utilization of preventive care services reflects the quality of health service coverage. The findings of this study demonstrated that only a small proportion of the respondents utilized these services and that people in the lower quintiles utilized them less than those in the higher quintiles. **After the implementation of the Universal Coverage Program , the rate of utilization of preventive services** did not increase as expected, although preventive care services are included in the coverage. Pannarunothai (2002) also found that the Universal Coverage Program did not change or increase the rate of utilization of preventive services. Since preventive services are cost-effective, strategies to increase their accessibility and utilization should be considered.

Although respondents in each quintile reported positively when asked if they understood the **instruction on prescription medicines**, the printed information distributed by health care personnel, and the health care instruction given in person, the differential response rates of the various socio-economic groups suggest that, in general, information needs to be communicated more effectively, especially for the low income group. Clear understanding of written information and **instructions on prescription medicines** could lead to better health outcomes among the poor and contribute to reducing inequity in health status and health care services.

Conclusions

Although equitable accessibility to health care services is a main focus of the Thai health service system, it may not ensure equity in the quality of care. The lower income consumers tended to use services from health stations and district hospitals whereas the higher income group tended to use services from private clinics and hospitals. The 30 Baht Universal Coverage Program, which allows beneficiaries to use services from those health facilities with which they have registered, may still be restricting the choices of the lower income groups. Quality of care in terms of comprehensive services provided showed that the lower income groups had lower utilization rates for preventive services than the higher income groups. The Universal Coverage Program **did not increase rates of utilization** of these services although it may be too early to conclude anything since this new scheme is still quite new. With little information on the quality of care from the consumer's perspectives in Thailand, this study showed that in terms of **understanding the instructions on prescription medicines** and written information distributed by health care personnel lower income groups were less positive than the higher income group. When communication between physicians and patients was examined, the lower income groups reported more negatively than the higher income groups in terms of understanding what their physician said and in terms of being given the opportunity to ask questions and be involved in decision making. All these findings suggest that there is some room to improve the quality of care. However, equity in quality of care among people in different socioeconomic groups should also be taken into account. Further studies in quality of care should focus not only on the clinical and technical components of health care but also on communication with health care personnel from the consumer's perspective.

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Table 1 Socioeconomic and demographic characteristics of the sample

Characteristics	Number (%)
Sex	
-Male	235 (36.2)
-Female	415 (63.8)
Age (years)	
-Up to 29	
-30-39	61 (9.4)
-40-49	170 (26.2)
-50-59	182 (28.0)
-60 up	133 (20.4)
	104 (16.0)
Marital status	
-Single	70 (10.8)
-Married	497 (76.0)
-Separated, widow	86 (13.2)
Educational level	
-Illiteracy	48 (7.4)
-Primary school	437 (67.2)
-Secondary school	113 (17.4)
-Certificate & degree	52 (8.0)
Occupation	
-Employee	163 (24.9)
-Agricultural workers	128 (19.7)
-White collar workers & civil servants	16 (2.5)
-Owners of small business	196 (30.2)
-Housewife	88 (13.5)
-Unemployed	55 (8.5)
Income (Baht)	
-No income	131 (20.2)
-Below 1,000	16 (2.4)
-1,001-5,000	314 (48.3)
-5,001-10,000	137 (21.1)
-10,000 up	52 (8.0)
Residence	
-Urban	350 (53.8)
-Rural	300 (46.2)
Under coverage of any health insurance schemes	
-Yes	616 (94.8)
-Universal coverage	546 (88.6)
-Civil servant	33 (5.4)
-Social security	31 (5.0)
-Private insurance	6 (1.0)
-No	34 (5.2)

Table 2 Self-reported health status and utilization of health care services classified by income quintiles

Self-reported health status and utilization of health care services	Income quintiles					Overall
	First	Second	Third	Fourth	Fifth	
-Please give a self-assessment of your health status ***	68	31	58	67	87	311
-Excellent/good	51.9	27.5	42.3	51.1	63.0	47.8
	42	60	60	54	42	258
-Fair	32.1	53.1	43.8	41.2	30.4	39.7
	21	22	19	10	9	81
-Poor	16.0	19.5	13.9	7.6	6.5	12.5
-Did you visit any outpatient health facilities in the past year? **						
-Yes	99	79	90	84	76	428
	75.6	69.9	65.7	64.1	55.1	65.8
-No	32	34	47	47	62	222
	24.4	30.1	34.3	35.9	44.9	34.2
-Overall	131	113	137	131	138	650
-What type of health care facilities do you regularly use? ***						
-Private clinics	32	14	25	25	45	141
	24.4	12.4	18.2	19.1	32.6	21.7
-Health stations	18	40	37	21	5	121
	13.7	35.4	27.0	16.0	3.6	18.6
-District hospitals	56	52	55	61	40	264
	42.7	46.0	40.1	46.6	29.0	40.6
-Provincial/regional/tertiary hospitals	8	2	6	2	5	23
	6.1	1.8	4.4	1.5	3.6	3.5
-Private hospitals	17	5	14	22	43	101
	13.0	4.4	10.2	16.8	31.2	15.5
- Were you admitted to hospital in the past year? *						
-Yes	20	17	18	12	7	74
	15.3	15.0	13.1	9.2	5.1	11.4
-No	111	96	119	119	131	576
	84.7	85.0	86.9	90.8	94.9	88.6

*** Chi square test significant at 0.00

** Chi square test significant at 0.01

* Chi square test significant at 0.05

Table 3 Perception of quality of health care services

Perception of quality of health care services	Income quintiles					Overall
	First	Second	Third	Fourth	Fifth	
-Are you satisfied with the health care services you received in the past 2-5 years						
-Satisfied	123 96.9	99 93.4	123 93.2	117 95.1	114 89.8	576 93.7
-Not satisfied	4 3.1	7 6.6	9 6.8	6 4.9	13 10.2	39 6.3
-Do you have confidence in the quality of care you will receive in the future?						
-Yes	87 66.4	75 66.4	75 54.7	85 64.9	96 69.6	418 64.3
-No	44 33.6	38 33.6	62 45.3	46 35.1	42 30.4	232 35.7
-Do you visit doctors regularly?						
-Yes	24 18.3	13 11.5	20 14.6	26 19.8	21 15.2	104 16.0
-No	107 81.7	100 88.5	117 85.4	105 80.2	117 84.8	546 84.0
-How much choice of where to go for health care services do you have? ***						
-Adequate/would like more choice	97 75.8	71 65.7	108 78.8	106 82.2	124 90.5	506 79.2
-No/little choice	31 24.2	37 34.3	29 21.2	23 17.8	13 9.5	133 20.8
-Did you utilize alternative medicine in the past 2 years						
-Yes	26 19.8	22 19.5	32 23.4	37 28.2	35 25.4	152 23.4
-No	105 80.2	91 80.5	105 76.6	94 71.8	103 74.6	498 76.6
-Have you ever used any of the following types of alternative medicine?						
-Herbal medicine	15 55.6	17 77.3	27 84.4	29 80.6	27 77.1	115 75.7
-Acupuncture	3 11.1			3 8.3	1 2.9	7 4.6
-Traditional medicine	7 25.9	4 18.2	3 9.4	3 8.3	3 8.6	20 13.2
-Others	2 7.4	1 4.5	2 6.3	1 2.8	4 11.4	10 6.6
-Do you usually understand the written instructions on prescription medicines? ***						
-Yes	119 95.2	90 87.4	126 95.5	118 95.9	131 98.5	584 94.8
-No	6 4.8	13 12.6	6 4.5	5 4.1	2 1.5	32 5.2

- Do you usually understand the information distributed by health care personnel? **						
-Yes	113 95.8	90 90.0	130 97.0	118 97.5	132 98.5	583 96.0
-No	5 4.2	10 10.0	4 3.0	3 2.5	2 1.5	24 4.0
-Have you ever failed to comply with your physician's instructions?						
-Yes	27 20.6	13 11.5	31 22.6	21 16.0	30 21.7	122 18.8
-No	104 79.4	100 88.5	106 77.4	110 84.0	108 78.3	528 81.2
-Do you believe that you would receive better treatment if your socioeconomic status was higher?						
-Yes	63 50.0	63 58.9	76 56.7	83 64.3	73 56.2	358 57.2
-No	63 50.0	44 41.1	58 43.3	46 35.7	57 43.8	268 42.8
-Have you or a family member had experience of any medical errors, or have you heard about any from a member of your community?						
-Yes	12 9.2	14 12.4	14 10.2	21 16.0	17 12.3	78 12.0
-No	101 77.1	86 76.1	100 73.0	83 63.4	97 70.3	467 71.8
-Not sure	18 13.7	13 11.5	23 16.8	27 20.6	24 17.4	105 16.2

*** Chi square test significant at 0.00

** Chi square test significant at 0.01

Table 4 Utilization of preventive care before and after universal coverage program

Utilization of preventive care	Income quintiles					overall
	First	Second	Third	Fourth	Fifth	
Preventive services (Before Universal coverage program)						
-Physical check up *	51	40	51	52	73	267
	38.9	35.4	37.2	39.7	52.9	41.1
-Blood pressure screening	99	79	99	96	110	483
	75.6	69.9	72.3	73.3	79.7	74.3
-Cholesterol screening *	32	13	22	27	35	129
	24.4	11.5	16.1	20.6	25.4	19.8
-Dental check up	42	27	35	39	47	190
	32.1	23.9	25.5	29.8	34.1	29.2
-Cervical cancer screening **	21	11	29	25	34	120
	21.6	18.3	30.9	29.4	43.0	28.9
-Blood examination	59	33	56	52	60	260
	45.0	29.2	40.9	39.7	43.5	40.0
Preventive services (After Universal coverage program)						
-Physical check up ***	40	25	24	31	52	172
	30.5	22.1	17.5	23.7	37.7	26.5
-Blood pressure screening	74	62	68	70	71	345
	56.5	54.9	49.6	53.4	51.4	53.1
-Cholesterol screening **	21	9	10	15	28	83
	16.0	8.0	7.3	11.5	20.3	12.8
-Dental check up **	16	10	18	17	32	93
	12.2	8.8	13.1	13.0	23.2	14.3
-Cervical cancer screening ***	14	3	10	7	21	55
	14.4	4.9	10.8	8.3	26.3	13.3
-Blood examination *	40	18	23	28	32	141
	30.5	15.9	16.8	21.4	23.2	21.7

*** Chi square test significant at 0.00

** Chi square test significant at 0.01

* Chi square test significant at 0.05

Table 5 Quality of communication with physician

Quality of communication	Income quintiles					Overall
	First	Second	Third	Fourth	Fifth	
-Does your physician listen well?						
-Yes	102 77.9	94 83.2	106 77.4	109 83.2	111 80.4	522 80.3
-No	29 22.1	19 16.8	31 22.6	22 16.8	27 19.6	128 19.7
-Do you usually understand what the physician says?						
-Yes	105 80.2	86 76.1	103 75.2	108 82.4	120 87.0	522 80.3
-No	26 19.8	27 23.9	34 24.8	23 17.6	18 13.0	128 19.7
-Do you have confidence in the physician?						
-Yes	127 96.9	111 98.2	130 94.9	128 97.7	134 97.1	630 96.9
-No	4 3.1	2 1.8	7 5.1	3 2.3	4 2.9	20 3.1
-Does the physician give you the opportunity to ask questions?						
-Yes	88 67.2	74 65.5	88 64.2	96 73.3	106 76.8	452 69.5
-No	43 32.8	39 34.5	49 35.8	35 26.7	32 23.2	198 30.5
-Does the physician treat you with respect?						
-Yes	126 96.2	108 95.6	133 97.1	127 96.9	136 98.6	630 96.9
-No	5 3.8	5 4.4	4 2.9	4 3.1	2 1.4	20 3.1
- Does the physician give you the opportunity to be involved in decision making?						
-Yes	62 47.3	54 47.8	71 51.8	75 57.3	83 60.1	345 53.1
-No	69 52.7	59 52.2	66 48.2	56 42.7	55 39.9	305 46.9
- Does the physician spend enough time with you?						
-Yes	102 77.9	88 77.9	110 80.3	109 83.2	114 82.6	523 80.5
-No	29 22.1	25 22.1	27 19.7	22 16.8	24 17.4	127 19.5
- Does the physician explain your health condition to you satisfactorily?						
-Yes	113 86.3	100 88.5	121 88.3	120 91.6	123 89.1	577 88.8
-No	18 13.7	13 11.5	16 11.7	11 8.4	15 10.9	73 11.2

Chi square test significant at 0 .1