Revised

A Research Report

HEALTH INSURANCE FOR THE URBAN POOR: THE CASE OF SLUM DWELLERS IN BANGKOK

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1. Introduction

1.1 Significance of the problem

Over the past three decades Thailand has made impressive gains in both economic and social development. The income and standard of living of households across regions have improved considerably. Gross Domestic Product (GDP) in real terms continued to grow at an increasing rate, from 5.6% p.a. during 1970-75, to 6.5% p.a. and 7.7% p.a. during 1975-80 and 1980-85, respectively (Bhongmakapat, 1990). Real GDP growth rate even reached a double digit figure during 1988-90, but had since dropped and stabilized around 8% p.a. until 1995. The nation's GDP at 1988 prices more than tripled between 1980 and 1995, while per capita income rose about 2.5 times, from 19,493 baht in 1980 to 48,628 baht in 1995.

Urbanization and industrialization has resulted in the government providing incentives to promote large scale industries. Large firms are located in Bangkok and its vicinity. Despite attempts by the government to promote rural industrial development, the rate of rural-to-urban migration is still high. The report of the 1992 National Migration Survey by the Institute for Population and Social Research, Mahidol University, revealed that migration into Bangkok is much higher than that of any past estimates (Chamratrithirong et al. 1995).

The prosperity of the Bangkok Metropolitan Administration (BMA) attracted a great number of migrants to the city. Immigrants to the BMA consist of both life-time and temporary. A large number of these migrants have been living in various existing slums and squatter settlements and are rapidly joining the rank of the urban poor.

Although poverty in Thailand is much more a rural than an urban phenomenon, a core group of urban poor has remained and little progress has been made in reducing the relative size of this group. In 1988-89, 29.6% of the urban poor were in the BMA (Hutaserani, 1992). Most of them have migrated from rural areas in search of better work opportunities. Regarding characteristics of the urban poor, the majority have a low level of education, are unskilled, underemployed and earn a low income. Most of them rent house and land. Housing problem is typical in all slum areas. But the most important problem of slum dwellers is not housing condition but poverty resulted from many socio-economic factors (Siriwan and Chanpen, 1988).

The Sixth and Seventh National Economic and Social Development Plans (1987-1991 and 1992-1996) prepared by the National Economic and Social Development Board state that industrial development is the development policy of Thailand. However, the government realizes that impacts of the industrialization process on different disadvantaged groups must be recognized and measures to improve the situation need to be identified and undertaken. The government is aware that slum eviction and slum relocation are not long-term solutions in all cases. Some slums are needed to provide residences for people in certain locations in the middle of the city such as near the dockyard. The government therefore adopted the policy to upgrade slum conditions by providing water and electricity to respond to the basic minimum needs of the people.

To turn the current economic and development transformation into a more sustainable and competitive growth path by the year 2000 and allow the nation's economic success to be equally enjoyed by every population group, the quality of life of people must be improved. Educational and health services are two key factors in sustainable development. Health is a basic dimension of the quality of life. Currently 65 per cent of the population are covered by one insurance program or another for health services, another 35 per cent must rely on either self or family support (Supachutikul, 1994). Many of the urban poor are likely to be among the latter 35 per cent of the population as they may be left out of the national health insurance scheme embodied in the recently enacted Social Security Law that covers income earners in formal-sector employment.

1.2 Objectives of the study

A great deal of research has been conducted on urban poverty in Thailand. Research on the health problems of the urban poor has been carried out by many institutions covering various disciplines, i.e., medicine, anthropology, sociology, political science, economics and social work. Most of these studies deal with poverty trends and profiles, surveys of living conditions and economic and environmental problems, and specific concerns such as the relationship between socio-economic status and child care behavior and eating habits in the slum areas. Very few studies address the issue of the relationship between socio-economic conditions of these households and health status (morbidity, mortality, access to and use of health services, the related financial burden and the sources of finance of health care). Very few provide a profile of the health services system available to this low income group of the population. Thus there is a large gap of knowledge about

the socio-economic determinants of health status, health service utilization pattern and the financing of health care by this particular group. The research undertaken is intended to fill this gap.

The research aims to provide a fuller body of knowledge of the health of the population to complement and supplement existing knowledge and other research undertakings. The research topic is concerned fundamentally with the access to health services and the sources of finance of these services among one of the most disadvantaged groups in the country, namely slum dwellers. It therefore complements other research that has been done or is currently being undertaken with the aim of understanding the health problems of disadvantaged groups

The specific objectives of the research are as follows:

1) to obtain information on the socio-economic-demographic characteristics of selected groups of the urban poor, their income, occupation, education, skills, family size and composition, migration history, and so on;

2) to investigate their access to health care services, involving a survey of services available, taking into account their "prices", choice and attitudes towards them, whether there are important supply constraints on the use of services, rationing by socio-economic characteristics, or lack of access due to prohibitive distance/waiting time;

3) to determine how health care is financed, the willingness of households to pay for services, their actual expenditures, and the feasibility of introducing an urban health-card system similar to the rural health card project for which Thailand is widely known.

The financing of health services and provision of social security are areas of utmost policy interest in the endeavor to provide "health for all". The research is of particular importance in view of the consideration of the government to provide health insurance to the disadvantaged groups of society. Since most of the slum dwellers do not have a regular employment status, they do not benefit from the current Social Security Scheme which has been designed initially for workers in medium and large business enterprises. Although there are plans to extend the benefits to cover other groups of the population, it is likely that the urban slum dwellers may be the last group to benefit from the Scheme or may be left out of the system altogether, due to their uncertain and sometimes unidentified social and work status. Alternatively, the Ministry of Public Health (MOPH) has been considering extending the health card programme, a voluntary health

insurance program in place in rural areas since 1983, to the urban areas to provide insurance coverage to the urban poor. Studying their health service utilization and financing pattern will help shed some light on alternative ways to provide for their security in terms of access to basic health services.

The MOPH has been concerned with identifying disadvantaged groups in terms of their socio-economic and health status and their health-care behavior, in the hope of devising some index to pinpoint them. It is hoped that the research will help provide some useful answers to the questions raised by the MOPH regarding the health security of the disadvantaged group of the population.

The research is intended to yield more definitive information on the real resources at the command of poor urban families and on their ability to afford health care, shelter and other essential services. It is hoped that the study will yield important insights into the capacity to pay for basic services, and the results are likely to provide input for policy formulation on a number of allocative and distributive issues.

For example, by studying access, supply constraints and attitudes towards available health services, more appropriate modes of provision can be designed. Examination of the social and economic conditions of the urban poor and appraisal of their condition will shed light on some of the adverse and undesirable effects of urbanization. Investigation of the sources of health-care financing, the extent and reliability of income transfers and the uses to which they are put, will improve knowledge of the role of the family network, if any, as a substitute for imperfect formal capital markets.

In-depth understanding of the health behavior of the urban poor is particularly urgent at this time, in view of the unprecedented rate of urban growth which will aggravate existing problems. It is estimated that the urban population will increase from 18.1 million in 1990 to 28.8 million in 2005, 37% of which will be in the BMA and 5 surrounding provinces (Daniere and Sussangkarn, 1992). A sizable number of migrants from the rural areas will likely add to the rank of the urban poor residing in slums and squatter settlements. Already the figures are astounding; slum dwellers in Bangkok are believed to number more than 1.2 million people, or about 20 per cent of Bangkok's population in 1994 (BMA and UNICEF, 1994).

An encouraging aspect lies in the fact that Thailand has achieved high growth and substantial increases in per capita incomes in recent years. This means that the income and consumption shortfalls of the poor are not a large proportion of GNP. The

political commitment towards quality of life and equity which has begun to be evidenced in the Seventh National Economic and Social Development Plan also suggests that the problems of the urban poor are likely to be successfully addressed. With a well-directed and well-implemented strategy, it is believed that Thailand can now afford a substantial attack on poverty and related health problems without significantly hampering growth rates. The research will complement the slums studies previously conducted by sociologists, social workers, and anthropologists, emphasizing economic behavior and the health financing aspects which will serve as an input to this effort.

2. Overview of Slums in Bangkok

2.1 The background of slums in Bangkok

Various surveys of Bangkok slums in the past reported a number less than 100 in the late 1960's, those conducted during 1971-84 found between 100 and 500 slums, and in 1985, 1,020 slums (Pornchokchai, 1985). The reported increase in the number of slums overtime has been due to underreporting in previous surveys as well as an increase in the number due to new establishments, especially in the suburban areas and in private housing projects.

In September 1994 , the BMA survey found 1.25 million people living in 1,246 so-called "communities" in the 38 districts of BMA (BMA and UNICEF, 1994). Although the BMA classifies these communities into 5 types according to density of houses, location and whether they are private or public housing projects, all of them require physical and social development (See Appendix Table A1). 775 of these communities or 62% of the total are densely populated, with about 800,000 population, and are located in the inner city of Bangkok, while the remaining are suburban and housing project communities which are relatively less crowded. About half of the communities are small (not more than 140 houses) and only 5% are large ones (500 houses and over).

These communities had a tendency to expand both in number and area around the vicinity of Bangkok (Nonthaburi, Pathumthani, Samutprakan, and Nakornpathom), due to continuous migration of labor from the rural areas.

Inspite of the growth of slums, their characteristics now are not much different from what they were in the past. People in the slums still utilize poor-quality materials to build their residence. Each house has a very limited space of 6-8 square meters, which accommodates about 5-10 members of the family. There is hardly any space

between houses, and no roads in the slums, except for footpaths made of wood connected and raised above a pool of sewage and garbage. Recently some slums have replaced concrete pavements for the wooden paths. Lack of drainage facilities and proper garbage disposal create non-hygienic environment common to most slums.

Slum dwellers consist mainly of people who migrated many years ago from upcountry to Bangkok to get away from the harsh economic conditions in their own hometowns to seek a better opportunity for their life in the capital. Some of these migrants have settled in the Bangkok slums for generations. Most of them take such jobs as construction and general workers, taxi drivers, and street vendors. Many do not have regular jobs. Their earnings are generally low, compared with the costs of living in Bangkok. More recent settlements in the slums took place as a result of poor households being forced out of rented land when the price of land in Bangkok rocketed in the past decade.

With the slums being densely populated in non-hygienic and unhealthy environment, many social problems exist including crime, drugs, fire hazard and health problems.

2.2 A summary of policies towards the slums in Bangkok

2.2.1 The central government policy. The central government has made a number of attempts to reduce migration from provincial poverty areas into the capital, for instance, in the form of job creation in rural areas. Unfortunately, few were successful.

Policies involving the control of the size of slums and reduction in slum population have encountered major obstacles mainly because some political parties take advantage of the existence of the slums in obtaining their votes. Recently, the support from these parties resulted in the upgradation of some leading squatters to be community. The acceptance of these slums in legal term can be seen from the fact that the Bangkok Metropolitan Administration (BMA) made a census of the slums and registered them. The slum households now have their registration of residence.

2.2.2 The National Housing Authority (NHA). The National Housing Authority has two important mandates dealing with the slums.

First, the NHA provides new accommodation for those in the slums whose houses were burnt down or expropriated. Due to their familiarity with the illegally occupied area in the slums, the slum residents usually refuse to move out. In some cases, new accommodations furnished by the NHA are rented out to someone else.

Secondly, the NHA looks after the conditions of utilities in the slums. The cooperation between the NHA and the slum people is crucial. The improvement in pavement, drainage, fire protection and refuse collection is hindered by the lack of enthusiasm of the slum people.

2.2.3 The Bangkok Metropolitan Administration (BMA). The Bangkok Metropolitan Administration is mainly responsible for health care and well-being of the slum population. It is found that most of the slum people suffer from disease of poverty. Common illnesses include the diseases of digestive system and those of respiratory tract. Other health problems involve malnutrition. According to the BMA report in 1990, about 13% of the children under 5 were identified as malnourished. Another serious and unresolved problem faced by the BMA is the provision of proper health care services to wanderers whose whereabouts are hardly identified.

In the BMA 1994 plan, primary health care was to be set up in every slum. In order that the elderly will be better looked after, a grouping of the elderly will be established in 45 slums. A dental service program will be available in every slum.

3. Household Survey

3.1 Survey Method

Two sets of survey were conducted for this study. One is a household survey, and the other is a provider survey. Different sets of questionnaires were developed for each survey, as attached in the appendix.

The household questionnaire is divided into three parts. Part one contains questions about the general characteristics and health conditions of household members, their illness and treatment received in the past three months, access to and expenditures made for health care services, and the methods of financing the services. Part two is to identify socio-economic characteristics of the households, their migration history, and information regarding availability of utilities and sanitation services. And part three investigates household willingness to pay for health services and for health cards, as well as their attitudes towards risk.

A pretest of the questionnaire was conducted by the research team in one slum area in Bangplad district in March 1995. During this preparatory process systematic consultations regarding survey sites are essential. The research team had received great

cooperation from the Department of Policy and Planning of the Bangkok Metropolitan Administration in selecting the slums to be surveyed.

The household survey was conducted in April and May 1995. The revised household questionnaire was used by trained interviewers to interview household heads (either the husband or wife who is the decision maker in that house). There are six teams of field interviewers. Each team consisted of two interviewers who worked under an overall supervision of one researcher throughout the survey. One field development officer from each district of the Bangkok Metropolitan Administration, who is in charge of that particular slum being surveyed, accompanied the research team into the slum. In addition, the slum leader assisted the team to obtain cooperation from slum dwellers. Each interviewer carried out approximately 5 interviews per day.

In addition to the use of questionnaire, the research team had an informal and random interview with the slum dwellers about their illness, health care seeking behavior and attitudes, and observed their living conditions. These interviews and observations yield qualitative information to supplement the questionnaire answers.

3.2 Sampling Procedure

The target group of the study is the households residing in the slums. The sample size of approximately 500 was predetermined on the basis of budget and time available for the study. This sample size is considered to be sufficient for the regression analysis using cross-section data.

The sampling procedure involves 3 steps. First is the selection of the BMA districts, then the slums in the sampled districts, and finally the selection of households in the sampled slums.

The 38 districts of the BMA are located in 3 areas, namely, 15 districts in Northern Bangkok, 12 in Southern Bangkok and 11 districts in Thonburi. In order that the sample consists of slums dispersed in all the 3 areas, one-fourth of the districts in each area were randomly selected. Thus 4 of the sample districts are in Northern Bangkok, 3 in the South and 3 in Thonburi, totaling 10 districts (See Figure 1 and Table A2). It should be noted that the 3 districts in the South of the BMA happened to be the same site as the study project called "Healthy City" by the Bangkok Metropolitan Administration. The Healthy City Project is planned to cover every district of the BMA in the future. It is aimed to obtain information for improving the living standard of the urban poor.

Since the sample size was determined to be 500, an equal number of about 50 household samples were to be interviewed in each of the 10 sample districts. Given the small number of households, only one or two slums can be selected in each district, depending on the size of slums.

In selecting the sample slums in each district, cooperation from the slum dwellers and variation of slums (in terms of size, land ownership and land tenure status) were the two main considerations. The Department of Policy and Planning of the BMA had assisted in selecting the slums whose committee was set up by the BMA, so as to secure cooperation from the slums. As for the size, the proportion of small, medium and large sample slums were to resemble the size distribution of the Bangkok slums. Hence, 50% of the sample slums are small (less than 140 houses), and another 50% are medium (141-499 houses) and large (500 houses and over).

The BMA classifies the communities into 5 types, namely, crowded communities, city communities , suburban communities and those under private housing projects and under the National Housing Authority. The present survey aims to select the sample only from the first two types, which are densely populated and have sub-standard housing conditions, together forming 62% of the total number of slums in Bangkok (Table A2). These slums or communities are more likely to belong to the urban poor than the other 3 types of communities.

The non-systematic sampling of slums selected one slum each in 8 sample districts and 2 small slums each in 2 sample districts, yielding a total of 12 slums, 6 of which are small, 4 medium and 2 large ones. As for land ownership, 5 sample slums had private land ownership, 4 owned by the government and 3 are mixed. Land tenure status also shows a variation, whereby 2 of the sample slums consist of rented land or houses, one fully owned by the slum dwellers, 6 are a mixture of rented and owned, 2 squatters and one a mix of all the above cases.

Once the sample slums were selected, the households in each slum were purposively selected for the interview. The total sample consists of 529 households, 524 were interviewed in 12 sample slums, and an additional 5 households were taken from the pre-tested slum in Thonburi, as shown in Table 1.

4. Data Analysis and Findings

The analyses and findings of the study are divided into two main sections. Section I provides the background information about the sampled slum dwellers and their access to health services. Section II addresses the issue of whether an urban health card program is feasible. In the second section the study examines the willingness of slum dwellers to pay for the health card, their choice of health care providers, and the availability and reactions of health care providers to the introduction of a health card program in Bangkok. The methodology used for the analysis in the second section will be discussed in that section before the findings are presented.

4.1 Section I: Slum Households' Socio-economic Characteristics and Their Access to Health Services

This section focuses on the empirical results derived from the 1995 household survey on the slum dwellers in Bangkok, conducted by the Faculty of Economics, Thammasat University. The socio-economic characteristics of the sampled slum dwellers will be presented first. Then, information regarding their health status and health service utilization will be provided. The last part will examine the health benefits, accessibility to health care , and sources of health care financing.

4.1.1 Socio-economic Characteristics of Slum Dwellers

The socio-economic characteristics of the sampled slum dwellers are highlighted in Table 1.2. It is found that the per capita slum household income of 37,874 baht was lower than the country's Gross Domestic Product (GDP) per capita which was 70,182 baht in 1995. It was also lower than per capita Gross Regional Product (GRP) for the Central, East, West and the Southern regions of the country, but higher only than that for the North and Northeast in the same year. Compared with Bangkok, the per capita income of the sampled slum households was about 16% of the average income of people living in Bangkok Metropolis, whose per capita Gross Provincial Product was 238,849 baht (See Table A3). In short, the average income of slum dwellers was lower than that of Bangkok and several regions of the country. This implies that the slum people do not live comfortably in Bangkok where the cost of living is high, and should therefore be treated as the "urban poor".

Money income, not income-in-kind, in the forms of wages, salaries, and profits from self-employed business such as street vendors is the major source of income for

slum dwellers. Transfer payments from relatives and friends are also included in household income.

On average household heads in the sampled slums have an annual income of 86,704 baht. If income of the sampled household heads are broken down into three groups, namely, below average, average (mean income, plus and minus one standard deviation), and above average income levels, it is found that 25 per cent of the household heads had income below an average level, 59 per cent were in the average income group, and 16 per cent were classified as an above average income group.

Table 1.3 shows clearly that better educated household heads tend to have higher annual income. Since 64 percent of the household heads had no more than 7 years or primary level of schooling, their average annual income was only around 78,000 baht. On the other hand, the remaining 36 percent of the household heads who had secondary and higher level of education earned at least 93,000 baht per year. On average, household heads completed only primary education and had not received a higher formal education since they migrated to Bangkok. Seven per cent of the household heads did not have any formal education at all. Note that the average earning of this group was not different from that of the group with primary level of education.

The other distinguishing feature of slum dwellers is that these people have been living in Bangkok for a long period of time. The average number of years the heads of slum households have been living in Bangkok is thirty one. This contradicts with our earlier assumption that people living in the slums migrated to Bangkok within the last ten years and earlier slum residents have already moved out to live elsewhere. Since the average age of household head was 43 years old (See Table 1.2) this means that they moved to Bangkok when they were very young ; only about 12 years old, after completing the elementary school which was the compulsory level then. This seems reasonable since they could join the labor force right away after they moved to Bangkok, as the legitimate age for joining the labor force is thirteen. This slum dwellers household survey does not support the hypothesis that slum dwellers live in the slums temporarily. In fact, most slum dwellers tend to settle down in certain places and are unwilling to relocate. Even when their economic conditions improve, so that some are wealthy enough to buy a piece of land elsewhere , they still live in the slums because they get used to the surroundings and feel secure. In addition, living in the slums is more convenient to commute to their workplaces which are located in the inner city of Bangkok, and costs less for utilities and transportation.

From the informal interview it is found that most slum people have a loose tie with their relatives in the provinces upcountry.

Fifty-three percent of the slum household heads migrated to Bangkok from various parts of the country. Table 1.4 indicates that over 50 per cent of those migrated moved from the Central part of Thailand. Thirty two per cent moved from the North-East which is the poorest region of the country.. Thirteen per cent came from the North and the rest came from the South.

The slum dwellers live in crowded accommodation. The average household size of 4.76 persons exceeds that of the country which is 3.8 persons per household in 1994 (NSO 1995). It is observed that most of the houses have less than ten square meters of space. This indicates that an individual can occupy only two square meters on average.

Most of the slum people worked in the informal sector. Table 1.5 indicates that twenty one percent of the household heads were self-employed . They had private small scale businesses such as street food vending or peddling. Some opened tiny grocery stores selling necessity goods in their own homes in the slums. Another 18 per cent were hired as general workers. This latter group was unskilled or semi-skilled laborers working for daily payment. Nineteen percent of the household heads worked in the service and other sectors. Most of them did not have full-time jobs. They were under-employed. Among those working in the informal sector,. general workers and those engaged in miscellaneous other jobs had the lowest average annual income, while those in services earned the highest income.

The remaining 42 per cent of the slum household heads worked in the formal sector, 28 per cent as private enterprise employees and 14 per cent as government officials. Earnings in the formal sector were on an average level compared with other occupations.

The slum dwellers are poor by Bangkok's standard of living but they are on the average better off than people residing in the North and the Northeast where 45 percent of the migrated slum household heads came from. However, their economic gains are made at the expense of the loss in the form of poor quality of life and sub-standard level of living.

4.1.2 Slum Dwellers' Health Status, their Illness and Health Service Utilization

The majority (77 per cent) of household heads claimed that they were in good health (this information is obtained by asking the respondent to rate his or her own

health status as good, fair, not good, or poor). Twelve per cent reported fair health status and ten per cent considered that their health was not good. Only one per cent rated themselves as having poor health. Those who worked in the formal sector, including government and private sector employees, claimed the highest percentage of good health and none of them had poor health (Table A6). This could be due to the fact that they have better access to health services as a result of the somewhat better average income. Moreover, the Civil Servants' Medical Benefit Scheme for government officials and the Social Security Scheme for private enterprise employees make it less costly for these two groups to seek care when they are ill. On the other hand, the informal workers tend to have lower income and are unlikely to have any kind of health insurance benefits, so a larger percentage report that their health is either not good or poor.

Eventhough most slum household heads believed that they had good health it is not necessarily true for their members of the family. Seventy three per cent of the 529 sampled households reported that there was at least one ill person within three months prior to the survey (three-month recall period). Twenty per cent of the household members (517 out of 2,517) were ill. (See Figure 2) Altogether they had 547 illness episodes, averaging just about one episode each during the 3 months. Only 10 percent of the households had more than 2 episodes of illness.

Due to the different recall periods, however, these results, obtained from a three-month recall period, are not comparable with those from two other surveys, i.e., the 1991 National Statistical Office (NSO) Health and Welfare Survey and the 1991 National Health Examination Survey by the Ministry of Public Health (MOPH), which used a two-week recall period. The NSO Survey found that 18.4 percent of the people in Bangkok reported ill within 2 weeks, while the MOPH survey indicated that 49.2 percent of the people in Bangkok had acute illnesses within two weeks. The difference in the proportion of ill persons is probably due to the fact that the illness criteria used by the MOPH were determined on the medical basis and the ill were confirmed by thorough medical examinations.

Considering the health status of household members with differing income, the cross tabulation between the number of ill members in a household and its per capita income (Table 1.6) points out that the below average income group possessed a larger average number of ill persons and illness episodes during the three-month recall period than households in other income groups. Appendix Table A7 further suggests that twenty-six

percent of the former group had at least 2 ill persons in each household in the three months, compared to 18 percent and 17 percent for the average and above average income groups, respectively. Thirty six per cent of households in the above average income group, compared with twenty per cent for below average income group, did not have any members ill. This can be explained by the fact that the least well-off households are less able to afford to maintain their health status than the better-offs. This is also indicative of inequity in health status among slum dwellers.

Slum dwellers' health care seeking behavior as shown in Table 1.7 indicated that when they were ill, 36 episodes or about 6 percent did not receive any kind of treatment. For those seeking treatment, about 63 percent of the visits received medical care, and 31 percent purchased drugs for self treatment. A comparison of these findings with those of the National Health Examination Survey conducted by the MOPH in 1991 (Table 1.8) suggests that sample slum dwellers sought medical care from providers in a higher percentage than people in Bangkok in general (52 percent according to the 1991 MOPH survey). They relied on drugs for self-treatment in roughly the same proportion as the people in Bangkok (34 percent).

Most illness episodes sought treatment only from one place. Among these about two-thirds went to providers for medical care, where public hospital is the most popular choice regardless of the degree of severity (see Table 1.9). This is because health services delivered by public hospitals are highly subsidized by the government, thus price charged by public hospitals is much lower than that of private hospitals (Table 1.17). Severity of illness does not seem to be a reason explaining the popular choice of public hospitals, because a comparable percentage of those who went to public hospitals were severely ill (absent from work) (34%), and slightly ill (able to work normally) (37%). On the other hand, as high as 53% of those who visited private hospitals were severely ill, and 25% slightly ill. (Table 1.10).

Private clinic is the second choice of provider for the slum households.. These clinics exist in all areas of Bangkok as well as surrounding the slum areas. Several private clinics are located within a walking distance of the slums. As most of them offer health services after working hours, it is a convenient place for people who have common and mild illness such as cold and fever to receive treatment after they return from work. Table 1.10 confirms that 36% of those visited private clinics were slightly ill and able to work normally. Moreover, some private clinics do not charge very high, the average payment

per visit being 274 baht. Sixty-four percent of the clinics charged less than 200 baht per visit, and 24 percent charged between 200 and 500 baht per visit (Appendix Table A15).

Since visits to private hospitals usually cost more than visits to all other health facilities, the former are chosen mostly for severe and acute illness. It is found that the BMA health centre, despite its low price and close location to the slum areas, is not a popular place of treatment for slum dwellers. Mostly the below average income households seek health treatment there, and the largest percentage of the visitors to BMA health centres were least severely ill.. Most of the MBA health centres do not have medical doctors on a regular basis. A medical doctor may come once or twice a week and for only a few hours per day. In addition, medicines prescibed by para-medical personnels are mostly simple medicine listed on the essential drug list. These drugs are perceived by slum dwellers as being low in quality.

Among places of drug purchase, drugstores are most popular, accounting for 80% of the visits to purchase drugs, as they are available on every street in Bangkok and prescriptions are not generally required . Most drugstores now have a qualified pharmacist on either a part-time or a full time basis to provide consultations to customers about the type of drugs to use for each symptom. It is noted that convenience stores are the second popular place for drug purchase. These stores sell drugs for common illness such as cold or headache, etc. They are even more often visited than the BMA health centres.

Hutaserani (1992) conducted a field survey of 600 households living in 15 urban slums and 3 construction sites in Bangkok Metropolitan Region in 1992, and found that about a half of the sample visited drugstores and purchased medicine on their own when someone in the family was ill. The next popular places of visit were private clinics, public hospitals and public health centres in decreasing order. Private hospitals were the least popular place to seek treatment among the sample slum households. These findings are similar to those of the present study, except that the present study found that slum households prefer to seek care at private hospitals to the BMA health centres.

There were 37 illness episodes which sought treatment in two places. Appendix Table A9 presents the sequence of their visit. Although this involves only a small number of visits, it provides some indication relevant to the recommendations to be presented later regarding the inclusion of private clinics and drugstores in the health card program. About 57 percent of these episodes purchased drugs for self treatment first before seeking medical care. Almost three-fourths of these chose drugstores as the place for drug

purchase then if they still did not feel better they would go to private clinics (22 percent) or public hospitals (11 percent), or private hospitals (8 percent) as the second place of visit. The choices of public hospitals for both visits, and of private clinics first then public hospitals, are equally preferred (11 percent). Eight percent purchased drugs at convenience stores for self treatment before going to private clinics, and 5 percent went for treatment first and obtained prescriptions to purchase drugs at drugstores.

The choice of treatment place is different for different income levels. Table 1.11 indicates that public hospitals and private clinics are relatively more popular among the below average and average income groups, while the above average income group tends to go more to private hospitals, and to public hospitals to a lesser extent than the other two groups. Those who went to the private hospitals had a higher average per capita income than those who visited public hospitals and private clinics. This can be explained by a higher average expenditure per visit in private hospitals (1,725 baht) than in public hospitals (781 baht) or private clinics (274 baht). Higher income people can afford to pay a higher price at private hospitals for greater convenience and shorter waiting time, averaging 31 minutes compared to 62 minutes in public hospitals.

Private drugstores were the major place of drug procurement for all income groups in the sample., while convenience stores are clearly for the below average income group.

The slum dwellers sought medical care in a greater proportion of illness episodes than the people in Bangkok in general. They rely mainly on public hospitals and private clinics as places of treatment. Their choices of alternative health facilities may be explained by the financial barrier and the health benefit available. These two issues are discussed in the following section.

4.1.3 Health Benefits Available and Financial Accessibility to Health Services

Only about 30 percent of the sampled household members had some type of health benefits. This indicates that slum dwellers have less access to the health benefits available than the population in general. According to the latest data available the national health benefit coverage is now more than 65 per cent. (Supachutikul, 1994). The health benefits accessible to the sampled slum household members were as follows: ten per cent were entitled to government reimbursement, 7 per cent were under the Social Security

Scheme, 6 per cent were welfare benefit holders who either were low income earners or elderly citizens or students under the age of 12, about 5 per cent had medical benefits from private companies and only one per cent had health cards (Table 1.12). The health cards held by the latter group were sold by few public hospitals in the Bangkok Metropolitan Area as a pilot project for people living in urban areas. It is found that most people bought this card only when they had serious health problems and because they wanted to seek care from those particular hospitals.

Among income groups, Table 1.13 indicates that 75% of the ill persons in the below average income group had no health benefits, compared with 60% and 48% for average and above average income groups respectively. The type of health benefits accessed most by the below average income group is the welfare schemes consisting of the low-income, the elderly, and the students health benefits, covering 9% of the ill persons. The health card holders only account for 3% of this income group. As for the average income group, the two main types of health benefits are the civil servants' medical benefit scheme (14%) and the Social Security Scheme (10%) which are for the formal sector employees. Also these two schemes and private companies health benefits form the major types of health benefits for the above average income group, together covering 42% of the ill persons.

However, even those who had health benefits such as government reimbursement or the Social Security Scheme may encounter financial barriers in accessing to health care. Government reimbursement is mostly restricted to public health facilities. Government will partially reimburse for inpatient care in private health facilities. For private employees under the Social Security Scheme they have to pay out-of-pocket for certain services not covered by the Scheme.

In the sample there are 15 households with 43 members whose household income was below 33,600 baht per year or 2,800 baht per month (the eligible income level for the low income scheme). Among these 43 persons who are eligible for the low income card, 26 had no health benefits and only 4 already had the low income card. Thus, even if the low income scheme extends to cover all the target beneficiaries, only 26 more persons from this sample (equal to 16% of the ill persons in the below average income group who had no health benefits, or only 1% of the total household members who had no health benfits) can be included. Hence the remaining 84% or 132 ill persons in the below average

income group who still had no health benefits could be a target group for the health card program. .

A number of health benefit holders did not exercise their rights when they decided to visit health facilities for treatment. Table 1.14 shows that the percentage of utilization of accessible benefits were mostly less than 50 percent, except for the government reimbursement under the Civil Servant Medical Benefit Scheme. The reasons for the low utilization were inconvenience, the inappropriate conditions for usage and the benefit limitations. Most of them preferred visiting private clinics and hospitals which are not covered by the schemes. Those entitled to more than one health benefits would use the one considered as most beneficial and most convenient to them. For example, an elderly person may use his son's or daughter's government reimbursement right which offers better benefit package, rather than using the elderly welfare program.

In order to measure a financial burden of illness, a comparison between health service expenditure and income earning is made. The share of income spent on health services can assess the degree of the financial accessibility to health services between the different income groups. It is shown in Table 1.15 that, on the average, a household in the slums spent about 1.8 percent of its annual income on health services for all members. This share was 5.2 percent for the below average income group, which was about 4 times the percentage for the average and above average income groups. This rather high percentage for the below average income group resulted from the inclusion of extreme cases where expenditures on health treatment exceeded 10,000 baht. However, using the share of health expenditure to household income may understate the financial burden and may lead to a conclusion that slum dwellers did not have any financial barrier to health care. Since the majority (58 percent) of household heads worked in the informal sector and was likely to get paid daily or weekly, we, then, compare health expenditure with daily wage. It is found that for a visit to receive health care, averaging of both inpatients and outpatients, an ill person paid about 670 baht (Tables 1.16 and 1.17), which was more than 5 times his daily wage. For a visit at public hospitals he spent about 6.5 times his daily wage, compared with 2.3 times at private clinics and 14.4 times at private hospitals. This means that a treatment of an illness episode costed him about a week's income on average A below average income person certainly had a higher financial burden than did the higher income persons. in terms of the number of days he had to work to earn enough for health care treatment.

In terms of health expenditure slum dwellers paid less for health services than an average household in Bangkok, but it exceeded the national figure. A household in the slums spent an average health expenditure of 2,932 baht per year whereas the national figure from the Socio-economic Survey 1994 was 2,320 baht annually., and the figure for households in Bangkok in general was 4,952 baht yearly. The empirical results shown in Table 1.15 indicated that the below average income households paid more than the average income group both in absolute amount and as percentage of income.

One with higher severity paid more for treatment than another with less severity. Those with the highest severity who had to be absent from work paid about 5 times more on average per visit than those with the least severity who could perform their normal functions (Table 1.16). About 42 per cent of the visits with least severity paid less than 200 baht whereas 79 per cent of those with most severity paid over 2,000 baht.

Inequality regarding the financial accessibility to health services exists between the different income groups in the slums. Those whose income was below average bore a higher financial burden (as measured by the percentage of income spent on drugs and medical treatments) and were less entitled to the existing health benefits. Though the health benefits were less available for the slum dwellers than for the population in general, there was underutilization of these health benefits by the slum dwellers since some people did not use their rights and as many as 41% of the sample households were accessible to more than one type of health benefits. A low utilization of the health benefits available among the slum dwellers may be a result of their rejection of these health benefits due to the restrictive conditions, inconvenience, and unpopularity of some of these benefits.

Figure 1: Map of BMA

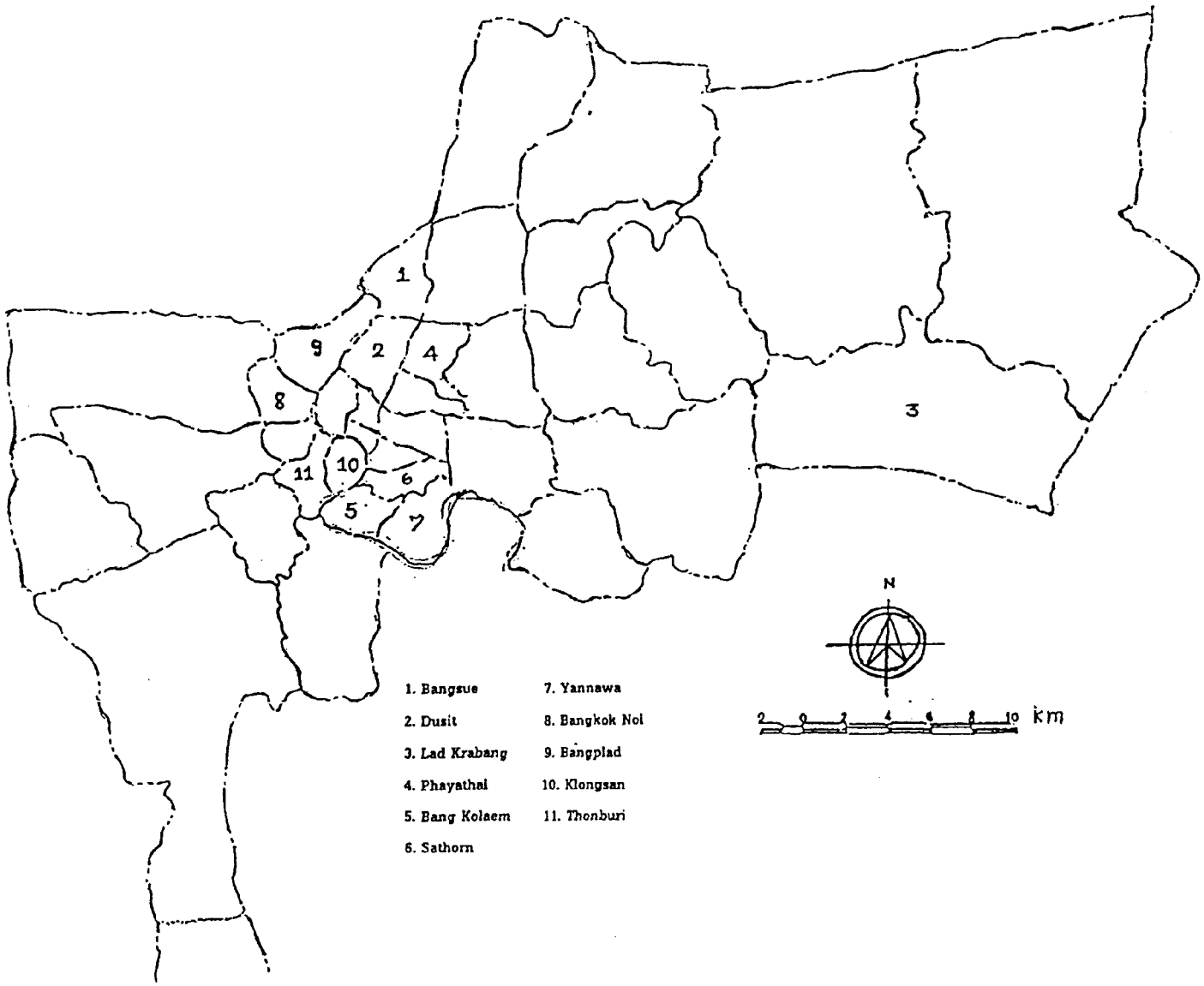

Figure 2 : Health Service Utilization

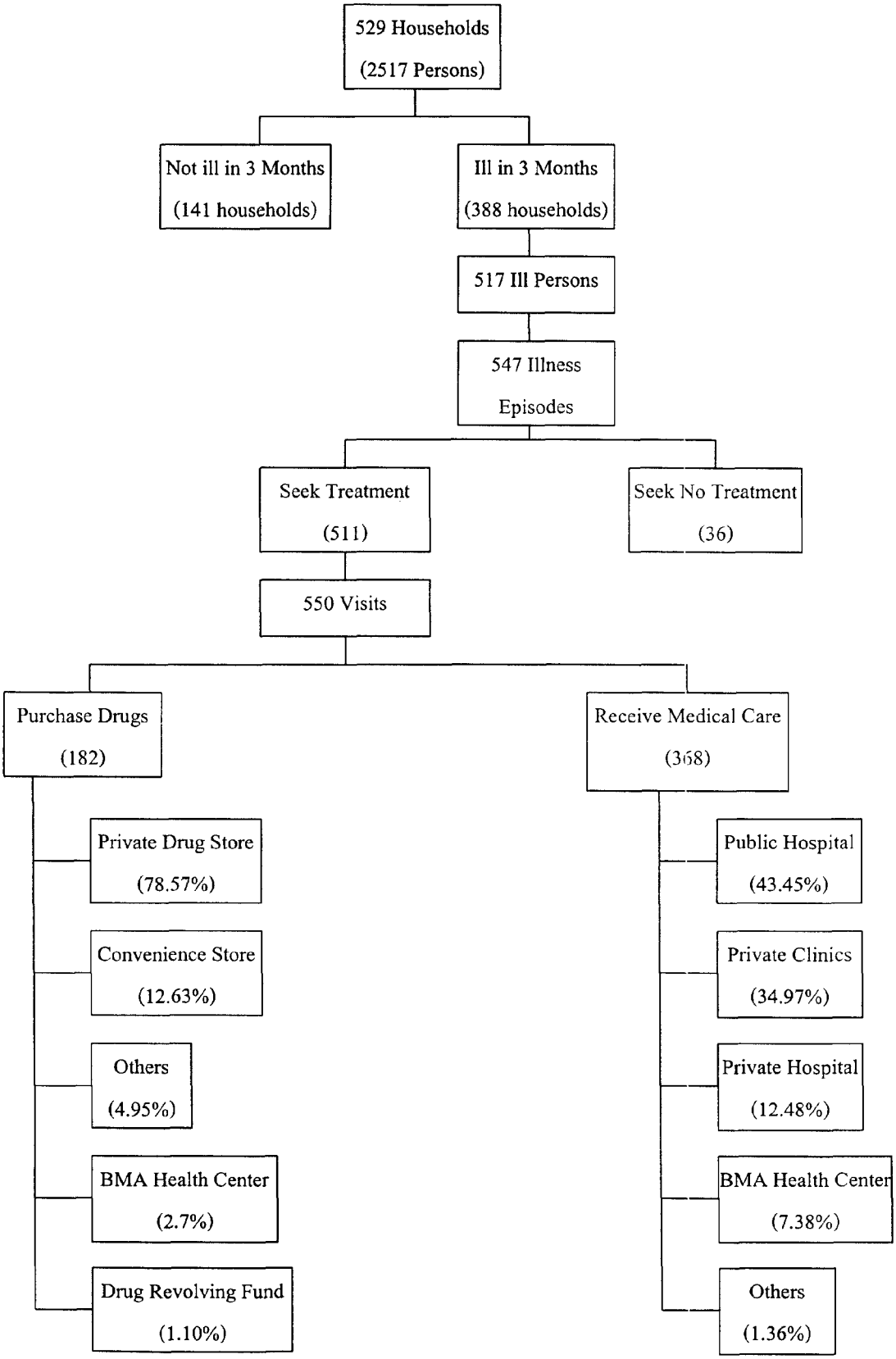

Table 1.1

The Sample of Slum Households in Bangkok Metropolitan Administration, 1995

Areas of BMA	District	Name of Slum	Number of Houses	Number of Families 1/	Number of Sampled Household 2/
North	1.Bangsue	Chankasem	168	230	54
	2.Dusit	Soi Soda	114	187	57
	3.Lad Krabang	Rom Klao Zone 7	128	154	51
	4.Phayathai	Behind Pai Tan Temple	301	1,200	52
South	5.Bang Kolaem	Chan Nai Temple	580	880	56
	6.Sathorn	Opposite Thammasat Association	123	162	53
	7.Yannawa	Yen Akad 2	281	331	56
Thonburi	8.Bangkok Noi	Dong Moon Lek Temple	500	700	51
	9.Bangplad	Panurangsi Temple	145	216	5
	10.Klongsan	Behind Kulsiri School	33	52	20
	Klongsan	Wanawan 2	80	157	20
	11.Thonburi	Kalaya Temple	98	123	33
	Thonburi	Kudee Kao Temple	169	171	21
			2,720	4,563	529

Source : Slum Household Survey, April-May, 1995

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Note : 1/ family is defined by BMA as including father, mother, children, unmarried residents

2/ household is defined in the present study as those living in the same house, eating together and sharing income and expenses.

Table 1.2

Summary Information about the Household Sample

	Range	Mean	Std Dev	N
Household Head				
Age (years)	17-89	43.1	13.4	529
Education (Number of years)	0-19	6.8	4.3	526
Income (baht per year)	0-720,000	86,703.8	82,185.1	528
Years living in Bangkok	0-89	31.0	16.9	525
Household				
Income(baht per year)	4,000-866,010	167,078.6	136,528.6	528
size (persons)	1-12	4.8	2.2	529
Household per Capita Income (baht per year)	1,000-240,000	37,873.8	30,585.5	528
Health Service Expenditure (baht per year)	0-112,000	2,932.4	10,250.6	350

Source : Slum Household Survey, April-May, 1995

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Table 1.3

Average Annual Income of Household Head by Level of Education

Level of Education	% of Household Head	Average Annual Income (Baht)
No Schooling	7.4	78,815
Lower Primary Level	42.5	78,407
Upper Primary Level	13.7	70,581
Secondary Level	25.6	93,121
Under Graduate	8.6	118,592
Graduate	2.3	164,700
Overall	100.00	86,704

Source : Slum Household Survey, April-May, 1995

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Table 1.4

Original Region of Migrated Household Heads

(persons)

Region	Household Heads	%
Central	149	53.2
Northern	36	12.9
Southern	6	2.1
North - Eastern	89	31.8
Total	280	100.0

Source : Slum Household Survey, April-May, 1995

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Missing Values : 249

Table 1.5

Average Annual Income of Household Head by Occupation

Occupation	Household Head		Average Annual Income
	Number	%	(Baht)
Commerce	110	20.9	99,167
Government Sector	74	14.1	99,919
General Worker	97	18.4	68,206
Services	46	8.7	102,491
Employee	147	27.9	94,522
Others	52	9.9	42,846
Overall	526	100.0	86,704

Source : Slum Household Survey, April-May, 1995

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Table 1.6

Average Number of Ill Persons and Illness Episodes Within 3 Months

by Level of Household Per Capita Income

Household Per Capita Income	Average Number of Ill Persons	Average Number of Illness Episodes
Below average (1-22,580)	1.12	1.17
Average (22,581-53,167)	0.93	1.01
Above average (>53,167)	0.83	0.88
Overall	0.98	1.04

Source : Slum Household Survey, April-May, 1995

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Note : Average = mean income plus and minus 1 standard deviation

Table 1.7

Type of Treatment of Ill Persons

Type of Treatment	Number of Visits	Percent
Seek No Treatment	36	6.2
Purchase Drugs	182	31.2
Private Clinics	127	21.7
Private Hospitals	47	8.0
Public Hospitals	160	27.4
BMA Health Centres	27	4.6
Others	5	0.9
Total	584	100.0

Source : Slum Household Survey, April-May, 1995

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Missing Observations : 2

Table 1.8

Type of Treatment of Ill Persons During the 2 Weeks Prior to the National Health Examination Survey in 1991

(Percent)

Type of Treatment	Thailand	Bangkok
Purchase Drugs	33.0	33.8
Seek No treatment	18.4	14.4
Private Clinics/Hospitals	16.4	25.7
BMA Health Centres	13.7	10.4
Public Hospitals	12.4	10.4
Traditional Healers	0.9	0.2
Other	4.8	4.7

Source : MOPH, National Health Examination Survey, 1994

Table 1.9

Place of Drug Purchase/ Treatment

(for those who had one place of visit for each episode of illness)

Place	Visits	%
Place of Drug Purchase		
- Drug Revolving Funds	2	1.27
- Drug Stores	126	79.75
- Convenience Stores	17	10.76
- BMA Health Centres	4	2.53
- Others	9	5.70
Total	158	100.00
Place of Treatment		
- Private Clinics	104	32.91
- Public Hospitals	140	44.30
- Private Hospitals	42	13.29
- BMA Health Centres	25	7.91
- Traditional Healers	1	0.32
- Home Visits	1	0.32
- Others	3	0.95
Total	316	100.00

Source : Slum Household Survey, April-May, 1995

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Missing Observations : 2

Table 1.10

Severity of Illness and Place of Treatment

(Visits)

Severity / Place of Treatment	Absence from Work		Work with limitation		Work with minor limitation		Able to work normally		Total	
Private Clinics	37	30.3	27	49.1	17	29.8	45	35.4	126	34.9
	29.4		21.4		13.5		35.7		100.0	
Public Hospitals	53	43.4	16	29.1	29	50.9	58	45.7	156	43.2
	34.0		10.3		18.6		37.2		100.0	
Private Hospitals	25	20.5	5	9.1	5	8.8	12	9.4	47	13.0
	53.2		10.6		10.6		25.5		100.0	
BMA Health Centres	7	5.7	5	9.1	6	10.5	9	7.1	27	7.5
	25.9		18.5		22.2		33.3		100.0	
Others	0	0.0	2	3.6	0	0.0	3	2.4	5	1.4
	0.0		40.0		0.0		60.0		100.0	
Total	122	100.0	55	100.0	57	100.0	127	100.0	361	100.0
%	33.8		15.2		15.8		35.2		100.0	

Source : Slum Household Survey, April-May, 1995

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Missing Observation : 7

Table 1.11

Average Household Per Capita Income by Place of Drug Purchase / Treatment

Place	Average Household Per Capita Income (Baht)	Percent of Visits by Income Group			
		Below Average	Average	Above Average	Total
Place of Drug Purchase					
Drug Revolving Funds	30,000	1.2	1.4	0.0	1.1
Drug Stores	34,287	73.8	80.3	88.9	78.6
Convenience Stores	23,439	19.0	8.5	3.7	12.6
BMA Health Centres	41,519	0.0	7.0	0.0	2.7
Others	31,336	6.0	2.8	7.4	4.9
Overall	32,922	100.0	100.0	100.0	100.0
Number of Visits		84	71	27	182
Place of Treatment					
Private Clinics	35,082	40.1	29.7	37.5	34.8
Public Hospitals	32,089	44.5	46.5	32.1	43.6
Private Hospitals	55,157	2.9	16.9	25.0	12.9
BMA Health Centres	22,804	10.9	6.4	1.8	7.4
Others	57,559	1.5	0.6	3.6	1.4
Overall	35,763	100.0	100.0	100.0	100.0
Number of Visits		137	172	56	365

Source : Table A10

Slum Household Survey, April-May, 1995

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Table 1.12

Type of Health Benefits

(persons)

Type of Benefits	Household Members	%
None	1,747	69.6
Health Card	33	1.3
Welfare	161	6.4
Civil Servant Medical Benefits	263	10.5
Private Companies	123	4.9
Social Security	184	7.3
Total	2,511	100.0

Source : Slum Household Survey, April-May, 1995

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Missing Observations : 6

Table 1.13

Average Household Per Capita Income and Distribution of Ill Persons by Type of Health Benefits

Benefit Scheme	Average Household Per Capita Income (Baht)	Percent of Ill Persons by Income Group			
		Below Average	Average	Above Average	Total
None	32,072	74.5	59.8	47.6	63.9
Health Card	40,163	2.8	0.5	1.2	1.6
Welfare : Low Income	20,121	4.7	2.7	0.0	3.1
Elderly	34,712	2.4	5.5	4.8	4.1
Students	28,594	1.9	0.9	2.4	1.6
Civil Servant Medical Benefits	48,645	4.7	14.2	22.6	11.7
Local Government	32,000	0.0	0.5	0.0	0.2
Private Companies	74,029	1.4	2.7	10.7	3.5
Social Security	40,089	3.3	9.6	8.3	6.8
Others	30,944	4.2	3.7	2.4	3.7
Overall	37,874	100.0	100.0	100.0	100
Number of Ill Persons		212	219	84	515

Source : Table A11

Slum Household Survey, April-May, 1995

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Missing Observations : 2

Table 1.14

Utilization of Health Benefits by Type of Benefits Accessible

(V:sits to Health Facilities)

Type of Accessible Benefits	% Utilization of own benefits	% Utilization of other benefits
Health Card	25.0	-
Welfare : Low Income	37.5	-
Elderty	42.3	3.8 1/
Civil Servant Medical Benefits	58.8	-
Private Company	50.0	-
Social Security	27.0	2.7 1/
Others	31.8	-

Source : Slum Household Survey, April-May, 1995

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1/ Use Civil Servant Medical Benefits

Table 1.15

Household Average Annual Drug and Health Treatment Expenditures

by Household Annual Income Level

(Households with Ill Persons and sought treatment)

Household Income (Baht)	Average Health Expenditure (baht)	Average Income	Total as % of Income	Number
Below Average (0-98,815)	3,238	62,829	5.15	132
Average (98,816-235,344)	1,835	147,647	1.24	152
Above Average (>235,344)	4,909	373,999	1.31	65
Total	2,932	157,724	1.86	349

Source : Slum Household Survey, April-May, 1995

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Table 1.16

Average Drug and Health Treatment Expenditures by Severity of Illness

Severity	Average Expenditures per Visit (Baht)					
	Drug Expenses	N	Health Treatment	N	Total	N
Absence from Work	55	35	1,320	120	1,034	155
Work with limitations	44	26	611	54	427	80
Work with minor limitations	45	24	196	57	151	81
Able to work normally	95	84	280	122	205	206
Overall	72 1/	169 1/	671 2/	353 2/	477 2/	522 2/

Source : Table A14 and A15

Slum Household Survey, April-May, 1995

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Marks : 1/ Missing Observations = 13

2/ Missing Observations = 15

Table 1.17

Average Drug and Health Treatment Expenditures

by Place of Purchase or Treatment in 3 Months

	Average Expenditures per Visit (Baht)	N
Place of Drug Purchase		
Drug Revolving Funds	25	2
Drug Stores	86	134
Convenience Stores	19	20
BMA Health Centres	4	5
Others	18	8
Overall	72 1/	169 1/
Place of Health Treatment		
Private Clinics	274	127
Private Hospitals	1,725 2/	46
Public Hospitals	781 2/	157
BMA Health Centres	19	23
Others	77	5
Overall	664 3/	358 3/

Source : Table A16 and A17

Slum Household Survey, April-May, 1995

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Notes : 1/ Missing Observations = 13

2/ Average of outpatient and inpatient services, due to inaccuracy of inpatient data

3/ Missing Observations = 10

4.2 Section II: Feasibility of an Urban Health Card Program

4.2.1. Background

The Health Card program is a voluntary health insurance program, operated by the Ministry of Public Health. The program was initiated in 1983 for the rural population who did not have any kinds of health benefits or health insurance. The coverage of the program has expanded over the past 15 years to cover 3.2 million people in the rural area or 18.40 % of the population. See Tangcharoensathien (1995) for more details on the health card program. In recent years, however, the Office of Health Insurance has planned to extend the program to urban areas in order to achieve the objective of universal coverage of health insurance for the Thai population. The urban poor in Bangkok is one of the target groups of the Program.

Considering the differences in many aspects of behavior and living standards between the rural people and the urban poor , it is uncertain that the Health Card program in its current form appropriate for the rural clients would be suitable for the urban poor clients. It is then necessary to investigate whether or not the present Health Card program is feasible and efficient for the potential urban poor customers before it is implemented. If it is not viable, the modification and adjustment of the program should be sought. These would enable the Office of Health Insurance to extend the Health Card program to attain the health insurance universal coverage.

Many issues of implementing the program in the urban areas warrant examinations. On the demand side, both the willingness and ability to pay for the health card, as well as choice behavior regarding place of treatment when becoming ill, need to be investigated.

Similarly, the willingness of health care providers particularly those in the private sector to join in the program also depends on the conditions or incentives offered to them.

Hence, after considering household income and health care expenditures to determine their ability to pay in the previous section, this section will turn to analyse the feasibilty of extending the health card program to Bangkok and other urban areas by examining the following : a) slum households' willingness to pay for health card b) households' choice of health care providers and c) the reactions of health care providers to the introduction of an urban health card program. This section will be followed by a synthesis of the findings on both demand and supply sides to provide a conclusion and

suggest policy implications for the design and implementation of the urban health card program.

4.2.2. Households' Willingness to Pay for Health Card

The improvement in the social welfare as a result of expanding the program can show how feasible and efficient health resources are used in the program. Economic analysis can assess these issues directly. According to Gertler et al (1992), the willingness to pay approach can be employed to determine the feasibility and efficiency of health policies involving different pricing methods. Regarding the financing aspects of equity in health care, the willingness to pay concept is preferable since it is not concerned with people's ability to pay.

The influences of some factors on the willingness to pay for Health Card should be scrutinized as they could affect the generalization of the findings obtained to the whole population. To take into account and allow for these factors could result in the unbiased and reliable sum of money the urban poor are willing to pay for Health Card. The true feasibility and efficiency of expanding the program can be derived accordingly. As there exist few analyses of economic and financial factors influencing the decision to purchase Health Cards, this study will improve the understanding of these issues.

4.2.2.1 The study objectives

This part of the study evaluates the feasibility and efficiency of expanding the existing Health Card program to the Bangkok urban poor. The willingness to pay (WTP) approach is used to measure the value of the health benefits from health care paid out of their pockets and the value of the health benefits from Health Cards. The comparison between the two indicates the program feasibility. The comparison between the WTP for Health Card (i.e. the program benefit) and the Health Card cost shows the program efficiency.

If the program is feasible and efficient, the program policy makers should be encouraged to enlarge the present Health Card program to the Bangkok urban poor. On the contrary, if it is infeasible and inefficient, it should be halted and the policy makers should start rethinking to find appropriate strategies to modify and adjust the program to be more compatible with the urban poor.

The study aims at offering the answers to the following specific questions:

a) How much are the urban poor in Bangkok willing to pay for health care ?

b) How much are the urban poor in Bangkok willing to pay for the Health Card ?

c) What factors affect their WTP amounts ? How significant are their impacts ?

d) What is the proportion of the urban poor in Bangkok who are likely to buy Health Cards ?

e) Is the Health Card program financially feasible given the proportion of households who are aversive to the risk of paying a huge sum for health care ?

f) How feasible is the extension of the Health Card coverage to the urban poor by weighting the WTP for Health Card against the WTP for health care ?

g) How efficient is the health resources employed to expand the existing Health Card program to the urban poor by comparing the WTP for Health Card with the cost of Health Card ?

4.2.2.2 A review of relevant studies

A selection of the works related to this study falls into two groups. One uses the WTP approach to analyze public health policy. The other involves the analysis of influences on the decision to continue or to stop buying Health Cards. Though there are many small-scale analyses of the Health Card purchase decision available, the number of the reliable analyses qualified for a standard-journal publication is indeed limited. As a result, only one such study is included.

Donaldson (1990) measures health benefits from two types of care for elderly people in the United Kingdom: National Health Service (NHS) nursing home care and hospital care. The analysis employs the bidding-game WTP method. The study samples the relatives of patients obtaining both types of care. Interviews were used to elicit the respondents' WTP values. The response rate was 71% (69 usable samples). It is found that the NHS nursing home care gave a net benefit of £11,837 while the hospital care gave £ 2,145 in net benefit. The finding suggests that the former choice is more efficient than and preferable to the latter one as the NHS nursing home care users can theoretically

compensate the hospital care users and still remain better off if only the NHS nursing homes are chosen to provide the care for elderly people.

Neumann et al (1994) estimate the WTP for in vitro fertilization (IVF) in Massachusetts. The sample was divided into 6 groups with different occupations. A total of 231 respondents were obtained (a response rate of 60%). The survey questions are conditional on the probability of succeeding in having a child by this technique in the event of infertility (10% , 25% , 50% and 100%). In order to compare two conditions: do not know their fertility status (the ex ante case) and know their fertility status (the ex post case), half of the sample were presented with each condition.

The WTP amount of money in the ex post case is $17,730 , $28,054 , $43,576 and $63,896 for 10% , 25% ,50% and 100% chances of the success. On the contrary, the WTP in the ex ante case is $865 , $1,055 , $1,466 and $2,006; respectively. The result indicates that the WTP is higher in the case of realizing one's own fertility status. The WTP varies with the success chance. The WTP values have a positive relationship with inclination to use IVF, number of children, desire to have (more) children and the education level. Though the WTP is expected to increase with the expected income, the income effect is not statistically significant.

Gertler et al (1990) analyse the WTP for shorter travelling time to health facilities in rural Cote d'Ivoire and rural Peru. They define welfare-neutral fee as the sum of money patients would be willing to pay for not having to travel for a certain distance or a length of time. They claim that the welfare-neutral fee is in fact the compensating variation. The experiments is West forest and Savannah in the rural Cote d' Ivoire can give their welfare-neutral fees by asking respondents 3 questions: how much they are willing to pay not to have to travel to free clinics that takes one hour, two hours and three hours; given that they spend 4 hours travelling to a nearest hospital and pay a user fees of CFAF 600. The result shows that the welfare-neutral fees vary with the length of the travelling time for both children and adults. The West forest adult sample was willing to pay CFAF 46, CFAF 62 and CFAF 78 for a one- , two- and three-hour travelling journey to free clinic whereas the Savannah adult sample was willing to pay CFAF 16, CFAF 22 and CFAF 27. The West forest children's WTP was CFAF 28 , CFAF 46 and CFAF 57 while the Savannah children's, CFAF 14 , CFAF 19 and CFAF 38.

Similar three questions were used in the experiments in Coastal and Sierra areas in the rural Peru. The only difference is that the questions suppose a closest hospital

charges 15 intis and a private doctor is two hours away and charge 20 intis. The results obtained repeat those found in the rural Cote d'Ivoire. However, the adults and children in Sierra were willing to pay very small sum for reducing longer journeys. The Coastal adult sample was willing to pay 0.56, 10.7 and 1.57 intis for decreasing one-, two- and three -hour travelling time to free clinic whereas the Sierra adult sample was willing to pay 0.00, 0.01 and 0.02 intis. The Coastal children's WTP was 1.01 , 1.94 and 2.8 intis while the Sierra children's 0.03, 0.06 and 0.09 intis.

Suwanteerangkul (1993) investigates factors influencing the drop-out of the Health Card holders in Mae Rim district, Chiang Mai, during 1989-1991. Her study randomly selected 10 villages in the district with a sample of 352. Over the period, the drop-out rate was 34%. Chi-square test was used to detect any difference between the drop-outs and continued Health Card members on some selected variables. Coverage by alternative health insurance such as the low income scheme and the elderly welfare, first-choice treatment place or the most convenient health facilities and the consumer satisfaction are significant factors in their decisions to go on or stop buying Health Card.

The multiple logistic regression analysis indicates that the availability of other health insurance and welfare has the strongest impact on the drop-out decision , followed by the consumer satisfaction with health services at provincial hospital, lack of Health Card program information, small household size and bad attitude towards the program.

4.2.2.3 Methodology

Patrick et al (1993) define the willingness-to-pay(WTP) approach as "a method of valuing health that is based on the amount of money that individuals would be willing to pay either to reduce the probability of death due to a given disease or to increase the probability of cure for a given disease. The willingness-to-pay approach is an alternative to the human capital method for expressing health benefits in monetary units." In fact, the WTP approach can also be applied to other health benefits. For example in the study by Gertler et al (1990), the willingness to pay for better accessibility to health care by having new public health facilities in rural areas is "the maximum price that can be charged for the facilities without making individuals worse off."

The elicitation survey is the most popular means for the WTP approach. The survey questions attempt to link between a change in health benefits and the sum of money a person is willing to pay for it. The scenario described in the questions is usually

hypothetical. An expert suggests that such hypothetical questions be used for the evaluation of decisions to purchase health insurance as the insured no longer pay the prices of health care.(Neumann et al 1994)

For the Health Card program to be feasible, two key conditions are required. First, the program must provide a net gain. That is, the benefits offered by Health Card exceed those rendered by other options. This means that the WTP for Health Card is greater than the WTP for other options. Secondly, households who are aversive to making a considerable health expenditure are more likely to buy Health Cards than those who are risk neutral and risk seeking.

An important alternative to the Health Card program is a direct payment for health care consumed. The difference between the (out-of-pocket) amount of money households are willing to pay for health care and for the purchase of Health Card can be employed to measure the feasibility of the program. That is, the Health Card program is feasible if households benefit more from Health Card than from out-of-pocket health care expenditures. In other words the program is feasible if the following equation is satisfied.

$$\sum_{i}^{N} WTP_{HC} - \sum_{i}^{N} WTP_{OP} > 0$$

Where WTP_{HC} = the amount of money households are willing to pay for Health Card

WTP_{OP} = Out of pocket amount of money households are willing to pay for health care

i = household i

N = the total number of households willing to buy Health Card.

On the other hand, if the equation below is true, the Health Card program is infeasible.

$$\sum_{i}^{N} WTP_{HC} - \sum_{i}^{N} WTP_{OP} < 0$$

It is a formidable task to obtain the WTP sums from every potential Health Card client. Instead, the representatives of them are selected. Therefore, the conditions above can be expressed in the alternative forms as follows :

$\overline{WTP}_{HC} - \overline{WTP}_{OP} > 0$ if the program is feasible

$\overline{WTP}_{HC} - \overline{WTP}_{OP} < 0$ if the program is infeasible

where

$\overline{WTP}_{HC}$ = households' average WTP for Health Card

$\overline{WTP}_{OP}$ = households' average WTP for out-of-pocket health care.

The more households who are aversive to pay by themselves a substantial sum for health care exist in the urban areas, the more feasible the program is. However, it is extremely difficult to determine the minimum number or proportion of the risk averse households that makes the program feasible. Therefore, the decision over the program feasibility on this account is indeed subjective.

To investigate the efficiency of the Health Card program, the benefit as reflected by WTP has to be compared with the cost of the program. If the WTP exceeds the average cost of the health card, then the gains to society outweigh the costs in terms of resources used to operate the program. On the contrary , if the WTP is less than the cost, the society wastes resources in operating the program. It is better for households to pay for health care directly than for the society to organise the Health Card program. The following two equations represent the efficiency evaluation above :

If $\overline{WTP}_{HC} > AC$, the program is efficient.

If $\overline{WTP}_{HC} < AC$, the program is inefficient.

To test the validity of the WTP results obtained in the survey, the factors expected to affect the WTP values are analysed by multiple regression technique. They include annual household income, the age of household head, the education of household head, the household size, the illness severity and per capita health expenditure in the past period. Mitchell et al (1989) and Neumann et al (1994) recommend that the validity test be required in every WTP study. In addition, the WTP result becomes valid and reliable if they are compatible with economic theory. Theoretically, one of the factors affecting the WTP is wealth.

There are various WTP survey methods available. Different studies usually choose appropriate WTP survey methods that are suitable to their contexts. The popular methods include bidding game, risk-dollar trade-off, risk-risk trade-off and direct open-end

question. Neumann et al (1994) employed the bidding game with yes or no answers. Donaldson (1990) used the bidding game with a narrow range of the WTP variation as well as the open-end values. Persson et al (1991) applied the risk-dollar trade-off, asking respondent's WTP for safety devices that would reduce fatal injury by 50% , 25% and 10% . The study design by Viscusi et al (1991) is the risk-risk trade-off, measuring respondents' willingness to trade off between the chronic bronchitis risk reduction and the automobile fatality risk reduction. Berwick et al (1985) adopted the direct open-end question method in their study. Respondents were asked to give the WTP sums for pieces of information or services that were regarded valuable to themselves or to doctors. In the study by Gertler et al (1990), three hypothetical open-end questions were asked for valuing health care users' shorter journey.

This study uses a direct approach, asking respondents to reveal their WTP. All the questions are open-ended. The reason for selecting this means is its simplicity. If an indirect method is employed, respondents are most likely to be confused so that the WTP values could not be obtained. Though the bias of the answers can arise, they can be detected by other related information and the validity test.

It is essential that the WTP questions have to contain crucial information and characteristics. Neumann et al (1994) emphasize the plausible and meaningful scenario and relevant details presented to respondents. As the WTP questions are crucial, the questions used in this study are described in detail. The WTP questions were in the third which is the last section of the interview survey. This section consists of 3 parts: the willingness to pay for health care, the willingness to pay for Health Card and respondent's time preference and attitude towards risk. In the first part, it is supposed that during the following year a household member(s) must seek health care. Two questions are asked: How much is his/her household willing to pay for a visit to obtain health care? How much is his/her household willing to pay for health care for the whole year? Both the reported WTP values are also computed in the form of the percentage of the total annual household income.

The second part asks the WTP for each of the three types of Health Card.

- How much is his/her household willing to pay for Health Card that offers free health care to all the members for a whole year without expense limit in public health facilities only ?

- How much is his/her household willing to pay for Health Card that offers free health care to all the members for 6 months with an expense limit of no more than 2,000 baht per visit in public hospital only ?
- How much is his/her household willing to pay for Health Card that offers free health care to all the members for a whole year without expense limit in both public and private health facilities ?

Again, all the WTP sums in terms of the percentage of the total annual household income are calculated. It should be noted that the first type of Health Card is currently sold. The second covers a period suitable for mobile workers. The third offers services in private as well as public facilities. Therefore, the last two types can be considered as hypothetical Health Card.

The last part about attitude toward risk comprises the following four questions:

- If you invest your money of 500 baht today, how much return do you expect in a year?
- Have you ever bought life insurance? If you have, how much is the indemnity?
- Have you ever gambled? If you have, how much is the maximum bet?
- Have you ever bought lottery (legal or illegal one)? If you have, how much is your maximum purchase?

The details of the household survey of this study were reported in the earlier part of this research report, the information available includes the survey method, sampling design and data collection. Data regarding socio-economic status, the severity of illness, treatment places, expenditures made and the availability of health insurance and welfare also are provided.

4.2.2.4 The study results

Tables 2.1 and 2.2 show the key statistics of the answers to all the questions in the third section of the survey. Since the sample size is small, median is the most appropriate summary statistics and is used here. A household is willing to pay only 200 baht for a visit to obtain health care. However, the sum rises to 1,500 baht for a year. The substantial difference between the two cannot be explained by the number of visits a household is likely to make in a year. It can be accounted for by the fact that a single visit at any time may involve acute illness that needs a small expense whereas over a longer

period many illnesses can happen, including chronic illness that requires a continuous and costly treatment.

The WTP for a Health Card with free health care in public health facilities for a year without expense limit is 500 baht. But it is reduced to 300 baht if the Health Card is valid only for 6 months and has an expense limit of 2,000 baht per visit. The Health Card offering free health care in both private and public health facilities within a year without expense limit is given the highest WTP of 1,000 baht. It should be noted that the WTP values for the first two types of Health Card are identical to their prices fixed by the Health Card program.

A household expects to earn an average of 3,000 baht from investing 500 baht for a year. In other words, the rate of the expected return is 500% per year. Compared with the market (bank) interest rate of no more than 10% after tax, the expected return rate is extremely high. Fifteen percent of the sample had or have life insurance with an average maximum indemnity of 100,000 baht. Twenty-one percent gambled or gamble (excluding buying lottery), with the maximum bet of 2,755 baht. Seventy-nine percent bought or buy lottery. The maximum amount of the lottery purchase is only 120 baht. For most people, buying lottery is not considered a gamble which involves a larger sum of betting. Such a belief leads the analysis to separate lottery from gamble. The respondents' differing answers between the maximum amounts spent on lottery and gamble seems to support the distinction of the two.

The households are willing to pay for health care (1,500 baht for a year) more than for Health Card currently available (500 baht). This means that the health benefits perceived to derive from health care by an out-of-pocket payment method are larger than those obtained from purchasing the Health Card insurance. The urban poor in Bangkok prefer the out-of-pocket payment option to the health insurance option. Therefore, the Health Card program is not feasible in this population.

It is assumed that a household who are aversive to the risk of paying a substantial health expenditure is the one purchasing life insurance and not gambling. A risk seeking household is one having no life insurance and gambling. A risk neutral household is neither with life insurance nor gambling and both with life insurance and gambling. According to Table 2.3, 15% of the households are risk averse. The majority of them are risk neutral (68%). Seventeen percent are risk seeker.

It is most likely that 17% of the total households who are risk-seeking do not buy Health Card. There are two possibilities of the Health Card sale to the urban poor households in Bangkok. In the worst case, only 15% of the total households buy Health Card. The best case, consisting of the risk averse and risk neutral households, indicates that 83% would purchase Health Cards.

By comparing the maximum bet (2,755 baht) and the WTP for health care (1,500 baht) and the WTP for Health Card currently available (500 baht), it seems that the health issue is not the household's priority in their spending. The low priority for health care means that they are likely to ignore any voluntary health insurance. In other words, they tend to select themselves out of the Health Card program.

On efficiency aspect, although WTP for health card is known from the survey, the average cost data for an urban health card scheme. The only cost data available for the program is for the rural areas are not available. Hence, no definite conclusion can be reached about efficiency in expanding the health card program to urban areas.

The regression analysis results of the WTP validity test are presented in Table 2.4. The households' willingness to pay for health care is influenced by annual household income and education. The WTP for all the three types of Health Card is affected by only household income. A rise in the annual household income leads to the higher WTP for health care and Health Card. This is consistent with the economic theory. The education variable has a positive relationship with the WTP for health care and two types of Health Card, suggesting that better educated household offer higher WTP values than lower educated ones.

The findings from this section will be used in conjunction with findings from subsequent sections in reaching policy recommendations regarding the extension of health card program to Bangkok and other urban areas.

4.2.3. The Choices of Health Care Providers of the Urban Poor in Bangkok

4.2.3.1 Background

The differences in health care seeking behavior between the rural people who are the existing clients of the health card program, and the urban poor who are potential clients, cause much concern for the success of the expansion of the program to the people living in Bangkok particularly the urban poor. The two groups of population are exposed not only to different socio-economic factors, but also to different availability and accessibility to health care. The available data on health care seeking behavior of the rural population are not appropriate for analyzing the behavior of the urban population. Consequently, it is necessary to study the urban poor health care seeking behavior and employ the results obtained to modify the Health Card Program so that it is compatible with their behavior.

Understanding health care seeking behavior is important in studying demand for health care. Over-or under-utilization of health care and incompatibility between health care provider choice and the patients' need can cause inefficiency and waste of limited health care resources. It is therefore essential to identify factors influencing the choice of health care provider of the urban poor. Taking these factors into account in the modification of the health card program will make it consistent with the preferences of the urban poor, and thereby making the program more easily acceptable to them.

4.2.3.2 The study objectives.

The study investigates the choices of the health care providers of the slum dwellers in Bangkok in case of illness. It identifies the factors affecting their choices. The specific questions addressed in this study are as follows :

a) From which source of the health care provision -the public or the private- do the slum dwellers seek health care? Or what is the proportion of the slum dwellers that select either of them?

b) What factors affect their selection of the public provider, and what factors affect their selection of the private provider?

c) From which types of the providers available- drug stores, private clinics, public hospitals, private hospitals and Bangkok Metropolitan Authority's health centers- do the slum dwellers choose to get health care? or What is the proportion of the slum dwellers selecting each of them?

d) What factors affect their selection of each type of the providers?

4.2.3.3 A review of relevant studies.

R. Bitran (1989) analysed the demand for curative care in Santo Domingo, Dominican Republic, with a 2,537 household sample. The study identified the impacts of tested socio-economic variables on the decision whether or not to seek medical care in case of illness. The choices of obtaining medical care are health facilities operated by State Secretariat of Health and Social Services (SESPAS), Dominican Social Security Institute (IDSS), Armed Forces and Private sector. Medical care is further examined in terms of outpatient and inpatient care, despite the limitations of the analysis of the latter.

The study employed the behavior model to theoretically represent household's demand for health care. Household obtains utility from health status and the consumption of non-health commodities but loses utility from time spent in getting health care. Utility is maximised subject to the budget constraint. The model incorporates the quality of care, where quality is the difference between health status with and without treatment. It depends on consumer's or household's and provider's characteristics.

The indirect utility function that is compatible with the conditions mentioned above is specified as follows :

$$V_{ij} = H_{i\theta} + Q_{ij}(X_i, Z_j) + a(Y_i - P_{ij}) + b(Y_i - P_{ij})^2 + cT_{ij} \qquad (1)$$

where

	V	=	indirect utility
	H_θ	=	health status without treatment
	X	=	consumer's or household's characteristics
	Z	=	provider's characteristics
	Y	=	income
	P	=	health care price
	T	=	Time used in getting health care
	a, b, c	=	coefficients
	i	=	individual ith
	j	=	provider jth

The study further assumes the constant without-treatment health status and individual's income, and a linear relationship between the quality of care and household's as well as provider's characteristics. As a result, the following equation is used for the empirical estimation.

$$V_{ij} = aP_{ij} + b(P_{ij}^2 - 2Y_i P_{ij}) + cT_{ij} + d_i X_i + e_j Z_j \qquad (2)$$

where d and e = coefficients

The estimation procedure consists of two steps. The sequence is opposed to the real-life condition. In the first step, the parameters of the equation (2) are estimated for people seeking health care. An exponentially weighted sum of the utilities from every alternative provider, "inclusive value," is then computed. It is used as an additional variable in equation (1) in the second step, which evaluates one's decision to seek health care or not. The conditional logit regression technique is employed.

Only the major findings are reported here. Household income has a small effect on the decision to seek health care but has a large effect on the provider choice. The high-income households are more likely to obtain health care from the private sector whereas the low-income households go to the public sector. Better educated persons tend to seek health care more often than poorly educated ones. The former select health care from the private sector while the latter do so from the public sector. Though the health care price has a small effect on demand, the effect on the low-income households is relatively larger than that on the high-income counterparts.

In the study by M. Phananiramai and S. Suksiriserekul (1996) , the morbidity pattern of Thai people is determined and their health care seeking behavicur modeled. The analysis employs the data from the First Survey on Health Status of Thai Population in 1991, with a sample of 22,214 persons across the country. It is found that the ill persons in urban areas have a different behavior in obtaining health care from those in rural areas. 17.9% of the urban ill did not seek any health care. The remainders' first health care contact consists of 47.4% non-physician health care and 34.7% physician health care, where non-physician health care consists of drugstores, traditional healers, injectionists, health centres with health workers or nurses. In the rural areas 20.6% of the ill did not seek any health care. Their first health care contact consists of 58.6% non-physician health care and 20.8% physician health care.

The study uses the multiple logit models to determine the factors affecting the visits to physicians. The dependent variable, representing the utilization of physician services per episode within a two-week survey period, takes on 3 values. A value of 0,

which is normalized, denotes no use of physician services. A value of 1 denotes the use of physician services within the survey period. A value of 2 denotes the continuing use of physician services after the survey period. Among the socio-economic factors tested, age, sex and residential area are found to have statistical significance. Children aged 0-14 and adults aged over 44 are more likely to use physician's services. The urban population visit doctors more often than do the rural population.

S. Khoman (1992) examines Thai households' choices of health care providers in the case of illness and identifies the determinants of alternative providers. The study employs the 1985 Survey of Morbidity and Mortality conducted by the Institute of Population and Social Science Research of Mahidol University. The sample consists of 7,514 households with 36,611 persons in 19 provinces across the country.

The analysis employed two classifications. The first classification is based on the treatment institutions while the second classification is based on the treatment personnel. Both classifications share the same beginning steps of the decision. The household with an ill member, first of all, decides to do nothing or to seek health care. If the latter is selected, then its decision is whether to use self-prescribed drugs or to obtain health care from the providers. At this point, the two classifications differ. In the first classification, the household chooses between traditional health care and modern health care. If the modern health care is selected, then it decides whether to go to a hospital or a non-hospital facility. After one of them is chosen, it decides whether to use the public one or the private one. In the second classification, the household chooses between physician health care and non-physician health care. After the former is chosen, the final decision is between the public and the private physician.

The analysis employs the logit regression technique. The findings indicate that education, place of residence, wealth, the age of the sick and the illness severity influence the choice of health care provider significantly. However, these factors do not affect every decision level equally. Wealth does not play role in deciding to seek health care but influences the choice of provider when a decision to seek health care has been made. The household with higher level of wealth is more likely to utilize private hospitals and physicians than that with lower level of wealth. Better educated households seek modern health care provided by physicians in private non-hospital facilities more often than do lower educated households. The urban people tend to visit physicians and private non-hospital facilities.

4.2.3.4 Methodology

The treatment choice model used in this study is derived from the standard demand model. It focuses on only the consumption aspect. An individual derives utility from consuming good health and a set of non-health goods and services. His utility maximization is constrained by a number of factors. As a result, he optimized the utility with the given constraints. Ill health, which lowers his utility, leads him to decide whether or not to seek health care. Once deciding to get health care, he makes a choice between the public health sector and the private health sector. A number of factors affect his choice such as the illness severity, sex, the right to the health and welfare program, age and income.

The model is fit to the logit regression model. The dependent variable (Y) is either the visit to the public health sector or the private health sector. The independent variables (X) include illness severity, sex, the right to health and welfare program, age and income of the patients. Therefore the choice model between the public and private health sectors can be specified as follows :

$$Yi = \alpha + \beta Xi + \varepsilon I \qquad (1)$$

where α and β = The coefficient terms

ε = error term

i = observation ith

As Yi has two possible values : 0 for public sector and 1 for private sector, the equation can be modified into a probability model [Pr(.)], in which the following two equations are :

$$Pi = Pr(Yi = 1) = P(Xi, \theta) \qquad (2)$$

$$Qi = Pi(Yi = 0) = 1 - P(Xi, \theta) = Q(Xi, \theta) \qquad (3)$$

where

P , P(.) = a probability as a function of certain variables Q and Q(.)

Pr(.) = the probability of the event

θ = the vector of the parameters determining the choice selection

By assuming the logistic function, the following probability can be obtained.

$$P(x) = \frac{\exp.(\alpha + \beta x)}{(1 - \exp(\alpha + \beta x))} \quad (4)$$

$$Q(x) = 1 - P(x) \quad (5)$$

$$= \frac{1}{(1 - \exp(\alpha + \beta x))} \quad (5)'$$

After one decides to seek health care, he makes a choice among 5 major categories of the providers : drug store, private clinic, public hospital, private hospital and other health facilities. The patient's characteristics can affect his choice. Due to the limited information and the requirement of the estimation method, these characteristics include age, sex, education level, household income, illness severity, distance from home to health facilities or transportation expenses and the right to free medical care.

The choice analysis is consistent with the multiple logit regression model. The dependent variable (Y) is one of the following : drug store, private clinic, public hospital, private hospital and other health facilities. The independent variables (X) comprise age, sex, education level and household income. The choice model of different types of the provider can be expressed below.

$$Yi = \alpha + \beta Xi + \varepsilon I \quad (6)$$

$$Yi = i_s \quad (6)'$$

Where i_s = ith observation with a state of S.

$$P_{is} = P_r(Y_i = i_s) \text{ for all } s = 1,2,...,S \quad (7)$$

$$P_{is} = P_s(Xi, \theta) \quad (7)'$$

There are two constraints to the above equation :

$P_s(X,\theta) \geq 0$ and $\sum_S P_s(X,\theta) = 1$

$$P_s(X_i,\theta) = \frac{\exp(X_i\gamma_s)}{\sum_i \exp(X_i\gamma_i)} \quad (8)$$

Where γ_s = the model parameters

However, the parameters of the equation cannot be identified. Therefore, the estimation method requires the omission of a state.

$$P_s(X_i,\theta) = \frac{\exp(X_i \hat{\gamma}_s)}{1+\sum_i \exp(X_i \hat{\gamma}_t)} \qquad \text{for } S \neq 1 \qquad (9)$$

$P_s(X_i, \theta)$ for S = 1 can be retrieved by the following equation.

$$P_1(X_i,\theta) = \frac{1}{1+\sum_i \exp(X_i \hat{\gamma}_s)} \qquad (10)$$

All the estimation models are based on the maximum likehood estimation technique. In this study, the choice between the public and private health sector is totally separate from that over the provider type. This means that the decision over the former is independent of that over the latter.

4.2.3.5 The study results.

A. The choice of the health care sector.

The finding of the logit regression technique of the patients' choices between the public and private sectors are presented in Table 2.5. The predicted probability of the visits to the private health sector is about 49% (Table 2.8). This means that the private and public health sectors are visited more or less equally. The use of the private health sector is significantly influenced by illness severity, a person's age and daily wage. When the persons' illness becomes moderately severe, they are more likely to visit the private health facilities than the public ones. The private health institutions are used more often by the younger age groups and the higher-income persons. On the other hand, those who choose to go to public facilities are those whose illness severity is either mild or serious, the elderly and the low income.

B. The choice of the health care provider.

The result of the multiple logit regression method of the treatment choices among drug stores, private clinics, public hospitals, private hospitals and the remainder of the health facilities is shown in Table 2.6. The right to free medical care affect the decision to select the place to obtain health care from all types of health institution. The choices of treatment for the higher income households are the private hospitals. This is consistent with

the expectation that the wealthier people prefer buying the high quality health care from these two sources. Patients with severe illness go to private clinics. The younger patients tend to visit private clinics and other facilities. The lower educated patients use private clinics and public hospitals.

The predicted probability of the drug store choice is 34%, the private clinic choice 24%, the public hospital choice 30%, the private hospital choice 7% and the other facility choice 5% (Table 2.8). This means that the first choice of the treatment is the drug stores, followed by the public hospitals, the private clinics, the private hospitals and other health facilities.

As the data involving the distance between the patients' residents and the drug stores as well as their transportation costs are not available, the equation cannot include the effects of the distance and the transportation costs on the treatment choices. Nevertheless, another multiple logit regression equation, incorporating all the choices except the drug stores, is estimated. It can assess the impact of the distance and the transportation costs on the private clinics, the public hospitals, the private hospitals and other health facilities. Since the two variables are highly correlated, both cannot be in the same equation. It is found that the equation with the distance variable gives a better result than the one with the transportation cost variable. Therefore, only the result of the former is presented and discussed.

The regression result, shown in Table 2.7, indicates that the patients travel a longer distance to the public and private hospitals than to the private clinics. This suggests that the preference of the slum households for private clinics can be explained by an easy access since private clinics visited tend to be within a walking distance from the slums. The females go to the private hospitals more than the males do. The patients with higher annual household income make a larger number of visits to the private hospitals.

From the result with the distance variable, the predicted probability of the private clinic choice, the public hospital choice, the private hospital choice and the other health facility choice are 0.39, 0.44, 0.12 and 0.05, respectively (not shown in table). The patients most frequently visit the public hospitals, followed by the private clinics, private hospitals and other health facilities. It should be noted that the rank order of the four treatment choices does not alter for the two equations.

4.2.4. Reactions of Health Care Providers.

4.2.4.1 The Study Objectives

Apart from the demand side study which examines the willingness to pay and choice of providers by the slum households, another objective of the study is to look at the supply side or the availability of health care providers and their attitudes toward provision of care to the slum dwellers, whether there are supply constraints on the use of services, whether the health care providers are willing to join the health card program and conditions under which they would be willing to join.

4.2.4.2 Methodology and Survey Results

To achieve the above objective separate questionnaires were designed for health care providers. One hundred and twenty six questionnaires were sent to private health care providers located nearby 11 districts where the primary data were collected. Unfortunately, only 18 responses (14.3%) were received and only 12 were complete. The respondents belong to three types of providers: hospital(3), polyclinic(3) and private clinics (12). Eventhough the respondents are limited, it provides us with some meaningful information which can be summarized as follows.

Some private health providers in Bangkok still do not have any idea about the health card program. They are more likely not to join the health card program due to the fact that the beds and the personnel are not adequate to provide good care for patients under the health card program. In addition they are fed up with the bureaucrats and the reimbursement from the health card program is not attractive and will not cover costs. However, we find that small providers and those subcontractors under the Social Security Scheme of which the poor are the majority of their patients tend to join the health card program.

All private health care providers agree that the health card will encourage the card holders to increase utilization of health care services. There is a consensus on the characteristics of one who is willing to buy health cards. These include one who is ill, the poor, the low income families, those who are unhealthy or who have chronic diseases which require a large sum of money for treatment, and one who has a large family

There is a split of opinion regarding whether the government should subsidize the poor in buying health card. Those who disagree see that the poor already

obtain health care at the public facilities free of charge. Thus there is no need for the government to subsidize the health card.

The respondents give us plenty of information about the measures to increase health services to slum dwellers. They are for example, to offer health care providers in/or nearby slum areas, to have mobile health units with the task of advising the poor how to take good care of their health and concentrate on the protective measures, to set up primary health care centers by pooling various types of health personnel as a team in order to educate the poor to take care of their health through various media, i.e.,video, movie.

Table 2.1 : The Summary Statistics of Key WTP-related Variables.

	Minimu	Maximu	Mean	Median	Mode	Std Dev
WTP for each visit to obtain health care (baht)	20	10,000	362.84	200	200	746.39
The percentage of WTP for each visit to obtain health care with respect to annual household income	0.13	8.33	0.34	0.17	0.28	0.72
WTP for health care one whole year (baht)	100	50,000	2,870.93	1,500	1,000	4,643.64
The percentage of WTP for health care one whole year with respect to annual household income	0.05	51.76	2.57	1.25	2.08	4.82
WTP for Health Card with free health care in public health facilities within one year without expenditure limit (baht)	10	6,000	845.01	500	500	963.57
The percentage of WTP for Health Card with free health care in public health facilities within one year without expenditure limit with respect to annual household income	0.12	12.50	0.77	0.45	0.56	1.19
WTP for Health Card with free health care in public health facilities within 6 months with a 2,000 baht-per-visit limit (baht)	20	5,000	470.10	300	500	574.91
The percentage of WTP for Health Card with free health care in public health facilities within 6 months with a 2,000 baht-per-visit limit with respect to annual household income	0.01	8.33	0.42	0.24	0.28	0.64
WTP for Health Card with free health care in both public and private health facilities within one year without expenditure limit (baht)	70	40,000	1,711.91	1,000	1,000	2,666.71
The percentage of WTP for Health Card with free health care in both public and private health facilities within one year without expenditure limit with respect to annual household income	0.17	27.78	1.51	0.81	1.39	2.63
Expected return of one year's 500 baht investment (baht)	50	547,500	14,652.12	3,000	1,000	46,162.03
Maximum life-insurance indemnity (baht)	100	3,000,000	145,459.49	100,000	100,000	343,714.02
Maximum bet (baht)	2	3,000,000	40,577.22	275	100	292,915.25
Maximum lottery purchase (baht)	5	200,080	994.95	120	80	9,925.37

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University.

Table 2.2 : The Number and Percentage of the Respondents Possessing Life Insurance, Gambling and Buying Lottery.

	Yes	No
Had or have life insurance	99(19%)	429(81%)
Gambled or gamble (apart from buying lottery	114(22%)	415(78%)
Bought or buy lottery	418(79%)	110(21%)

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University.

Missing Values : 1

Table 2.3 : A Matrix of the Number and Percentage of the Respondents' Combined Behaviour of Having Life Insurance and Gambling

	No life insurance	Have life insurance	Total
Not gamble	337(63.8%)	77(14.6%)	414(78.4%)
Gamble	92(17.4%)	22(15.0%)	114(21.6%)
total	429(81.3%)	99(4.2%)	528(100.0%)

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University.

Missing Values : 1

Table 2.4 : WTP for Health Care and Health Card : Results of Regression Analysis.

dependent variables / independent variable	WTP1	WTP2	WTP3	WTP4
household income	0.3197	0.3156	0.3105	0.3410
	(4.757)*	(4.952)*	(4.423)*	(4.942)*
health status	0.0415	0.0165	0.0227	0.0055
	(0.417)	(0.175)	(0.225)	(0.054)
age	0.0052	-0.0013	-0.0012	-0.0037
	(1.567)	(-0.389)	(-0.355)	(-1.019)
household size	0.0001	-0.0153	-0.0238	-0.0153
	(.023)	(-0.710)	(-1.049)	(-0.656)
education	0.0382	0.0337	0.0192	0.0359
	(2.945)*	(2.626)*	(1.428)	(2.574)
intercept	3.1557	2.5054	2.0648	2.8997
	(4.212)*	(3.543)*	(2.641)*	(3.776)*
R^2	0.0945	0.1021	0.0701	0.1070
F-test	10.1793*	10.5038*	6.4570*	11.0556*
number of sample	493	467	433	466

Source : Slum Household Survey, April-May, 1995
Faculty of Economics, Thammasat University.

Notes : 1) WTP1 denotes the willingness to pay for health care one whole year.

2) WTP2 denotes the willingness to pay for Health Card in public health care facilities within one year without expenditure limit.

3) WTP3 denotes the willingness to pay for Health Card in public health facilities within 6 months with a 2,000-baht-per-visit limit.

4) WTP4 denotes the willingness to pay for Health Card in both public and private health facilities within one year without expenditure limit.

5) Age and education are those of the respondents.

6) T-statistics are in parentheses.

7) * represents the level of significance at 0.05

8) Health status is persons x times of illness in the household in the past 3 months. The health status takes on the value of zero when no illness happened, 1 when there are 1 to 3 persons x times of illness and 2 when there are 4-5 persons x times of illness.

Table 2.5 : The result of the logit regression method of the treatment choice between the public and private sector.

Independent variable	Coefficient	t-test
Severity : mild	0.9388	0.027
moderate	0.0096*	2.677
severe	0.3749	1.379
SEX	-0.0522	-0.223
RIGHT	-0.2780	-1.138
AGE	-0.0201*	-3.785
DWAGE	0.0055*	3.392
CONSTANT	-0.0860	-0.278

Notes : 1. The coefficients of the public health facilities have been normalized. Therefore, the coefficients of the private health facilities are computed relative to the public health facility coefficients.

2. Dummy variables. In the illness severity(SV), the omitted dummy is no work limitation, while mild severity (work with minor limitation) moderate severity (work with limitation) and severe (unable to work) each takes on the values of 0 or 1. The sex dummy takes on 1 if the person is male. The right to free medical care (RIGHT) takes on 1 if the person has the right to free medical care.
3. DWAGE, a person's daily wage, is computed by dividing the annual per capita income by 313, the number of working days in a year.
4. AGE is the age of ill persons (years).
5. * denotes the significance level at 0.05.
6. The sample size is 356.

Table 2.6 : The result of the multiple logit regression model of the treatment choice between drug stores, private clinics, public hospitals, private hospitals and other facilities.

Independent Variables	Private Clinics	Public Hospitals	Private Hospitals	other facilities
CONSTANT	-0.3549	-1.0605	-3.2144	-0.9031
	(-1.116)	(-3.241)*	(-5.889)*	(-1.1811)
AGE	-0.0161	0.0099	0.0090	-.01897
	(-2.729)*	(1.788)	(-1.022)	(-2.002)*
SEX	0.1194	0.2843	-0.030	-0.8244
	(0.477)	(1.180)	(-0.080)	(-1.741)
EDUCATION	-0.0627	-0.0718	0.0005	-0.1079
	(-2.074)*	(-2.420)*	(0.013)	(-1.945)
INCOME	0.0073	0.0075	0.0226	-0.0012
	(1.653)	(1.790)	(4.430)*	(-0.137)
RIGHT	0.6095	1.0114	1.1773	0.9868
	(2.196)*	(3.976)*	(3.072)*	(2.232)*
SEVERITY	0.7428	0.3223	1.3608	0.4467
	(3.024)*	(1.360)	(3.630)*	(1.083)

Notes :
1. The coefficients of the drug store choice have been normalized. Therefore, the coefficients of the private clinics, the public hospitals, the private hospitals and other facilities are calculated relative to the coefficients of the drug store choice.
2. Dummy variables. The sex dummy takes on 1 if the person is male. The severity dummy takes on 1 if the person's severity is moderate (work with limitation) or severe (unable to work). The right dummy takes on 1 if the person has the right to free medical care.
3. Continuous variables. AGE is the age of the ill persons (years). Education level is the number of schooling years of the ill persons. Income is the 3-month household income and its unit is in 1,000 baht.
4. * denotes the significance level at 0.05.
5. T-statistics are shown in parentheses.
6. The sample size is 530.

Table 2.7 : The result of the multiple logit regression model of the treatment choice between private clinics, public hospitals, private hospitals and other facilities.

Independent Variables	Public Hospitals	Private hospitals	other facilities
CONSTANT	-1.1143	-3.2529	-0.4011
	(-2.909)*	(-5.312)*	(-0.711)
AGE	0.0265	0.0094	-0.012
	(4.075)*	(0.993)	(-1.065)
SEX	0.0458	-0.4439	-1.3459
	(0.154)	(-1.045)	(-2.239)*
EDUCATION	-0.0248	0.0471	-0.0626
	(-0.717)	(1.041)	(-0.976)
INCOME	0.0018	0.0148	-0.0079
	(0.368)	(2.555)*	(-0.788)
DISTANCE	0.1631	0.2078	-0.0741
	(3.181)*	(3.672)*	(-0.557)
SEVERITY	-0.4479	0.5673	-0.2571
	(-1.553)	(1.338)	(-0.521)
RIGHT	0.3426	0.6128	0.5841
	(1.118)	(1.440)	(1.103)

Notes :

1. The coefficients of the private clinics choice have been normalized. Therefore, the coefficients of the public hospitals, the private hospitals and other facilities are calculated relative to the coefficients of the private clinics choice.
2. Dummy variables. The sex dummy takes on 1 if the person is male. The severity dummy takes on 1 if the person's severity is moderate (work with limitation) or severe (unable to work). The right dummy takes on 1 if the person has the right to free medical care.
3. Continuous variables. AGE is the age of the ill persons (years). Education is the number of schooling years of the ill persons. Income is the 3-month household income and its unit is in 1,000 baht. Distance is the distance between the person's residence and the health facility, measured in kilometers.
4. T-statistics are shown in parentheses.
5. * denotes the significance level at 0.05.
6. The sample size is 292.

Table 2.8 The predicted probability of the health sector choice and the health care provider choices.

A. The choice of the health care sector.

Sector	Predicted probability (%)*
Public	51
Private	49

B. The choice of the health care providers.

Provider	Predicted probability (%)**
Drug store	34
Private clinic	24
Public hospital	30
Private hospital	7
Other facility	5

Sources : * calculated from equation 8.

** calculated from equations 9 and 10.

5. A Synthesis of Finding and Policy Recommendations

5.1 Findings

5.1.1 Poor Bangkok slum dwellers need better health benefit coverage

Bangkok slum dwellers are poorer than the average people living in Bangkok and the vicinity areas, judging from their average income. Almost two thirds of slum household heads had no more than primary level of education. They migrated to Bangkok over 3 decades ago and settled in the slums ever since. More than half of them worked in the informal sector, including the self-employed small-scale businesses, general workers and services. They suffer from poor quality of life and sub-standard level of living.

Access to health care for poor Bangkok slum dwellers is hampered by the relatively high cost to them of obtaining health services. The accessibility issue is important, as the number of slums in Bangkok is growing all the time. Bangkok had fewer than 100 squatter settlements forty years ago, but it has 1,246 slums now--with 1.2 million people.

This paper identifies some key factors responsible for the accessibility problem faced by the poor, an issue few studies have highlighted. The findings could assist the government in tackling the issue, which is one of the quality of life and equity issues to be addressed in the Seventh National Economic and Social Development Plan.

A 1995 survey of over 500 households in 12 slums in Bangkok showed that poor slum dwellers have a greater need for health services than better-off slum dwellers, but fewer resources to meet that need. The poor are ill more often than the better-off. Yet with income below the minimum wage and less likelihood of having work-related health benefits, they have greater difficulty paying for the health services that they need. The fee is a bigger constraint for the poor in obtaining health services than waiting time and travelling costs to health facilities.

Of the 529 sample households, 388 (73.3%) had at least one episode of illness within the three months prior to the survey. This involves about one fifth or 517 out of 2,517 persons. Though an average household in the slums paid less for health services than an average household in Bangkok, the expenditure exceeds the national average figure. A household in the slums spent an average health service expenditure of 733 baht in 3 months. The figure is far lower than that of a household in Bangkok, paying 1,238 baht for a 3-month period. Several slum households paid a huge sum even though a number of households under some health benefit schemes could waive their treatment costs.

Not only do poor slum dwellers have limited access to such private health coverage as work-related benefits, they also have poor access to public health benefit schemes. The distribution of the public health benefits between the poor and the better-off slum dwellers is uneven. Some households have coverage under several health benefit schemes while others have no coverage. To improve the coverage of the poor in Bangkok slums, the distribution of public health benefits needs to be reformed. More of the poor slum dwellers should be enrolled in the low-income scheme. There are difficulties in expanding the health benefit programs, however, in slum areas with widespread illegal activities.

For those covered by the public health benefit schemes, the quality of health services provided is an issue. Because the public health benefit schemes give limited package of benefits, they are used less than the private ones. Including private health services in the public health benefit package would encourage poor slum dwellers to use more of the existing public health benefits. Enhancing the quality of public health services provided under the public health benefit schemes is also a key.

The survey found that the average daily earning of Bangkok slums dwellers was 121 baht. That amount is a little lower than the minimum wage (135 baht), which is supposed to enable one to afford basic necessities, including health services. The low income probably makes them give up health services in some cases, especially when the cost of treatment is substantial. Several slum dwellers paid in excess of 10,000 baht per treatment, over 85 times their daily income.

Poor slum dwellers tend to be ill more than their better-off counterparts. On average, a poor person had 1.17 episodes of illness during the three-month recall period, whereas a better-off person had 0.88 episodes.

The higher morbidity rate among the poor increases their financial burden. They pay a larger share of their income for health services than the better-off do-- 5.2% compared with only 1.3%.

There are few health benefit schemes available to cover the poor's health costs. Most schemes are related to employment, so those who lack a definite occupation or work status do not qualify. According to the analysis of the survey data, 69% of all slum dwellers (poor and better-off) had no health benefits and 8% were on welfare and health card scheme which are not job-related health benefits. These people worked for small private businesses, as general workers, in the service sector, or in miscellaneous jobs or were unemployed. Since the poor are more likely to lack work-related health benefits, they cannot

avoid paying for health services if they do not have coverage under a public welfare scheme or do not identify themselves as poor in order to receive a waive of fees.

The financial constraint for poor slum dwellers stems more from the fee for health services than from waiting and travelling costs. On average, the travelling cost is almost nil since the health facilities visited by the poor are near their homes. Although the survey indicated that the average slum dweller waits a significant length of time for health services, especially in public hospitals, the opportunity cost of the waiting time is low. Most visits to private and public health facilities are made in the evening, when health facilities are less crowded and the workday is over.

The proportion of poor slum dwellers without health benefits (75%) exceeds that of their better-off counterparts (60% and 48% respectively for the average and above-average income groups). All of the poor are entitled to the low-income schemes, and older poor people qualify for the elderly welfare program, but only 5% of the sampled poor actually had access to the low-income scheme. The government reimbursement, the social security and private company reimbursement schemes benefit the better offs more than the poor.

The ineffective distribution of public health benefits to poor slum dwellers makes some eligible for more than one health benefit scheme while leaving others with none. For example, an elderly person who is entitled to the elderly welfare program can qualify for his son's or daughter's government reimbursement.

Poor slum dwellers' low use of low-income benefits results from complicated application procedures and rigid use guidelines. An applicant must produce a valid residence registration and an I.D. card. Those without permanent accommodation, a definite work place or a formal job are unlikely to be able to produce the documents required to obtain health benefits. The requirements of the low-income scheme are to use local health facilities, and to use only drugs in the National Essential Drug List.

The application procedure should be simplified so that poor slum dwellers without valid residence registration can enroll in the scheme and get accustomed to paperwork. The benefits should be usable nationwide since most of the poor frequently relocate.

Expanding the coverage of the low-income scheme is the most effective way to provide health benefits to the poor because it is the only scheme targeting the poor. But because the beneficiaries receive health services free of charge, expanding the scheme may

lead to over consumption of health service. The Thai government may opt instead for expanding the health card program, which is a partial health insurance scheme.

There are some difficulties in extending health benefit schemes to some poor people in need of health services, such as the homeless, street vendors, squatters and wanderers in the slums. Information obtained by informal interviews of some members of these groups and through observation suggests that they are the poorest people in the slums. They also have a lower health status. Because some are involved in illegal activities -- drugs, theft and prostitution--the welfare officials are unable to reach them to provide assistance. This is still an unresolved issue and requires further study.

The public health benefits available to poor slum dwellers provide relatively low-quality health services, available only from public providers. Only 38% of those enrolled in the low-income scheme in the slums surveyed claimed the benefits when they were ill, in part because of the low quality of the health services. Private health services are preferred to public services because of their higher quality. When people are able to pay for health services, they choose to purchase private health services. Among the poor slum dwellers, 45% used services from public hospitals, whereas 32% of the above-average income group in the slums did. And 25% of the latter group but only 3% of the poor, used health services from private hospitals. The quality differences include better treatment, more effective drugs, modern medical technology, shorter waiting times and more convenient visiting hours. It is noted, however, that private clinics are more equally preferred by all income groups in the slum.

The cost of public health services is lower than that of private services. On average, the sample in the survey paid 781 baht for a visit to a public hospital but 1,725 baht for a visit to a private one. But the low cost of the public health services comes at the expense of low-quality medicine, short consultations and short visiting hours.

As a result of the difference in the quality of care, health benefit schemes that are not restricted to public providers are used more often than those that are. About 60% of those entitled to government reimbursements and 50% of those with private company reimbursements, which allow them to purchase health services from any providers, although with some limitations, used their health benefits. By contrast, less than 40% of those with access to health services only from public facilities--through health cards, low-income cards, student insurance cards --used their health benefits (Table 1.14).

One way to boost the use of public health benefits among poor slum dwellers is to incorporate private health services in the benefit package. Including private health

services in the poor's public health benefits could broaden the choice of providers and increase the use of health services.

An alternative is to upgrade the quality of the services provided under the public health benefit schemes to match that of private services. Public health facilities should spend more on providing high-quality medicine, extending visiting hours and giving faster services, especially to the beneficiaries of public health benefit or welfare schemes.

If the access of Bangkok's poor slum dwellers to health services is to be improved, their cost of obtaining care must be reduced. Although some public health benefits are available that reduce the financial burden of the poor, they are distributed unevenly and provide low-quality health services. The public health benefit schemes therefore require reform--either by including private health services or by enhancing the quality of public health services.

5.1.2 Feasibility of an Urban Health Card Program

The health care reform policy in Thailand advocates a universal coverage of health insurance for the whole population. A major strategy employed to achieve this objective is to expand health insurance to cover people who are not currently entitled to any kind of health benefits. From the health welfare and health insurance schemes for different groups of the population operated by the government, the policy makers select Health Card program as a key approach to the universal coverage. Although the program has been extended to the rural population over a number of years, it is new to the Bangkok population. The slum dwellers in Bangkok who rarely possess any health benefits are one of the program's target groups. They are not poor enough to qualify for the Low Income scheme. Moreover, the health insurance coverage for the slum dwellers is significant since the number of slum dwellers in Bangkok will continue to grow. .

The Health Card program is a voluntary health insurance scheme, operated by the Office of Health Insurance, the Ministry of Public Health (MOPH). At present, its price is 500 baht, with another 500 baht subsidy from the government. The benefits include free health services for 5 members of a household for a year. Though there is no limit on the number of utilizations, health services can be used only in public health facilities with a referral system.

This study was undertaken with the objective to examine the viability of operating Health Card scheme among the slum dwellers in Bangkok. It is important to realise how appropriate it is to use Health Card program to achieve the universal coverage

of health insurance. To reach the objective, it is necessary to know the current accessibility to health care and health expenditure of the slum dwellers. Their willingness to pay (WTP) for out-of-pocket health care and Health Card and their choices of health care providers in case of illness are analyzed. Also, it investigates whether or not the health care providers want to join the program and identifies factors necessary for their participation in the scheme.

The analysis of health care seeking behavior of the slum dwellers reveals that 368 episodes (63%) received treatment from both private and public health facilities, 182 (31%) treated themselves by purchasing drugs and the remaining 36 (6%) did not obtain any kind of treatment. Among five major sources of treatment, the slum people preferred public hospitals most and BMA health centres least. The ill most frequently visited public hospitals (44%). Private clinics were the second most popular (33%), followed by private hospitals (13%) and BMA health centres (8%).

The findings of the logit regression technique indicates that the predicted probabilities of the visits to the private and the public health sectors are 49% and 51%, respectively. The use of the private health sector is statistically significantly influenced by the illness severity, a person's age and a person's daily wage. When the persons' illness becomes severe, they are more likely to visit the private health facilities than the public ones. The private health institutes are used more often by the younger-age groups and the higher-income persons.

The result of the multiple logit regression method, explaining the slum dwellers' choices of treatment, points out that the first choice is drug stores (a predicted probability of 0.34), followed by public hospitals (0.30), private clinics (0.24), private hospitals (0.07) and other health facilities (0.05).

In assessing the slum dwellers' interest in Health Card and their willingness to pay for it, the study uses a direct approach by asking respondents to reveal the amount of money that they would be willing to pay (WTP) for out-of-pocket health care in a year and for a Health Card. All the questions are open-ended. They are willing to pay 1,500 baht a year for out-of-pocket health care. After explaining the benefits and conditions of 3 scenarios of Health Card, they were asked the sum they are willing to pay for them. The households, on the average, are willing to pay 500 baht for Health Card offering free health services only in public health facilities for a year without expense limit (the currently sold Health Card). The willingness to pay is reduced to 300 baht if a hypothetical Health Card is

valid for only 6 months and is subject to an expense limit of 2,000 baht per visit. Another hypothetical Health Card offering free health care in both private and public health facilities within a year without an expense cap is given the highest WTP of 1,000 baht. It is obvious that the difference in the WTPs of these Health Cards stems from the availability or otherwise of private health facilities and the health expenditure limit.

The fact that the WTP of 1,500 baht a year for out-of-pocket health care is higher than the WTP of the presently available Health Card (500 baht) means that the respondents perceived the health benefit derived from health care based on out-of-pocket payment to exceed that obtained from Health Card. One can select their own choice of health care providers if paying out-of-pocket by oneself. On the contrary, one using Health Card has no choice but the designated public health facility. Therefore, the Health Card program does not seem to be well received in this population.

The study approximates the slum dwellers' risk behavior with their gambling behavior and the possession of life insurance. It is found that 17% of the sample are risk-lovers, meaning that they are willing to take risk rather than to insure. They are not likely to buy Health Card. On the other hand, the estimated maximum purchase is 83%, including 15% of the risk averse group who is most likely to buy Health Card.

The study predicts that without any significant modifications in the scheme, the introduction of Health Card in Bangkok is subject to failure due to at least 2 reasons. First, the households prefer paying for health care out of their pockets to buying Health Card as the WTP of the former choice is greater than that of the latter one. The former gives free choice of providers as well as saves the travelling cost and time. Secondly, the program expansion would encounter the problem of an insufficient number of the Health Card buyers who are risk averse. The Office of Health Insurance expected to sell 285,458 Health Cards in Bangkok in 1998.

Before this study was completed, MOPH had launched the Health Card program in Bangkok. According to the Office's report in 1997, the sale was about 3.6% of the target population who do not possess any kind of health benefits. However, it was about 23% of the target population that are supposed to afford the cards. The extremely less-than-expected sale arises from several rigid conditions of Health Card scheme. It does not include the most popular treatment choice (i.e., private clinics). It requires the card holder to follow the referral system, where the BMA health centre is the first contact but the slum dwellers'

last choice. All the terms and conditions of Health Card sold in Bangkok are the same as those sold in rural areas, despite many differences existing between the two populations.

Our survey of health care providers reports that the majority of the provider respondents know about the Health Card program. According to their predictions, the availability of the card would increase the holder's health service utilization. Most of the private providers do not want to join the scheme. The major reasons for this is that the expected payment of the Health Card fund may not cover the costs of the private providers. In contrast, small hospitals desire to join Health Card program because more revenue can be generated from additional patients from the scheme. Few providers would accept the Health Card patients on humanitarian ground. In the views of all the providers, the persons who are highly likely to purchase Health Card are those who have low income, poor health and a large family. In other words, they are high risk persons, who are not desirable from an insurance viewpoint.

5.2 Policy Recommendations

How should the Ministry of Public Health Modify the Health Card Program (HCP)?

Because the current HCP is not viable, several modifications are warranted before it is extended to all of Thailand's urban poor.

Private Clinics and Drug Stores should be Included

Private health care providers, particularly private clinic and drug stores, should be included in the HCP. More than one-third of urban households rely on drug stores as their main health care provider. Expansion of the HCP is likely to encounter limitations in the supply of providers; including drug stores and private clinics would ease that pressure. Although the quality of drug stores varies, appropriate control measures could ensure consistent standards. Drug stores must be upgraded before joining the HCP. Qualified pharmacists must be available for drug consultations. And only safe and effective drugs, such as those on the essential list, should be provided.

This recommendation might shift referrals at the lowest level from local health centers to local drug stores. (The other levels of the referral system are the Bangkok Metropolitan Administration's local health centers, Ministry of Public Health hospitals, and

other public hospitals.) Thus all drug stores participating in the HCP should be required to deal with minor illnesses by providing basic medications.

The Program Should Be Financially Viable

The HCP will not be financially viable unless more households buy health cards. Only 15% of risk-averse urban households are willing to buy health cards. Seventeen percent of households will not buy cards. When the Office of Health Insurance launched the HCP in Bangkok in 1997, only 3.6% of the target population bought health cards. Yet about 23% of the target population could afford cards.

Sales were much lower than expected because the HCP imposes several rigid constraints. As noted, it does not include the most popular treatment choices, such as private clinics and drug stores. The required first contact, the Bangkok Metropolitan Administration's health centers, is the least popular health provider. The terms and conditions of the HCP in Bangkok are the same as the rural areas, despite many differences between the two populations. More people would buy health cards if these constraints were eased. Making the HCP compulsory would solve the viability problem, but this move should be considered only as a last resort. Voluntary participation is preferable and attainable.

More Information Should Be Gathered

More research is needed before extending the HCP to all Thailand's urban poor. For example, the Office of Health Insurance should try to predict health card sales. Modified health cards for the urban poor should be tested before the revised program is implemented. Data on the socioeconomic status and health use patterns of urban households are needed to strengthen the HCP and ensure that it meets the needs of urban clients. A risk assessment of urban households would be useful in setting a reasonable price for the health card and determining the compensation of health care providers.

Such information can be obtained through household surveys. Because people's willingness to pay and attitude towards risk may change, these surveys should be conducted regularly. The Office of Health Insurance could hire a private marketing firm to perform these surveys. The Office of Health Insurance should also gather information from local leaders, as it already does in rural areas to market health cards. Policy makers can then adjust the urban HCP in line with the acquired information.

Private Providers Should Be Properly Compensated

If private providers are included in the HCP, as in the Social Insurance Scheme, their compensation must be acceptable to them. The Office of Health Insurance should not base payments to private providers on the cost of health services at public hospitals because those services are subsidized. A regular reporting system with a built-in monitor for private providers may be the most effective and economic way to calculate their actual costs.

6. The Study Limitations and Suggestions for Future Research

6.1 The Study Limitations

It is required in the Neoclassical approach that in assessing the efficiency the marginal cost of the Health Card program be compared with the WTP for Health Card. Since no studies about the marginal cost are available, the average cost is used. Theoretically, if fixed cost approaches zero, the gap of the difference between average cost and marginal cost becomes narrow so that marginal cost could be represented by average cost. The fixed cost of the Health Card program is indeed small. According to the 1997 annual budget report of the Office of Health Insurance, the overhead (fixed) cost was 36.3 million bath (3.14% of the total cost) in the first nine months of the 1997 fiscal year. However, the average cost and the marginal cost of the health facilities participated in the program are completely unknown. If the difference between the two is substantial, the efficiency result may not be feasible.

The direct method with open-ended questions in the WTP survey can be criticized of being unable to control the respondents' bias. Donaldson (1990) claims that the direct method invites the respondents' incentive to overestimate the WTP results. Though the validity test can detect the influences of the households' income, age and education variables, it would be better if they are controlled so that the genuine WTP values are obtained. The bias can affect the feasibility and efficiency results. However, the bias due to the wrong perception about the issue being valued or the cognitive incapabilities to grasp the question as mentioned in some studies (Neumann et al , 1994), are least likely to occur since all key words are fundamental and familiar by the respondents.

Since 1995 the Office of Health Insurance has substantially reformed the Health Card program. In addition to health benefits mentioned before, it now includes the

use of Health Card in different areas from the place of the card issuance and the holders' right to choose a community hospital of their choice. Such differences can cause some doubt over the applicability of the results obtained to the reformed Health Card program.

The assumptions that identify the risk behavior to catastrophic-illness expense with the life insurance possession and the gambling habit may not be accepted by some. It is possible that the assumptions understate the real situation. The feasibility of the Health Card program can be underestimated. The worst case of less than 15% Health Card buyers may not be correct. The compulsory Health Card option may not be necessary if there are in fact enough risk-averse households to make the program feasible and worth the resources used.

6.2 Suggestions for Future Research

The experience gained and lessons learnt in this study suggest the following issues to be further analyzed in the future.

1. The alternative WTP valuation methods to the direct method and the open-ended question used in this study are warranted to examine the validity and reliability of the results obtained. As the bidding-game method is popular and employed in most analyses (Fabian et al.,1994), it should be ranked first among one's choices.

2. As the WTP approach is new and rarely applied to value health benefits in the Thai health sector, it is necessary to reanalyze the feasibility and efficiency of the Health Card program by other approach in order to verify the conclusion in this study. The alternatives include the human capital, value of life and quality-adjusted life year approaches.

3. The risk behavior towards paying a huge health care cost should be represented by more precise approximations than life insurance and gamble used in this study. They should be quantified to enable an estimate of a more accurate number or proportion of Health Card buyers. As a result, a more valid and reliable degree of the program feasibility can be estimated. In addition, they should be able to offer some criteria to identify the self opting-out of the program as well as key reasons for the opting-out. Such understanding could assist the Health Card program to minimise the number of the voluntary non-insured and thereby improve the program feasibility.

Appendix

Table A1

Number of Districts and Communities in BMA

Area	Number of Districts	Communities					Total	
		Crowded	City	Suburban	Private housing project	Under housing authority	Number	Percent
N. BMA	15	113	127	229	57	3	529	42.5
S. BMA	12	180	98	39	0	0	317	25.4
Thonburi	11	218	39	133	10	0	400	32.1
Total	38	511	264	401	67	3	1,246	100.0
Percent		41.0	21.2	32.2	5.4	0.2	100.0	
# houses per community		170.9	160.8	129.1	394.1	57.7	167.0	
# population per house		5.94	6.39	5.28	4.66	353.29	5.99	

Source : BMA and UNICEF (1994)

Table A2

Distribution of Sample Districts and Slums

Area	Sample Districts	Communities					Total
		Crowded	City	Suburban	Private housing project	Under housing authority	
N. BMA	Bangsue	14	32 (1)	-	-	-	46
	Dusit	14	22 (1)	-	-	-	36
	Ladkrabang	2	-	27 (1)[1/]	-	-	29
	Phyathai	7 (1)	6	-	-	-	13
		37 (1)	60 (2)	27 (1)	-	-	124 (4)
S. BMA	Bangkolaem	14 (1)	8	-	-	-	22
	Sathorn	13 (1)	5	-	-	-	18
	Yannawa	16 (1)	16	-	-	-	32
		43 (3)	29	-	-	-	72 (3)
Thonburi	Bangkoknoi	21 (1)	-	-	-	-	21
	Klongsan	-	36 (2)	-	-	-	36
	Thonburi	44 (2)	1	-	-	-	45
		65 (3)	37 (2)	-	-	-	102 (5)
	Total	145 (7)	126 (4)	27 (1)	-	-	298 (12)

In parentheses are the number of sample communities in each district and each type of community

1/ This community used to be a crowded slum but just moved out and became a suburban community

Table A3

Gross Regional and Provincial Product : 1995

	GRP (billion baht)	GRP per capita (baht)
Bangkok metropolitan and vicinity	2,165.4	212,278
Bangkok metropolis 1/	1,652.6	238,849
Sub-central 2/	186.9	64,896
East	409.9	109,138
West	176.8	52,885
North	384.4	34,565
Northeast	502.8	24,834
South	376.6	47,947

1/ includes, Nonthaburi, Pathumtani, Sumutprakarn, Nakornpathom and Samutsakorn

2/ excludes Bangkok and vicinity

Source : NSO, Statistical Yearbook, Thailand 1997

Table A4

Annual Income and Educational Level of Household Head

(persons)

Years of schooling / Income (Baht per year)	None		Primary Level				Secondary Level				Under Graduate		Graduate		Total	%
	0		1-4		5-7		8-10		11-12		13-16		>16			
Below average	18	38.5	78	28.3	12	13.9	10	14.7	13	19.7	3	6.7	0	0.0	134	25.5
(0-45,610)	13.4		58.2		9.0		7.5		9.7		2.2		0.0		100.0	
Average	15	43.6	117	51.6	55	76.4	49	60.3	35	53.0	30	66.7	8	33.3	309	58.9
(45,611-127,796)	4.9		37.9		17.8		15.9		11.3		9.7		2.6		100.0	
Above average	6	17.9	28	20.2	5	13.9	9	13.2	18	27.3	12	26.7	4	66.7	82	15.6
(>127,796)	7.3		34.1		6.1		11.0		22.0		14.6		4.9		100.0	
Total	39	100.0	223	100.0	72	100.0	68	100.0	66	100.0	45	100.0	12	100.0	525	100.0
%	7.4		42.5		13.7		13.0		12.6		8.6		2.3		100.0	

Source : Slum Household Survey, April-May, 1995

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Missing Value : 4

Note : Average = mean plus and minus 1 standard deviation

Table A5

Occupation and Income of Household Head

(persons)

Occupation / Income(baht)	Commerce		Government		General worker		Services		Employee		Others		Total	%	Average income (baht)
Below average	32	29.1	10	13.5	40	41.2	6	13.0	14	9.5	30	57.7	132	25.1	23,435
(0-45,610)	24.2		7.6		30.3		4.5		10.6		22.7		100		
Average	57	51.8	46	62.2	51	52.6	30	65.2	108	73.5	19	36.5	311	59.1	75,088
(45,611-127,796)	18.3		14.8		16.4		9.6		34.7		6.1		100		
Above average	21	19.1	18	24.3	6	6.2	10	21.7	25	17.0	3	5.8	83	15.8	232,373
(>127,796)	25.3		21.7		7.2		12.0		30.1		3.6		100		
Total	110	100.0	74	100.0	97	100.0	46	100.0	147	100.0	52	100.0	526	100	86,704
%	20.9		14.1		18.4		8.7		27.9		9.9		100		
Average annual income (baht)	99,167		99,919		68,206		102,491		94,522		42,846		86,704		

Source : Slum Household Survey, April-May, 1995

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Missing Value : 3

Note : Average = mean plus and minus 1 standard deviation

Table A6

Occupation and Health Status of Household Head

(persons)

Occupation / Health status	Commerce		Government		General worker		Services		Employee		Others		Total	%
Good	78	70.3	59	79.7	73	75.3	36	78.3	123	83.7	38	73.6	407	77.2
	19.2		14.5		17.9		8.8		30.2		9.3		100.0	
Fair	14	12.6	10	13.5	15	15.6	6	13.0	13	8.8	4	7.5	62	11.8
	22.6		16.1		24.2		9.7		21.0		6.5		100.0	
Not Good	17	15.3	5	6.8	9	9.4	3	6.5	11	7.5	8	15.1	53	10.1
	32.1		9.4		17.0		5.7		20.8		15.1		100.0	
Bad	2	1.8	0	0.0	0	0.0	1	2.2	0	0.0	2	3.8	5	0.9
	40.0		0.0		0.0		20.0		0.0		40.0		100.0	
Total	111	100.0	74	100.0	97	100.0	46	100.0	147	100.0	52	100.0	527	100.0
%	21.1		14.0		18.4		8.7		27.9		9.9		100.0	

Source : Slum Household Survey, April-May, 1995

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Missing Value : 2

Table A7

Number of Ill Persons in Each Household within 3 Months and Household Per Capita Income

(Household)

Number of Ill Persons / Household Per capita Income	0		1		2		3		4		Total	%
Below average	38	27.0	102	36.8	40	44.0	9	50.0	1	100.0	190	36.0
(1-22,580)	20.0		53.7		21.1		4.7		0.5		100.0	
Average	67	47.5	127	45.8	36	39.6	7	38.9	0	0.0	237	44.9
(22,581-53,167)	28.3		53.6		15.2		3.0		0.0		100.0	
Above average	36	25.5	48	17.3	15	16.5	2	11.1	0	0.0	101	19.1
(>53,167)	35.6		47.5		14.9		2.0		0.0		100.0	
Total	141	100.0	277	100.0	91	100.0	18	100.0	1	100.0	528	100.0
%	26.7		52.5		17.2		3.4		0.2		100.0	

Source : Slum Household Survey, April-May, 1995

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Note : average = mean plus and minus 1 standard deviation

Table A8

Type of Treatment of Ill Persons

Order of Ill Person in Household and Episode of Illness	Recieve Medical Care	Purchase Drugs	Total Visits to Seek Treatment	%	Seek No Treatment	%
1st Person 1st Episode	236	131	367	67.0	20	55.6
1st Person 2nd Episode	52	8	60	10.9	2	5.6
2nd Person 1st Episode	61	36	97	17.7	12	33.3
2nd Person 2nd Episode	5	1	6	1.1	0	0.0
3rd Person 1st Episode	11	6	17	3.1	2	5.6
3rd Person 2nd Episode	1	0	1	0.2	0	0.0
Total	366	182	548	100.0	36	100.0

Source : Slum Household Survey, April-May, 1995

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Missing Value : 2

Table A9

Sequence of Places of Drug Purchase and Treatment

(for those who had two places of visits for each episode of illness)

First Place	Second Place	Episodes	% of Total	% of Grand Total
1. Place of Drug Purchase	Place of Treatment			
Drug Stores →	Private Clinics	8	38.10	21.62
	Public Hospitals	4	19.05	10.81
	Private Hospitals	3	14.29	8.11
Convenience Stores →	Public Hospitals	1	4.76	2.70
	Private Clinics	3	14.29	8.11
	BMA Health Centres	1	4.76	2.70
BMA Health Centres →	Private Clinics	1	4.76	7.89
Total		21	100.00	56.76
2. Place of Treatment	Place of Drug Purchase			
Private Clinics →	Convenience Stores	1	33.33	2.70
Public Hospitals →	Drug Stores	2	66.67	5.41
Total		3	100.00	8.11
3. Place of Treatment	Place of Treatment			
Private Clinics →	Private Clinics	1	7.69	2.70
	Public Hospitals	4	30.77	10.81
	Private Hospitals	2	15.38	5.41
	BMA Health Centres	1	7.69	2.70
Public Hospitals →	Public Hospitals	4	30.77	10.81
	Private Clinics	1	7.69	2.70
Total		13	100.00	35.14
Grand Total		37		100.00

Source : Slum Household Survey, April-May, 1995

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Table A10

Household Per Capita Income and Place of Drug Purchases / Treatment

(Visit to Health Facilities)

Income per Capita (Baht) / Place	below average (1-22,580)		average (22,581-53,167)		above average (>53,167)		Total	
Place of Drug Purchase								
Drug Revolving Funds	1	1.2	1	1.4	0	0.0	2	1.1
Drug Stores	62	73.8	57	80.3	24	88.9	143	78.6
Convenience Stores	16	19.0	6	8.5	1	3.7	23	12.6
BMA Health Centers	0	0.0	5	7.0	0	0.0	5	2.7
Others	5	6.0	2	2.8	2	7.4	9	4.9
Total	84	100.0	71	100.0	27	100.0	182	100.0
Place of Treatment								
Private Clinics	55	40.1	51	29.7	21	37.5	127	34.8
Public Hospitals	61	44.5	80	46.5	18	32.1	159	43.6
Private Hospitals	4	2.9	29	16.9	14	25.0	47	12.9
BMA Health Centres	15	10.9	11	6.4	1	1.8	27	7.4
Others	2	1.5	1	0.6	2	3.6	5	1.4
Total	137	100.0	172	100.0	56	100.0	365	100.0

Source : Slum Household Survey, April-May, 1995

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Missing Observations : 3

Table A11

Accessibility to Health Benefits by Household per Capita Income

(Number of Ill Persons)

Income per Capita (Baht) / Benefit Scheme	below average (1-22,580)	%	average (22,581-53,167)	%	above average (>53,167)	%	Total	%
none	158	74.5	131	59.8	40	47.6	329	63.9
	48.0		39.8		12.2		100.0	
Health Card	6	2.8	1	0.5	1	1.2	8	1.6
	75.0		12.5		12.5		100.0	
Low Income	10	4.7	6	2.7	0	0.0	16	3.1
	62.5		37.5		0.0		100.0	
Student's Health Insurance	4	1.9	2	0.9	2	2.4	8	1.6
	50.0		25.0		25.0		100.0	
Government Reimbursement	10	4.7	31	14.2	19	22.6	60	11.7
	16.7		51.7		31.7		100.0	
Local Government	0	0.0	1	0.5	0	0.0	1	0.2
	0.0		100.0		0.0		100.0	
Private Company	3	1.4	6	2.7	9	10.7	18	3.5
	16.7		33.3		50.0		100.0	
Elderly	5	2.4	12	5.5	4	4.8	21	4.1
	23.8		57.1		19.0		100.0	
Social Security	7	3.3	21	9.6	7	8.3	35	6.8
	20.0		60.0		20.0		100.0	
Others	9	4.2	8	3.7	2	2.4	19	3.7
	47.4		42.1		10.5		100.0	
Total	212	100.0	219	100.0	84	100.0	515	100.0
	41.2		42.5		16.3		100.0	

Source : Slum Household Survey, April-May, 1995

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Missing Observations : 2

Table A12

Household Annual Income and Health Treatment Expenditure within 3 Months

(Household with Ill Persons)

Total Expenditure (Baht) / Total Income (Baht)	0		1-200		201-500		501-2,000		> 2000		Total	%	Average Expenditure on Health Treatment (Baht)
Below Average	14	28.0	34	38.2	21	34.4	10	24.4	7	35.0	86	33.0	524 1/
(0-98,815)	16.3		39.5		24.4		11.6		8.1		100.0		
Average	26	52.0	43	48.3	28	45.9	19	46.3	7	35.0	123	47.1	552
(98,816-235,344)	21.1		35.0		22.8		15.4		5.7		100.0		
Above Average	10	20.0	12	13.5	12	19.7	12	29.3	6	30.0	52	19.9	946 2/
(>235,344)	19.2		23.1		23.1		23.1	.	11.5		100.0		
Total	50	100.0	89	100.0	61	100.0	41	100.0	20	100.0	261	100.0	619
%	19.2		34.1		23.4		15.7		7.7		100.0		

Source : Slum Household Survey, April-May, 1995

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Remarks : 1/ = excludes 3 cases whose health expenditure > 10,000 baht, otherwise the figure would be 1,158 baht

2/ = excludes 1 case whose health expenditure > 25,000 baht, otherwise the figure would be 1,400 baht

Table A13

Household Annual Income and Household Drug Expenses within 3 Months

(Household with Ill Persons)

Total Expenditure (Baht) / Total Income (Baht)	0		1-50		51-100		101-200		201-500		501-2,000		> 2000		Total	%	Average of Expenditure on Drug (Baht)
Below Average	2	25.0	46	49.5	8	36.4	4	44.4	1	50.0	2	100.0	0	0.0	63	46.0	62.7
(0-98,815)	3.2		73.0		12.7		6.3		1.6		3.2		0.0		100.0		
Average	5	62.5	39	41.9	9	40.9	2	22.2	1	50.0	0	0.0	0	0.0	56	40.9	37.3
(98,816-235,344)	8.9		69.6		16.1		3.6		1.8		0.0		0.0		100.0		
Above Average	1	12.5	8.0	8.6	5	22.7	3	33.3	0	0.0	0	0.0	1	100.0	18	13.1	63.5 1/
(>235,344)	5.6		44.4		27.8		16.7		0.0		0.0		5.6		100.0		
Total	8	100.0	93	100.0	22	100.0	9	100.0	2	100.0	2	100.0	1	100.0	137	100.0	52.3
%	5.8		67.9		16.1		6.6		1.5		1.5		0.7		100.0		

Source : Slum Household Survey, April-May, 1995

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Note : 1/ = excludes 1 case whose health expenditure > 5,000 baht, otherwise the figure would be 338 baht

Table A14

Severity of Illness and Health Treatment Expenditure

(Visits)

Severity / Treatment Expenditure(Baht)	Absence from Work		Work with limitation		Work with some limitation		Able to work as usual		Total	%
0	27	22.5	7	13.0	18	31.6	27	22.1	79	22.4
	34.2		8.9		22.8		34.2		100.0	
1-200	34	28.3	26	48.1	26	45.6	52	42.6	138	39.1
	24.6		18.8		18.8		37.7		100.0	
201-500	25	20.8	10	18.5	9	15.8	31	25.4	75	21.2
	33.3		13.3		12.0		41.3		100.0	
501-2,000	19	15.8	8	14.8	4	7.0	11	9.0	42	11.9
	45.2		19.0		9.5		26.2		100.0	
> 2,000	15	12.5	3	5.6	0	0.0	1	0.8	19	5.4
	78.9		15.8		0.0		5.3		100.0	
Total	120	100.0	54	100.0	57	100.0	122	100.0	353	100.0
%	34.0		15.3		16.1		34.6		100.0	
Average Expenditure per Visit (Baht)	1,320		611		196		280			

Source : Slum Household Survey, April-May, 1995

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Missing Observation : 15

Seek No Treatment	6		3		11		16		36	
%	16.7		8.3		30.6		44.4		100.0	

Table A15

Severity of Illness and Drug Expenses

(Visits)

Severity / Drug Expenses(Baht)	Absence from Work		Work with limitation		Work with some limitation		Able to work as usual		Total	%
0	1	2.9	1	3.8	3	12.5	7	8.3	12	7.1
	8.3		8.3		25.0		58.3		100.0	
1-100	32	91.4	23	88.5	19	79.2	71	84.5	145	85.8
	22.1		15.9		13.1		49.0		100.0	
101-200	1	2.9	1	3.8	1	4.2	4	4.8	7	4.1
	14.3		14.3		14.3		57.1		100.0	
201-300	0	0.0	1	3.8	1	4.2	0	0.0	2	1.2
	0.0		50.0		50.0		0.0		100.0	
>300	1	2.9	0	0.0	0	0.0	2	2.4	3	1.8
	33.3		0.0		0.0		66.7		100.0	
Total	35	100.0	26	100.0	24	100.0	84	100.0	169	100.0
%	20.7		15.4		14.2		49.7		100.0	
Average Expenditure per Visit (Baht)	55		44		45		95			

Source : Slum Household Survey, April-May, 1995

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Missing Observation : 13

Table A16

Places of Health Treatment and Treatment Expenditure in 3 Months

(Visits)

Place of Treatment / Treatment Expenditure(Baht)	Private Clinics		Private Hospitals		Public Hospitals		BMA Health Centres		Others		Total	
0	4	3.1	12	26.1	49	31.2	15	65.2	0	0.0	80	22.3
	5.0		15.0		61.3		18.8		0.0		100.0	
1-200	81	63.8	6	13.0	45	28.7	8	34.8	3	60.0	143	39.9
	56.6		4.2		31.5		5.6		2.1		100.0	
201-500	30	23.6	10	21.7	31	19.7	0	0.0	1	20.0	72	20.1
	41.7		13.9		43.1		0.0		1.4		100.0	
501-2,000	10	7.9	10	21.7	22	14.0	0	0.0	0	0.0	42	11.7
	23.8		23.8		52.4		0.0		0.0		100.0	
> 2,000	2	1.6	8	17.4	10	6.4	0	0.0	1	20.0	21	5.9
	9.5		38.1		47.6		0.0		4.8		100.0	
Total	127	100.0	46	100.0	157	100.0	23	100.0	5	100.0	358	100.0
%	35.5		12.8		43.9		6.4		1.4		100.0	
Average Expenditure per Visit (Baht)	274		1,725		781		19		77			

Source : Slum Household Survey, April-May, 1995

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Missing Observations : 10

Table A17

Place of Purchase and Drug Expenses

(visits)

Drug Expense \ Place of Purchase	Drug Revolving Funds		Drug Stores		Convenience Stores		BMA Health Centres		Others		Total	%
0	1	50.0	1	0.7	0	0.0	4	80.0	6	75.0	12	7.1
	8.3		8.3		0.0		33.3		50.0		100.0	
1-100	1	50.0	122	91.0	19	95.0	1	20.0	2	25.0	145	85.8
	0.7		84.1		13.1		0.7		1.4		100.0	
101-200	0	0.0	6	4.5	1	5.0	0	0.0	0	0.0	7	4.1
	0.0		85.7		14.3		0.0		0.0		100.0	
201-300	0	0.0	2	1.5	0	0.0	0	0.0	0	0.0	2	1.2
	0.0		100.0		0.0		0.0		0.0		100.0	
>300	0	0.0	3	2.2	0	0.0	0	0.0	0	0.0	3	1.8
	0.0		100.0		0.0		0.0		0.0		100.0	
Total	2	100.0	134	100.0	20	100.0	5	100.0	8	100.0	169	100.0
%	1.2		79.3		11.8		3.0		4.7		100.0	
Average Expenditure per Visit (Baht)	25		80		19		4		18			

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University

Missing Observations : 13

Table A18

Financing Method and Health Treatment Expenditure

(Visits)

Financing Method / Treatment Expenditure(Baht)	Self Finance		Partially Self Financed		Fully Reimbursable		Free		Total	%
0	0	0.0	0	0.0	65	100.0	15	100.0	80	22.3
	0.0		0.0		81.3		18.8		100.0	
1-200	137	52.3	3	18.8	0	0.0	0	0.0	140	39.1
	97.9		2.1		0.0		0.0		100.0	
201-500	71	27.1	4	25.0	0	0.0	0	0.0	75	20.9
	94.7		5.3		0.0		0.0		100.0	
501-2,000	40	15.3	2	12.5	0	0.0	0	0.0	42	11.7
	95.2		4.8		0.0		0.0		100.0	
>2,000	14	5.3	7	43.8	0	0.0	0	0.0	21	5.9
	66.7		33.3		0.0		0.0		100.0	
Total	262	100.0	16	100.0	65	100.0	15	100.0	358	100.0
%	73.2		4.5		18.2		4.2		100.0	

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University

Missing Observations : 10

Table A19

Places of Treatment and Financing Method in 3 Months

(visits)

Place of Treatment / Financing Method	Private Clinics	Private Hospitals	Public Hospitals	BMA Health Centres	Others	Total
Self Finance	121	30	99	9	4	263
Partially Self Financed	2	5	11	2	0	20
Full Reimbursable	2	12	46	5	1	66
Free	2	0	3	10	0	15
Total	127	47	159	26	5	364

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University

Missing Observations : 4

Table A20

Places of Drug Purchasing and Financing Method in 3 Months

Place of Purchasing / Financing Method	Drug Revolving Funds	Drugstores	Convenience Stores	BMA Health Centres	Others	Total
Self Finance	1	142	23	1	3	170
Free	1	1	0	4	6	12
Total	2	143	23	5	9	182

Source : Slum Household Survey, April-May, 1995

Faculty of Economics, Thammasat University

ชุดที่ 1

แบบสอบถามครัวเรือน

โครงการวิจัย

"การเข้าถึงบริการสาธารณสุขของครัวเรือนในชุมชนแออัดและ/หรือเร่ร่อนใน กทม."

โดย

คณะเศรษฐศาสตร์ มหาวิทยาลัยธรรมศาสตร์

ชื่อชุมชน/สถานที่สัมภาษณ์ .....

ผู้ให้สัมภาษณ์

ชื่อ นาย/นาง/น.ส. .....สกุล.....

ปัจจุบันอยู่บ้านเลขที่.....ถนน.....ตำบล.....

อำเภอ..... จังหวัด .....

ผู้สัมภาษณ์

วันที่สัมภาษณ์..... เริ่มสัมภาษณ์เวลา.....สิ้นสุดเวลา.....

ชื่อผู้สัมภาษณ์..... ชื่อผู้ตรวจสอบ.....

หมายเหตุ.....

ส่วนที่ 1 การเจ็บป่วยและการเข้าถึงบริการสาธารณสุข

ข้อ 1.

ตอนที่ 1 : ลักษณะทั่วไปของสมาชิกครัวเรือน						ตอนที่2: การะสุขภาพทั่วไป		ตอนที่3: สิทธิการใช้บริบอกเว้นค่ารักษาพยาบาล	ดื่มสุรา หรือไม่?	สูบบุหรี่ หรือไม่?
		อายุ	เพส	ความสัมพันธ์กับหัวหน้าครอบครัว	การศึกษา	ประเมินภาวะสุขภาพ	โรคประจำตัว	ประเภทสิทธิ/บัตรอกเว้นที่มี	ไม่ดื่ม =0	
ลำดับที่	ชื่อ นามสกุล	(บันทึกอายุเป็นปี ต่ำกว่า 1 ปี บันทึก "0")	บันทึกรหัส ชาย..1 หญิง..2	บันทึกรหัส หัวหน้า.....1 คู่สมรส.....2 พ่อ แม่.....3 ลูก.....4 ญาติ/ผู้อาศัย.5	(บันทึกชั้นปี ประกาศนียบัตรปริญญาที่สำเร็จสูงสุด) บันทึกรหัส ไม่ได้เรียน/ไม่จบป.4.....1 ป.4.....2 ป.6/7.....3 มัธยมต้น.....4 มัธยมปลายหรือประกาศนียบัตร.....5 ปริญญาตรีหรือสูงกว่า.....6 อื่นๆ (ระบุ).....7	"สุขภาพโดยทั่วไปของท่านดี" บันทึกรหัส ดี.....1 พอใช้.....2 ไม่ค่อยดี.....3 ไม่ดีเลย.....4	".....ชื่อ.....ไม่ว่ามีเป็นโรคอะไร" บันทึกรหัส มี...1(ระบุโรค) ไม่มี.....2	"ในปัจจุบัน...(ชื่อ)...มีสิทธิหรือมีบัตรอกเว้นค่า บันทึกรหัส ไม่มี.....0;บัตรสุขภาพบุคคล.....1 บัตรสุขภาพครอบครัว....2;บัตร สปน.....3 ประกันสุขภาพนิสิตเรียน...4;สิทธิข้าราชการ.....5 ผู้ใหญ่บ้าน/กำนัน/อสม.....6 สวัสดิการบริษัทเอกชน.....7 บัตร/สิทธิผู้สูงอายุ.....8 บัตรประกันสังคม.....9 อื่นๆ (ระบุ).....10	ดื่ม สัปดาห์แก้ว =(1) สัปดาห์ละ 3-4 แก้ว =(2) ดื่มทุกวัน วันละ 1-3 แก้ว =(3) มากกว่านั้น =(4)	ไม่สูบ =0 สูบสัปดาห์ละ 1 =(1) สัปดาห์ละ 2-3 ซอง =(2) สัปดาห์ละ 4-5 ซอง =(3) มากกว่านั้น =(4)
1	(ผู้ให้สัมภาษณ์)					1				
2						2				
3						3				
4						4				
5						5				
6						6				
7						7				
8						8				
9						9				

ล้อมวงการเจ็บป่วย และการรักษาพยาบาลในรอบ 3 เดือนที่ผ่านมา

ส่วนที่ 1(ต่อ) จำนวนสมาชิกในครัวเรือนที่ป่วยในช่วง 3 เดือนที่ผ่านมา .....คน

ข้อ 2. (7) การรักษา

(1) คนที่ ครั้งที่ 1	(2) โรค	(3) อาการ	(4) ความรุนแรง 1 = ทำงานไม่ได้เลย 2 = ยอทำได้แต่จำกัดปริมาณงาน 3 = ยอทำได้แต่จำกัดชนิดและปริมาณกิจกรรมอื่นๆ 4 = ทำงานได้ทุกอย่างตามปกติ (ถ้าเป็นเด็กกิจกรรม หมายถึงไปโรงเรียนหรือเล่นแล้วแต่กรณี)	(5) จำนวนวันที่ป่วยทั้งหมดสำหรับการป่วยครั้งนี้ (โดยนับตั้งแต่เริ่มมีอาการจนกระทั่งหายหรือหลุดจากการรักษาหรือจนถึงวันสิ้นภายษ์)	(6) ไม่ได้รักษาปล่อยให้หายเอง =0 รักษา=1	(7.1) ลำดับที่ไปรับการรักษา	(7.2) ซื้อยากินเอง สถานที่ 1=กองทุนยาในชุมชน 2=ร้านขายยา 3=ร้านขายของชำหรือร้านค้าทั่วไป 4=ศูนย์บริการสาธารณสุข กทม. 5=อื่นๆ (ระบุ).....	(7.2) ซื้อยากินเอง จำนวนวันที่ป่วยก่อนซื้อยา	(7.2) ซื้อยากินเอง ค่าใช้จ่าย ค่าเดินทางไปกลับ	(7.3) ไปรับการรักษา (7.3ก) สถานที่ 1=คลินิกเอกชน 2=โรงพยาบาลของรัฐบาล 3=โรงพยาบาลเอกชน 4=ศูนย์บริการสาธารณสุข กทม. 5=แพทย์แผนโบราณ 6=แพทย์ม้ารักษาที่บ้าน 7=อื่นๆ(ระบุ)..... ระยะเวลารับการรักษา.....นาที	(7.3ข) จำนวนวันที่ป่วยก่อนมารับการรักษาที่สถานพยาบาลนั้น (เว้นจากสถานที่ที่ไปรับการรักษาหรือซื้อยา)	(7.3ค) การเดินทาง ระยะทางจากบ้าน (ก.ม.)	(7.3ค) การเดินทาง พาหนะที่ใช้ในการเดินทางไปรักษา	(7.3ค) การเดินทาง ระยะเวลาเดินทาง (นาที)	(7.3ง) ค่าใช้จ่าย ค่าเดินทางรวมตนเองและญาติที่มาด้วย	(7.3ง) ค่าใช้จ่าย ค่ายา	(7.3ง) ค่าใช้จ่าย ค่ารักษา	(7.3ง) ค่าใช้จ่าย อื่นๆระบุ เช่นค่าอาหารญาติที่มาดูแล	(7.4) แหล่งที่มาของค่าใช้จ่ายในการรักษาพยาบาลครั้งนี้ 1=จ่ายเองเบิกไม่ได้ 2=จ่ายเองบางส่วน (ระบุสัดส่วน) 3=เบิกได้ทั้งหมดหรือมีบัตร (ระบุ)..... 4=ฟรีโดยไม่มีบัตร	(7.5) การหาเงินมาจ่ายค่ารักษา "ในการจ่ายเงินค่ารักษามีปัญหาต้องไปหาเงินมาจ่ายหรือไม่" (ตอบได้มากกว่า 1 คำตอบ) บันทึกรหัส จ่ายเองได้หรือไม่มี ปัญหา.....1 ต้องไปยืมเงิน/จำนำทรัพย์สิน.....2 ต้องหยิบยืมมาจ่าย.....3 ต้องขอจากบุคคลอื่น/ญาติ/ผู้ใจบุญ.....4 ต้องขายทรัพย์สิน.....5
1	1						1											
	2						2											
2	1						1											
	2						2											
3	1						1											
	2						2											
4	1						1											
	2						2											
5	1						1											
	2						2											

การเจ็บป่วยและการเข้ารับบริการสาธารณสุข

3. นอกจากความเจ็บป่วยที่ได้บอกมาแล้วเท่าที่จำได้ ท่านและสมาชิกในครอบครัวของท่านเคยเจ็บป่วยหรือได้รับบาดเจ็บจากอุบัติเหตุชนิดที่ต้องเสียค่าใช้จ่ายมากๆจนไม่สามารถจ่ายค่ารักษาได้เอง ต้องไปหาเงินมาจ่าย หรือไม่

( ) 1. เคย (ระบุ จำนวนครั้ง).....ครั้ง

( ) 2. ไม่เคย (ข้ามไปส่วนที่ 3)

4. โปรดให้รายละเอียด ความเจ็บป่วย หรืออุบัติเหตุ ตามข้อ 24 (จำกัดความเจ็บป่วยที่เกิดขึ้นล่าสุดนับย้อนไปจากปีนี้แล้วไม่เกิน 3 ครั้ง)

๕	๖	๖	๖	๖	๗
ลำดับครั้งความเจ็บป่วย	โรค/อาการป่วย (บันทึกโรคหรืออาการสำคัญ)	ค่ารักษาทั้งหมดที่จ่าย (บันทึกจำนวนเงินถ้าจำไม่ได้จริงๆ ให้ใส่รหัส 99999)	"หาเงินมาจ่ายได้อย่างไร" (ตอบได้มากกว่า1 คำตอบ) บันทึกรหัส ต้องไปกู้เงิน/จำนำทรัพย์สิน.....1 ต้องหยิบยืมมาจ่าย.....2 ต้องขอจากบุตรหลาน/ญาติ/ผู้ใกล้ชิด.....3 ต้องขายทรัพย์สิน.4	ปีที่ป่วย (บันทึกปี พศ. ถ้าจำไม่ได้ให้ลงรหัส 99)

ส่วนที่ 2

ข้อมูลทางประชากร เศรษฐกิจ และสังคม

5. สถานภาพในครัวเรือนของผู้ให้สัมภาษณ์

( ) 1.หัวหน้าครัวเรือน ( ) 2.คู่สมรส ( ) 3. อื่นๆ ระบุ.....

(หมายเหตุ : "หัวหน้าครัวเรือน" คือผู้ที่มีรายได้สูงที่สุดในครัวเรือน)

6. สถานภาพการสมรส

( ) 1.โสด ( ) 2.คู่

( ) 3.หม้าย ( ) 4.หย่า/แยก

7. หัวหน้าครัวเรือนจบการศึกษาชั้น.....

8. คู่สมรสของหัวหน้าครัวเรือนจบการศึกษาชั้น.....

9. หัวหน้าครัวเรือนอายุ.....ปี

10. จำนวนสมาชิกในครัวเรือน .....คน

สมาชิกที่มีงานทำ.....คน

สมาชิกที่ไม่มีงานทำ.....คน

11. หัวหน้าครัวเรือนอยู่ใน กทม. นานเท่าไรแล้ว .....ปี .....เดือน

12. ภูมิลำเนาเดิมของหัวหน้าครัวเรือนคือจังหวัด ..... อำเภอ .....(เป็นคนจังหวัดใด)

13. ก่อนย้ายเข้ามาอยู่ กทม. หัวหน้าครัวเรือนอยู่ที่จังหวัด .....อำเภอ .....

14. ก่อนย้ายเข้ามา กทม. อาชีพหลักของหัวหน้าครัวเรือน (ตอบได้ข้อเดียว)

(หมายเหตุ : อาชีพหลักคืออาชีพที่สร้างรายได้ให้มากที่สุด)

อาชีพ	ระบุ
( ) 1. เกษตรกรรม	.....
( ) 2. ค้าขาย	.....
( ) 3. รับจ้างทั่วไป	.....
( ) 4. บริการ	.....
( ) 5. ทำงานในโรงงาน	.....
( ) 6. รับราชการ	.....
( ) 7. พนักงานรัฐวิสาหกิจ	.....
( ) 8. รับจ้างรายวัน	.....
( ) 9. ทำงานห้างร้าน/บริษัทเอกชน	.....
( ) 10. ขับชี่รถรับจ้าง	.....

อาชีพ	ระบุ
( ) 11. ช่างเสริมสวย	.....
( ) 12. รับเหมาก่อสร้าง	.....
( ) 13. แม่บ้าน/พ่อบ้าน	.....
( ) 14. ไม่เคยทำอะไรเลย	.....
( ) 15. อื่นๆ	.....

15. ปัจจุบันหัวหน้าครัวเรือนทำงานอะไร

อาชีพ	ระบุ
( ) 1. เกษตรกรรม	.....
( ) 2. ค้าขาย	.....
( ) 3. รับจ้างทั่วไป	.....
( ) 4. บริการ	.....
( ) 5. ทำงานในโรงงาน	.....
( ) 6. ราชการ	.....
( ) 7. พนักงานรัฐวิสาหกิจ	.....
( ) 8. รับจ้างรายวัน	.....
( ) 9. ทำงานห้างร้าน/บริษัทเอกชน	.....
( ) 10. รับขี่รถรับจ้าง	.....
( ) 11. ช่างเสริมสวย	.....
( ) 12. รับเหมาก่อสร้าง	.....
( ) 13. แม่บ้าน/พ่อบ้าน	.....
( ) 14. ไม่เคยทำอะไรเลย	.....
( ) 15. อื่นๆ	.....

สถานที่ทำงาน.....

ทำงานนี้มา .....เดือน .....

16. ปัจจุบันหัวหน้าครัวเรือนมีรายได้เฉลี่ย.....บาท

( ) ต่อวัน

( ) ต่อสัปดาห์

( ) ต่อเดือน

ปัจจุบันหัวหน้าครัวเรือนทำงานเฉลี่ย .....วันในรอบ 1 เดือน และเฉลี่ย.....เดือนในรอบ 1 ปี

17. นอกจากหัวหน้าครัวเรือนแล้ว สมาชิกอื่นในครัวเรือนมีรายได้รวมเฉลี่ย.....บาทต่อเดือน (ให้ผู้สัมภาษณ์รวมเอง)

คนที่ 1 มีรายได้เฉลี่ย.....บาทต่อเดือน ทำงานเฉลี่ย...วันใน 1 เดือน และเฉลี่ยที่...เดือนใน 1 ปี

คนที่ 2 มีรายได้เฉลี่ย.....บาทต่อเดือน ทำงานเฉลี่ย...วันใน 1 เดือน และเฉลี่ยที่...เดือนใน 1 ปี

คนที่ 3 มีรายได้เฉลี่ย.....บาทต่อเดือน ทำงานเฉลี่ย...วันใน 1 เดือน และเฉลี่ยที่...เดือนใน 1 ปี

คนที่ 4 มีรายได้เฉลี่ย.....บาทต่อเดือน ทำงานเฉลี่ย...วันใน 1 เดือน และเฉลี่ยที่...เดือนใน 1 ปี

18. รายได้ของครัวเรือนจากบุคคลอื่นหรือหน่วยงาน

๕	๖	๗
จากผู้ใด/แหล่งใด	จำนวนเงิน(ตลอดปีที่ผ่านมา) (หรือปริมาณสิ่งของ)	
บุตรที่ทำงานต่างถิ่น		
ญาติ		
อื่นๆ ระบุ.....		

19. รายได้อื่นๆ ที่ไม่ได้จากการประกอบอาชีพ (ตลอดปีที่ผ่านมา) เช่นถูกหวย ถูกล็อตเตอรี่ จับฉลาก ชิงโชค ได้จากผู้สมัคร สส. และอื่นๆ

๕	๖	๗
แหล่งที่มา	จำนวนเงินและ/หรือปริมาณสิ่งของ	

20. รวมรายได้เฉลี่ยของครัวเรือนต่อปี.....บาท (ผู้ให้สัมภาษณ์รวมเอง)

21. รวมรายได้เฉลี่ยของครัวเรือนต่อปี.....บาท (ผู้สัมภาษณ์รวมเอง)

22. ทรัพย์สินและสาธารณูปโภค

จงกาเครื่องหมายถูก ( ) ในทุกช่องที่มี

1) ทรัพย์สิน : ( ) ทีวี ( ) หม้อหุงข้าวไฟฟ้า ( ) เครื่องวีดีโอ*(ระบุ).....

( ) วิทยุ-เทป ( ) พัดลม ( ) ตู้เย็น*(ระบุ).....

( ) จักรยาน ( ) โทรศัพท์ ( ) เงินออม/หรือให้กู้ยืม

( ) รถยนต์* (ระบุ)..... ใช้เอง... รับจ้าง...

( ) สามล้อเครื่อง*(ระบุ)..... ใช้เอง... รับจ้าง...

( ) มอเตอร์ไซค์*(ระบุ)..... ใช้เอง... รับจ้าง...

( ) เครื่องซักผ้า (ระบุ) ...ใช้เอง ...รับจ้าง

( ) ทอง.....บาท ( ) ที่ดิน ระบุจำนวน..... จังหวัด.....

* ระบุว่ามีกรรมสิทธิโดยสมบูรณ์หรือไม่ (ผ่อนหมดแล้วหรือไม่)

2) แหล่งน้ำดื่ม : (เลือกได้มากกว่า 1 แหล่ง)

( ) น้ำฝน ( ) น้ำบาดาล ( ) น้ำบ่อ

( ) แม่น้ำลำคลอง ( ) น้ำประปา ( ) ซื้อ (ข้ามไปถามข้อ 5)

3) ก่อนดื่มท่านปฏิบัติอย่างไร

( ) ไม่ทำอะไร ( ) ต้ม ( ) กรอง

( ) แกว่งสารส้ม ( ) อื่นๆ (ระบุ).....

4) ท่านเก็บรักษาน้ำดื่มอย่างไร

ภาชนะ	มีฝาปิดหรือไม่ (ถ้ามีขีด /)
( ) ถังซีเมนต์	.....
( ) ถังโลหะ	.....
( ) โอ่ง	.....
( ) ถัง/กระบอกพลาสติก	.....
( ) ขวดแก้ว	.....
( ) อื่นๆ	.....

5) แหล่งน้ำใช้ : (เลือกได้มากกว่า 1 แหล่ง)

( ) น้ำฝน ( ) น้ำบาดาล ( ) น้ำบ่อ

( ) แม่น้ำลำคลอง ( ) น้ำประปา

6) มีไฟฟ้าใช้หรือไม่ : ( ) มี ( ) ไม่มี

ถ้ามี : ( ) มีมิเตอร์เอง

( ) ต่อไฟจากบ้านอื่น

( ) ต่อไฟจากสาธารณะ

7) มีส้วมใช้เองหรือไม่ : ( ) มี ( ) ไม่มี

ส้วมที่ใช้ประจำ : ( ) ส้วมซึม ( ) ส้วมหลุม

( ) ส้วมชักโครก ( ) ไปทุ่ง/แม่น้ำลำคลอง

23. ขณะนี้ครัวเรือนของท่านมีหนี้สินที่ยังคงค้างชำระหรือไม่

( ) มี ( ) ไม่มี

หนี้ที่ยังค้างชำระ ..... บาท

กู้จาก

ญาติพี่น้อง.....บาท เมื่อ..... กู้มาเพื่อ.....

นายทุน.....บาท เมื่อ..... กู้มาเพื่อ.....

เพื่อนฝูง.....บาท เมื่อ..... กู้มาเพื่อ.....

นายจ้าง.....บาท เมื่อ..... กู้มาเพื่อ.....

ธนาคาร.....บาท เมื่อ..... กู้มาเพื่อ.....

ธ.ก.ส. .....บาท เมื่อ..... กู้มาเพื่อ.....

พ่อ/แม่ .....บาท เมื่อ..... กู้มาเพื่อ.....

โรงจำนำ.....บาท เมื่อ..... กู้มาเพื่อ.....

วงแชร์ .....บาท เมื่อ..... กู้มาเพื่อ.....

อื่นๆ(ระบุ).....บาท เมื่อ..... กู้มาเพื่อ.....

24. ลักษณะที่อยู่อาศัย (ให้ผู้สัมภาษณ์สังเกตุเอง ไม่ต้องถาม)

( ) กระท่อม ( ) ห้องเดี่ยวอยู่คนเดียว ( ) ห้องเดี่ยวรวมอยู่หลายคน

( ) บ้านไม้ชั้นเดียว ( ) บ้านไม้ 2 ชั้น ( ) อื่นๆ (ระบุ).....

25. ใครเป็นเจ้าของที่อยู่อาศัยนี้

( ) ตนเองหรือคู่สมรส ( ) นายจ้าง ( ) รัฐ

( ) ญาติ ( ) ผู้ให้เช่า ( ) อื่นๆ (ระบุ).....

26. ท่านกำจัดขยะอย่างไร

( ) ทิ้งไว้ที่พื้นนอกบ้าน / ใต้ถุน / แม่น้ำลำคลอง

( ) เผาทิ้ง

( ) ฝังดิน

( ) เทลงหลุมโดยไม่กลบ

( ) ใส่ถังรอเทศบาลเก็บ

( ) อื่นๆ (ระบุ).....

27. หน่วยงานของรัฐเข้ามาฉีดยากันยุงหรือกำจัดหนูในเขตที่พักอาศัยของท่านหรือไม่

.....

ส่วนที่ 3

ความยินดีในการจ่ายเพื่อประกันสุขภาพและบัตรสุขภาพ

ความยินดีจ่ายประกันสุขภาพ

28. ในระยะเวลาภายใน 1 ปีข้างหน้านี้ ท่านคิดว่าถ้าท่านจะต้องไปหาหมอแล้ว

1) ท่านคิดว่าแต่ละครั้งท่านยินดีจ่ายเงินเป็นจำนวนเท่าไร .....บาทต่อครั้ง

ซึ่งเงินจำนวนนี้คิดเป็นประมาณร้อยละ ..... ของรายได้ครัวเรือนใน 1 ปี (ผู้สัมภาษณ์คำนวณเอง)

2) ท่านคิดว่าท่านยินดีจ่ายเงินเท่าไรสำหรับการไปหาหมอตลอด 1 ปี .....บาทต่อปี

ซึ่งเงินจำนวนนี้คิดเป็นประมาณร้อยละ ..... ของรายได้ครัวเรือนใน 1 ปี (ผู้สัมภาษณ์คำนวณเอง)

ความยินดีซื้อบัตรสุขภาพ (อธิบายและระบุว่าเป็นบัตรครอบครัว)

29. ท่านยินดีจะจ่ายเงิน ..... บาท สำหรับใช้บริการฟรีตลอดปี เฉพาะในสถานพยาบาลของรัฐในเขตกรุงเทพฯ โดยไม่จำกัดวงเงินค่ารักษาพยาบาล

ซึ่งเงินจำนวนนี้คิดเป็นประมาณร้อยละ ..... ของรายได้ครัวเรือนใน 1 ปี

30. ท่านยินดีจะจ่ายเงิน ..... บาท สำหรับใช้บริการฟรีเป็นเวลา 6 เดือน เฉพาะในสถานพยาบาลของรัฐในเขตกรุงเทพฯ โดยไม่จำกัดวงเงินค่ารักษาพยาบาลไม่เกิน 2,000 บาทต่อครั้ง

ซึ่งเงินจำนวนนี้คิดเป็นประมาณร้อยละ ..... ของรายได้ครัวเรือนใน 1 ปี

31. ท่านยินดีจะจ่ายเงิน ..... บาท สำหรับใช้บริการฟรีตลอดปี เฉพาะในสถานพยาบาลของทั้งรัฐและเอกชนในเขตกรุงเทพฯ โดยไม่จำกัดวงเงินค่ารักษาพยาบาล

ซึ่งเงินจำนวนนี้คิดเป็นประมาณร้อยละ ..... ของรายได้ครัวเรือนใน 1 ปี

Time Preference and Risk Avertion

32. ถ้าท่านลงทุนด้วยเงิน 500 บาทในวันนี้ ท่านหวังที่จะได้ผลตอบแทนเป็นเงิน.....บาทภายใน 1 ปี

33. ท่านเคยซื้อประกันชีวิตหรือไม่ ( ) เคย ( ) ไม่เคย

ถ้าเคย ท่านซื้อวงเงินประกันเท่าไร .....บาท

34. ท่านเคยเล่นพนันหรือไม่ ( ) เคย ( ) ไม่เคย

ถ้าเคย ท่านเล่นในวงเงินสูงสุดเท่าไร .....บาท

35. ท่านเคยซื้อหวยหรือล็อตเตอรี่หรือไม่ ( ) เคย ( ) ไม่เคย

ถ้าเคย ท่านเคยซื้อเป็นเงินสูงสุดเท่าไร .....บาท รางวัลประเภท .....

แบบสอบถามสถานพยาบาล/ผู้ให้บริการสาธารณสุข

โครงการวิจัย

เรื่อง การเข้าถึงบริการสาธารณสุขของครัวเรือนในชุมชนแออัดหรือเร่ร่อนใน กรุงเทพมหานคร

โดย

คณะเศรษฐศาสตร์ มหาวิทยาลัยธรรมศาสตร์

ชื่อผู้ให้สัมภาษณ์/ผู้กรอกแบบสอบถาม.....

ตำแหน่ง.....

ชื่อสถานพยาบาล.....

ที่ตั้ง.....

ประเภทของสถานพยาบาล ( ) โรงพยาบาล ( ) คลินิก ( ) ศูนย์อนามัย
( ) หน่วยแพทย์เคลื่อนที่ ( ) อื่นๆ.....

สถานพยาบาลของ ( ) รัฐบาล ( ) เอกชน
( ) NGO/มูลนิธิ/สถานพยาบาลไม่มุ่งหวังกำไร(Non-profit)

สังกัด ( ) กระทรวง (ระบุ)..... ( ) มูลนิธิ(ระบุ).....
( ) สภากาชาด ( ) อื่นๆ(ระบุ).....

ผู้สัมภาษณ์

วันที่สัมภาษณ์.....เริ่มสัมภาษณ์เวลา.....น.สิ้นสุดเวลา.....น.

ชื่อผู้สัมภาษณ์.....ชื่อผู้ตรวจสอบ.....

หมายเหตุ.....

ข้อมูลสถานพยาบาล ปี 2538

ก. ข้อมูลทั่วไป

1. จำนวนแพทย์ทั้งหมด.....คน ทำงานเต็มเวลา..... คน

   จำนวนพยาบาล.....คน

   จำนวนบุคคลากรทางการแพทย์อื่นๆ

   1) เภสัชกร.....คน

   2) ผู้ช่วยแพทย์.....คน

   3) ผู้ช่วยพยาบาล.....คน

2. จำนวนผู้ป่วยนอกเฉลี่ย.....คนต่อวัน

3. มีเตียงรับผู้ป่วยในหรือไม่

   ( ) มี จำนวน.....เตียง

   ( ) ไม่มี (ข้ามไปข้อ 5)

   จำนวนผู้ป่วยในเฉลี่ย.....คนต่อปี

   ผู้ป่วยในอยู่ในสถานพยาบาลเฉลี่ยนาน.....วันต่อราย

4. ประเภท/แผนกของบริการ(กรณีมีเตียง) (ตอบได้มากกว่า 1 ข้อ)

   ( ) แผนกสูตินรีเวช ( ) แผนกศัลยกรรม

   ( ) แผนกอายุรกรรม ( ) แผนกกุมารเวช

   ( ) V.D. คลีนิก ( ) แผนกผู้ป่วยฉุกเฉิน

   ( ) หู ตา คอ จมูก ( ) รักษาโรคทั่วไปไม่แยกแผนก

   ( ) อื่นๆ (ระบุ).....

5. ปัจจุบันนี้สถานพยาบาลของท่านอยู่ในระบบประกันสังคมหรือไม่

   ( ) อยู่ ( ) ไม่อยู่ (ข้ามไปข้อ ข.)

   ถ้าอยู่ ( ) เป็นสถานพยาบาลหลัก

   ( ) เป็นสถานพยาบาลรอง

   จำนวนผู้เอาประกันขึ้นทะเบียนต่อปี.....คน(ข้อมูลปี2538)

   อัตราการใช้บริการของผู้เอาประกันในปีที่ผ่านมา (พ.ศ. 2538)

   จำนวนผู้ป่วยนอก.....ราย เฉลี่ยจำนวนครั้ง.....ต่อราย

   จำนวนผู้ป่วยใน.....ราย เฉลี่ยจำนวนวัน.....ต่อราย

สาเหตุการเจ็บป่วยของผู้ใช้บริการภายใต้ระบบประกันสังคม

อันดับที่ 1.....ร้อยละของผู้ป่วยประกันสังคมทั้งหมด.....

อันดับที่ 2.....ร้อยละของผู้ป่วยประกันสังคมทั้งหมด.....

อันดับที่ 3.....ร้อยละของผู้ป่วยประกันสังคมทั้งหมด.....

ข. ข้อมูลเกี่ยวกับผู้มารับบริการ

ในปีที่ผ่านมา(พ.ศ. 2538) จำนวนผู้ป่วยทั้งหมด.....ราย

6. ผู้ป่วยเพศหญิง.....ราย , เพศชาย.....ราย
7. ผู้ป่วยอายุ < 15 ปี.....ราย

   ผู้ป่วยอายุ 15-45 ปี.....ราย

   ผู้ป่วยอายุ 46-60 ปี.....ราย

   ผู้ป่วยอายุ > 60 ปี.....ราย
8. ผู้ป่วยมาจากชุมชนแออัด.....ราย

   1. ชื่อชุมชน.....ร้อยละของผู้ป่วยทั้งหมด.....

   2. ชื่อชุมชน.....ร้อยละของผู้ป่วยทั้งหมด.....
9. ระยะเวลาโดยเฉลี่ยที่ผู้มาใช้บริการต้องรอก่อนได้รับบริการ.....นาที
10. จำนวนผู้ป่วย<u>นอก</u>ที่ได้รับยกเว้นค่ารักษาพยาบาลหรือมีสิทธิ์เบิก จำนวน.....ราย แยกประเภทดังนี้

ประเภท	จำนวน (ราย)	คิดเป็นร้อยละของผู้ป่วยนอกทั้งหมดที่ได้รับยกเว้นค่ารักษาพยาบาล
บัตรสงเคราะห์ผู้มีรายได้น้อย	.....	.....
เบิกราชการ	.....	.....
เบิกรัฐวิสาหกิจ	.....	.....
อยู่ในโครงการประกันสังคม	.....	.....
มีบัตรลดหย่อนอื่น ๆ (ระบุ)..... สวัสดิการบริษัทเอกชน	.....	.....
ให้การรักษาฟรี	.....	.....
รวม	.....	.....

11. จำนวนผู้ป่วย<u>นอก</u>ที่จ่ายค่ารักษาพยาบาลเอง (ไม่ได้รับยกเว้นหรือไม่มีสิทธิ์เบิก).....ราย คิดเป็นร้อยละ.....ของผู้ป่วยนอกทั้งหมด

12. จำนวนผู้ป่วย<u>ใน</u>ที่ได้รับยกเว้นค่ารักษาพยาบาลหรือมีสิทธิ์เบิก จำนวน..... ราย แยกประเภทดังนี้

ประเภท	จำนวน (ราย)	คิดเป็นร้อยละของผู้ป่วยในทั้งหมดที่ได้รับยกเว้นค่ารักษาพยาบาล
บัตรสงเคราะห์ผู้มีรายได้น้อย	.....	.....
เบิกราชการ	.....	.....
เบิกรัฐวิสาหกิจ	.....	.....
อยู่ในโครงการประกันสังคม	.....	.....
มีบัตรลดหย่อนอื่น ๆ (ระบุ)..... สวัสดิการบริษัทเอกชน	.....	.....
ให้การรักษาฟรี	.....	.....
รวม	.....	.....

13. จำนวนผู้ป่วย<u>ใน</u>ที่จ่ายค่ารักษาพยาบาลเอง(ไม่ได้รับยกเว้นหรือไม่มีสิทธิ์เบิก).....ราย คิดเป็นร้อยละ .....ของผู้ป่วยในทั้งหมด

ค. <u>แหล่งรายรับของสถานพยาบาล</u>

14. ในปี พ.ศ. 2538 ที่ผ่านมา สถานพยาบาลของท่านได้รับรายได้จากแหล่งต่าง ๆ ต่อไปนี้ คิดเป็นร้อยละเท่าใดของรายได้ทั้งหมด

( ) งบประมาณแผ่นดินประจำปี ร้อยละ.....
( ) งบสงเคราะห์ผู้ป่วยรายได้น้อย ร้อยละ.....
( ) ผู้ป่วยเบิกจากราชการ/รัฐวิสาหกิจ ร้อยละ.....
( ) บริษัทเอกชน/บริษัทประกันสุขภาพ ร้อยละ.....
( ) ผู้ป่วยจ่ายเอง ร้อยละ.....
( ) กองทุนประกันสังคม ร้อยละ.....
( ) เงินบริจาค ร้อยละ.....
( ) อื่น ๆ ระบุ ..... ร้อยละ.....

ง. <u>บัตรประกันสุขภาพ</u> คือ บัตรสำหรับรับการรักษาฟรี ในสถานพยาบาลของรัฐ คุ้มครองสมาชิกในครอบครัวไม่เกิน 5 คน ไม่จำกัดจำนวนครั้งของการรักษา โดยซื้อบัตรเป็นรายปีในราคา 500 บาท

15. ท่านรู้จักบัตรประกันสุขภาพหรือไม่ ( ) รู้ ( ) ไม่รู้
16. ท่านคิดว่าโครงการบัตรประกันสุขภาพจะเป็นประโยชน์ช่วยให้ประชาชนมารับบริการสาธารณสุขมากขึ้นหรือไม่.....
17. ท่านคิดว่าผู้ป่วยที่ต้องจ่ายเงินเองจะยินดีซื้อบัตรประกันสุขภาพหรือไม่
    ( ) ยินดี เพราะ .....
    ( ) ไม่ยินดี เพราะ.....
18. ท่านยินดีจะเข้าร่วมเป็นสถานพยาบาลในโครงการบัตรประกันสุขภาพหรือไม่
    ( ) ยินดี เพราะ .....
    ( ) ไม่ยินดี เพราะ.....
19. ท่านคิดว่าบัตรประกันสุขภาพควรมีราคา.....บาท เพราะ.....
    .....
20. ท่านคิดว่ารัฐควรให้เงินอุดหนุนแก่ประชาชนในการซื้อบัตรประกันสุขภาพหรือไม่
    ( ) ควร เพราะ .....
    ( ) ไม่ควร เพราะ.....
    ถ้าควร จำนวนเงินอุดหนุนต่อบัตรควรเป็น.....บาท เพราะ.....
    .....
21. ท่านคิดว่าใครจะยินดีซื้อบัตรประกันสุขภาพ
    ( ) ผู้ที่กำลังป่วย ( ) ผู้มีรายได้น้อย
    ( ) ผู้มีรายได้สูง ( ) ผู้ที่ป่วยเรื้อรังหรือสุขภาพไม่ดี
    ( ) ผู้ที่มีสมาชิกในครัวเรือนมาก ( ) ผู้ที่มีบัตรประกันสุขภาพอื่น ๆ
    ( ) อื่น ๆ.....
22. การคุ้มครองด้านสุขภาพไปสู่ผู้อาศัยในชุมชนแออัดหรือเร่ร่อนหรือมีรายได้ค่อนข้างต่ำ มาตรการประเภทใดเหมาะสมที่สุดในการขยายบริการสาธารณสุขไปสู่คนเหล่านี้.....
    .....เพราะเหตุใด.....
    .....

หากท่านมีข้อสงสัยประการใดเกี่ยวกับแบบสอบถามชุดนี้ กรุณาติดต่อกลับที่ นายพงศธร วรรัตนธรรม หรือ นายครรชิต สุขนาค โทร. 224-0147-9 โทรสาร 224-0146

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