

The Epidemiology of Inequity : The Case of Slum Dwellers in Thailand

A Research Report

by

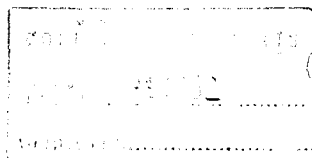
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1. Nature of the policy problem

Thailand has improved substantially her social and economic condition over the past three decades. The income and standard of living of households have increased considerably. From 1961 to 1985, for instance, the nation's GNP increased 18 times in real terms, while per capita income rose almost 10 times. Gross enrollment ratios at the primary school level increased from 83% in 1970 to 99% in 1986.

As a disproportionate share of the development has fallen in Bangkok Metropolitan Area (BMA), the prosperity of the capital city attracted a great number of migrants to the city. Many migrants have been living in various existing slums and squatter settlements. Their low levels of education, skill and income make them to join the rank of the urban poor. The urban poor refer officially to those whose income is below the poverty line for the urban population. According to the latest study of this subject in Thailand (Krongkaew, 1994), the poverty line of the urban population in 1992 was 12,776 baht (US\$ 511) per year.

As the slums are not rejected by the government, public policies are launched to upgrade slum conditions by providing water, electricity, sanitation, etc. to respond to the basic needs of the dwellers. Some groups of the people such as the homeless, wanderers, and street vendors have not benefitted from the government assistance. It is difficult for the officials to reach them. Some do not receive continuous services as their stay is temporary and their job is uncertain. The economic and social conditions of people in these groups are worse than those of the slum dwellers.

As the major share of health service expenditure is paid by the users, access to health services of the urban poor becomes an issue, in particular financial aspect. Also, they are less likely to be covered by existing health benefit schemes. For example, their uncertain and informal social and work status prevent them from being included in the current Social Security Scheme, which has been designed for workers in business with at least 10 employees.

The inaccessibility of the urban poor due to the limitation of health service supply does not arise at present. According to the latest data in 1993, a doctor in Bangkok on average

covered 901 people. The figure is much higher than that at the national level (5,660). Also, a hospital bed in Bangkok served 282 people whereas a hospital bed in the country served 691. Since the number of hospital beds represents both the size of hospitals and the number of hospitals, it implies that people in Bangkok can get access to more health facilities than the whole population. As the slums in the study are situated in Bangkok, the slum dwellers can enjoy the abundant supply of doctors and health facilities like any other people living in Bangkok. This means that the supply of health services is not a binding constraint.

Moreover, the substantial growth of the private health sector adds to the stock of health facilities available. The distribution of these health facilities reduce the travelling cost and waiting time of most Bangkok residents. The inaccessibility because of these factors is not likely to happen.

Therefore, this study will emphasise the financial and related issues to show whether the urban poor have the inaccessibility to health services and what are the underlying factors. The findings will be used to recommend appropriate means of tackling the inaccessibility problem of the urban poor. Unfortunately, most of the data and information available from the survey were provided by the slum dwellers. The findings therefore reflect the situation of the slum dwellers more than the other less advantaged groups.

2. The context of the problem

2.1 Objectives of the study

The research 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 study 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 role of government and non-government organizations and institutions, 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; in addition, the dynamics of adjustment will be traced to determine the extent to which urbanization has broken the ties of the urban household with the extended family group, thereby eliminating the supporting functions carried out by family networks in rural areas.

The financing of health services and provision of social security are areas of utmost policy interest in the endeavor to provide "health for all". This study is of particular importance in view of the consideration of the government to provide social security 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. They may therefore have to finance their own health care. 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 Ministry of Public Health (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. By tracing the dynamics of adjustment and the interactions within the family network, it should be possible to assess how exchanges between households affect the overall distribution of welfare among the urban poor. 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 growth rate of the urban population will be as high as 5 per cent per annum in the next five years. Already the figures are astounding; slum dwellers in Bangkok are believed to number close to 2 million people, or about 20-25 per cent of Bangkok's population.

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.

2.2 A review on related studies.

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). Currently in existence are two studies that explore the possibility of extending the health card system to urban areas (Hongvivatana et, 1991), but 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 research is intended to fill this gap.

Health card programme is a voluntary health insurance scheme. It is organised by the Thai government. At present, its price is 500 baht, with another 500 baht subsidy from the government. The benefits include free medical care for all household members, with no limit on the number of sickness episodes in a year, but utilisation is limited to public health facilities with a referral system.

2.3 Overview of Slums in Bangkok

2.3.1 The background of slums in Bangkok

1. Size and number of the slums

Forty years before, Bangkok had less than 100 squatters of various kinds. There were a few large slums (over 1,000 households). The size and number of the slums have risen at an annual rate of 1,000 households. At present, the number of slums of various sizes in Bangkok is more than 1,000.

2. Slum characteristics

The characteristics of the slums now have not much differed from those in the past. People in slums still utilized 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 family. There is hardly space between houses. Therefore, slum people suffer from drainage from nearby

communities and from their own.

3. The genesis of the slums

The following are the key reasons for the slum settlement.

a) Economic factor. Migrants from upcountry who get away from the house economic condition in their own hometowns seek a better opportunity for their life in the capital city. Most of them take such jobs as construction workers, taxi drivers, and vendors. Their earnings are low.

b) Landlessness factor. Since the price of land in Bangkok has rocketed in the past decade, some people were forced to be out of the rented land and resettled in squatters.

4. Slum people's characteristics

A survey undertaken in 1983 by the Bangkok Metropolitan Administration in one of the Bangkok slums finds that 54.17% of the households' occupation were private employees, 20.83% small business owners, 16.20% public and state enterprise employees and the rest 8.8% unemployed.

2.3.2 A summary of policies towards the slums in Bangkok

1. The central government policy

There has been a number of attempts to reduce migration from poverty areas into the capital city, 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. They can get 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 made a consensus of the slums and registered them. The slum households now have their registration of residence.

2. The National Housing Agency

The National Housing Agency has two important mandates dealing with the slums. First, the agency provides new accommodation for those in 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

agency are rented to someone else.

Secondly, the agency looks after the conditions of utilities in the slums. The cooperation between the agency 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.

3. The Bangkok Metropolitan Administration.

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 Bangkok Metropolitan Administration, in 1990 about 13% of the children under 5 were identified as malnourished. Wanderers are the unresolved problem of the Bangkok Metropolitan Administration. They are found to be ones without proper health care services.

In the Bangkok Metropolitan Administration's 1994 plan, primary health care in every slum will be set up. In order that the elderly will be better looked after, a grouping of the elderly will be established in 45 slums. A dental service programme will be available in every slum.

2.4 Household Survey

2.4.1 Survey method

This survey was conducted using a sample of 500 households. A questionnaire was developed for the household survey. The questionnaire is divided into three parts. Part one contains questions about the existing situation regarding access to health care services by the slum dwellers and the methods of financing the services. Part two is to identify factors determining the relationship between socio-economic conditions and health accessibility and their ability and willingness to pay for health services. Part three elicits their health care utilization behavior.

A pretest was conducted by the research team in March 1995. During this preparatory process, systematic consultations regarding survey sites was made. The research team had received great cooperation from the Department of Policy and Planning of the Bangkok Metropolitan Administration in selecting the slums in the survey.

The revised household survey questionnaire was used by trained interviewers to interview household heads (either the husband or wife who is the decision maker in that household). There

are six teams of field interviewers. Each team consisted of two interviewers and worked under overall supervision of one researcher throughout the survey. One field development officer from each district of the Bangkok Metropolitan Administration, who was in charge of that particular slum being surveyed led the research team into the slum. The slum leader joined the research team and assisted the team to obtain cooperation from slum dwellers. Each interviewer carried out approximately 5 interviews per day.

2.4.2 Sampling design

According to the National Housing Agency, the total number of slums in Thailand was 1,841 with 310,202 households (1.37 million people) in 1994). The number of slums in Bangkok was 1,521. There were 254,492 households (1.12 million people) in the slums. The slum in the survey is confined to those under the BMA. The Department of Policy and Planning, which has administrative responsibility for those slums, classifies the slums in terms of their land tenure status, namely, invaded, rented and mixed.

The sample consists of 529 households interviewed in 13 slums scattered in 11 out of the total 38 districts of the BMA. (See Table 1.) Four of the sample districts are in the North of the BMA, 3 in the South and the rest are in Thonburi. It should be noted that the 3 districts in the South of the BMA happen to be the same site as a 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.

The target group of the study is the household residing in slums. The sample size of approximately 500 was predetermined on the basis of budget and time available for the study. The sample households in each slum were randomly selected.

2.4.3 Data collection

The survey was conducted from April to May, 1995. It was a summer. As many people in the survey worked during weekdays, part of the field survey had to be carried out on Saturdays or Sundays. Over the period, there was no report regarding an epidemic of any disease in the surveyed areas.

3 Research findings

3.1 The slum dwellers' some major social and economic conditions

The survey covered slums of various sizes in Bangkok except for those with extraordinary size. The reason for excluding the huge slums is that they have been developed so that they are atypical of the slums in Bangkok. The sample size in the survey varies with the slum size, ranging from 20 to 57 households. Five samples from Bangplad obtained in the pre-test session. There are altogether 529 household samples from 11 slums in three parts of Bangkok.

The social and economic characteristics of the slum dwellers, as presented in Table 2, suggest that the household heads are in the middle-age group, have the secondary education. The mean age of the household heads is 43 years. On average, they have been living in Bangkok for 31 years. This implies that they migrated to Bangkok when they were just 12 years old. They had 7 years of schooling, which is the compulsory level. Their study length is less than the national average figure by only half a year.

The slum dwellers' household financial condition are worse than that of Bangkok people but better than that of people in general in this country. Their average household income of 167,078 baht (US\$ 6,683) per year exceeds the national figure of 119,912 baht (US\$ 4,796.5) per year in 1995, (An exchange rate of 25 baht per US\$ is used throughout the analysis.) but is less than that of people living in Bangkok, whose average annual income of 270,847 baht or US\$ 10,833.9. (Since the data available now are as of the year 1992, the 1995 figures are estimated by adjusting the 1992 figures with the inflation rate and the national economic growth rate.) The median household income was 124,000 baht (US\$ 4,960) a year, slightly above the national figure. It is indicative of an uneven distribution of income between the slum households.

The figures on the household per capita income gives the similar conclusion to those on the household income; that is, they are poorer than people in Bangkok but better off than average people in Thailand. The slum dwellers' average household per capita income was 37,874 baht (US\$ 1,515 baht) though the median figure is lower (29,486 baht or US\$ 1,179.4). It is higher than that in all the regions of Thailand except for Bangkok (84,815 baht or US\$ 3,392.6) and the Vicinity. Their average daily wage was 121 baht (US\$ 4.8). The amount is a little lower than the latest minimum wage rate (135 baht). All the income comparisons support that they indeed are the urban poor.

Better educated household heads are likely to have high household income. Table 3 indicates positive association between the educational level of the household heads and their annual household income. 66.7% of the household heads with more than 16 years of schooling fall in the high income group whereas none of the household heads in the low income group had more than 16 years of study. On the other hand, there are as many as 38.5% of the household heads in the low income group without education while in the high income group only 17.9% of the household heads are without education.

The slum dwellers live in crowded accommodation. The average household size of 4.76 persons exceeds that of the country (3.9 persons a household). It is observed that most of the houses have space less than 10 square meters. This means that an individual can occupy about 2 square meters.

Though a household in the slums paid less for health services than an average household in Bangkok, the expenditure exceeds the national figure. A household in the slums spent an average health service expenditure of 733 baht (US\$ 29.3) in 3 months. Their spending exceeds the expenditure of an average household at the national level (580 baht or US\$ 23.2 within 3 months as estimated by adjusting the 1992 figure with the inflation rate). The figure is far lower than that of a household in Bangkok, paying 1,238 baht or US\$ 49.5 for a 3-month period. The median household health service expenditure of only 150 baht implies that there is a substantial imbalance of the expenditure. Several households paid a huge sum (i.e. in excess of 10,000 baht) while a number of households could waive their treatment cost.

Most of the slum people are private enterprise employees. Of the five major occupations, these employees constitutes the large proportion (28%). Private small business comes second (21%), followed by general worker (18%), government employees (14%) and those in the service sector (9%). Miscellaneous jobs account for another 10% (See Table 4.)

Though more than half of the household heads migrated from provinces, their children were born in Bangkok and brought up in the slums. It is most likely that their offspring's behaviour does not differ from that of the people in Bangkok. As shown in Table 5, half of the household heads came from the Central region. 32% migrated from the Northeast region.

Most of the slum people have a loose tie with their relatives in provinces. They tend to settle down in a certain place and are unwilling to relocate. As their economic condition

improves, they insist staying on since the location suits them very well in terms of convenience of commuting to workplace and feeling secure. Some are wealthy enough to buy real estate elsewhere but still like living in the slums.

The slum dwellers are poor by the standard of people living in Bangkok but they are better off than people residing in other regions. However, their economic gain is made at the expense of the loss in the form of poor quality of life and sub-standard of living.

3.2 The slum dwellers' illness within 3 months

One fifth of the slum people were ill in the three months prior to the survey. Most of them obtain health services from private and public health facilities. Of the 529 sample households, 388 (73.3%) had at least one member ill within 3 months prior to the survey. 517 out of 2,517 persons reported ill (20.5%). Altogether, they had 586 illness episodes. Their health care seeking behaviour indicates that 368 episodes (62.8%) received treatment from both private and public health facilities, 182 (31%) treated themselves by purchasing drugs and the remaining 36 (6.1%) did not obtain any kind of treatment. (See Figure 1.)

Though not comparable, the results of the two following surveys are indicative of a wide variation in the illness incidence found. According to the 1991 national survey by the Ministry of Public Health (MOPH), 49.2% of people in Bangkok were sick within 2 weeks. The figure is relatively high because the sickness criteria used are based on the medical basis and the sick were confirmed by thorough medical examination. On the contrary, the National Statistical Office (NSO) survey in 1991 finds that 18.4% of people in Bangkok reported ill in a two-week period.

The MOPH survey indicates that 51.8% of the sick people in Bangkok sought treatment, 33.8% purchased drugs to cure themselves and 14.4% did nothing. The slum dwellers sought treatment in a higher percentage than people in Bangkok in general. They relied on drugs for self-treatment in roughly the same proportion to the people in Bangkok.

Among five major sources of treatment, the slum people preferred public hospital most and used less BMA health centres. The ill most frequently visited public hospitals (43.5%). Private clinics were the second most popular (35%), followed by private hospitals (12.8%) and BMA health centres (7.4%).

Private drug stores were the major place of the drug procurement (78.6%). 12.6% of drug

purchasers bought drugs from convenient stores. 2.8% obtain their drugs at BMA health centres and only 1.1% did so from drug revolving funds in their communities. The slum people prefer private drug stores to the others since they can have a wide range of drug choice there and lower transaction costs. The drugs obtained free of charge in the BMA health centres are not an incentive to visit them.

A high income group possesses better health status than a low income group. The crosstabulation between the number of ill members in a household and its per capita income in Table 6 points out that a larger number of ill household members are likely to be found in the households with low household per capita income. 35% of the high income households did not have any ill members within 3 months while 24% of the low income households did not. 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 between the income groups in the slums.

In most households, an ill member suffered from only one episode (83%). The multiple illnesses occurred in 17% of the households. (See Table 7.)

For ill household members, receiving treatment is a dominant choice. That the number of visits to receive treatment exceeds the number of visits to purchase drugs for self-treatment is true for most ill household members, including those suffering from two episodes, as shown in Table 8.

The most popular place for drug purchase is private drug stores and public hospitals were most frequently used for both single and multiple visits (for the same illness), as seen from Tables 9a and b. For the single visits, 77% of drug purchasers visit drug stores and 44% of the treatment visits were made to public hospitals. For the two visits, various combinations of places of drug purchase and treatment arise. The most popular combinations are to purchase drugs from private drug stores followed by visiting to private clinics (10 episodes) and to visit a government hospital before visiting another government hospital (11 episodes).

All the income groups used private drug stores. Most of the low income group visited public health facilities while most of the high income group visited private clinics. Table 12 indicates that 77%, 79% and 91% of the low, middle and high income group, respectively, visited private drug stores. 36% of the high income persons went to private hospitals while 9% of the

low income group and 17% of the middle income group did. On the contrary, 45% of the low income group and 43% of the middle income group used public hospitals and BMA health centres while 22% of the high income group did. The fact that private hospitals charge more than public ones and the fact that the rich can afford to pay more than the poor can explain the distinguished health facility choices of the different income classes.

Most of the slum dwellers suffered from diseases of respiratory tract. As reported in Table 11, within 3 months there were 36% of the episodes involving disease of respiratory system, 10% diseases of nervous system and 10% diseases of circulatory system. The other diseases account for less than 10% of the episodes.

The MOPH survey and the NSO survey also report that diseases of respiratory system is the most common illness in Bangkok. However, the two surveys and this one differ in the ranking of all the other diseases. That a large number of slum dwellers, like people living in Bangkok, are afflicted by respiratory system diseases can be accounted for by their poor accommodation, environment, working condition and living standard. Their chronic illness stems from stress due to various reasons and poverty.

The slum dwellers were ill in a higher proportion than people in Bangkok in general. The poor in the slums were dependent upon the public health sector whereas the better off the private health sector. Their choices of treatment place may be explained by the cost incurred and the health benefit available. These two issues are addressed in the following analysis.

3.3 The slum dwellers' financial assessability to health services.

In order to measure a financial burden due to seeking health services, a comparison between health service expenditure and income earning is made. The share of income spent on health service can assess the degree of the financial assessability to health services between the different income groups.

Though the households' financial burden was small, the poor households had a higher financial burden than the rich. On average, a household in the slums has a financial burden of 2.94%, meaning that during 3 months, they spent on health services for all the ill household members 2.94% of their household income. It is found that the share inversely varies with the household income. The figures of the financial burden of the low, middle and high income group are 3.48%, 1.32% and 0.97%, respectively.

The average financial burden at the individual level, relating an individual's health service expenditure to his 3-month income, is 959%. To treat one episode of illness, an ill person paid 9.59 times his daily income earning. For a visit, he spent 8.67 times his daily income earning. A treatment of an illness episode costed him about 9-10 days' income

A low income person had a higher financial burden (1,109%) than that of a middle income (615%) and a high income person (500%). The average financial burden of a visit of a low income person is also larger (983%) than that of a middle income (615%) and a high income person (500%). All the measurements do not alter the conclusion that the poor bear a large financial burden than the rich.

In terms of the health service expenditure, the low and middle income households paid less than the high income households. Table 12a shows the relation between the household total health expenditures and their income levels. 54% and 36% of the low and middle income households paid between 1 and 200 baht while 27% of the high income households paid between 501 and 2,000 baht. The pattern also repeats when only treatment expenditures are considered (38% and 20% versus 32%). (See Table 12b.) However, most households of all the income groups paid for purchasing drugs a similar sum. 71%, 55% and 50% of the low, middle and high income households paid 1-50 baht. (See Table 12c.) Therefore, the treatment expenditure is responsible for the difference in health expenditure found between the different income groups.

One with higher severity paid more for treatment than another with less severity. About 42% of the visits with least severity paid between 1 and 200 baht whereas 79% of those with most severity paid over 2,000 baht. However, the pattern is not found in the case of drug purchase since the health condition of the ill who used drugs to treat themselves was not critical - they were able to work as usual (see Table 13a and b).

The slum people paid high total treatment cost in private hospitals than public hospitals and private clinics. The relation between places of treatment and the total cost of treatment (treatment expenditure plus travelling and accommodation expenses) and that between places of drug purchase and the total cost of purchasing drugs are presented in Tables 14a and b. 17% of the visits to private hospitals costed over 2,000 baht while 6% and 2% of the visits to public hospitals and private clinics costed over 2,000 baht. Also, there were 2% of the visits to private hospitals with spending between 501 and 2,000 baht whereas there were 14% and 10% of the

visiting to public hospitals and private clinics paying that amount. BMA health centres gave free treatment to most users. The travelling cost to BMA health centres are nil since they are normally located nearby communities. Free drugs are available mainly at BMA health centres. The cost of drugs purchased from private drug stores was mostly around 1-100 baht.

A great deal of the ill in the slums did not possess any health benefit. A larger proportion of the low income households than that of the high income counterparts did not have the health benefit. 65% of the ill were not entitled to any kind of the health benefits. This means that the slum dwellers get less access to the health benefits available than the population in general, the health benefit coverage of which is now more than 65% according to the latest data available from the MOPH. Among the health benefits available in the slums, free medical care for the government employees constitutes a major proportion, followed by social security scheme and the elderly welfare programme, as shown in Table 15.

More than half of the non-beneficiaries of the health benefits (69%) are in the low income group. (see Table 16.) The proportion (69%) of the ill in the low income group without health benefit is more than that in the other two income groups (equally 55%). The majority of the ill with entitled government reimbursement are the middle income people while most holders of other health benefits fall in the low income group.

A number of the health benefit rights were not exercised. On the contrary, some are qualified for more than one health benefit scheme. Table 17 shows the utilization of the health benefits by those who were ill. 83.9% of them did not claim any benefit when obtaining treatment. It is surprising to realize that 2% of them were qualified for some health benefits. A large number of those ill entitled to government reimbursement and social security did not exercise their rights due to inconvenience, inappropriate condition for usage and the benefit limitation. Most of them preferred visiting private clinics and private hospitals, which are not covered by the schemes. For with more than one benefit entitlement, it is possible for an individual to choose the benefit that is appropriate. For example, an elderly person may use his child's government reimbursement right, which offers a better health benefit package than the benefit of the elderly welfare programme.

Inequity regarding the financial assessability to health services exists between the different income groups in the slums. The low income group bears higher financial burden and is less

entitled to the existing health benefits. Though the health benefits are less available for the slum dwellers than for the population in general, there is inefficiency in the use of health benefits by the slum dwellers since some people did not use their rights and since some people are qualified for more than one benefit. A small number of the health benefit rights available among the slum dwellers may be as a result of the rejection of these health benefits by them due to the benefit restrictive condition, inconvenience and unpopularity.

4 Policy recommendations

4.1 Government health benefit policy

Though the slum dwellers are the least well-off group in Bangkok, they are still better than people living in other parts of Thailand. They did bear a more financial burden of obtaining health services than others. An average financial burden of a household at the national level of 1.76% exceeds that incurred to the slum dwellers (2.94%). The figure is also smaller than that of the low income group in the slums (3.48%) but larger than that of the middle and high income groups (1.32% and 0.97%)

The slum dwellers financial hardship for health services is an acceptable condition for obtaining some health benefit. However, existing health benefits should be modified in order to discourage unused health benefit rights available. Therefore, extending existing health benefit schemes to them may be desirable.

If the government really wants to promote the health card programme to the slums, as it has expanded to most rural areas, it may be able to sell the card and there will be a social gain. In theory, the slum dwellers may buy the card since the annual households health expenditure (130x4 baht) exceeds the cost of the card (a 500 baht of the card price plus a 500 baht subsidy from the government to an issuing health facility). The gain is in the region of 1,900 baht. There should be no problem of their ability to pay as the price of the card is only 0.3% of the average annual household income.

As many ill persons in the slums did not qualify for health benefits, the health benefit scheme that is designed for the poor should be strengthened (e.g. the low income scheme). The scheme should target the eligible effectively since not all the people living in the slums are poor as it is perceived. It should also avoid providing the health benefits to those already having one.

As existing health benefits serve many objectives - pooling risk, sharing resources, equity, accessibility, etc. - at the same time in any single scheme, it is difficult to assess any one objective without disturbing others. Health benefit schemes in the future should be devised in such a way that a programme should attain a certain goal. Multiple programmes available for a certain group is not unusual. It should also take into account the cost of using the health benefits. Such cost arising from, for example, long waiting time and absence from work to obtain health services, should be reduced to the minimum.

4.2 Target groups of the health benefits

Homeless, street vendors, squatters and wanderers are the most disadvantaged group that are most entitled to the health benefit scheme. Though these groups could not be included and analysed in this study, the information obtained from some members of these groups by informal interview and observation suggests that they are poorer than the slum dwellers, that their living condition is below standard and that they possess low level of health status.

There is much difficulty encountering the officials, providing health services to these groups. Also, there exist barriers for the disadvantaged to receive the available health benefits. Some areas that are used by drug addicts, criminals and illegal groupings are not safe for the officials. Though the officials are not concerned about the unlawful business but intend to provide assistance, they are not welcomed. Since most of them do not have permanent accommodations, definite working places and formal jobs, they can hardly produce and document any evidence to claim the existing health benefits.

The health benefit scheme should be adapted in some way to allow these groups to be eligible for the rights. As they frequently relocate, the scheme should enable them to obtain the health benefits anywhere.

5. References

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Appendix

Table 1

Samples Households in BMA , 1995

Region	District	Name of Slum	Number of Sampled HH.
North	1.Bangsue	Chankasem	54
	2.Dusit	Soi Soda	57
	3.Lad Krabang	Rom Klao Zone 7	51
	4.Phayathai	Behind Pai Tan Temple	52
South	5.Bang Kolaem	Chan Nai Temple	56
	6.Sathorn	Opposite Thammasat Association	53
	7.Yannawa	Yen Akad 2	56
Thonburi	8.Bangkok Noi	Dong Moon Lck Temple	51
	9.Bangplad	Panurangsi Temple	5
	10.Klongsan	Behind Kulsiri School	20
	Klongsan	Wanawan 2	20
	11.Thonburi	Kalaya Temple	33
	Thonburi	Kudee Kao Temple	21
			529

Source : Household Survey, April-May 1995

Figure 1 : Health Service Utilization

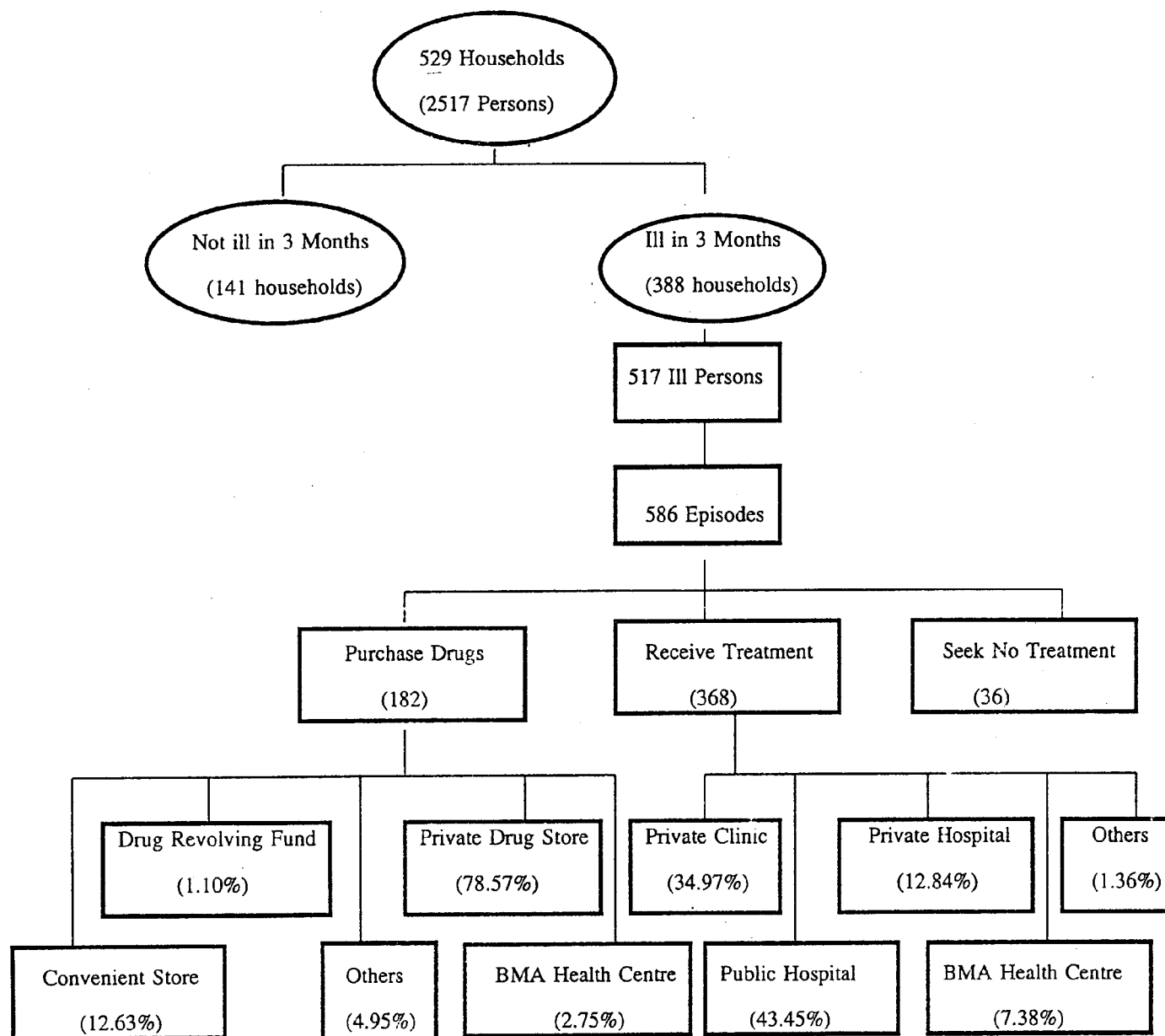


Table 2

Some Key Social and Economic Variable

	Minimum	Maximum	Mean	Std Dev	First Quantile	Median	Third Quantile	N
Age of household head	17	89	43.09	13.43	33.00	41.00	53.00	529
Household Income(baht)	4,000	866,010	167,078.58	136,528.58	72,900.00	124,000.00	210,000.00	528
Income of Working Household Head (baht)	2,000	600,000	80,671.04	68,854.51				510
Household Head Income (baht)	0	720,000	86,703.80	82,185.08	45,000.00	66,000.00	102,000.00	528
Household per Capita Income (baht)	1,000	240,000	37,873.80	30,585.50	12,850.00	29,486.00	26,800.00	528
Education of household head (Number of years)	0	19	6.83	4.29	4.00	4.00	10.00	526
Household size	1	12	4.76	2.19	3.00	4.00	6.00	529
Years of Household Head's living in Bangkok	0	89	31.04	16.88	20.00	30.00	42.00	525
Health Service Expenditure	0	28,000	733.09	2,562.65	25.00	150.00	400.00	350

Source : Household Survey, April-May 1995

Table 3

Annual Income* and Educational Level of Household Head

(persons)

Years of study Income (Baht)	0		1-4		5-7		8-10		11-12		13-16		>16		Total	%
Low	15	38.5	63	28.3	10	13.9	10	14.7	12	18.2	3	6.7	0	0.0	113	21.5
(0-40,000)	13.3		55.8		8.8		8.8		10.6		2.7		0.0		100.0	
Middle	17	43.6	115	51.6	52	72.2	41	60.3	24	36.4	22	48.9	4	33.3	275	52.4
(40,001-100,000)	6.2		41.8		18.9		14.9		8.7		8.0		1.5		100.0	
High	7	17.9	45	20.2	10	13.9	17	25.0	30	45.5	20	44.4	8	66.7	137	26.1
(>100,000)	5.1		32.8		7.3		12.4		21.9		14.6		5.8		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 : Household Survey, April-May 1995

Missing Value : 4

Note : * Income of 1994

Table 4

Occupation and Health Status of Household Head

(persons)

Health status*	Occupation Commerce		Government		General worker		Services		Employee		Others		Total	%
Good	78	70.27	59	79.73	73	75.30	36	78.26	123	83.67	38	73.58	407	77.23
	19.16		14.50		17.93		8.85		30.22		9.34		100.00	
Fair	14	12.61	10	13.51	15	15.63	6	13.04	13	8.84	4	7.55	62	11.76
	22.58		16.13		24.19		9.68		20.97		6.45		100.00	
Not Good	17	15.32	5	6.76	9	9.38	3	6.52	11	7.48	8	15.09	53	10.06
	32.08		9.43		16.98		5.66		20.75		15.09		100.00	
Bad	2	1.80	0	0.00	0	0.00	1	2.17	0	0.00	2	3.77	5	0.95
	40.00		0.00		0.00		20.00		0.00		40.00		100.00	
Total	111	100.00	74	100.00	97	100.00	46	100.00	147	100.00	52	100.00	527	100.00
%	21.06		14.04		18.41		8.73		27.89		9.86		100.00	

Source : Household Survey, April-May 1995

Missing Value : 2

Note : Health status is based on the sample's self-assessment

Table 5
Original Region of Migrated Household Heads
 (persons)

Region	Household Heads	%
Central	149	53.21
Northern	36	12.86
Southern	6	2.14
North - Eastern	89	31.79
Total	280	100.00

Source : Household Survey, April-May 1995

Table 6

Number of Ill Persons in Each Household within 3 Months and Per Capita Income per year (Household)

Number of Ills		0		1		2		3		4		Total	%
Persons	Household Per capita												
Low*		84.0	59.6	192.0	69.3	65.0	71.4	12.0	66.7	1.0	100.0	354.0	67.0
(1-40,000)		23.7		54.2		18.4		3.4		0.3		100.0	
Middle		42.0	29.8	65.0	23.5	21.0	23.1	4.0	22.2	0.0	0.0	132.0	25.0
(40,001-80,000)		31.8		49.2		15.9		3.0		0.0		100.0	
High		15.0	10.6	20.0	7.2	5.0	5.5	2.0	11.1	0.0	0.0	42.0	8.0
(>80,000)		35.7		47.6		11.9		4.8		0.0		100.0	
Total		141.0	100.0	277.0	100.0	91.0	100.0	18.0	100.0	1.0	100.0	528.0	100.0
%		26.7		52.5		17.2		3.4		0.2		100.0	

Source : Household Survey, April-May 1995

Note : based on the minimum wage rate of 135 baht a day and 312 working days

Table 7

Number of Households with Ill Persons and Episodes of Illness

(number of households)

Number of Ill Persons Number of Episodes					
	1	2	3	4	Total
1	234				234
2	40	74			114
3	3	17	13		33
4	1		3	1	5
5			2		2
Total	278	91	18	1	388

Source : Household Survey, April-May 1995

Table 8**Type of Treatment of Ill Persons**

(number of illness episodes)

Order of Ill Person in Household and Episode	Recieve Treatment	Purchase Drugs	Seek No Treatment	Total
1st Person 1st Episode	236	131	20	387
1st Person 2nd Episode	52	8	2	62
2nd Person 1st Episode	61	36	12	109
2nd Person 2nd Episode	5	1	0	6
3rd Person 1st Episode	11	6	2	19
3rd Person 2nd Episode	1	0	0	1
Total	366	182	36	584

Source : Household Survey, April-May 1995

Missing Value : 2

Table 9a
Place of Drug Purchase/ Treatment
(for those who had one place of visit only)

Place	Visits	%
Place of Drug Purchase		
- Drug Revolving Funds	2	1.41
- Drug Stores	110	77.46
- Convenient Stores	17	11.97
- BMA Health Centres	4	2.82
- Others	9	6.34
Total	142	100.00
Place of Treatment		
- Private Clinics	92	33.82
- Public Hospitals	120	44.12
- Private Hospitals	36	13.24
- BMA Health Centres	19	6.99
- Traditional Healers	1	0.37
- Home Visits	1	0.37
- Others	3	1.10
Total	272	100.00

Source : Household Survey, April-May 1995

Missing Observations : 2

Table 0b
Sequence of Places of Drug Purchase and Treatment
(for those who had two places of visits)

First Place	Second Place	Visits	% of Total	% of Grand Total
1. Place of Drug Purchase	Place of Drug Purchase			
Drug Stores → Drug Stores		5	100.00	7.46
Total		5	100.00	7.46
2. Place of Drug Purchase	Place of Treatment			
Drug Stores → Private Clinics		10	38.46	14.93
Drug Stores → Government Hospitals		7	26.92	10.45
Drug Stores → Private Hospitals		3	11.54	4.48
Convenient Stores → Private Clinics		3	11.54	4.48
Convenient Stores → BMA Health Centres		1	3.85	1.49
Convenient Stores → Private Clinics		1	3.85	1.49
BMA Health Centres → Government Hospitals		1	3.85	1.49
Total		26	100.00	38.81
3. Place of Treatment	Place of Drug Purchase			
Private Clinics → Drug Stores		1	25.00	1.49
Private Clinics → Convenient Stores		1	25.00	1.49
Government Hospitals → Drug Stores		2	50.00	2.99
Total		4	100.00	5.97
4. Place of Treatment	Place of Treatment			
Private Clinics → Private Clinics		4	12.50	5.97
Private Clinics → Government Hospitals		5	15.63	7.46
Private Clinics → Private Hospitals		3	9.38	4.48
Private Clinics → BMA Health Centres		2	6.25	2.99
Government Hospitals → Private Clinics		1	3.13	1.49
Government Hospitals → Government Hospitals		11	34.38	16.42
Private Hospitals → Government Hospitals		1	3.13	1.49
Private Hospitals → Private Hospitals		2	6.25	2.99
BMA Health Centres → Private Clinics		1	3.13	1.49
BMA Health Centres → BMA Health Centres		2	6.25	2.99
Total		32	100.00	47.76
Grand Total		67		100.00

Source : Household Survey, April-May 1995

Table 11**Type of Diseases within 3 Months**

	Types of Diseases	Episodes	%
1	Infectious diseases	41	7.00
2	Malignancy (all types)	1	0.17
3	Benign growth	2	0.34
4	Endocrine disturbance	23	3.92
5	Diseases of blood & blood forming organ	3	0.51
6	Mental disorder	0	0.00
7	Diseases of nervous system	59	10.07
8	Diseases of eye and ear	4	0.68
9	Diseases of circulatory system	59	10.07
10	Diseases of respiratory system	211	36.01
11	Diseases of digestive system	35	5.97
12	Diseases of urinary tract & sex organs	12	2.05
13	Diseases of skin & subcutaneous tissue	13	2.22
14	Diseases of muscle & skeleton & connection tissue	47	8.02
15	Ill-defined symptoms	48	8.19
16	Accidents	22	3.75
17	Dental problems	6	1.02
	Total	586	100.00

Source : Household Survey, April-May 1995

Note : The criteria and Classification of the diseases are based on Institute of Population and Social Research

Table 12a

Total Annual Household Income and Household Health Service Expenditure within 3 Months

(Household with Ill Persons)

Total Expenditure (Baht)	0		1-200		201-500		501-2,000		> 2000		Total	%
Total Income (Baht)												
Low	33	71.7	142	83.0	47	74.6	27	61.4	16	64.0	265	75.9
(0-200,000)	12.5		53.6		17.7		10.2		6.0		100.0	
Middle	10	21.7	23	13.5	12	19.0	11	25.0	6	24.0	62	17.8
(200,001-400,000)	16.1		37.1		19.4		17.7		9.7		100.0	
High	3	6.5	6	3.5	4	6.3	6	13.6	3	12.0	22	6.3
(>400,000)	13.6		27.3		18.2		27.3		13.6		100.0	
Total	46	100.0	171	100.0	63	100.0	44	100.0	25	100.0	349	100.0
%	13.2		49.0		18.1		12.6		7.2		100.0	

Source : Household Survey April-May , 1995

Missing Observations : 22

Note; Including Drug Purchase for Self Treatment.

Table 12b

Total Annual Household Income and Household Treatment Expenditure within 3 Months

(Household with Ill Persons)

Total Expenditure (Baht)	0		1-200		201-500		501-2,000		> 2000		Total	%
Total Income (Baht)												
Low	38	76.0	74	83.1	44	72.1	25	61.0	16	66.7	197	74.3
(0-200,000)	19.3		37.6		22.3		12.7		8.1		100.0	
Middle	9	18.0	13	14.6	12	19.7	10	24.4	5	20.8	49	18.5
(200,001-400,000)	18.4		26.5		24.5		20.4		10.2		100.0	
High	3	6.0	2	2.2	5	8.2	6	14.6	3	12.5	19	7.2
(>400,000)	15.8		10.5		26.3		31.6		15.8		100.0	
Total	50	100.0	89	100.0	61	100.0	41	100.0	24	100.0	265	100.0
%	18.9		33.6		23.0		15.5		9.1		100.0	

Source : Household Survey April-May , 1995

Missing Observations : 10

Table 12c

Total Annual Household Income and Household Drug Expenses within 3 Months

(Household with Ill Persons)

Total Expenditure (Baht)	0		1-50		51-100		101-200		201-500		501-2,000		> 2000		Total	%
Total Income (Baht)																
Low	7	87.5	79	84.9	16	72.7	5	55.6	2	100.0	2	100.0	0	0.0	111	81.0
(0-200,000)	6.3		71.2		14.4		4.5		1.8		1.8		0.0		100.0	
Middle	1	12.5	11	11.8	4	18.2	3	33.3	0	0.0	0	0.0	1	100.0	20	14.6
(200,001-400,000)	5.0		55.0		20.0		15.0		0.0		0.0		5.0		100.0	
High	0	0.0	3.0	3.2	2	9.1	1	11.1	0	0.0	0	0.0	0	0.0	6	4.4
(>400,000)	0.0		50.0		33.3		16.7		0.0		0.0		0.0		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
%	5.8		67.9		16.1		6.6		1.5		1.5		0.7		100.0	

Source : Household Survey April-May , 1995

Missing Observations : 13

Table 13a

Severity and Total 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	22.50	7	12.96	18	31.58	27	22.13	79	22.38
	34.18		8.86		22.78		34.18		100.00	
1-200	34	28.33	26	48.15	26	45.61	52	42.62	138	39.09
	24.64		18.84		18.84		37.68		100.00	
201-500	25	20.83	10	18.52	9	15.79	31	25.41	75	21.25
	33.33		13.33		12.00		41.33		100.00	
501-2,000	19	15.83	8	14.81	4	7.02	11	9.02	42	11.90
	45.24		19.05		9.52		26.19		100.00	
> 2,000	15	12.50	3	5.56	0	0.00	1	0.82	19	5.38
	78.95		15.79		0.00		5.26		100.00	
Total	120	100.00	54	100.00	57	100.00	122	100.00	353	100.00
%	33.99		15.30		16.15		34.56		100.00	

Source : Household Survey, April-May, 1995

Missing Observation : 15

Seek No Treatment	6		3		11		16		36	
	16.67		8.33		30.56		44.44		100.00	

Table 13b

Severity and Total 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	2.86	1	3.85	3	12.50	7	8.33	12	7.10
	8.33		8.33		25.00		58.33		100.00	
1-100	32	91.43	23	88.46	19	79.17	71	84.52	145	85.80
	22.07		15.86		13.10		48.97		100.00	
101-200	1	2.86	1	3.85	1	4.17	4	4.76	7	4.14
	14.29		14.29		14.29		57.14		100.00	
201-300	0	0.00	1	3.85	1	4.17	0	0.00	2	1.18
	0.00		50.00		50.00		0.00		100.00	
>300	1	2.86	0	0.00	0	0.00	2	2.38	3	1.78
	33.33		0.00		0.00		66.67		100.00	
Total	35	100.00	26	100.00	24	100.00	84	100.00	169	100.00
%	20.71		15.38		14.20		49.70		100.00	

Source : Household Survey, April-May, 1995

Missing Observation : 13

Seek No Treatment	6		3		11		16		36	
	16.67		8.33		30.56		44.44		100.00	

Table 14a

Places of Treatment and Treatment Expenditure

(Visits)

Source Tretment Expenditure(Baht)	Private Clinics		Public Hospitals		Private Hospitals		BMA Health Centres		Others		Total	%
0	5	3.94	52	33.12	12	26.09	14	60.87	0	0	83	23.31
	6.02		62.65		14.46		16.87		0.00		100.00	
1-200	78	61.42	42	26.75	6	13.04	9	39.13	3	100.00	138	38.76
	56.52		30.43		4.35		6.52		2.17		100.00	
201-500	32	25.20	31	19.75	10	21.74	0	0.00	0	0.00	73	20.51
	43.84		42.47		13.70		0.00		0.00		100.00	
501-2,000	10	7.87	22	14.01	10	21.74	0	0.00	0	0.00	42	11.80
	23.81		52.38		23.81		0.00		0.00		100.00	
> 2,000	2	1.57	10	6.37	8	17.39	0	0.00	0	0.00	20	5.62
	10.00		50.00		40.00		0.00		0.00		100.00	
Total	127	100.00	157	100.00	46	100.00	23	100.00	3	100.00	356	100.00
%	35.67		44.10		12.92		6.46		0.84		100.00	

Source : Household Survey, April-May 1995

Missing Observations : 12

Table 14b
Drug Expenses and Places of Purchasing (visits)

Drug Expenses(Baht)	Place		Drug Revolving Funds		Drug Stores		Convenient Stores		BMA Health Centers		Others		Total	%
0	1	50.00	1	0.75	0	0.00	4	80.00	6	75.00	12	7.10		
	8.33		8.33		0.00		33.33		50.00		100.00			
1-100	1	50.00	122	91.04	19	95.00	1	20.00	2	25.00	145	85.80		
	0.69		84.14		13.10		0.69		1.38		100.00			
101-200	0	0.00	6	4.48	1	5.00	0	0.00	0	0.00	7	4.14		
	0.00		85.71		14.29		0.00		0.00		100.00			
201-300	0	0.00	2	1.49	0	0.00	0	0.00	0	0.00	2	1.18		
	0.00		100.00		0.00		0.00		0.00		100.00			
>300	0	0.00	3	2.24	0	0.00	0	0.00	0	0.00	3	1.78		
	0.00		100.00		0.00		0.00		0.00		100.00			
Total	2	100.00	134	100.00	20	100.00	5	100.00	8	100.00	169	100.00		
%	1.18		79.29		11.83		2.96		4.73		100.00			

Source : Household Survey , April-May , 1995

Missing Observations : 13

Table 15
Type of Benefits

(persons)

Type of Benefits	Household Members	%
None	1747	69.57
Health Card	33	1.31
Welfare	161	6.41
Government	263	10.47
Private Companies	123	4.90
Social Security	184	7.33
Total	2511	100.00

Missing Observation : 6

Source : Household Survey, April-May 1995

Table 16

Accessibility to Health Benefits by Household per. Capita Income

(Number of Ill Persons)

Income per. Capita (Baht)	Low	%	Middle	%	High	%	Total	%
Benefit Scheme	(1 - 40,000)		(40,001 - 80,000)		(>80,000)			
none	246	68.33	64	53.78	19	52.78	329	63.88
	74.77		19.45		5.78		100.00	
Health Card	7	1.94	0	0.00	1	2.78	8	1.55
	87.50		0.00		12.50		100.00	
Low Income	16	4.44	0	0.00	0	0.00	16	3.11
	100.00		0.00		0.00		100.00	
Student's Health Insurance	6	1.67	2	1.68	0	0.00	8	1.55
	75.00		25.00		0.00		100.00	
Government Reimbursement	25	6.94	28	23.53	7	19.44	60	11.65
	41.67		46.67		11.67		100.00	
Local Government	1	0.28	0	0.00	0	0.00	1	0.19
	100.00		0.00		0.00		100.00	
Private Company	8	2.22	5	4.20	5	13.89	18	3.50
	44.44		27.78		27.78		100.00	
Elderly	16	4.44	4	3.36	1	2.78	21	4.08
	76.19		19.05		4.76		100.00	
Social Security	20	5.56	13	10.92	2	5.56	35	6.80
	57.14		37.14		5.71		100.00	
Others	15	4.17	3	2.52	1	2.78	19	3.69
	78.95		15.79		5.26		100.00	
Total	360	100.00	119	100.00	36	100.00	515	100.00
	69.90		23.11		6.99		100.00	

Source : Household Survey, April - May 1995

Missing Observations : 2

Table 17
Accessibility and Utilization of Health Benefit

(Visits)

Used Right Accessible Right	Not used	Health Card	Low Income	Government Reimbursement	Private Company	Elderly	Social Security	Others	Total	%
none	345	0	0	0	0	0	0	0	345	63.30
	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	
Health Card	3	1	0	0	0	0	0	0	4	0.73
	75.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	
Low Income	10	0	6	0	0	0	0	0	16	2.94
	62.50	0.00	37.50	0.00	0.00	0.00	0.00	0.00	100.00	
Student's Health Insurance	7	0	0	0	0	0	0	0	7	1.28
	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	
Government Reimbursement	28	0	0	40	0	0	0	0	68	12.48
	41.18	0.00	0.00	58.82	0.00	0.00	0.00	0.00	100.00	
Private Company	10	0	0	0	10	0	0	0	20	3.67
	50.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	100.00	
Elderly	14	0	0	1	0	11	0	0	26	4.77
	53.85	0.00	0.00	3.85	0.00	42.31	0.00	0.00	100.00	
Social Security	26	0	0	1	0	0	10	0	37	6.79
	70.27	0.00	0.00	2.70	0.00	0.00	27.03	0.00	100.00	
Others	15	0	0	0	0	0	0	7	22	4.04
	68.18	0.00	0.00	0.00	0.00	0.00	0.00	31.82	100.00	
Total	458	1	6	42	10	11	10	7	545	100.00
	84.04	0.18	1.10	7.71	1.83	2.02	1.83	1.28	100.00	

Source : Household Survey, April - May 1995

Missing Observation : 5