# HONG KONG ACADEMY OF MEDICINE 

A Study on<br>the Requirements of Medical Services of Elderly Citizens in Hong Kong

## A Study on the Requirements of Medical Services of Elderly Citizens in Hong Kong <br> Report

## Executive summary:

The senior citizen population continues to soar and is expected to reach 1.4 million ( $17.2 \%$ of the population) in 2021. It is predicted that there will be increasing demand for their health services in the near future. Early access to health services for them can prevent many serious medical problems and reduce financial burden of the public health service funding. Chronic diseases are common in the senior citizen population and they are the main cause for hospitalization and medical consultations. Therefore, the present consultation study commissioned by the Hong Kong Academy of Medicine aims to examine:
(1) the medical conditions of senior citizens requiring treatment, their financial burden and ability to pay out of pocket or through help from relatives or through an insurance policy;
(2) where the medical services are rendered, and the level of satisfaction of senior citizens with the services rendered;
(3) what percentage of medical services of private doctors are for senior citizens, whether reduced consultation fee has been offered to the senior citizens; and if not, whether they are willing to give such a discount, and at what level; and
(4) what percentage of retired doctors is willing to offer a charity service for senior citizens of the lower income group, through being employed by the Hospital Authority or the Department of Health in the general out-patients clinics at a nominal remuneration rate.

The findings can provide insightful results for the development of an effective senior citizens health care policy targeting their health service needs and improve their health status. In response to this challenge, a proposed special senior citizens health service scheme was studied.

## Part I: Medical service needs for senior citizens

### 1.1. Profile:

1.1.1. There were $39.2 \%$ male $(\mathrm{n}=392)$ and $60.8 \%$ female $(\mathrm{n}=608)$ respondents.
1.1.2. The distribution of the respondent was across the 18 districts.
1.1.3. There were $36.5 \%$ in public rental housing ( $\mathrm{n}=365$ ). $32.9 \%$ in privatelyowned properties ( $\mathrm{n}=329$ ), $18 \%$ in home ownership scheme flats ( $\mathrm{n}=180$ ), $6.1 \%$ in private rental housing ( $\mathrm{n}=61$ ), $3.9 \%$ in village houses ( $\mathrm{n}=39$ ), and $2.6 \%$ who did not answer.
1.1.4. $9.4 \%$ of them $(\mathrm{n}=94)$ received Comprehensive Social Security Assistance Scheme (CSSA).
1.1.5. $35.8 \%$ of them $(n=358)$ had a monthly family income of less than $\$ 4,000$; $25.7 \% ~(n=257)$ between $\$ 4,000-\$ 9,999 ; 11.9 \%(n=119)$ between $\$ 10,000-$ $\$ 24,999$; and $4.6 \%$ above $\$ 25,000$.
1.2. Source of payment and satisfaction for NON-CHRONIC-DISEASE medical service:
1.2.1. $75.3 \%$ of the respondents used only one health service for their non-chronicdisease treatment.
1.2.2. Private general practitioners ( $47.1 \%$ of respondents) and public clinics/ hospitals ( $51.6 \%$ of respondents) were the major health services used for their non-chronic-disease treatment.
1.2.3. $40.6 \%$ of the respondents indicated their medical fee for non-chronic diseases was less than $\$ 100$ and only $13.9 \%$ of them paid more than $\$ 200$ per visit.
1.2.4. $72.2 \%$ of the senior citizens paid the medical fee by themselves and $26.2 \%$ of them with financial help from their next of kin (e.g. parents or sons).
1.2.5. The respondents reported an average satisfaction level at $2.60(\mathrm{SD}=0.97)$ out of 5 , indicating that they were somewhat satisfied with their services received for the non-chronic-disease treatment.
1.3. Current CHRONIC-DISEASE status and medical service needs:
1.3.1 $62.3 \%$ of the respondents had at least one diagnosis of chronic diseases.
1.3.2 Of the senior citizens with chronic diseases, $51.4 \%$ had only one diagnosis and $32.4 \%$ of them had two diagnoses.

1．3．3 The 5 most common types of diagnosis were（in descending order）： hypertension（ $57.8 \% ; \mathrm{n}=360$ ）；diabetes（ $24.2 \%$ ； $\mathrm{n}=151$ ）；heart disease （ $15.4 \%$ ；$n=96$ ）；arthritis（ $11.4 \%$ ；$n=71$ ）；high cholesterol（ $10 \%$ ；$n=62$ ）．

1．4．Satisfaction and requirement for medical service for chronic diseases （ $\mathrm{n}=623$ ）：

1．4．1． $84 \%(\mathrm{n}=525)$ of the senior citizens with chronic diseases used only one type of health service．

1．4．2．The most popular health services for their chronic diseases were Hospital Authority General Out－Patient Clinics（GOPC；政府普通科門診部；51．2\％） and Hospital Authority Specialist Clinics（政府專科門診部；41．4\％）。

1．4．3．Utilization rates of different private health services（private general practitioners，private specialists or private hospitals）for their chronic diseases were $10.9 \%, 4.2 \%$ and $2.4 \%$ ，respectively．

1．4．4．Slightly more than half of them were satisfied with the health services received for their chronic－disease treatment．They reported an average satisfaction level at 2.56 （ $\mathrm{SD}=0.99$ ）out of 5 ，indicating that they were somewhat satisfied with the services received for the non－chronic－disease treatment．

1．4．5． $91.7 \%$ of them required regular follow－up health services for their chronic－ disease treatment．

1．4．6． $68 \%$ of these senior citizens $(\mathrm{n}=571)$ required follow－up services every two to three months．

1．5．Source of payment and burden for the medical expenses for chronic diseases （ $\mathrm{n}=571$ ）：

1．5．1． $76.8 \%$ of them indicated their medical fee for chronic diseases were less than $\$ 200$ on average per month．

1．5．2． $88.6 \%$ of them had only one source for payment of their chronic－disease treatment．

1．5．3． $67.1 \%$ of them paid the medical fee by themselves and $29.7 \%$ of them with financial help from their next of kin．
1.5.4. $34 \%$ of them felt the financial burden of their medical expenses for their chronic-disease treatment and the average burden level was 2.95 ( $\mathrm{SD}=1.16$ ) out of 5, indicating that the treatment cost for chronic diseases were somewhat a financial burden.
1.5.5. $43.8 \%$ of them felt that the medical expenses influenced their spending on their normal daily living.
1.5.6. $24.1 \%$ of them would not seek medical consultation because of the fee.
1.5.7. $54.7 \%$ of them would use quality as a criterion for their selection of doctors.

Part II: Provision of medical services by medical doctors aged below 60
2.1. Profile:
2.1.1. There were 663 respondents. 541 of them ( $81.6 \%$ ) were males, 117 of them ( $17.6 \%$ ) were females and 5 of them ( $0.8 \%$ ) did not indicate their gender.
2.1.2. The average duration of their medical practice was 24.54 years ( $\mathrm{SD}=9.40$ ).
2.2. Service and intention to reduce consultation fee for senior patients:
2.2.1. The average percentage of services provided for senior citizens was $25.16 \%$ ( $\mathrm{SD}=27.41$ ).
2.2.2. 530 of them gave discounts to the senior citizens.
2.2.3. Of the 530 medical doctors providing discounts for senior citizens, $52.5 \%$ provided discounts based on the need of the patients. The others provided discounts for every senior citizen.
2.2.4. Their average discounted fee was at $59.36 \%$ ( $\mathrm{SD}=24.42$ ).
2.2.5. Of the 116 medical doctors who had not provided discounts for senior citizens in their current practice, $25.9 \%$ would be willing to provide discounts in the future.
2.2.6. Their average discount rate would be provided at $20.75 \%$ ( $\mathrm{SD}=12.8$ ).

Part III: Provision of medical services by medical doctors aged 60 or above
3.1. Profile:
3.1.1. There were 112 respondents. 102 of them ( $91.1 \%$ ) were males and 7 of them ( $6.3 \%$ ) were females, and 3 of them ( $2.6 \%$ ) did not indicate their gender.
3.1.2. The average duration of their medical practice was 39.94 years ( $\mathrm{SD}=5.59$ ).
3.2. Service and intention to reduce consultation fee for senior patients:
3.2.1. The average percentage of services provided for senior citizens was $30.43 \%$ ( $\mathrm{SD}=22.92$ ).
3.2.2. 71 of them gave discounts to the senior citizens.
3.2.3. Of the 71 medical doctors providing discounts for senior citizens, $78.9 \%$ provided discounts based on the need of the patients. The others provided discounts for every senior citizen.
3.2.4. Their average discounted fee was at $60.53 \%$ of the normal fee $(\mathrm{SD}=25.62)$.
3.2.5. Of the 35 medical doctors who had not provided discounts for senior citizens in their current practice, $25.7 \%$ would be willing to provide discounts in the future.
3.2.6. Their average discount rate would be provided at $21.88 \%(\mathrm{SD}=13.08)$.
3.2.7. $66.1 \%$ of all respondents would be willing to take part in the medical service scheme for senior citizens organized by the Hospital Authority or the Department of Health after their retirement.
3.2.8. The average level of willingness was at $6.98(\mathrm{SD}=2.07)$ out of 10 , indicating they were quite willing to take part in this medical service scheme.
3.2.9. $60.9 \%$ of those willing to join the scheme would like to provide service at a frequency of 1-2 times per week.

Part IV: Intention of retired medical doctors to provide medical service for senior citizens
4.1. Profile:
4.1.1. There were 24 respondents. 18 of them ( $75 \%$ ) were males and 6 of them ( $25 \%$ ) were females.
4.1.2. The average duration of their medical practice was 37.73 years ( $\mathrm{SD}=9.73$ ).

### 4.2. Service and intention to reduce consultation fee for senior patients:

4.2.1. The average percentage of services provided for senior citizens was $25.14 \%$ ( $\mathrm{SD}=20.71$ ).
4.2.2. $50 \%$ of them would be willing to take part in the medical service scheme for senior citizens organized by Hospital Authority or Department of Health after their retirement.
4.2.3. The average level of willingness was at 5.45 out of 10 , indicating they were slightly willing to take part in this medical service scheme.
4.2.4. $72.7 \%$ of those willing to join the scheme would like to provide service at a frequency of 1-2 times per week.

## $\underline{\text { Part V: Post-hoc analysis }}$

Based on the categories of (a) gender, (b) type of housing, (c) family income level, and (d) living district, further statistical analyses were conducted using One WayAnalysis of Variance (ANOVA) and Chi-square to identify the potential differences.

### 5.1. Gender differences:

Using Chi-square analysis the following findings were observed:
5.1.1. Compared with male senior citizens, female senior citizens were significantly more likely:
a) to use private general practitioners for their non-chronic-disease treatment, (49.7\%)
b) to receive financial help from their next of kin for their non-chronic diseases ( $31.3 \%$ ), and chronic diseases ( $33.9 \%$ ),
c) to use private general practitioners to treat their chronic diseases ( $12.7 \%$ ),
d) not to seek medical advice due to the fee ( $28.2 \%$ ),
e) to have higher prevalence rates of osteoporosis (6.7\%) and high cholesterol (13\%), and
f) to have more types of chronic diseases (1.75 diagnoses) based on Oneway ANOVA analysis.
5.1.2. Compared with male senior citizens, female senior citizens were significantly less likely to pay for their non-chronic-disease (69.2\%) and chronic-disease ( $64.0 \%$ ) treatment by themselves.
5.2. Type of housing:

Using Chi-square analysis the following findings were observed:
5.2.1. Compared with the other 3 groups, senior citizens living in home ownership scheme flats were significantly more likely to:
a) use public hospitals for their non-chronic-disease treatment (59.5\%),
b) have chronic diseases $(67.0 \%)$.
5.2.2. Compared with the other 3 groups, senior citizens living in private rental housing were significantly more likely:
a) to use private general practitioners for their chronic-disease treatment (22.6\%),
b) to feel their normal spending influenced by their medical expenses (61.3\%), and
c) not to seek medical advice due to the expensive medical cost $(25.8 \%)$
5.2.3. Compared with the other 3 groups, senior citizens living in privately-owned properties ( $8.2 \%$ ) were more likely to use private specialists for their chronic-disease treatment.
5.3. Monthly family income:

Using Chi-square analysis the following findings were observed:
(For communication purpose, "low income group" was defined as those with monthly family income $<\$ 4,000$; "moderate income group" as those in the range of $\$ 4,000-\$ 9,999$; "middle income group" as those in the range of $\$ 10,000-\$ 14,999$; and "high income group" as those $>\$ 15,000$.)
5.3.1. Compared with the other three groups, senior citizens in low income group were significantly more likely to:
a) use public hospitals for their non-chronic-disease treatment (56.1\%),
b) pay for their non-chronic-disease treatment by themselves (78.2\%), and
c) use consultation fee as a criterion to choose their doctors ( $28.2 \%$ ).
5.3.2. Compared with the other three groups, senior citizens in low income group were significantly less likely to:
a) use private general practitioners ( $7.8 \%$ ) and private hospitals ( $1.3 \%$ ) for their chronic-disease treatment,
b) receive financial support from their next of kin for their non-chronicdisease ( $15.1 \%$ ) and chronic-disease ( $16.1 \%$ ) treatment, and
c) use private general practitioners for their non-chronic-disease treatment (41.6\%).
5.3.3. Compared with the other three groups, senior citizens in high income group
were significantly more likely to use quality of a doctor as a criterion to choose their doctors ( $60.0 \%$ ).
5.3.4. Compared with the other three groups, senior citizens in lower income group ( $46.6 \%$ ) were more likely to feel their normal spending influenced by their medical expenses.

### 5.4. Living District:

5.4.1. An attempt to conduct analysis across the 18 districts was made. The wide distribution of respondents across these districts would weaken the statistical power. Therefore, the respondents' living districts were simplified from 18 into 3 categories: Hong Kong Island, Kowloon and New Territories for the further statistical analysis.

Using Chi-square analysis the following findings were observed:
5.4.2. Compared with the other 2 groups, senior citizens living in Hong Kong Island:
a) were significantly more likely to receive financial support from their next of kin for their non-chronic-disease treatment (35.6\%),
b) had significant higher prevalence rates of high cholesterol ( $16.0 \%$ ), stomach problems (6.3\%), ear/nose problems (5\%) and depression (3.1\%).
c) were significantly less likely to feel their normal spending influenced by their medical expenses ( $30.9 \%$ ),
d) were significantly less likely not to seek medical advice due to the expensive medical cost $(22.3 \%)$,
5.4.3. Compared with the other 2 groups, senior citizens living in New Territories had a significant higher prevalence rate of Parkinson's disease (3.1\%). There was no other significant difference between those living in Kowloon and New Territories.

## Recommendations:

## The Present system

6.1. Senior citizens are more quality conscious in selecting health services for their chronic diseases and many of them are in low income group. The public hospitals/ clinics provide cheaper and satisfactory health services, and they are most widely used by these senior citizens. But with the present low charges for service within the HA system, expansion of service will only increase the demand from the other sectors of the population and would not be possible to specifically meet the demand of the elderly patients. Only a carefully planned subsidy system can direct the resource to senior citizens.
6.2. The present subsidy system should be revisited. Those who can afford private service should not receive any subsidy. Those who cannot afford to full payment of private services may receive partial subsidy. The long term goal should be addressing the problem of the disproportionate use of HA services compared with private sector. In case more patients are channeled to private practitioners, the responsible doctor should take up the role of a family doctor and take care of both chronic and non-chronic disease in order to provide continuing holistic care.
6.3. In view of the finding that the majority of senior citizens with chronic diseases require follow-up every $2-3$ months ( $68 \%$ ) or longer ( $18.8 \%$ ), and the fee on average per month is less than $\$ 200$ in the majority of cases ( $65.4 \%$ ), the present government subsidy scheme of providing five $\$ 50$ vouchers per year for medical treatment should be continued. Consideration can be given to increase the subsidy to $\$ 100$ per voucher.
6.4. Special medical subsidies should be targeted to senior citizens who are from low income group or family income with less than $\$ 9,999$, as about $70 \%$ of senior citizens in this income group are paying for their chronic-disease treatments by themselves. This can improve their health service utilization for both chronic and non-chronic-disease treatment.
6.5. Promotion of voluntary fee reduction for senior citizens by private practitioner, particularly the Medical Practice Groups, would be helpful to reduce the financial burden for the senior citizens seeking non-chronicdisease treatment.
6.6. The survey of the likelihood of interest by doctors who are retired or likely to retire in the near future or in medium term (i.e. aged 60 and above) to participate in a special senior citizens health service scheme is encouraging. Although the return sample size is small, nevertheless more than half are willing to join the service scheme.
6.7. Conceptually, the scheme is mainly for patients with chronic diseases. The participating doctors will work in the existing GPOC/Specialist OPC of HA/DH 1-2 times a week on a nominal remuneration basis, for a defined number of months on any one contractual period. Such doctors will, as usual, have a valid practicing certificate, and have satisfied any CME requirements for the general or specialist register of the Hong Kong Medical Council. Medical professional liability protection will be provided by the overall HA/DH insurance scheme for all their employed doctors.
6.8. The recruitment of medical doctors for the special senior citizens health service scheme can be targeted at those who are retired, or planning to retire in the near future, since they are more likely to be willing to join the scheme.
6.9. A more comprehensive survey of possible participating doctors is needed to ensure sustainability of the scheme, before deciding on whether the scheme is implementable. In order to attract greater response, this survey should contain more details about the scheme to be set up.
6.10. A Register for the special senior citizens health service scheme should be established by the Academy. Any Fellows or doctors who are interested in joining the scheme can apply to be included in the Register, so that they can be enrolled into the scheme when it is in place.
6.11. If the scheme is deemed useful to implement, the special senior citizens services should be opened near those areas with high density of senior citizens of low family income.
6.12. A careful comparison of the senior citizens health service utilization rate in the three districts can provide meaningful information regarding how to distribute the new senior citizens health service, if implemented, to meet the demands of senior citizens who need this service.

## General overview of the senior citizen population (Senior citizen is defined as those aged 65 or above):

In the health survey reported by the Department of Health (2004), there were only 753,600 senior citizens in 2001 , composed of $11.2 \%$ of the Hong Kong population. The survey projected that the senior citizen population would rise to 916,000 senior citizens in 2011 (where 460,000 (>65-74), 340,000 (>75-84), $116,000(>85))$ and the rising trend of senior citizen population would continue to soar, reaching $17.2 \%$ of the population with 1.4 million in 2021. This figure shows that there is a stronger demand for medical services in the senior citizen population in the near future. In the Census and Statistical Department report conducted in 2001, $23 \%$ of these senior citizens perceived their health status as poor and this was one of the important factors predicting their health service utilization. This rate suggested that more than two hundred thousand people would feel their need to receive medical attention in 2011 With the speedy advancement in medical sciences and technology, the mortality rate of senior citizens is slowing down to $3,374.5$ per 100,000 . This is believed to be a major reason for the increase in the aging population. The senior citizen population would become older (on average) than before and more people will live beyond the age of 85 . At the same time, it is expected that more senior citizens would have poorer health status and they would utilize more medical services.

Key Message: Population of senior citizens is increasing in Hong Kong and their medical needs are rising as well.

## Health service utilization of senior citizens:

Senior citizen is the age group with the highest rate for need of hospitalization $(158 / 1,000)$ and the second highest rate for medical consultation (289/1,000), compared with other age groups. These rates are similar to those observed in other countries (e.g. USA) (Murphy \& Hepworth, 1996). This is mainly due to the age-related medical conditions, including cerebrovascular accident, chronic obstructive pulmonary disease, ischaemic heart disease, lower respiratory tract infection and cataract.

Key Message: The five common chronic diseases would be the major factors for their hospitalization and medical consultation.

## Financial burden on public medical funding:

Despite many negative myths on the senior citizens' poor health conditions, prevention against their poor health status is possible to achieve. Treating serious medical conditions when they are still in their early stage is one of the prevention methods. Therefore, enabling senior patients to have early access to health service is the key for this prevention to be effective. It not only has important health benefits for the senior citizens, but also reduces the huge medical cost incurred by the delay of treatment, including longer hospital stay (Broyles, Narine, \& Brandt, 2000). Thus, this can be an effective means to relieve the financial burden in the limited public health service funding. However, there are many factors influencing their health service utilization, including medical insurance coverage, financial burden of the patients, income, and family support (Burnette \& Mui, 1999). Therefore, a thorough understanding of how these factors influence their decision making on health service utilization is important for designing policy that can facilitate senior citizens to gain early access of their needed health services.

Key message: Early medical intervention for senior citizens would improve their health status and reduce financial burden of the public health service funding due to delay of treatment.

## Financial burden for senior citizens seeking medical treatment:

As the senior citizens are less able to generate income as compared with the younger populations, their out-of-pocket medical expenditure may deplete their personal savings. In order to receive treatment for more severe diseases, they may need to sell whatever assets they have (Steinhardt, Waters, Rao, Naeem, Hansen \& Peters, 2008). This is another risk factor for poor health in senior citizens. Thus, it may generate a vicious cycle between their health status, poverty, and eventually lead to pre-mature death (Inverson, 1989; Smith, 1987). Poor senior citizens in turn seek health service utilization from the public resources for treatment.

Key message: The out-of-pocket medical expenditure may be a burden for senior citizens and result in vicious cycle of poor health, and poverty. Poor senior citizens would increase health service utilization from the public resources.

## The health and financial implication of having chronic diseases:

A major reason for health utilization by senior citizens is having chronic diseases. In a survey conducted in 2000 (Department of Health, 2004), 71.8\% of non-institutional senior citizens had at least one chronic disease such as hypertension, arthritis, eye disease, diabetes and cholesterol. Among them, $15 \%$ were disabled (with restricted body movements, seeing difficulties, hearing difficulties, speech difficulties, and mental illness). This rate is comparable to those observed in other countries where it is reported to have $79 \%$ of the senior citizens with at least one diagnosis of chronic diseases (Katia, Carmen, Carlo, Jyoti, Luis, \& Jorge, 2008). The diagnosis of chronic diseases implies a constant demand for health service utilization to maintain their deteriorating health.

Key message: Most senior citizens received diagnosis of at least one chronic disease and this implies their constant demands for health service utilization.

## Medical system in Hong Kong:

In Hong Kong, the health services are provided by private general practitioners, private hospitals, GOPCs and HA hospitals. Medical insurance can be voluntarily purchased on a personal basis, or provided as a benefit by companies. For those who are in extreme poverty, they can apply for Comprehensive Social Security Assistance (CSSA) and receive free health services under the public clinics and hospitals. All Hong Kong citizens are eligible to use the heavily subsidized health services provided by the public hospitals and clinics. However, the types of medication and treatment provided by these public clinics and hospitals are limited. There is a long waiting list for treatment of complicated medical problems. Also, people may perceive quality of service from the public clinics and hospitals as low and it deters their health service utilization (Steinhardt, Waters, Rao, Naeem, Hansen, \& Peters, 2009). Another factor influencing the choice of medical service provider by senior citizens is their income level. With higher income, senior citizens would be more likely to select private health care (Makinen, et al., 2000). Senior citizens from lower income group would be more likely to seek cheaper health service provided by the public hospitals/clinics.

Key message: Subsidized fee of medical services are provided by the public hospitals and clinics and their perceived quality of service may be lower due to long queues and limited medication available. This may deter health service utilization by senior citizens.

## Objectives of the present study:

As commissioned by the Hong Kong Academy of Medicine (HKAM), the objectives of the present study are to find out:
a) The medical conditions of senior citizens requiring treatment, their financial burden and ability to pay out of pocket or through help from relatives or through an insurance policy;
b) Where the medical services are rendered, and the level of satisfaction of senior citizens with the services rendered;
c) What percentage of medical services of private doctors are for senior citizens, whether reduced consultation fee has been offered to the senior citizens; and if not, whether they are willing to give such a discount, and at what level; and
d) What percentage of retired doctors is willing to offer a charity service for senior citizens of the lower income group, through being employed by the Hospital Authority or the Department of Health in the general outpatients clinics at a nominal remuneration rate.

## Methods:

a. Samples:

Based on the study objectives, (a) telephone interviews were performed with senior citizens who were aged 65 or above, (b) questionnaires with self-stamped envelopes were sent to practicing doctors and specialists, and (c) questionnaires with self-stamped envelopes were sent to medical doctors retired in the recent 2 years.
b. Questionnaire

Three sets of questionnaires in Chinese with one to each of the aforesaid group of respondents were designed by the Quality Evaluation Centre (QEC) of City University of Hong Kong in consultation with the HKAM and the final version is included in the Appendix. The closed-ended questions for senior citizen interview included (a) demographic variables, (b) non-chronic-disease related matters (health
service needs, payment, and service satisfaction), (c) chronic-disease-related matters (types of chronic diseases, health service needs, payment, service satisfaction, their financial burden), and (d) criterion for selection of doctors for their chronic-disease treatment.

There were three sets of questionnaire for: (1) currently practising medical doctors under age of 60 ; (2) currently practising medical doctors aged 60 or above; and (3) those already retired. All questionnaires contained items including (a) duration of medical practice, and (b) percentage of service for senior citizens. For the 2 groups of currently practising doctors, items related to (c) their discount practice, and (d) willingness to provide discount in the future were included. For currently practising medical doctors aged 60 or above and those already retired, items related to (e) willingness to join the special senior citizen medical service scheme and the level of involvement were included.

## c. Sample size

The total number of successfully enumerated cases was 1,000 for senior citizens, 663 for medical doctors aged below 60, 112 for medical doctors age 60 or above, and 24 retired doctors.
d. Sampling
i) Senior citizens

A computer assisted interviewing system was used for collecting survey data. Telephone numbers were randomly generated from the residential telephone numbers as printed in the telephone directory.

After a targeted household was connected, the one who had just passed the birthday was chosen by an interviewer if there were more than one resident aged 65 or above residing in that living premises.

If the potential household could not be contacted, at least three attempts at different times on different days of the week were made before classifying the case as a noncontact case. This ensures the results are not biased by non-contact and nonresponse cases.

Since the survey data were directly recorded by the interviewers during the interviewing process, the error of data input could be minimized.

The fieldwork was performed from 4 February 2009 to 9 March 2009.
ii) Practising specialists, general practitioners, and retired doctors

In a pilot study, telephone interviews with doctors were conducted. Due to the low response rate, the method of mailed questionnaire was adopted with the consent of HKAM.

The final sample was based on (1) the contact list including their name and mailing address of currently practising specialists and doctors retired in the recent 2 years provided by HKAM and (2) randomly selected names of doctors listed in the Yellow Pages. An invitation letter was sent to them by the QEC together with the questionnaire and self-stamped return envelope.

## Results:

## Part I: Medical service needs for senior citizens with chronic diseases

### 1.1. Profile of respondents

There were 392 males ( $39.2 \%$ ) and 608 ( $60.8 \%$ ) females in the sample. The response rate is $56.63 \%$. 365 of them in public rental housing ( $36.5 \%$ ), 329 of them were living in privately-owned properties ( $32.9 \%$ ), 180 of them in home ownership scheme flat ( $18 \%$ ), 61 of them in private rental housing $(6.1 \%), 39$ of them in village houses ( $3.9 \%$ ) and only 26 of them ( $2.6 \%$ ) reported either "not sure" or did not reply about their housing situation (See Table 1). These respondents were living in Kung Tong (10.9\%), Shatin (8.4\%), Eastern District (8.2\%), Wong Tai Sin (7.6\%), Yau Tsim Mong (6.7\%), Kwai Ching (6.7\%), Shum Shui Po (6.1\%), Kowloon City (5.7\%), Tsuen Wan (5.2\%), Yuen Long (4.9\%), Northern District (4.8\%), Sai Kung (4.0\%), Mid-West District (3.9\%), Southern District (3.8\%), Tuen Mun (3.8\%), Tai Po (3.6\%), Wan Chai (2.9\%), Outlying Islands (1.2\%). 16 respondents refused to indicate their living district (see Table 2)

Table 1: Type of housing distribution:

|  | Frequency | Percentage |
| :--- | ---: | ---: |
| Privately-owned properties | 329 | 32.9 |
| Private rental housing | 61 | 6.1 |
| Public rental housing | 365 | 36.5 |
| Home ownership scheme housing | 180 | 18.0 |
| Village houses | 39 | 3.9 |
| Not sure | 11 | 1.1 |
| Refuse to answer | 15 | 1.5 |
| Total | 1,000 | 100.0 |

Table 2: District distribution of the senior respondents:

|  | Frequency | Percentage |
| :--- | ---: | ---: |
| Kwun Tong | 109 | 10.9 |
| Shatin | 84 | 8.4 |
| Eastern District | 82 | 8.2 |
| Wong Tai Sin | 76 | 7.6 |
| Yau Tsim Mong | 67 | 6.7 |
| Kwai Ching | 67 | 6.7 |
| Shum Shui Po | 61 | 6.1 |
| Kowloon City | 57 | 5.7 |
| Tsuen Wan | 52 | 5.2 |
| Yuen Long | 49 | 4.9 |
| Northern District | 48 | 4.8 |
| Sai Kung | 40 | 4.0 |
| Mid-West District | 39 | 3.9 |
| Southern District | 38 | 3.8 |
| Tuen Mun | 38 | 3.8 |
| Tai Po | 36 | 3.6 |
| Wan Chai | 29 | 2.9 |
| Outlying Islands | 12 | 1.2 |
| Refuse to answer | 16 | 1.6 |
| Total | 1,000 | 100.0 |

The self-reported monthly family income distribution of these 1,000 senior citizens was as follows: 197 of them (19.7\%) were less than $\$ 2,000,161$ of them ( $16.1 \%$ )
were in $\$ 2,000-\$ 3,999,146$ of them (14.6\%) were in $\$ 4,000-\$ 5,999,69$ of them ( $6.9 \%$ ) were in $\$ 6,000-\$ 7,999,42$ of them were in $\$ 8,000-\$ 9,999,68$ of them ( $6.8 \%$ ) were in $\$ 10,000-\$ 14,999,51$ of them $(5.1 \%)$ were in $\$ 15,000-\$ 24,999,23$ of them $(2.3 \%)$ were in $\$ 25,000-\$ 39,999,12$ of them $(1.2 \%)$ were in $\$ 40,000-$ $\$ 59,999,11$ of them ( $1.1 \%$ ) were more than $\$ 60,000.161$ of them ( $16.1 \%$ ) were not sure about their monthly family income and 59 of them (5.9\%) refused to reply. Only 94 cases $(9.4 \%)$ reported receiving CSSA and 895 respondents ( $89.5 \%$ ) declared not receiving CSSA. 11 respondents (1.1\%) reported either "not sure" or did not reply their CSSA status (See Table 3a \& 3b).

Table 3a: Monthly family income distribution:

| Monthly family income | Frequency | Percentage |
| :--- | ---: | ---: |
| $\langle \$ 2,000$ | 197 | 19.7 |
| $\$ 2,000-3,999$ | 161 | 16.1 |
| $\$ 4,000-5,999$ | 146 | 14.6 |
| $\$ 6,000-7,999$ | 69 | 6.9 |
| $\$ 8,000-9,999$ | 42 | 4.2 |
| $\$ 10,000-14,999$ | 68 | 6.8 |
| $\$ 15,000-19,999$ | 28 | 2.8 |
| $\$ 20,000-24,999$ | 23 | 2.3 |
| $\$ 25,000-29,999$ | 9 | .9 |
| $\$ 30000-39999$ | 14 | 1.4 |
| $\$ 40,000-59,999$ | 12 | 1.2 |
| $\$ 60,000>$ | 11 | 1.1 |
| Not sure | 161 | 16.1 |
| Refuse to answer | 59 | 5.9 |
| Total | 1,000 | 100.0 |

Table 3b: Number of Comprehensive Social Security Assistance Scheme (CSSA) recipient:

| CSSA recipients | Frequency | Percentage |
| :---: | ---: | ---: |
| Yes | 94 | 9.4 |
| No | 895 | 89.5 |
| Not sure | 9 | .9 |
| Refuse to answer | 2 | .2 |
| Total | 1,000 | 100.0 |

### 1.2. Sources of payment and satisfaction for NON-CHRONIC-disease medical services

### 1.2.1. Medical service utilization for non-chronic diseases

Of these 1,000 senior citizens, 471 ( $47.1 \%$ ) used private general practitioners for their non-chronic diseases, 46 ( $4.6 \%$ ) would seek service from private hospitals, $516(51.6 \%)$ would use public hospitals/clinics, 62 (6.2\%) reported using public hospitals for emergency cases, $71(7.1 \%)$ would seek treatment from Traditional Chinese Medicine practitioners, 107 ( $10.7 \%$ ) used self-medication and 7 ( $0.7 \%$ ) either used other service or refused to reply (See Table 4a). The results showed that the majority of the senior respondents would seek treatment from private general practitioners and public clinics for their non-chronic diseases. Most of them would seek only one service ( 753 respondent; $75.3 \%$ ), 213 respondents ( $21.3 \%$ ) would use two different medical services and 28 of them ( $2.8 \%$ ) would use three or more of the service (see Table 4b). The mean number of medical services used for nonchronic diseases is $1.1(\mathrm{SD}=0.32)$. This result is consistent with the frequency distribution data and showed that most of the senior respondents would only use one medical service for their treatment of non-chronic diseases.

Table 4a: Type of health service sought for non-chronic diseases:

| Type of health service sought | Frequency | Percentage |
| :--- | ---: | ---: |
| Private general practitioners | 471 | 47.1 |
| Private Hospitals | 46 | 4.6 |
| Public Clinics/ Hospitals | 516 | 51.6 |
| Emergency service | 62 | 6.2 |
| Chinese Medical Practitioners | 71 | 7.1 |
| Self-medication | 107 | 10.7 |
| Others | 1 | .1 |
| Refuse to answer | 6 | .6 |

Table 4b: Number of health services sought for non-chronic diseases:

| Number of services sought | Frequency | Percentage |
| :---: | ---: | ---: |
| 0 | 6 | .6 |
| 1 | 753 | 75.3 |
| 2 | 213 | 21.3 |
| 3 | 19 | 1.9 |
| 4 | 8 | .8 |
| 6 | 1 | .1 |
| Total | 1,000 | 100.0 |

### 1.2.2. Medical expenses \& sources of payment for non-chronic diseases

227 respondents (22.7\%) indicated paying the consultation fee in the range of \$1$\$ 50,179$ ( $17.9 \%$ ) in $\$ 51-\$ 100,196$ respondents (19.6\%) in $\$ 101-\$ 150,149$ respondents ( $14.9 \%$ ) in $\$ 151-\$ 200$ and 129 respondents ( $12.9 \%$ ) above $\$ 201$ (See Table 5a). Of these 1,000 respondents, 27 ( $2.7 \%$ ) were not sure about their medical expenses and $82(8.2 \%)$ received free consultation. Most of the respondents were required to pay for their medical consultations. 722 respondents ( $72.2 \%$ ) paid these medical services by themselves, 262 of them ( $26.2 \%$ ) paid by their next of kin (e.g. parents or sons), 106 of them ( $10.6 \%$ ) paid by other means. Only a very few of them ( $<1 \%$ ) received financial help from distant relatives (e.g. grandson) or were covered by an insurance policy (see Table 5 b ). The majority of these respondents ( $897 ; 89.7 \%$ ) had only one source of payment and 98 of them ( $9.8 \%$ ) had two or more sources of payment for the non-chronic diseases (See Table 5c).

Table 5a: Consultation fee for non-chronic diseases:

| Consultation Fee | Frequency | Percentage |
| :--- | ---: | ---: |
| Free | 82 | 8.2 |
| $\$ 1-50$ | 227 | 22.7 |
| $\$ 51-100$ | 179 | 17.9 |
| $\$ 101-150$ | 196 | 19.6 |
| $\$ 151-200$ | 149 | 14.9 |
| $\$ 201-250$ | 76 | 7.6 |
| $\$ 251-300$ | 21 | 2.1 |
| $\$ 301>$ | 42 | 4.2 |
| Not sure | 27 | 2.7 |
| Refuse to answer | 1 | .1 |
| Total | 1,000 | 100.0 |

Table 5b: Distribution of payment methods for the non-chronic diseases:

| Payment Method | Frequency | Percentage |
| :--- | ---: | ---: |
| Myself | 722 | 72.2 |
| Next of kin | 262 | 26.2 |
| Insurance | 2 | .2 |
| Distant relatives | 4 | .4 |
| Others | 106 | 10.6 |
| Refuse to answer | 5 | .5 |

Table 5c: Number of payment sources for the non-chronic diseases:

| Number of payment sources | Frequency | Percentage |
| :---: | ---: | ---: |
| 0 | 5 | .5 |
| 1 | 897 | 89.7 |
| 2 | 95 | 9.5 |
| 3 | 3 | .3 |
| Total | 1,000 | 100.0 |

### 1.2.3. Level of satisfaction for non-chronic medical services

$476(47.6 \%)$ rated somewhat or very satisfied with their non-chronic-disease health services received, 324 of them ( $32.4 \%$ ) rated their satisfaction with the services as average and 96 of them $(9.6 \%)$ rated somewhat or very unsatisfied with their services received. In the Likert scale of 1="very satisfied", 2="somewhat satisfied", $3=" a v e r a g e ", 4=" s o m e w h a t ~ u n s a t i s f i e d " ~ a n d ~ 5=" v e r y ~ u n s a t i s f i e d ", ~ t h e ~ a v e r a g e ~$ satisfaction level for the non-chronic-disease health services received was 2.60 ( $\mathrm{SD}=0.97$ ). The results suggested that on average, respondents felt somewhat satisfied with their health service received for non-chronic-disease treatment.

Table 6: Frequency of the Level of Satisfaction for the non-chronic-disease health services:

| Satisfaction Level | Frequency | Percentage |
| :--- | ---: | ---: |
| Very satisfied | 95 | 9.5 |
| Somewhat satisfied | 381 | 38.1 |
| Average | 324 | 32.4 |
| Somewhat unsatisfied | 102 | 10.2 |
| Very unsatisfied | 45 | 4.5 |
| Not sure | 51 | 5.1 |
| Refuse to answer | 2 | .2 |
| Total | 1,000 | 100.0 |

### 1.3. CHRONIC-DISEASE status and their related health service demands

### 1.3.1. Chronic-disease type and number of diagnosis received by respondents

Of the thousand respondents, 623 (62.3\%) had chronic diseases. Among the 623 respondents, the disease with the highest prevalence is high blood pressure ( 360 of them; $57.8 \%$ ), followed by diabetes with 151 person; ( $24.2 \%$ ), then heart disease (96 participants; $15.4 \%$ ), arthritis ( 71 respondents; 11.4\%) and high cholesterol (62 people; 10\%), eye disease (46 respondents; 7.4\%) and osteoporosis (31 respondents; 5\%). Prevalence of other chronic diseases included dementia, stroke, asthma, bone fracture, stomach problems, Parkinson's disease, depression, ear/nose problem, cancer, kidney failure, chronic skin condition and communicable diseases which constituted less than 5\% of the cases (See Table 7a).

Of the 623 senior citizens with chronic diseases, 320 (51.4\%) reported to have only one diagnosis, 202 ( $32.4 \%$ ) with two diagnoses, 77 ( $12.4 \%$ ) with three diagnoses and 24 ( $3.8 \%$ ) with four or more diagnoses (See Table 7b). Descriptive statistics showed that these patients had an average of $1.69(\mathrm{SD}=0.84)$ diagnosis of chronic diseases.

Table 7a: Frequency of chronic diseases ( $\mathrm{n}=623$ ):

| Chronic diseases | Frequency | Percentage |
| :--- | ---: | ---: |
| High Blood Pressure | 360 | 57.8 |
| Diabetes | 151 | 24.2 |
| Heart disease | 96 | 15.4 |
| Arthritis | 71 | 11.4 |
| High cholesterol | 62 | 10.0 |
| Eye disease | 46 | 7.4 |
| Osteoporosis | 31 | 5.0 |
| Stroke | 28 | 4.5 |
| Asthma | 20 | 3.2 |
| Stomach problems | 19 | 3.0 |
| Kidney problems | 17 | 2.7 |
| Ear, nose problems | 14 | 2.2 |
| Cancer | 14 | 2.2 |
| Parkinson's disease | 9 | 1.4 |
| Chronic skins conditions | 9 | 1.4 |
| Bone Fracture | 8 | 1.3 |
| Depression | 6 | 1.0 |
| Dementia | 2 | .3 |
| Communicable diseases | 1 | .2 |
| Others | 85 | 13.6 |

Table 7b: Frequency of numbers of diagnosis of chronic diseases

| Number of diagnosis of chronic diseases received | Frequency | Percentage |
| :---: | ---: | ---: |
| 1.00 | 320 | 51.4 |
| 2.00 | 202 | 32.4 |
| 3.00 | 77 | 12.4 |
| 4.00 | 22 | 3.5 |
| 5.00 | 2 | .3 |
| Total | 623 | 100.0 |

### 1.3.2. Satisfaction and requirement for medical service for chronic diseases

In seeking treatment for chronic diseases, 319 out of 623 respondents (51.2\%) used Hospital Authority General Out-Patients Clinics and 258 of them ( $41.4 \%$ ) used Hospital Authority Specialist Clinics. 68 of them (10.9\%) used private general practitioners. Respondents with chronic diseases used very few services from private specialists $(4.2 \%)$, private hospitals $(2.4 \%)$, traditional Chinese medical practitioners (3.9\%), or self-medication (2.4\%). One respondent was not sure the type of service s/he used and the other respondent refused to answer (See Table 8a). 525 of them ( $84.3 \%$ ) used only one of the listed services and 92 of them ( $14.8 \%$ ) used two of the services and five of them ( $0.8 \%$ ) used more than 3 types of services. One respondent did not use any service (See Table 8a). On average, these respondents used 1.17 services for their chronic diseases.

Table 8a: Type of health services for the chronic diseases:

| Type of health service sought | Frequency | Percentage |
| :--- | ---: | ---: |
| Private general practitioners | 68 | 10.9 |
| Private specialists | 26 | 4.2 |
| Private hospitals | 15 | 2.4 |
| Hospital Authority General Out-Patients Clinics | 319 | 51.2 |
| Hospital Authority Specialist Clinics | 258 | 41.4 |
| Chinese medicine practitioners | 24 | 3.9 |
| Self-medication | 15 | 2.4 |
| Others | 1 | .2 |
| Refuse to answer | 1 | .2 |

Table 8b: Number of health services sought for the chronic diseases:

| Number of health service sought for the chronic diseases | Frequency | Percentage |
| :---: | ---: | ---: |
| 0 | 1 | .2 |
| 1 | 525 | 84.3 |
| 2 | 92 | 14.8 |
| 3 | 3 | .5 |
| 4 | 2 | .3 |
| Total | 623 | 100.0 |

Of the 623 senior citizens with chronic diseases, 571 (91.7\%) required regular follow-up health services. Among these 571 senior citizens, 65 of them (11.3\%) required to have their follow-up services every one to three weeks. 388 of them $(68 \%)$ needed the follow-up services every two to three months. 97 of them ( $18.8 \%$ ) needed the services every four months to once a year (See Table 9).

Table 9: Frequency of for different follow-up schedule:

| Schedule for follow-up | Frequency | Percentage |
| :--- | ---: | ---: |
| Once a week | 7 | 1.2 |
| Biweekly | 11 | 1.9 |
| Once in 3-4 weeks | 47 | 8.2 |
| Bimonthly | 165 | 28.9 |
| Once in 3 months | 223 | 39.1 |
| Once in 4 months | 42 | 7.4 |
| Once in half year | 46 | 8.1 |
| Annually | 19 | 3.3 |
| Other | 8 | 1.4 |
| Refuse to answer | 3 | .5 |
| Total | 571 | 100.0 |

Of the 623 senior patients with chronic diseases, 312 (50.1\%) were somewhat or very satisfied with the health services received. 201 of them (32.3\%) felt the satisfaction their service as an average and 90 of them ( $14.4 \%$ ) felt the services were somewhat or very unsatisfied. In the Likert scale of $1=$ very satisfied", $2="$ somewhat satisfied", 3="average", 4="somewhat unsatisfied" and 5="very unsatisfied", the average satisfaction level for the chronic-disease medical consultation received was 2.56 ( $\mathrm{SD}=0.993$ ).

Table 10: Frequency of the Level of Satisfaction for the chronic-disease health services:

| Level of satisfaction | Frequency | Percentage |
| :--- | ---: | ---: |
| Very satisfied | 73 | 11.7 |
| Somewhat satisfied | 239 | 38.4 |
| Average | 201 | 32.3 |
| Somewhat unsatisfied | 60 | 9.6 |
| Very unsatisfied | 30 | 4.8 |
| Not sure | 19 | 3.0 |
| Refuse to answer | 1 | .2 |
| Total | 623 | 100.0 |

1.3.3. Sources of payment and financial burden for the chronic-disease medical expenditure

Of the 623 senior citizens with chronic diseases, 71 (11.4\%) received free treatment and $32(5.1 \%)$ were not sure of the cost of their treatment for chronic diseases. For chronic-disease treatments, 300 of them (48.2\%) spent \$1-\$100, 107 of them ( $17.2 \%$ ) spent $\$ 101-\$ 200$ and 113 of them ( $18.1 \%$ ) spent more than $\$ 201$, on average per month (See Table 11).

Table 11: Consultation fees for chronic diseases

|  | Frequency | Percentage |
| :--- | ---: | ---: |
| Free | 71 | 11.4 |
| $\$ 1-100$ | 300 | 48.2 |
| $\$ 101-200$ | 107 | 17.2 |
| $\$ 201-300$ | 35 | 5.6 |
| $\$ 301-400$ | 15 | 2.4 |
| $\$ 401-500$ | 4 | .6 |
| $\$ 501>$ | 59 | 9.5 |
| Not sure | 32 | 5.1 |
| Total | 623 | 100.0 |

418 of them ( $67.1 \%$ ) paid for the health services expenses themselves, 185 of them (29.7\%) paid with the help from their next of kin, 81 of them ( $13 \%$ ) received CSSA or civil service benefits. Payment from insurances and distant relatives were
very rare (less than one percent) (See Table 12a). 552 of them ( $88.6 \%$ ) reported to have only one source of payment for their chronic-disease treatment and 68 of them ( $11 \%$ ) had two or more sources. On average, the senior citizens with chronic diseases received $1.11(\mathrm{SD}=0.33)$ sources of payment for their health services (See Table 12b).

Table 12a: Distribution of payment methods for chronic diseases ( $\mathrm{n}=623$ ):

| Payment Method | Frequency | Percentage |
| :--- | ---: | ---: |
| Myself | 418 | 67.1 |
| Next of kin | 185 | 29.7 |
| Insurance | 1 | .1 |
| Distant relatives | 4 | .6 |
| Others | 81 | 13.0 |
| Refuse to answer | 2 | .3 |

Table 12b: Number of payment sources for chronic diseases:

| Number of payment sources | Frequency | Percentage |
| :---: | ---: | ---: |
| 0 | 3 | .5 |
| 1 | 552 | 88.6 |
| 2 | 67 | 10.8 |
| 3 | 1 | .2 |
| Total | 623 | 100.0 |

Of the 623 senior citizens with chronic diseases, 273 ( $43.8 \%$ ) felt that their treatment cost influenced spending on their normal daily living. In the Likert scale of $1=$ "very much burdened", $2=$ "somewhat burdened", $3=$ "average", $4=$ "somewhat not burdened" and $5=$ "very much not burdened", the average financial burden level for the chronic-disease medical treatment was $2.95(\mathrm{SD}=1.16)$ based on 588 senior citizens with chronic diseases. 212 of them (34\%) felt that the medical expenses for their chronic-disease treatment were somewhat or very much a burden, 159 of them ( $25.5 \%$ ) felt generally burdened, 217 of them (34.8\%) felt somewhat not or very not burdened. 33 of them ( $5.3 \%$ ) indicated "not sure" in this question and 2 of them did not answer it (See Table 13a). Of the 623 patients with chronic diseases, $150(24.1 \%)$ would not seek medical advices because of the expensive cost. 119 of them $(19.1 \%)$ indicated that consultation fee was the most important factor determining their choice of doctors, 208 of them (33.4\%) indicated quality of
doctor was the primary determining factor, 133 of them (21.3\%) reported that both consultation fee and quality of doctor were equally important for their selection of doctors. 163 of them $(26.2 \%)$ did not show any preference for their doctor selection criterion (See Table 13b).

Table 13a: Level of financial burden for chronic-disease treatment ( $n=623$ ):

| Level of financial burden | Frequency | Percentage |
| :--- | ---: | ---: |
| Very much | 79 | 12.7 |
| Somewhat | 133 | 21.3 |
| Average | 159 | 25.5 |
| Somewhat not | 174 | 27.9 |
| Very not | 43 | 6.9 |
| Not sure | 33 | 5.3 |
| Refuse to answer | 2 | .3 |
| Total | 623 | 100.0 |

Table 13b: Selection criterion for their choice of doctors:

| Selection Criterion | Frequency | Percentage |
| :--- | ---: | ---: |
| Consultation fee | 119 | 19.1 |
| Quality of doctor | 208 | 33.4 |
| Both | 133 | 21.3 |
| Not sure | 157 | 25.2 |
| Refuse to respond | 6 | 1.0 |
| Total | 623 | 100.0 |

Part II Provision of medical services by medical doctors aged under 60:

### 2.1. Profile of respondents and their current discount practice

A total of 663 completed questionnaires were returned by the practising medical doctors aged under 60. The response rate is $30.15 \%$. 541 of them were males, 117 were females and 5 of them did not indicate their gender. On average, they had practised medicine for 24.54 years ( $\mathrm{SD}=9.40$ ). 17 of them did not provide information regarding their discount practice. The following statistics were based on the 646 medical doctors who had indicated their discount practice. On average, $25.16 \%$ ( $\mathrm{SD}=27.41$ ) of their patients were senior citizens. 252 of them ( $39.0 \%$ ) gave discount health service for the senior citizens, 278 of them ( $43.0 \%$ ) gave
discount to those as deemed needed. 80 of them (12.4\%) did not give discount at all and 36 of them ( $5.6 \%$ ) did not give discount due to a clinic payment policy (See Table 14)

Table 14: Discount practice for the medical doctor under age of 60.

| Discount practice | Frequency | Percentage |
| :--- | ---: | ---: |
| Yes (all senior citizens received discount) | 252 | 39.0 |
| Yes (discount was given to the needed senior | 278 | 43.0 |
| No (no discount at all) | 80 | 12.4 |
| No (because of the clinic payment policy) | 36 | 5.6 |
| Total | 646 | 100 |

Of the 663 medical doctors, 197 did not indicate their level of discount. The following statistics were based on the 466 medical doctors who had indicated their discount practice. $44 \%$ of them charged at $71-99 \%$ of their normal fee, $25.1 \%$ of them at $51-70 \%$ of their normal fee, $9 \%$ of them at $31-50 \%$ of their normal fee and $21.9 \%$ of them at less than $30 \%$ of their normal fee. The average discounted consultation fee is $59.36 \% ~(S D=24.42)$ of their normal fee (See Table 15).

Table 15: Frequency of the percentage of the discounted fee level given by the medical doctors under age of 60 in the future

| $\%$ of normal fee paid | Frequency | Percentage |
| :---: | ---: | ---: |
| $<10 \%$ | 29 | 6.2 |
| $11-20 \%$ | 54 | 11.6 |
| $21-30 \%$ | 19 | 4.1 |
| $31-40 \%$ | 10 | 2.1 |
| $41-50 \%$ | 32 | 6.9 |
| $51-60 \%$ | 33 | 7.1 |
| $61-70 \%$ | 84 | 18.0 |
| $71-80 \%$ | 150 | 32.2 |
| $81-90 \%$ | 51 | 10.9 |
| $91-100 \%$ | 4 | .9 |
| Total | 466 | 100.0 |

### 2.2. Future service and intention to reduce consultation fee for senior patients

Of the 116 doctors who had not provided discount for senior citizens, 30 ( $25.9 \%$ ) were willing to provide discounts for senior citizens and 83 (71.5\%) indicated that they would not provide such discount, and it was partly due to the clinic payment policy ( $39.8 \%$ of the no discount providers). 3 of them ( $2.6 \%$ ) did not indicate their willingness to give discount in the future (See Table 16). Among the doctors who are willing to give the discounts, 20 of them indicated the level of discount to be given, and the average discount is $20.75 \%$ ( $\mathrm{SD}=12.80$ ). $40 \%$ of them were willing to provide discount of less than $10 \%, 50 \%$ of them at $11-30 \%$ discount. Only $10 \%$ of them would provide 41-50\% of discount.

Table 16: Willingness of providing discount in the future by medical doctors aged below 60 who is currently not giving discounts:

| Willingness to provide discounts in the future? | Frequency | Percentage |
| :---: | ---: | ---: |
| Willing | 30 | 25.9 |
| Not willing | 50 | 43.1 |
| No (because of the clinic payment policy) | 33 | 28.4 |
| Did not answer | 3 | 2.6 |
| Total | 116 | 100.0 |

Part III Provision of medical services by medical doctors aged 60 or above:

### 3.1. Profile of respondents and their current discount practice

A total of 112 completed questionnaires were returned by medical doctors aged 60 or above. The response rate was $25.74 \%$. 102 of them were males, 7 were females and 3 of them did not indicate their gender. On average, they had practiced medicine for 39.94 years $(\mathrm{SD}=5.59) .30 .43 \% ~(\mathrm{SD}=22.92)$ of their patients were senior citizens. 15 of them ( $13.4 \%$ ) gave discount for the senior citizens, 56 of them $(50.0 \%$ of the valid cases) gave discount to those as deemed needed. 24 of them $(21.4 \%)$ did not give discount at all and 11 of them $(9.8 \%)$ did not give discount due to clinic payment policy. 6 of them (5.4\%) did not indicate their discount practice (See Table 17).

Only 55 of the respondents indicated their level of discounts. Among them, $40 \%$ of the doctors charged at $71-99 \%$ of the normal fee, $21.8 \%$ of them at $51-70 \%$ of the normal fee, $20 \%$ of them at $31-50 \%$ of the normal fee and $18.1 \%$ of them at less than $30 \%$ of the normal fee (See Table 18). The average discounted consultation fee is $60.53 \%$ of their normal fee $(\mathrm{SD}=25.62)$.

### 3.2. Future service and intention to reduce consultation fee for senior patients

Of the 35 doctors who had not provided discount for senior citizens, 32 responded to the follow-up question on whether they would be willing to provide discount in future. 9 of them ( $25.7 \%$ ) were willing to provide discounts for senior citizens and 23 of them ( $65.7 \%$ ) indicated that they would not provide such discount, and it was partly due to the clinic payment policy ( $39.1 \%$ of the no discount providers). 3 of them ( $8.6 \%$ ) did not indicate their future discount practice. Among the doctors who were willing to give the discounts, 8 of them replied and the average discounted rate was $21.88 \%$ ( $\mathrm{SD}=13.08$ ). $25 \%$ of them were willing to provide discount of less than $10 \%, 62.5 \%$ of them at $11-30 \%$ discount and only $12.5 \%$ of them would provide $41-50 \%$ of discount (See Table 19).

Table 17: Discount practice for the medical doctor age 60 or above

| Discount practice | Frequency | Percentage |
| :---: | ---: | ---: |
| Yes (all senior citizens) | 15 | 13.4 |
| Yes (discount given to deemed needed) | 56 | 50.0 |
| No (no discount at all) | 24 | 21.4 |
| No (because of clinic payment policy) | 11 | 9.8 |
| Did not answer | 6 | 5.4 |
| Total | 112 | 100.0 |

Table 18: Frequency of the percentage of discounted fee level currently given by medical doctors aged 60 or above.

| Fee charged (as \% of normal) | Frequency | Percentage |
| :---: | ---: | ---: |
| $0-10 \%$ | 2 | 3.6 |
| $11-20 \%$ | 6 | 10.9 |
| $21-30 \%$ | 2 | 3.6 |
| $31-40 \%$ | 3 | 5.5 |
| $41-50 \%$ | 8 | 14.5 |
| $51-60 \%$ | 4 | 7.3 |
| $61-70 \%$ | 8 | 14.5 |
| $71-80 \%$ | 18 | 32.7 |
| $81-90 \%$ | 3 | 5.5 |
| $91-100 \%$ | 1 | 1.8 |
| Total | 55 | 100.0 |

Table 19: Willingness of providing discount in the future by medical doctors aged 60 or above who is currently not giving discounts:

| Willingness to provide discounts in the future? | Frequency | Percentage |
| :---: | ---: | ---: |
| Willing | 9 | 25.7 |
| Not willing | 14 | 40.0 |
| No (because of clinic payment policy) | 9 | 25.7 |
| Did not answer | 3 | 8.6 |
| Total | 35 | 100.0 |

### 3.3. Intention to join the special senior citizens health service scheme

74 medical doctors in this group ( $66.1 \%$ ) were willing to take part in the proposed special senior citizens medical service scheme organized by the Hospital Authorities or Department of Health and 61 of them (82.4\%) answered their level of willingness to take part in the scheme. In a scale of 1 (least willing) to 10 (very willing), 25 of them ( $41 \%$ ) rated 8 or above, 34 of them ( $55.7 \%$ ) rated $5-7$ and 2 of them (less than $4 \%$ ) rated 4 or below (See Table 20). The average willingness was $6.98(\mathrm{SD}=2.07)$ out of 10 , indicating that they were quite willing to join the scheme. Only 64 respondents indicated their frequency of involvement in the proposed scheme. Among them, 39 ( $60.9 \%$ ) indicated that they could provide the proposed service 1-2 times per week and 19 of them (29.7\%) for 3-4 times per week (See Table 21).

Table 20: Level of willingness to join the proposed scheme by medical doctors aged 60 or above.

| Level of willingness to join the scheme | Frequency | Percentage |
| :---: | ---: | ---: |
| 3 | 1 | 1.6 |
| 4 | 1 | 1.6 |
| 5 | 21 | 34.4 |
| 6 | 7 | 11.5 |
| 7 | 6 | 9.8 |
| 8 | 8 | 13.1 |
| 9 | 4 | 6.6 |
| 10 | 13 | 21.3 |
| Total | 61 | 100.0 |

Table 21: Frequency to participate the proposed scheme by medical doctors aged 60 or above.

| Frequency of involvement in the proposed scheme <br> (per week). | Frequency | Percentage |
| :--- | ---: | ---: |
| Less than once | 3 | 4.7 |
| One to two times | 39 | 60.9 |
| Three to four times | 19 | 29.7 |
| Five times or above | 2 | 3.1 |
| Other | 1 | 1.6 |
| Total | 64 | 100.0 |

Part IV Provision of medical services by retired medical doctors:

### 4.1. Profile of respondents

A total of 24 completed questionnaires were returned by retired medical doctors. The response rate was $38.10 \%$. 18 of them were males, 6 were females. On average, they had practiced medicine for 37.73 years ( $\mathrm{SD}=9.73$ ). $25.14 \%$ ( $\mathrm{SD}=20.71$ ) of their patients were senior citizens.
4.2. Intention to join the special senior citizens health service scheme

12 of medical doctors in this group (50\%) were willing to take part in the special medical service scheme organized by the Hospital Authority or Department of Health and 11 of them answered their level of willingness to take part in the scheme. In a scale of 1 (least willing) to 10 (very willing), 8 of them ( $72.8 \%$ ) rated 5 or above and 3 of them ( $27.3 \%$ ) rated 4 or below. The average willingness was $5.45(\mathrm{SD}=1.70)$ out of 10 , indicating that they were mildly willing to join the scheme (See Table 22). 8 of them ( $72.7 \%$ ) indicated they could provide the proposed service 1-2 times per week (See Table 23).

Table 22: Level of willingness to join the proposed scheme by retired medical doctors.

| Level of willingness to join the scheme | Frequency | Percentage |
| :---: | ---: | ---: |
| 2 | 1 | 9.1 |
| 4 | 2 | 18.2 |
| 5 | 2 | 18.2 |
| 6 | 3 | 27.3 |
| 7 | 2 | 18.2 |
| 8 | 1 | 9.1 |
| Total | 11 | 100.0 |

Table 23: Frequency to participate the proposed scheme by retired medical doctors.

| Frequency of involvement in the proposed scheme <br> (per week). | Frequency | Percentage |
| :--- | ---: | ---: |
| Less than once | 1 | 9.1 |
| One to two | 8 | 72.7 |
| Three to four times | 1 | 9.1 |
| Other | 1 | 9.1 |
| Total | 11 | 100.0 |

## Part V Post-hoc Analysis:

Based on the categories of (a) gender, (b) type of housing, (c) family income level, and (d) living district, different groups were formed. One-Way Analysis of Variance (ANOVA) and Chi-square were conducted to analyze the group differences on their previous health service experiences for non-chronic diseases; and for chronic diseases, prevalence rates of chronic diseases, the impacts of health service expenses and their financial burden for their medical treatment, separately.

### 5.1. Gender

Female senior citizens were significantly more likely to seek private clinical services for their non-chronic-disease treatment. They were significantly more likely to receive financial support from their next of kin and were less likely to pay for their health services as compared with male senior citizens (See Table 24a).

Female senior citizens were significantly more likely to have osteoporosis or high cholesterol than males and have a significant trend of higher prevalence rate of
depression ( $\mathrm{p}=0.056$ ). They have significantly more diagnoses of chronic diseases than male senior citizens. In selecting the health services for their chronic-disease treatment, female senior citizens were significantly more likely to seek private general practitioners. They were significantly more likely to receive financial support from their next of kin and were less likely to pay by themselves for their health services as compared with male senior citizens (See Table 24a). Furthermore, female senior citizens ( 1.5 ; $\mathrm{SD}=0.77$ ) were significantly more likely to use expensive medical cost as a reason to avoid medical treatment than male senior citizens (1.75; SD=0.88) (See Table 24b).

Table 24a: Gender differences in the experiences in non-chronic diseases, chronic diseases, payment methods and intention to seek medical services. The table indicates the number of positive reply ( $\%$ of respondents in that group).

| Items | Male Senior citizens | Female Senior citizens |
| :--- | :---: | :---: |
| Non-chronic diseases | $(\mathrm{n}=392)$ | $(\mathrm{n}=608)$ |
| Private general practitioners | $169(43.1 \%)$ | $302(49.7 \%)^{*}$ |
| Payment by myself | $301(77 \%)$ | $421(69.2 \%)^{* *}$ |
| Payment by next of kin | $72(18.4 \%)$ | $190(31.3 \%)^{* *}$ |
| Chronic-disease diagnosis | $(\mathrm{n}=237)$ | $(\mathrm{n}=386)$ |
| Osteoporosis | $5(2.1 \%)$ | $26(6.7 \%)^{* *}$ |
| Depression | 0 | $6(1.6 \%)$ |
| High cholesterol | $12(5.1 \%)$ | $50(13.0 \%)^{* *}$ |
| Chronic diseases: | $(\mathrm{n}=237)$ | $(\mathrm{n}=386)$ |
| Private general practitioners | $19(8.0 \%)$ | $49(12.7 \%)^{*}$ |
| Payment by myself | $171(72.2 \%)$ | $247(64.0 \%)^{*}$ |
| Payment by next of kin | $54(22.8 \%)$ | $131(33.9 \%)^{* *}$ |
| Expensive medical cost influenced | $(\mathrm{n}=237)$ | $(\mathrm{n}=386)$ |
| your intention to seek medical | $41(17.3 \%)$ | $109(28.2 \%)^{* *}$ |
| advice |  |  |

P.S. "*" indicates p < .05; "**" indicates p < .01.

Table 24b: Mean (SD) of the number of different chronic-disease treatment between the two gender groups.

|  | Male Senior citizens <br> $(\mathrm{n}=237)$ | Female Senior citizens <br> $(\mathrm{n}=386)$ |
| :--- | :---: | :---: |
| Number of different chronic diseases | $1.59(0.77)$ | $1.75(0.88)^{*}$ |

P.S. "*" indicates p < . 05

### 5.2. Type of housing

Senior citizens living in public rental housing or in home ownership scheme flats were significantly more likely to have chronic diseases and utilize public hospitals
for their non-chronic-disease treatment as compared with the other two groups (See Table 25a).

To seek treatment for their chronic diseases, senior citizens living in private rental houses were significantly more likely to seek private general practitioners than those living in the public rental houses or in home ownership scheme flats. On the other hand, those living in the privately owned property were more likely to seek private specialists for their treatment (See Table 25 b). Their normal spending was less likely to be affected by their medical expenses (See Table 25b). Furthermore, they were significantly less likely not to seek medical treatment due to the expensive cost as compared with the other three groups (See Table 25b).

Table 25a: Type of housing differences in incidence of non-chronic diseases, diagnosis of chronic-disease status, and influences of medical expenses. The table indicates the number of positive replies (\% of respondents in that group).

| Items | Privately- <br> owned <br> properties <br> $(\mathrm{n}=329)$ | Private <br> rental <br> housing <br> $(\mathrm{n}=61)$ | Public rental <br> housing <br> $(\mathrm{n}=365)$ | Home <br> ownership <br> scheme flat <br> $(\mathrm{n}=180)$ |
| :--- | :---: | :---: | :---: | :---: |
| Non-chronic diseases treated <br> in public hospitals | $148(45 \%)$ | $29(47.5 \%)$ | $203(55.6 \%)$ | $10759.5 \%)^{* *}$ |
| With chronic diseases | $194(59.0 \%)$ | $31(50.8 \%)$ | $240(65.0 \%)$ | $122(67.0 \%)^{*}$. |

P.S. "*" indicates $\mathrm{p}<.05$; "**" indicates $\mathrm{p}<.01$.

Table 25b: Type of housing differences in the experiences of chronic diseases, payment methods, and intention to seek medical services. The table indicates the number of positive reply (\% of respondents in that group).

|  | Privatelyowned properties $(\mathrm{n}=194)$ | Private rental housing ( $\mathrm{n}=31$ ) | Public rental housing ( $\mathrm{n}=240$ ) | Home ownership scheme flat $(\mathrm{n}=122)$ |
| :---: | :---: | :---: | :---: | :---: |
| Chronic-disease treatment: Private general practitioners Private specialists | $\begin{array}{\|l} \hline 29 \text { (14.9\%) } \\ 16 \text { (8.2\%) } \\ \hline \end{array}$ | $\begin{aligned} & 7 \text { (22.6\%) } \\ & 1(3.2 \%) \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 15 \text { (6.3\%) } \\ 6 \text { (2.5\%) } \\ \hline \end{array}$ | $\begin{aligned} & 9(7.4 \%)^{* *} \\ & 1(0.8 \%)^{* *} \\ & \hline \end{aligned}$ |
| Medical expenses influence your normal spending | 63 (32.5\%) | 19 (61.3\%) | 125 (52.1\%) | 54 (44.3\%)** |
| Expensive medical cost influences your intention to seek medical advice | 33 (17.0\%) | 8 (25.8\%) | 69 (28.8\%) | 31 (25.4\%)* |

P.S. "*" indicates p < .05; "**" indicates p < . 01 .

### 5.3. Monthly family income

Monthly family income groups were categorized based on the Census and

Statistics Department report (2007). The sample sizes for monthly family income $>\$ 60,000$ was rare ( $\mathrm{n}=7$ ), hence they were merged with the family income group of $\$ 15,000-\$ 59,999$. Thus 4 different monthly income groups (<\$4,000; \$4,000$\$ \$ 9,999 ; \$ 10,000-\$ 14,999 ;>15,000)$ were formed for further statistical analysis.

In seeking treatment for their non-chronic diseases, senior citizens with monthly family income less than $\$ 4,000(41.6 \%)$ would be less likely to visit private general practitioners and were significantly more likely to use public hospital services ( $56.1 \%$ ). Among those with monthly family income less than $\$ 9,999$, they would be more likely to pay for their own non-chronic-disease treatment (74.3$78.2 \%$ ). Those with $<\$ 4,000$ monthly family income was less likely to receive financial help from their next of kin for their treatment (15.1\%) as compared with the other three groups. In seeking treatment for their chronic diseases, senior citizens with monthly family income less than $\$ 9,999$ would be more likely to pay for their own chronic-disease treatment ( $68.2 \%-72.6 \%$ ). Those in the monthly family income group of $\$ 10,000-\$ 14,999$ would be more likely to use private hospitals ( $10 \%$ ) as compared with the other three groups. Furthermore, the medical expenses were more likely to influence the normal spending in the two lowest income groups ( $39.7 \%-46.6 \%$ ) than in the other two income groups ( $29.9 \%$ $33.8 \%$ ). They were more likely to use consultation fee for making decision on their health services $(21.6 \%-28.2 \%)$. Those who had higher family income ( $>\$ 10,000$ ) were more likely to use quality of doctor as the one or part of the criteria for making their health service decision (See Table 26).

Table 26: Monthly family income level differences in the experiences in nonchronic diseases, chronic diseases, payment methods and intention to seek medical services. The table indicates the number of positive replies (\% of respondents in that group).

|  | Monthly Family Income |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Items | $<\$ 4,000$ | $\$ 4,000-$ | $\$ 10,000-$ | $>\$ 15,000$ |
|  |  | $\$ 9,999$ | $\$ 14,999$ |  |
|  |  | $(\mathrm{n}=358)$ | $(\mathrm{n}=257)$ | $(\mathrm{n}=68)$ |
| Non-chronic diseases | $149(41.6 \%)$ | $129(50.2 \%)$ | $36(52.9 \%)$ | $53(54.6 \%)^{*}$ |
| Private general practitioners | $201(56.1 \%)$ | $122(47.5 \%)$ | $29(42.6 \%)$ | $38(39.7 \%)^{* *}$ |
| Public hospitals | $280(78.2 \%)$ | $191(74.3 \%)$ | $42(61.8 \%)$ | $64(66.0 \%)^{* *}$ |
| Payment by myself | $54(15.1 \%)$ | $77(30.0 \%)$ | $27(39.7 \%)$ | $30(30.1 \%)^{* *}$ |
| Payment by direct relatives | $(\mathrm{n}=230)$ | $(\mathrm{n}=157)$ | $(\mathrm{n}=40)$ | $(\mathrm{n}=55)$ |
| Chronic diseases | $18(7.8 \%)$ | $18(11.5 \%)$ | $9(22.5 \%)$ | $7(12.7 \%)^{*}$ |
| Private general practitioners | $3(1.3 \%)$ | $4(2.5 \%)$ | $4(10 \%)$ | $2(3.6 \%)^{*}$ |
| Private hospitals | $167(72.6 \%)$ | $107(68.2 \%)$ | $23(57.5 \%)$ | $36(65.5 \%)$ |
| Payment by myself | $37(16.1 \%)$ | $51(32.5 \%)$ | $20(50 \%)$ | $18(32.7 \%)^{* *}$ |
| Payment by direct relatives | $(\mathrm{n}=358)$ | $(\mathrm{n}=257)$ | $(\mathrm{n}=68)$ | $(\mathrm{n}=97)$ |
| Medical expenses influence |  |  |  |  |
| your normal spending | $167(46.6 \%)$ | $102(39.7 \%)$ | $23(33.8 \%)$ | $29(29.9 \%)^{* *}$ |
|  | $(\mathrm{n}=262)$ | $(\mathrm{n}=204)$ | $(\mathrm{n}=56)$ | $(\mathrm{n}=80)$ |
| Criteria for your choices of |  |  |  |  |
| doctors: | $74(28.2 \%)$ | $44(21.6 \%)$ | $9(16.1 \%)$ | $6(7.5 \%)^{* *}$ |
| Fee | $126(48.1 \%)$ | $100(49.0 \%)$ | $29(51.8 \%)$ | $48(60.0 \%)^{* *}$ |
| Quality | $62(23.7 \%)$ | $60(29.4 \%)$ | $18(32.1 \%)$ | $26(32.5 \%)^{* *}$ |
| Both |  |  |  |  |

P.S. "*" indicates p < .05; "**" indicates p < .01.

### 5.4. Living district

Because of the wide distribution, the living districts were simplified from the original 18 categories into 3 categories: Hong Kong Island, Kowloon and New Territories for further statistical analysis.

Senior citizens living in Hong Kong Island were more likely to receive financial support from their next of kin to pay for their non-chronic-disease treatment. Across the three districts, the prevalence rates of several chronic diseases were different. Senior citizens living in Hong Kong Island were more likely to have high cholesterol ( $16.0 \%$ ), stomach problems (6.3\%), ear/nose problem (5.0\%) and depression $(3.1 \%)$ as compared with the other two areas. Those living in the New Territories were more likely to have Parkinson's disease (3.1\%).

In seeking treatment for their chronic diseases, senior citizens living in Hong Kong Island were more likely to visit private specialists as compared with those living in the other two areas. Senior citizens in Kowloon area (45.7\%) were more likely to
seek treatment from Hospital Authority Specialist Clinics.
The medical expenses were significantly less likely to influence their normal spending for the senior citizens living in Hong Kong Island (30.9\%). They were significantly less likely not to seek medical treatment due to the expensive cost as compared with those living in Kowloon or the New Territories (See Table 27a).

One-way ANOVA revealed that there were significant differences in the measure of total number of different health service utilization for chronic diseases and level of satisfaction to their chronic-disease treatment. Bonferroni post-hoc analysis showed that senior citizens living in Hong Kong Island utilized significantly more types of health services and felt significantly more satisfied with their chronicdisease health services received as compared with those living in New Territories (See Table 27b).

Table 27a: Living district differences in the experiences in non-chronic diseases, chronic diseases, payment methods and intention to seek medical services. The table indicates the number of positive reply (\% of respondents in that group).

|  | Districts |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Items | Hong Kong Island | Kowloon | New Territories |  |
| Non-chronic diseases: | $(\mathrm{n}=188)$ | $(\mathrm{n}=422)$ | $(\mathrm{n}=374)$ |  |
| Payment by direct | $67(35.6 \%)$ | $102(24.2 \%)$ | $88(23.5 \%)^{* *}$ |  |
| relatives |  |  |  |  |
| Chronic-disease diagnosis: | $(\mathrm{n}=128)$ | $(\mathrm{n}=256)$ | $(\mathrm{n}=229)$ |  |
| High cholesterol | $21(16 \%)$ | $24(9.4 \%)$ | $16(7.0 \%)^{*}$ |  |
| Stomach problems | $8(6.3 \%)$ | $9(3.5 \%)$ | $2(0.9)^{* *}$ |  |
| Ear/nose problems | $7(5.5 \%)$ | $6(2.3 \%)$ | $1(0.4 \%)^{* *}$ |  |
| Depression | $4(3.1 \%)$ | $2(0.8 \%)$ | $00^{*}$ |  |
| Parkinson's disease | 0 | $2(0.8 \%)$ | $7(3.1 \%)^{*}$ |  |
| Chronic-disease treatment: | $(\mathrm{n}=128)$ | $(\mathrm{n}=256)$ | $(\mathrm{n}=229)$ |  |
| Hospital Authority | $45(35.1 \%)$ | $117(45.7 \%)$ | $89(38.9 \%)^{*}$ |  |
| Specialist Clinics | $11(8.6 \%)$ | $8(3.0 \%)$ | $7(3.1 \%)^{*}$ |  |
| Private specialists | $(\mathrm{n}=188)$ | $(\mathrm{n}=422)$ | $(\mathrm{n}=374)$ |  |
| Medical expenses | $58(30.9 \%)$ | $173(41.0 \%)$ | $157(42.0 \%)^{*}$ |  |
| influence your normal |  |  |  |  |
| spending | $(\mathrm{n}=188)$ | $(\mathrm{n}=422)$ | $(\mathrm{n}=374)$ |  |
| Expensive medical cost | $42(22.3 \%)$ | $102(24.2 \%)$ | $118(31.6 \%)^{*}$ |  |
| influences your intention |  |  |  |  |
| to seek medical advise |  |  |  |  |

P.S. "*" indicates $\mathrm{p}<.05$; "**" indicates $\mathrm{p}<.01$.

Table 27b: Mean (SD) of the number of different health services used and their level of satisfaction in their chronic-disease treatment among the 3 district groups

|  | Hong Kong Island | Kowloon | New Territories |
| :--- | :--- | :--- | :--- |
| Total number of different <br> health services utilization <br> for chronic diseases | $1.24(0.56)$ | $1.15(0.37)$ | $1.13(0.35)^{*, \mathrm{a}}$ |
| Level of satisfaction to <br> their chronic-disease <br> health services received | $2.33(1.06)$ | $2.57(0.94)$ | $2.69(1.03)^{*, \mathrm{a}}$ |

P.S. "*" indicates p < . 05 ; "a" indicates significant difference among Hong Kong Island group and New Territories group at $\mathrm{p}<.05$.

## Discussion:

The senior respondents in the survey were from a non-institutional sample. Based on the results in the district distribution, it indicated that the samples were fairly distributed throughout Hong Kong. Using the definition proposed by the Census and Statistics Department (C\&SD), monthly household income less than $\$ 4,000$ was categorized as low income group (Economic Analysis Division, 2007) and there were $36.8 \%$ of the senior citizens in this group. This might reflect their lack of ability to go back to labor force to generate income and live independently from their children. Also, there were $9.4 \%$ of senior citizens under the CSSA scheme. All these findings suggested that the poverty problem in senior citizens was pervasive and this alone might post a serious risk for their health status including improper nutrition and poor housing condition. To examine how representative of the present sample to the general population is, their sex ratio, housing type distribution, district distribution, monthly family income distribution and the five most common chronic diseases were compared with the results reported by the C\&SD 2006 (see Appendix II). The present sample was reported to have similar housing type distribution, the district distribution and the five most common chronic diseases as those found in the C\&SD 2006 report. However, it was observed that the present sample contained lower male-to-female ratio and reported to have lower monthly family income. Thus, it might limit the generalization of the present findings.

In the case of non-chronic diseases, such as fever and coughing, most senior patients would seek health services provided by private general practitioners or public hospitals/clinics. The use of emergency service for the non-chronic diseases was moderate. Nearly half of the senior citizens felt their non-chronic health services were somewhat or very satisfied and only $9.6 \%$ of them felt somewhat or
very unsatisfied with these services. Most of them relied on only one service for these treatments. The majority of the senior citizens had only one source of payment for their treatments and the payment by themselves was the most common source ( $72.2 \%$ ) followed by close relatives ( $26.2 \%$ ). Payment by insurance was extremely rare. This might be due to their limited popularity 20-30 years ago when these senior citizens were active in the labor force but they had no opportunities to purchase insurance to assist their future medical expenses.

The high level of health service utilization for non-chronic diseases from the private general practitioners and their reasonable level of satisfaction to these services suggested that the use of private general practitioners for non-chronicdisease management was acceptable by the senior citizens. Given many of them were in low income level and not covered by insurance, subsidies should be given for them to promote their utilization of private general practitioners over public hospitals/clinics to relieve the burden in the public hospitals/clinics.

## Key Implication:

The senior citizens used private general practitioners and public hospitals/clinics to approximately the same extent for their non-chronic-disease treatment. Incentive given to private general practitioners to provide discount service for senior citizens might help to ease the heavy case load in the public hospitals/clinics and allow better use of the limited public resources.

In this survey, $62.3 \%$ of the senior citizens had chronic diseases. The most common 5 chronic diseases in descending order were hypertension, diabetes mellitus, heart disease, arthritis, and high cholesterol. These results were quite similar to those previously reported by the C\&SD in 2001, except that eye disease was one of the 5 most common chronic conditions in their study and heart disease is more pronounced in the present study. In addition to the findings of the C\&SD report, the present study showed that $50 \%$ of the senior citizens with chronic diseases had two or more diagnoses. This implies more health service utilization would be expected by them as compared with those with only one diagnosis (Aurea, Pilar, Jose, \& Fernando, 2006) and the need to pay more for their medication cost (Portrait, Lindeoom, \& Deeg, 2000). The frequency for the followup health service was moderate and the majority of the senior citizens with chronic diseases ( $68 \%$ ) required a routine check up in every 2-3 months.

Despite the constant needs for the follow-up treatment, senior citizens with chronic diseases did not report to have a high level of financial burden for these treatments.

This might relate to their high level of utilization of the public health services. Also, nearly half of these senior citizens paid $\$ 100$ or less per visit for the follow-up treatment and $11 \%$ of them received free treatment due to CSSA or civil service benefits. The concern about quality of their health service was evident by the fact that more than half of these senior citizens would use quality as a determining factor for their choice of doctors. Since many of the senior citizens used public hospitals/clinics for their choices of chronic-disease treatment and were satisfied with their services received, it suggested that the quality of doctors in the public hospitals were perceived to be adequate. All these findings suggested public hospitals/clinics could be expanded to provide health service for chronic diseases.

The health services for the chronic diseases were perceived as somewhat satisfactory by the senior citizens. In a cross tabulation analysis of the satisfactory rating distribution across different service providers, it revealed that the distributions were similar across them and suggested the health service for chronic diseases provided by private general practitioners/hospitals was perceived as good as those provided by the public clinics/hospitals. In addition, their charge was the lowest among the health service options; and the high quality of their service suggested that expansion of the health service for senior citizens using public resources could be effective to improve the health service access for the needed senior citizens.

## Key Implication:

The senior citizens might be more quality conscious in selecting health services for their chronic-disease treatment as compared with the case for non-chronic-disease treatment. Over $90 \%$ of senior citizens use public hospitals/clinics for treatment, and since the quality of health services from public hospitals/clinics was satisfactory and their charge was the lowest among all the service providers, the expansion of the public health service for senior citizens might be the most effective means to enhance the health services utilization for their chronic diseases.

Provision of medical service by doctors currently practising:
In the study, there were two groups of doctors who were currently practising. The age of the younger group was below 60. The age of the older group was 60 or above. Overall, 25-30 \% of their patients were senior citizens. Compared with the older group, the younger group was more likely to give discount to senior citizens ( $82 \%$ vs $63.4 \%$ ). However, the distributions of discount rate provided by these two groups of doctors were similar with an average charge of $60 \%$ of their normal
consultation fee. Among those who had not provided discount at present, the percentages of doctors who were willing to provide, not willing to provide discount or not providing discount due to clinic payment policy, were similar. These results indicated that the criterion for giving discount and the level of discounts were similar among these two groups of doctors and suggested a common consensus among them. The rationale behind those who voluntarily gave discount to senior citizens was beyond the scope of the present study. Yet, the information might help to understand their motivation and be useful for development of suitable incentive/ promotion scheme (both financial and non-financial means) to recruit more doctors to provide voluntary discount services for senior citizens. This could improve the quality of health of the aging population and reduce the financial burden of the public health system.

## Key Implication:

Voluntary provision of discount for senior citizens by private doctors might play a significant role to improve health of the senior citizens, and reduce financial burden of publicly funded health services.

In consideration of the willingness to take part in the proposed service scheme, more than $50 \%$ of retired doctors or older doctors were willing to take part at a nominal remuneration rate, and most of them could take 1-2 visits per week.

## Key Implication:

The viability to develop the scheme is possible as more than $50 \%$ of those doctors aged above 60 or those already retired, who responded to the questionnaire, were willing to join the scheme. It provides a lot of man power at a reasonable cost to deliver quality health services for the senior citizens.

## Post- hoc analysis:

Based on the categories of (a) gender, (b) type of housing, (c) family income levels, and (d) living district, further statistical analysis were conducted using One WayAnalysis of Variance (ANOVA) and Chi-square to identify the potential.

Gender:
The gender differences in the prevalence rates of the chronic diseases were in line with other medical reports, where women were more likely to have more chronic diseases. They were more likely to have medical problems of osteoporosis, and depression. In addition to the previous findings, the present results showed that
women were more likely to have high cholesterol than men.
Female senior citizens were more likely to use private general practitioners for their non-chronic disease treatment and chronic-disease treatment. In paying for their health services of chronic and non-chronic diseases, female senior citizens were less likely to pay by themselves and more likely to receive financial help from their next of kin. Their normal spending would be more likely to be affected by their medical expenses. These results suggested that they had limited financial resources. This prevented them from accessing adequate health services. Together with their higher incidence of chronic diseases, they might require higher cost of medical attention if they were left untreated. Thus, a special subsidy for female senior citizens to encourage their utilization of health services is recommended to reduce the financial burden of public health services in the long-run.

Key Implication: Female senior citizens were more dependent on the financial help from next of kin to pay for their medical expenses. The lack of financial independence might deter them from seeking medical treatments.

Monthly family income and type of housing:
In the Chi-square analysis using the grouping of monthly family income and type of housing, their results suggested that better socioeconomic status was associated with (1) a decrease in utilization of public hospitals for non-chronic-disease treatment, (2) an increase in the utilization of private general practitioners for non-chronic-disease treatment, and (3) an increase in the utilization of private specialists, private hospitals and private general practitioners for chronic-disease treatment. Those senior citizens from higher monthly family income groups would be more likely to receive financial help from their next of kin for their chronicdisease treatment. This might lower the impact of medical expenses on their normal spending. In addition, those who were better off were less concerned about the medical costs for their choice of health services as compared with those who were poor. Low socioeconomic status (e.g. low monthly family income and living in public rental housing/home ownership scheme flat) would limit the choice of health service for non-chronic and chronic-disease treatment. This might be due to the financial implication of health service expenses to their normal spending. Therefore, special medical subsidy should be targeted at senior citizens who were from low income family. This would enable them to utilize the health services in a timely fashion to prevent serious medical condition at a later stage. In addition, the special senior citizens services should be provided in the area where those home ownership scheme flats/ public rental housing with higher density of lower family income senior citizens because they have the highest utilization rates for the public clinics/hospitals.

Key Implication: Low socioeconomic status might play a determining role for the increase utilization of public health services.

Living district:

Chi-square analysis revealed that senior citizens living in Hong Kong Island were more likely to receive financial support from their next of kin for their non-chronic-disease treatment. They were more likely to seek private specialists and utilized more different kinds of health services for their chronic-disease treatment. In addition, they were less concerned about the medical cost for their health services utilization and felt that their normal spending less influenced by their medical expenses as compared with those in Kowloon or New Territories. These results suggested that those living in Hong Kong Island felt less financial constraint on their access to health services as compared with those living in Kowloon or New Territories. The senior citizens health service rate of these three districts is uncertain. A careful comparison of this can provide meaningful information regarding how to distribute new senior citizens health service to meet the demands of senior citizens who need this service.

## References:

Aurea, R.S., Pilar, G.C., Jose, R.B., * Fernando, R.A. (2006). Gender differences in the utilization of health-care services among the older adult population of Spain. BMC Public Health, 6, 155 .

Broyles, R.W., Narine, L., Brandt, E.N. (2000). Equity concerns with the use of hospital services by the medically vulnerable. Journal of Health Care for the Poor and Underserved, 11, 343-360.

Burnette, D., \& Mui, A.C. (1999). Physician utilization by Hispanic elderly persons- National perspective. Medical Care, 37, 362-374.

Census \& Statistics Department (2002). 2001 Population Census Thematic Report: Older Persons. Hong Kong SAR.

Department of Health (2004). Topical Health Report No. 3: Elderly Health. Disease Prevention and Control Division and Elderly Health Services.

Economic Analysis Division (2007). Analysis of Income Disparity in Hong Kong. Financial Secretary's Office, SRA.

Gilson, L., McIntyre, D., Pannarunothai, S., Prieto, A.L., Ubilla, G., \& Ram, S. (2000). Inequalities in health care use and expenditures: empirical data from eight developing countries and countries in transition. Bulletin of the World Health Organization, 78, 55-65.

Iversen, L. (1989). Unemployment and mortality. Stress Medicine, 5, 85-92.
Katia, G.C., Carmen, G.P., Carlo, D.M., Jyoti, M., Luis, D.A., Jorge, S.C. (2008). Health care utilization and health-related quality of life perception in older adults: a study of the Mexican social security institute. Salud Publica de Mexico, 50, 207-217.

Makinen, M., Waters, H., Rauch, M. Almagambetova, N., Bitran, R., Murphy, J.F., \& Hepwort, J.T. (1998). Age and Gender Differences in Health Services Utilization. Research in Nursing \& Health, 19, 323-329.

Portrait, F., Lindeboom, M., \& Deeg, D. (2000). The use of long-term care services by the Dutch elderly. Health Economics, 9, 513-531.

Smith, R. (1987). Unemployment and Health. Oxford University Press, Oxford.
Steinhardt, L.C., Waters, H., Rao, K.D., Naeem, A.J., Hansen, P., \& Peters, D.H. (2009). The effect of wealth status on care seeking and health expenditures in Afghanistan. Health Policy and Planning, 24, 1-17.

## Appendix I：

## 一般醫生

「香港長者對醫療服務需求」意見調查
香港城市大學優質評估研究中心受香港醫學專科學院委託進行一項「香港長者對醫療服務需求」的調查硏究，以了解業界對長者醫療服務的意見，希望對現有醫療制度有所貢獻。期待您能與我們合作，完成問卷調查。而所提供的資料是絕對保密的。

Q1．請問您的病人當中大約有百分之幾是 65 歲或以上的長者？
$\qquad$ $\%$（請塡整數）

Q2．請問您有沒有提供診金折扣予長者？
口有（所有長者均有折扣）
口有（視情況而定，只提供給有需要的長者）


口沒有（完全沒有任何折扣）
■沒有，因爲診所有收費規定

Q3．您個人願不願意減收長者的診金？
－願意

$$
\longrightarrow
$$

- 不願意
- 沒有，因爲診所有收費規定

Q4．請問您行醫有多少年？（不足 1 年，當 1 年計）

Q3a．您願意減收百分之幾的診金？
\％（請塡整數）
Q2a．長者的診金是正常診金的百分之幾？
\％（請塡整數）
$\qquad$

$\qquad$年

Q5．性別
口男口女

問卷完成，多謝您接受我們的訪問。

## 年六十歲或以上現職專科醫生

## 「香港長者對醫療服務需求」意見調查

香港城市大學優質評估研究中心受香港醫學專科學院委託進行一項「香港長者對醫療服務需求」的調查研究，以了解業界對長者醫療服務的意見，希望對現有醫療制度有所貢獻。期待您能與我們合作，完成問卷調查。而所提供的資料是絕對保密的。

Q1．請問您有沒有提供診金折扣予長者？
口有（所有長者均有折扣）
口有（視情況而定，只提供給有需要的長者）


口沒有（完全没有任何折扣）
口沒有，因爲診所有收費規定

Q2．您個人願不願意減收長者的診金？
－願意


- 不願意
- 沒有，因爲診所有收費規定

Q3．請問您的病人當中大約有百分之幾是 65 歲或以上的長者？
$\qquad$ $\%$（請填整數）

Q4．假設退休後，如果醫管局或衛生署以一個固定薪金聘請您替長者醫病，即薪金不會與病人數量互相掛鈎，您有多大程度上會接受？請您以 $0-10$ 分表示您的接受程度， 10 分代表一定會接受， 0 分代表一定不會接受。
－0分（請續答Q5）
$\qquad$分


Q4a．請問您願意每星期抽出多少時間幫長者擎病？

- 一星期少於一次
- 一星期一至兩次
- 一星期三至四次
- 一星期五次或以上
- 其他（請註明）： $\qquad$
（語續答Q5）

Q5．請問您行醫有多少年？（不足 1 年，當 1 年計）
$\qquad$年

Q6．性別

問卷完成，多謝您接受我們的訪問。

## 已退休專科醫生

## 「香港長者對醫療服務需求」意見調查

香港城市大學優質評估硏究中心受香港醫學專科學院委託進行一項「香港長者對醫療服務需求」的調查硏究，以了解業界對長者醫療服務的意見，希望對現有醫療制度有所貢獻。期待您能與我們合作，完成問卷調查。而所提供的資料是絕對保密的。

Q1．請問您在退休前的病人當中大約有百分之幾是 65 歲或以上的長者？
$\qquad$ $\%$（請填整數）

Q2．如果醫管局或衛生署以一個固定薪金聘請您替長者醫病，即薪金不會與病人數量互相掛鈎，您有多大程度上會接受？請您以 $0-10$ 分表示您的接受程度， 10 分代表一定會接受， 0 分代表一定不會接受。
－ 0 分（請續答Q3）
$\qquad$分

Q2a．請問您願意每星期抽出多少時間幫長者醫病？

- 一星期少於一次
- 一星期一至兩次
- 一星期三至四次
- 一星期五次或以上
- 其他（請註明）： $\qquad$
（請續答Q3）

Q3．請問您行醫有多少年？（不足 1 年，當 1 年計）
$\qquad$年

Q4．性別
口男

問卷完成，多謝您接受我們的訪問。

## 電話訪問

「香港長者對醫療服務需求」意見調查

## 介紹：

你好！我姓／叫 ，係香港城市大學優質評估研究中心打 ，我 係受香港醫學專科學院委託進行一項「香港長者對醫療服務需求」 調查研究。而家希望阻你少少時間進行呢個訪問，而你提供 資料係會絕對保密 。

Q0．請問你屋企裡面有有 65 歲或以上而每星期最少有五晩 度 成員？［唔計外傭及響香港工作嘅外國人仕］
1．有
2．有（訪問員：訪問已經完結，多謝合作！）
因爲我 要隨機抽出一位 65 歲或以上 成員 接受訪問，麻煩你請就快到生日 位 聽電話。
如被抽中的住戶成員唔 屋企，要求對方留低住戶成員姓名並預約時間再訪問。如被抽中的住戶成員 屋企又唔係接電話個位，對他／她重覆「介紹」。

Q1．唔計長期病患，你身體唔舒服筧時候，好似：發燒，感冒，咳，你會去睇邊類醫生？ （不提供答案，可選多項）
1．私家普通科診所的西醫
2．私家醫院門診部／ 24 小時門診服務
3．政府普通科門診部（包括醫管局及衛生署轄下門診部）
4．政府急症室（包括醫管局及衛生署轄下急症室）
5．中醫
6．自己食中／西成藥
7．其他（請註明）： $\qquad$
8．拒絕回答（不用讀出）
Q2．你每次睇呢 D 病嘅費用大概喺幾多錢？（不提供答案）
1．免費
2．$\$ 1-\$ 50$
3．$\$ 51-\$ 100$
4．\＄101－\＄150
5．\＄151－\＄200
6．\＄201－\＄250
7．\＄251－\＄300
8．$\$ 300$ 以上
9．唔知道／好難講（不用讀出）
10．拒絕回答（不用讀出）

Q3．咁你睇呢 D 病嘅費用係邊個俾？（不提供答案，可選多項）
1．自己
2．直系親屬（例如：父母／子女）
3．保險
4．非直系親屬（例如：孫仔／孫女）
5．其他，請註明： $\qquad$
6．拒絕回答（不用讀出）
Q4．咁你對呢 D 醫療服務有幾滿意？
1．非常滿意
2．幾滿意
3．一般
4．唔係幾滿意
5．非常晤滿意
6．唔知／難講（不用讀出）
7．拒絕回答（不用讀出）
Q5．請問你現時有有經醫生診斷及證實患上任何慢性或長期疾病呢？（不提供答案）
1．有
2．有（請跳去 Q13）
Q6．咁醫生證實你患上咗邊種 1 邊幾種慢性或長期疾病呢？（不提供答案，可選多項）
1．高血壓
2．老人痴呆症
3．中風
4．眼疾
5．心臟病
6．關節炎
7．糖尿病
8．哮喘
9．骨折
10．骨質疏鬆症
11．胃病
12．柏金森氏病
13．老人抑鬱
14．耳／鼻／喉疾病
15．癌病
16．腎病
17．膽固醇過高
18．長期皮膚病
19．感染性疾病
20．其他（請註明）： $\qquad$

Q7．因應呢 D 慢性或長期疾病，你又會要去睇邊類嘅醫生？（不提供答案，可選多項）
1．私家普通科診所的西醫
2．私家專科診所的西醫
3．私家醫院門診部／ 24 小時門診服務
4．政府普通科門診部（包括醫管局及衛生署轄下門診部）
5．政府專科門診部（包括醫管局及衛生署轄下門診部）
6．中醫
7．自己食中／西成藥
8．其他（請註明）： $\qquad$
9．拒絕回答（不用讀出）
Q8．平均嚟講，你每個月睇慢性或長期疾病嘅費用大概要幾多錢？（不提供答案）
1．免費
2．\＄1－\＄100
3．\＄101－\＄200
4．\＄201－\＄300
5．\＄301－\＄400
6．\＄401－\＄500
7．$\$ 500$ 以上
8．唔知道／好難講（不用讀出）
9．拒絕回答（不用讀出）
Q9．咁你睇慢性或長期病嘅費用係邊個俾？（不提供答案，可選多項）
1．自己
2．直系親屬（例如：父母／子女）
3．保險
4．非直系親屬（例如：孫仔／孫女）
5．其他，請註明： $\qquad$
6．拒絕回答（不用讀出）
Q10．咁你又對呢D醫療服務有幾滿意？
1．非常滿意
2．幾滿意
3．一般
4．唔係幾滿意
5．非常唔滿意
6．唔知／難講（不用讀出）
7．拒絕回答（不用讀出）
Q11．你需唔需要定期覆診？（不提供答案）
1．需要
2．唔需要（請跳去 Q13）

Q12．你每次覆診大概隔幾耐？
1．一星期一次或以上
2．兩星期一次
3．三至四星期一次
4．兩個月一次
5．三個月一次
6．四個月一次
7．半年一次
8．一年一次
9．其他（請註明）： $\qquad$
10．拒絕回答（不用讀出）
Q13．而家兓醫藥費對你嚟講負擔有幾重？
1．非常重
2．幾重
3．一般
4．唔係幾重
5．非常唔重
6．唔知／難講（不用讀出）
7．拒絕回答（不用讀出）
Q14．你現時所花嘅醫藥費用會唔會影響你日常其他開支？（不提供答案）
1．會
2．唔會
Q15．你會唔會因爲醫藥費而唔去睇醫生？（不提供答案）
1．會
2．唔會
Q16．睇醫生時，你會以收費定係醫生嘅質素作選擇？
1．收費
2．醫生質素
3．兩樣都睇
4．唔知／難講（不用讀出）
5．拒絕回答（不用讀出）

## 個人資料

我想問你些少個人資料，方便進行分析。
Q17．性別
1．男
2．女

Q18．請問你住響邊區呢？（不提供答案）同時，筆錄受訪者的口頭答案。如受訪者的答案不是以下區分，訪問員將於其他，請註明位置輸入受訪者的答案。
1．灣仔
2．東區
3．中西區
4．南區
5．觀塘
6．九龍城
7．黃大仙
8．油尖旺
9．深水
10．西貢
11．沙田
12．離島
13．荃灣
14．葵青
15．屯門
16．元朗
17．北區
18．大埔
19．其他，請註明： $\qquad$
20．拒絕回答
Q19．請問你居住噆房屋類別係：
1．私人自置物業
2．私人租住物業
3．公營租住房屋（房委會）
4．公營租住房屋（房協）
5．平房／村屋
6．其他，請註明： $\qquad$ （不用讀出）
7．唔知／難講（不用讀出）
8．拒絕回答（不用讀出）
Q20．請問你係咪攞緊綜援？
1．係
2．唔係
3．唔知／難講
4．拒答

Q21．請問你每月的家庭收入係屬於以下邊個組別呢？
1．少於 2,000 元
2．2，000－3，999元
3．4，000－5，999元
4．6，000－7，999元
5．8，000－9，999 元
6．10，000－14，999元
7．15，000－19，999 元
8．20，000－24，999元
9． $25,000-29,999$ 元
10．30，000－39，999元
11． $40,000-59,999$ 元
12． 60,000 元或以上
13．唔知道（不用讀出）
14．拒絕回答（不用讀出）
多謝你接受我哋睌訪問！

Appendix II: Comparison of the sex ratio, housing type distribution, district distribution, monthly family income distribution and the five most common chronic diseases between those reported in the present sample and those in the C\&SD 2006.

Table a: Male/Female ratio \& percentage of senior citizens with chronic diseases

|  | Present sample <br> $(\mathrm{n}=1000)$ | C\&SD data in 2006 |
| :--- | :---: | :---: |
| Male/Female ratio | 645 in 1000 | 859 in 1000 |
| Senior citizens with at least <br> one chronic disease |  |  |
| With 2 chronic diseases | $62.3 \%$ | $71.8 \% \#$ |

Table b: Housing Type Distribution

|  | Present sample <br> $(\mathrm{n}=1000)$ | C\&SD data in 2006 |
| :--- | :---: | :---: |
| Type of Housing | $(\%)$ | $(\%)$ |
| Public Rental Housing | 36.5 | 41.1 |
| Home Ownership Scheme | 18.0 | 16.6 |
| Privately Owned Properties | 36.8 | 41.3 |
| Private Rental Housing | 6.1 | 1.0 |
| Did not Answer | 2.6 | -- |

Table c: District Distribution

|  | Present sample <br> $(\mathrm{n}=1000)$ | C\&SD data in 2006 |
| :--- | :---: | :---: |
| District | $(\%)$ | $(\%)$ |
| Kung Tong | 10.9 | 11.0 |
| Shatin | 8.4 | 7.3 |
| Eastern District | 8.2 | 9.7 |
| Wong Tai Sin | 7.6 | 8.8 |
| Kwai Ching | 6.7 | 8.5 |
| Hong Kong | 20.1 | 20.3 |
| Kowloon | 42.9 | 37.5 |
| New Territories | 38.0 | 42.1 |

P.S. \#Comparing with the C\&SD report in 2001.

Table d: Monthly Family Income Distribution

|  | Present sample <br> $(\mathrm{n}=1000)$ | C\&SD data in 2006 |
| :--- | :---: | :---: |
| Monthly Family Income | $(\%)$ | $(\%)$ |
| Less than $\$ 4,000$ | 35.8 | 21.5 |
| Between $\$ 4,000-\$ 9,999$ | 25.7 | 24.0 |
| Between $\$ 10,000-\$ 14,999$ | 6.8 | 14.2 |
| Above $\$ 15,000$ | 9.7 | 40.3 |
| Not sure | 16.1 | -- |
| Did not Answer | 5.9 | -- |

Table e: Five most common chronic diseases

|  | Present survey: | C\&SD report in 2001\# |
| :--- | :--- | :--- |
|  | Hypertension | Hypertension |
| $2^{\text {st }}$ | Diabetes | Arthritis |
| $3^{\text {rd }}$ | Heart Disease | Eye Disease (6th in the survey) |
| $4^{\text {ri }}$ | Arthritis | Diabetes |
| $5^{\text {th }}$ | High Cholesterol | High Cholesterol |

P.S. \#Comparing with the C\&SD report in 2001.

