



Knowledge, Attitude and Practice of Medical Checkup

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**Knowledge, Attitude and Practice of
Medical Checkup
(February to May 2008)**

**Surveillance and Epidemiology Branch
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Executive Summary

Background

Disease prevention is now recognized as a superior strategy to decrease the morbidity and mortality of different types of diseases. It is a cost-effective way to improve the population health. Attending regular medical checkups is one of the tools for disease prevention, which enables certain diseases or risk factors to be detected at an early stage for introducing timely interventions, such as lifestyle modifications, pharmaceutical or surgical treatment, in order to improve individual health outcome. Nowadays, there is a variety of medical checkup tests in the market. It becomes a public health issue in helping the public to make sensible choice and minimize the risk of harm implicated after unnecessary invasive investigations. The Department of Health (DH) conducted a cross-sectional survey to collect pertinent information on the knowledge, attitude and practice of medical checkups in Hong Kong population aged 15 and above in 2008. The survey was conducted under the Thematic Household Survey of the Census and Statistics Department (C&SD) and was commissioned to a private research company. It is hoped that the information collected will help the policy makers, the medical professionals and the public health authority to devise evidence-based plan in health policy, resource allocation as well as provision of health services and programmes.

The survey aims at assessing the knowledge, attitude and practice of medical checkups in local population aged 15 and above. Specific utilization pattern of medical checkup services by the population and different subgroups are also analyzed.

Survey Method

The survey was conducted from 23 February to 29 May 2008. It covered the 5.75 million land-based non-institutionalized population of Hong Kong aged 15 and above, excluding the foreign domestic helpers. Subjects were selected by stratified systematic sampling from the Frame of Quarters maintained by C&SD. Relevant data were collected by face-to-face interviews, using a standardized and structured questionnaire during household visits. Medical checkup was defined as an encounter with the health care system for the purpose of screening disease(s) without prior doctor's diagnosis related to the screening test. Checkups involving taking blood pressure only and dental checkup were excluded. By applying appropriate weighting factors, the information collected from the interviewed individuals could be used for drawing inferences on the utilization pattern of medical checkup services of the population aged 15 and above in Hong Kong.

Descriptive analysis was adopted to describe the knowledge, attitude and behaviour of medical checkups. Subgroup analysis by sex and age was performed. Further analysis by educational attainment and monthly personal income was also included as appropriate.

Key Findings

A total of 10 027 households, out of 13 064 households in the selected sample, were successfully interviewed, accounting for an overall response rate of 76.8%.

Information was collected from 25 208 eligible persons from the interviewed households. Key findings were listed as follows -

Knowledge and Attitude of Medical Checkups

To gauge the knowledge and attitude of medical checkups of persons aged 15 and above, respondents were asked to give their views on a series of statements. These statements included attitude/some misconceptions towards medical checkups.

Over 90% of the 5.75 million persons aged 15 and above had high expectations on the effectiveness of medical checkups on early detection of diseases. The vast majority (92.8%) of persons aged 15 and above believed that “majority of diseases can be detected earlier through medical checkups” and 94.4% of the persons aged 15 and above believed that “for the majority of diseases, detection at earlier stages can improve their prognosis”.

Other misconceptions about medical checkups had been identified in the survey:

- i) The most advanced investigations are most effective in detecting diseases (Misconception rate: 87.8%).
- ii) Abnormal findings in a medical checkup mean that the person must be suffering from certain diseases i.e. false positive (Misconception rate: 74.2%).
- iii) Normal findings in a medical checkup mean that the person must be free from diseases i.e. false negative (Misconception rate: 59.4%).

Furthermore, the majority opined that history taking (90.5%) and physical examination (92.5%) by doctors were always necessary components of medical checkups. Most of them (94.5%) preferred the checkup result to be interpreted and explained by a doctor.

Subgroup analysis showed that elders aged 75 and above had the lowest percentages of agreements to the statements describing medical checkups but highest percentage of choosing “don’t know” across different age groups.

Practice of Medical Checkups

48.5% of the 5.75 million persons aged 15 and above had ever had medical checkups. The proportions of persons aged 15 and above who had medical checkup(s) in the 3 years and 12 months before enumeration were 33.1% and 19.6% respectively. The percentage further dropped to 16.7% for those with regular medical checkups.

23.2% of the 5.75 million persons aged 15 and above planned to have medical checkups in future. It was found that a greater proportion of women had or planned to have medical checkups than men. The highest and lowest rates of having or planning to have medical checkups were in persons aged 35 to 44 and 15 to 24 respectively.

In general, people with higher educational attainment and higher income tended to have a higher rate of having or planning to have medical checkups.

Among 2.96 million persons aged 15 and above who never had medical checkup, the reasons “consider themselves healthy” and “never thought about it” were mainly claimed by persons aged 15 to 74. For those aged 75 and above, the two most

quoted reasons for not having medical checkups were “never thought about it” and “lack of money”.

For 1.66 million persons who had medical checkups but reported not having medical checkup in the 12 months before enumeration, the commonest reasons were “consider themselves healthy” and the second most common reason for not attending medical checkup cited by age groups under 65 was “lack of time” while the older age groups (aged 65 and above) was “lack of money”.

Characteristics of Medical Checkup Conducted in the 12 Months Before Enumeration

Among 1.13 million persons aged 15 and above who had medical checkups in the 12 months before enumeration, details of up to three most recent medical checkups (i.e. 1.20 million medical checkups) were collected. The vast majority (94.5%) of these medical checkups were conducted in Hong Kong. About 70% were conducted in local private settings.

The three most prevalent investigation items included in the checkups were blood tests (80.1%), blood pressure (76.4%) and body weight and height measurement (62.6%). Nearly two-thirds of the checkups (63.5%) were done without any particular health concerns.

Doctor was the main party to provide information on medical checkups (50.3%), decide investigation items to be included in the checkup (44.8%) as well as interpret and explain the result of medical checkups (82.5%).

About one-quarter of the medical checkups were provided free of charge, including free offers by commercial companies or employers. The remaining checkups were mainly paid by the persons who had the medical checkups or their family members (91.6%). The median of the total cost of medical checkup done over the 12 months before enumeration was HK\$600. 85.2% of the checkups were rated as very satisfactory or satisfactory.

Source of Information on Medical Checkups

Nearly 60% of the 5.75 million persons aged 15 and above had ever received information on medical checkups.

Of those 3.37 million persons who had ever received information on medical checkups, the leading source of information was the advice from doctors (35.1%). Other sources included pamphlets/posters in clinics or medical laboratories (30.2%), advertisements in housing estates from community organizations, board of owners or District Council members (26.2%) and promotional calls/personal letters from credit card or insurance companies (24.1%).

Different age groups received information related to medical checkups from various sources. For persons aged 45 and above, the leading source was the advice from doctors (36.2% to 63.9%). Information provided by insurance or credit card company was the main source of information for those aged 25 to 34 (36.1%). The remaining two age groups (aged 15 to 24, 35 to 44) received relevant information mainly from the printed materials in clinics or medical laboratory (being 28.3% and 35.4% respectively).

Chapter 1: Introduction

1.1 Background

There is an old saying that “Prevention is better than cure.” Disease prevention is gaining more attention from different health authorities because an effective prevention programme could help to improve the societal health with minimal cost. Three levels of disease prevention are commonly quoted, namely primary, secondary and tertiary prevention. Medical checkup as a tool of secondary prevention has been shown to be effective in detecting certain diseases. It also provides a good opportunity for primary prevention by counseling against undesirable lifestyles such as smoking. With the advances in technology, a variety of screening tests were developed.

Nowadays, there are different types of medical checkup packages offered by the commercial organizations in the market, comprising a number of laboratory investigations. Some of them may not be necessary or proven to be effective in detecting disease with reasonable reliability. To make matter worse, undergoing unnecessary or invasive investigations may cause more harm than good. The Department of Health therefore collected pertinent information about the knowledge, attitude and practice of medical checkups in the population aged 15 and above.

Since 1999, the Census and Statistics Department (C&SD) started to employ private research firms to conduct a series of Thematic Household Survey (THS) in order to collect statistical information on social topics proposed by individual bureaux/departments. In 2008, the THS on health-related issues was conducted by The Nielsen Company on behalf of the C&SD and the Department of Health to collect pertinent information about the knowledge, attitude and practice of medical checkup in the Hong Kong population aged 15 and above. It is hoped that the information can help the decision makers to understand the utilization pattern of population aged 15 and above on medical checkups, and shed some light on health policy development, resource allocation and provision of health services and programmes in dealing with issues on medical checkups.

1.2 Objectives

The objectives of the survey include:

- (i) To assess the knowledge, attitude and practice of medical checkups in the population aged 15 and above, particularly to identify the misconceptions about its risks and benefits;
- (ii) To collect information on the proportion of the population aged 15 and above who have had medical checkups before and to assess the proportions in different population subgroups; and
- (iii) To collect information on the characteristics of medical checkups conducted in the 12 months before enumeration by population aged 15 and above.

1.3 Coverage

The survey covered the land-based non-institutional population aged 15 and above other than foreign domestic helpers of Hong Kong. The following categories of people were also excluded:

- Inmates of institutions (including elderly homes); and
- Persons living on board vessels.

Chapter 2: Survey Method

2.1 Methodology

Face-to-face interviewing method was adopted for this survey.

2.2 Sampling Frame and Sample Selection

The survey adopted the Frame of Quarters maintained by the C&SD as the sampling frame. The Frame consists of two parts:

1. Register of Quarters (RQ); and
2. Register of Segments (RS).

The RQ contains records of all addresses of permanent quarters in built-up areas, including urban areas, new towns and other major developed areas. Each unit of quarters is identified by unique address with details such as street name, building name, floor number and flat number.

The RS contains records of area segments in non-built-up areas which are delineated by some physical or easily identifiable boundaries such as streams, footpaths, lanes and ditches. Each area segment contains some 8 to 15 quarters. The use of area segments as the sampling unit in non-built-up areas is necessary since the quarters in these areas may not have clear addresses and cannot readily be identified individually.

Stratified systematic sampling was deployed for selecting a sample of living quarters in built-up areas from the RQ maintained by C&SD, where records of quarters were sorted by geographical area and type of quarters.

The above sample was supplemented with a sample of area segments in non-built-up areas from the RS. The sampling method for the RS was similar to that for the RQ, except that the area segments were sorted by geographical area only (but not by the type of quarters).

All households in the selected living quarters and all members aged 15 and above in the selected households were enumerated individually.

Based on the information collected from the interviewed individuals and applying appropriate weighting factors, the situation related to the population could be inferred.

2.3 *Training*

All enumerators underwent an intensive training programme, designed to acquaint them with:

- the principle of sampling procedures and the importance of following these procedures;
- fieldwork methods and questionnaire design; and
- interviewing techniques, including initial approaches and probing.

2.4 *Definitions*

The following definitions were used in the survey:

- “**Medical checkup**” referred to an encounter with the health care system for the purpose of screening disease(s) when there was no doctor’s diagnosis of illness in relation to the screening test. Medical checkup could be in the form of regular screening or an ad-hoc nature performed by western medical practitioners.
- “**Medical checkup**” included pre-marital checkup, but **excluded** the following:
 - checkup involving taking blood pressure only,
 - medical consultation for symptoms or discomfort,
 - follow-up consultation, and
 - dental checkup.
- Any follow-up investigations or screening tests were considered part of the medical checkup and would not be counted as another separate medical checkup.

In this report, “persons aged 15 and above” referred to the land-based non-institutional population aged 15 and above other than foreign domestic helpers of Hong Kong.

2.5 Pilot Survey

To ensure the smooth execution of the study, a total of 100 pilot interviews were conducted from 21 to 25 January 2008 prior to the main survey to ascertain the fieldwork logistics and questionnaire design.

Each part of the questionnaire was fully tested in the pilot survey and amendments on the design of the questionnaire were made subsequently based on the pilot survey results. The amendments included addition of investigation items and unit labels, as well as addition of coding box to allow answers of higher values.

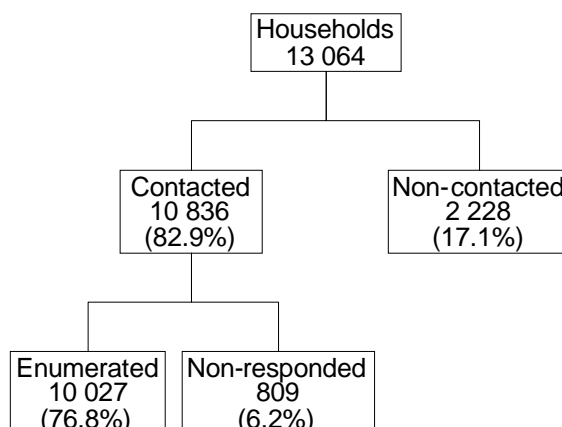
2.6 Data Collection

The fieldwork for the main survey was conducted between 23 February and 29 May 2008. The enumerators paid household visits to the selected quarters. Data were collected by face-to-face interviews, using a standardized and structured questionnaire, during the visits. The questionnaire entailed information in the following areas:

- (i) Demographic information
- (ii) Knowledge on medical checkup
- (iii) Attitude towards medical checkup
- (iv) Actual practice on medical checkup

A total of 13 064 households were found in the sample of 12 740 occupied quarters. Among those 13 064 households, 10 027 households were successfully enumerated, constituting an overall response rate of 76.8%. Within each selected household, all members aged 15 and above other than foreign domestic helpers were interviewed individually to collect the information. A total of 25 208 persons were interviewed.

The enumeration experience of the survey is summarised below:



2.7 Quality Control

Suitable quality control measures were taken to ensure that the survey data were of satisfactory quality - these included sufficient training and supervision of enumerators, independent random back-checking of 15% of the completed questionnaires, as well as validation of survey data in terms of completeness of entries, consistency among data items and credibility of reported data.

2.8 Grossing-up Method

The data collected from the survey were grossed up in accordance with the distribution of the land-based non-institutional population aged 15 and above other than foreign domestic helpers of Hong Kong breakdown by the age-sex groups and supplemented with administrative data on other health-related topics provided by C&SD.

2.9 Data Analysis

Descriptive analysis was adopted to describe the knowledge, attitude and behaviour of the population aged 15 and above on medical checkups. Subgroup analysis by sex and age group were performed. Analysis by educational attainment and monthly personal income were included as appropriate.

Imputation method was applied to missing data. Missing values were imputed by the results generated from the respondent with similar profile.

2.10 Reliability of the Estimates

Results of this survey are subject to sampling error and non-sampling error. The estimates were based on the information obtained from a particular sample, which was one of a large number of possible samples that could be selected using the same sample design. Estimates derived from different samples would differ from each other. The "sampling error" is a measure of these variations and is thus a measure of the precision with which an estimate derived from a particular sample would approximate the population parameter to be measured.

It should be noted that, since all estimates in this document are subject to sampling error, a zero figure might mean a non-zero figure of a small magnitude. Besides, some estimates are based on only a small number of observations and should be interpreted with caution.

For comparing the precision of the estimates of various variables in this document, the coefficient of variation (CV) is used. CV is obtained by expressing the standard error (SE) as a percentage of the estimate to which it refers. In turn, the SE is computed according to a formula which is established on the basis of statistical theory. Generally speaking, the SE is related to the variability of the elements in the population, the size of the sample and the sample design adopted for the survey. The smaller the CV or SE, the more precise is the estimate.

The CV of the estimates of the selected variables presented in this report are given below:

Variable	Estimate	CV
Percentage of persons aged 15 and above who had medical checkup during the 12 months before enumeration	19.6%	1.7%
Percentage of persons aged 15 and above who had medical checkup regularly	16.7%	2.0%

2.11 Rounding of Figures

Owing to rounding, there may be a slight discrepancy between the sum of individual items and the total as shown in the tables.

2.12 Confidentiality

At the beginning of this study, all staff involved in the project were required to sign a confidential agreement not to disclose any confidential information regarding this study.

All survey questionnaires were regarded as confidential documents after data have been entered. The private research company exercised due care in handling the questionnaires to avoid loss and leakage. The questionnaires were stored in a locked room. The data collected were used for compiling statistics *only* and were not used for other purposes.

All fully/partially completed questionnaires would be destroyed within 12 months after the survey is completed.

Chapter 3: Detailed Findings

3.1 Knowledge and Attitude on Medical Checkups

3.1.1 Views on Different Statements

To gauge the knowledge and attitude of medical checkups of persons aged 15 and above, respondents were asked to give their views on a series of statements. These statements included attitude/some misconceptions towards medical checkups.

3.1.1.1 Views on the Statement “the majority of diseases can be detected earlier through medical checkup”

The vast majority (92.8%) of the 5.75 million persons aged 15 and above believed that “majority of diseases can be detected earlier through medical checkup”. The rate of agreement was the same for both males and females, at 92.8% (Table 3.1.1.1a).

Among different age groups, elders aged 75 and above had the lowest rate of agreement (86.1%) and the highest rate of responding “don’t know” to the statement (10.3%); followed by those aged 65 to 74 (90.9% and 4.6% respectively). The rates of agreement for persons aged 15 to 64 were similar (Table 3.1.1.1b).

Table 3.1.1.1a: Persons aged 15 and above by agreement on “the majority of diseases can be detected earlier through medical checkup” by sex

Agreement on “the majority of diseases can be detected earlier through medical checkup”	Male		Female		Overall	
	Number of persons ('000)	%	Number of persons ('000)	%	Number of persons ('000)	%
Yes	2 590.7	92.8	2 745.4	92.8	5 336.1	92.8
No	145.3	5.2	135.4	4.6	280.7	4.9
Don't know	54.9	2.0	78.8	2.7	133.6	2.3
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.1b: Persons aged 15 and above by agreement on “the majority of diseases can be detected earlier through medical checkup” by age group

Agreement on “the majority of diseases can be detected earlier through medical checkup”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	811.4 (93.6%)	891.5 (93.7%)	1 064.7 (93.4%)	1 142.0 (93.3%)	694.1 (93.4%)	406.1 (90.9%)	326.2 (86.1%)	5 336.1 (92.8%)
No	41.8 (4.8%)	50.5 (5.3%)	59.1 (5.2%)	65.0 (5.3%)	30.7 (4.1%)	20.1 (4.5%)	13.5 (3.6%)	280.7 (4.9%)
Don't know	13.9 (1.6%)	9.4 (1.0%)	15.8 (1.4%)	16.4 (1.3%)	18.5 (2.5%)	20.5 (4.6%)	39.2 (10.3%)	133.6 (2.3%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.2 Views on the Statement “for the majority of diseases, detection at earlier stages can improve their prognosis”

Similarly, 94.4% of the persons aged 15 and above believed that “for the majority of diseases, detection at earlier stages can improve their prognosis”. Males and females showed similar rates of agreement, at 94.8% and 94.1% respectively (Table 3.1.1.2a).

Again, a smaller proportion of the older population agreed with the statement as compared to the younger population. In particular, persons aged 75 and above recorded the lowest rate of agreement (88.7%), followed by those aged 65 to 74 (91.5%) (Table 3.1.1.2b).

Table 3.1.1.2a: Persons aged 15 and above by agreement on “for the majority of diseases, detection at earlier stages can improve their prognosis” by sex

Agreement on “for the majority of diseases, detection at earlier stages can improve their prognosis”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 646.1	94.8	2 784.9	94.1	5 431.0	94.4
No	95.5	3.4	98.9	3.3	194.4	3.4
Don't know	49.3	1.8	75.8	2.6	125.1	2.2
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.2b: Persons aged 15 and above by agreement on “for the majority of diseases, detection at earlier stages can improve their prognosis” by age group

Agreement on “for the majority of diseases, detection at earlier stages can improve their prognosis”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	824.2 (95.0%)	904.0 (95.0%)	1 092.0 (95.8%)	1 163.9 (95.1%)	701.9 (94.4%)	409.0 (91.5%)	336.0 (88.7%)	5 431.0 (94.4%)
No	27.9 (3.2%)	35.9 (3.8%)	36.0 (3.2%)	42.7 (3.5%)	24.8 (3.3%)	17.1 (3.8%)	9.9 (2.6%)	194.4 (3.4%)
Don't know	15.1 (1.7%)	11.4 (1.2%)	11.6 (1.0%)	16.8 (1.4%)	16.7 (2.2%)	20.7 (4.6%)	32.9 (8.7%)	125.1 (2.2%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.3 Views on the Statement “investigations should be determined according to individual needs”

Of the 5.75 million persons aged 15 and above, over 90% believed that “investigations should be determined according to individual needs” (91.5%). Analyzed by sex, both genders had similar rates of agreement (91.8% in males and 91.2% in females) (Table 3.1.1.3a).

Similar to the previous two statements, persons aged 15 to 64 had higher rates of agreement, ranging from 91.1% to 93.6%. The rate of agreement dropped to 86.0% for persons aged 65 to 74, and further to 81.4% for persons aged 75 and above. Likewise, those aged 75 and above showed the highest rate of responding “don’t know” to this statement (15.4%) (Table 3.1.1.3b).

Table 3.1.1.3a: Persons aged 15 and above by agreement on “investigations should be determined according to individual needs” by sex

Agreement on “investigations should be determined according to individual needs”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 563.3	91.8	2 698.3	91.2	5 261.6	91.5
No	122.0	4.4	123.7	4.2	245.7	4.3
Don't know	105.5	3.8	137.5	4.6	243.1	4.2
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.3b: Persons aged 15 and above by agreement on “investigations should be determined according to individual needs” by age group

Agreement on “investigations should be determined according to individual needs”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	799.8 (92.2%)	890.7 (93.6%)	1 063.5 (93.3%)	1 137.8 (93.0%)	677.5 (91.1%)	384.0 (86.0%)	308.5 (81.4%)	5 261.6 (91.5%)
No	39.5 (4.6%)	43.5 (4.6%)	48.4 (4.2%)	49.9 (4.1%)	32.1 (4.3%)	20.2 (4.5%)	12.1 (3.2%)	245.7 (4.3%)
Don't know	27.9 (3.2%)	17.2 (1.8%)	27.7 (2.4%)	35.8 (2.9%)	33.8 (4.5%)	42.5 (9.5%)	58.2 (15.4%)	243.1 (4.2%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.4 Views on the Statement “the most advanced investigations are most effective in detecting diseases”

87.8% of the persons aged 15 and above believed that “the most advanced investigations are most effective in detecting diseases”. This statement was considered to be incorrect (i.e. misconception). The rates for both genders were similar (88.1% and 87.5% for males and females respectively) (Table 3.1.1.4a).

Among persons with correct perception of different age groups, elders aged 65 and above also showed the lowest rate (6.1% for those aged 65 to 74, 5.9% for those aged 75 and above) as compared with the young generation (ranged from 7.2% to 7.6%). It was found that a larger proportion of the aged groups choose “don’t know” in response to the statement (10.4% and 17.1% for persons aged 65 to 74, and 75 and above respectively) than the younger population (ranged from 2.4% to 5.0%) (Table 3.1.1.4b).

Table 3.1.1.4a: Persons aged 15 and above by agreement on “the most advanced investigations are most effective in detecting diseases” by sex

Agreement on “the most advanced investigations are most effective in detecting diseases”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 457.4	88.1	2 591.1	87.5	5 048.6	87.8
No	209.2	7.5	209.1	7.1	418.3	7.3
Don't know	124.2	4.5	159.4	5.4	283.6	4.9
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.4b: Persons aged 15 and above by agreement on “the most advanced investigations are most effective in detecting diseases” by age group

Agreement on “the most advanced investigations are most effective in detecting diseases”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	770.7 (88.9%)	859.9 (90.4%)	1 021.1 (89.6%)	1 081.8 (88.4%)	650.0 (87.4%)	373.3 (83.6%)	291.9 (77.1%)	5 048.6 (87.8%)
No	63.8 (7.4%)	68.8 (7.2%)	86.7 (7.6%)	93.4 (7.6%)	56.2 (7.6%)	27.2 (6.1%)	22.2 (5.9%)	418.3 (7.3%)
Don't know	32.6 (3.8%)	22.7 (2.4%)	31.8 (2.8%)	48.3 (3.9%)	37.2 (5.0%)	46.3 (10.4%)	64.8 (17.1%)	283.6 (4.9%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.5 Views on the Statement “some investigations may carry risk”

The rate of agreement to the statement that “some investigations may carry risk” was 69.3% among persons aged 15 and above. Likewise, there was little differentiation in their rates of agreement between the genders – males (69.9%) and females (68.8%) (Table 3.1.1.5a).

When analyzing the rates of agreement of different age groups, it was found that persons aged 25 to 34 attained the highest rate, at 73.1%. The rates gradually declined with increasing age and reached the lowest rate of 58.9% among elders aged 75 and above. Again, those aged 75 and above showed the highest rate of responding “don’t know” to this statement (27.1%) (Table 3.1.1.5b).

Table 3.1.1.5a: Persons aged 15 and above by agreement on “some investigations may carry risk” by sex

Agreement on “some investigations may carry risk”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	1 951.6	69.9	2 034.8	68.8	3 986.4	69.3
No	503.5	18.0	530.0	17.9	1 033.4	18.0
Don't know	335.8	12.0	394.8	13.3	730.6	12.7
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.5b: Persons aged 15 and above by agreement on “some investigations may carry risk” by age group

Agreement on “some investigations may carry risk”	Age group (Number of persons ('000) / %)							Overall
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	
Yes	610.4 (70.4%)	695.3 (73.1%)	817.1 (71.7%)	854.3 (69.8%)	502.9 (67.7%)	283.2 (63.4%)	223.2 (58.9%)	3 986.4 (69.3%)
No	152.2 (17.5%)	169.9 (17.9%)	212.6 (18.7%)	228.9 (18.7%)	143.5 (19.3%)	73.3 (16.4%)	53.1 (14.0%)	1 033.4 (18.0%)
Don't know	104.6 (12.1%)	86.2 (9.1%)	109.9 (9.6%)	140.2 (11.5%)	96.9 (13.0%)	90.3 (20.2%)	102.5 (27.1%)	730.6 (12.7%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.6 Views on the Statement “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases”

74.2% of persons aged 15 and above believed that “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases” (false positive). In fact, all screening tests carry a risk of producing faulty results. These test results are known as “false positive” and “false negative”. A “false positive” result indicates that a person has a specific disease or condition when the person actually does not have the disease or condition. On the other hand, a “false negative” result indicates that a person does not have a specific disease or condition when the person actually does have the disease or condition. Therefore, this statement was considered incorrect (i.e. misconception) because a false positive result can produce a positive test result in a healthy individual. Males (74.2%) and females (74.3%) did not show obvious differences in their rates of misconceptions (Table 3.1.1.6a).

The rate of correct perception was also low in elderly population. Those aged 75 and above attained a rate of 12.7% whereas the corresponding rates for those aged 15 to 74 ranged from 17.1% to 20.9%. It was found that a larger proportion of the elderly (16.7% for those aged 75 and above) chose “don’t know” in responding to this statement as compared with the younger population (4.5% to 9.4% for those aged 15 to 74) (Table 3.1.1.6b).

Table 3.1.1.6a: Persons aged 15 and above by agreement on “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases” by sex

Agreement on “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 071.3	74.2	2 197.8	74.3	4 269.1	74.2
No	556.3	19.9	553.3	18.7	1 109.6	19.3
Don't know	163.3	5.8	208.5	7.0	371.8	6.5
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.6b: Persons aged 15 and above by agreement on “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases” by age group

Agreement on “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	633.2 (73.0%)	709.4 (74.6%)	855.0 (75.0%)	912.9 (74.6%)	562.8 (75.7%)	328.1 (73.4%)	267.6 (70.7%)	4 269.1 (74.2%)
No	180.3 (20.8%)	199.0 (20.9%)	232.3 (20.4%)	242.4 (19.8%)	130.9 (17.6%)	76.6 (17.1%)	48.0 (12.7%)	1 109.6 (19.3%)
Don't know	53.6 (6.2%)	42.9 (4.5%)	52.3 (4.6%)	68.1 (5.6%)	49.6 (6.7%)	42.0 (9.4%)	63.1 (16.7%)	371.8 (6.5%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.7 Views on the Statement “normal findings in a medical checkup mean that the person must be free from diseases”

Around three-fifths (59.4%) of persons aged 15 and above believed that “normal findings in a medical checkup mean that the person must be free from diseases” (false negative). As explained in the previous section, this statement was considered incorrect (i.e. misconception) because a false negative result can produce a negative test result in a diseased person. Cross analysis by sex showed that no major difference on misconceptions were observed between males (59.0%) and females (59.8%) (Table 3.1.1.7a).

The rate of correct perception was again lower in elderly population. Those aged 75 and above attained a rate of 25.9% whereas the corresponding rates for those aged 15 to 74 ranged from 31.8% to 37.5%. It was found that a larger proportion of the elderly (15.1% for those aged 75 and above) chose “don’t know” in responding to this statement as compared with the younger population (3.7% to 8.7% for those aged 15 to 74) (Table 3.1.1.7b).

Table 3.1.1.7a: Persons aged 15 and above by agreement on “normal findings in a medical checkup mean that the person must be free from diseases” by sex

Agreement on “normal findings in a medical checkup mean that the person must be free from diseases”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	1 647.6	59.0	1 768.4	59.8	3 416.1	59.4
No	995.9	35.7	1 020.8	34.5	2 016.7	35.1
Don't know	147.3	5.3	170.4	5.8	317.7	5.5
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.7b: Persons aged 15 and above by agreement on “normal findings in a medical checkup mean that the person must be free from diseases” by age group

Agreement on “normal findings in a medical checkup mean that the person must be free from diseases”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	514.9 (59.4%)	559.3 (58.8%)	687.5 (60.3%)	719.5 (58.8%)	445.5 (59.9%)	265.8 (59.5%)	223.6 (59.0%)	3 416.1 (59.4%)
No	312.0 (36.0%)	357.1 (37.5%)	404.6 (35.5%)	447.1 (36.5%)	255.8 (34.4%)	141.9 (31.8%)	98.1 (25.9%)	2 016.7 (35.1%)
Don't know	40.3 (4.6%)	35.0 (3.7%)	47.5 (4.2%)	56.8 (4.6%)	42.0 (5.7%)	39.1 (8.7%)	57.1 (15.1%)	317.7 (5.5%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.8 Views on the Statement “results of a medical checkup should preferably be interpreted and explained by a doctor”

The vast majority (94.5%) of the persons aged 15 and above believed that “results of a medical checkup should preferably be interpreted and explained by a doctor”. Both genders showed similar rates of agreement, at 94.8% and 94.2% for males and females respectively (Table 3.1.1.8a).

Older persons aged 75 and above had the lowest rate of agreement (88.5%) than those aged 15 to 74, ranging from 92.3% to 95.5% (Table 3.1.1.8b). Again, those aged 75 and above showed the highest rate of responding “don’t know” to this statement (8.7%) (Table 3.1.1.8b).

Table 3.1.1.8a: Persons aged 15 and above by agreement on “results of a medical checkup should preferably be interpreted and explained by a doctor” by sex

Agreement on “results of a medical checkup should preferably be interpreted and explained by a doctor”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 645.4	94.8	2 787.1	94.2	5 432.5	94.5
No	84.2	3.0	90.6	3.1	174.8	3.0
Don't know	61.3	2.2	81.9	2.8	143.1	2.5
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.8b: Persons aged 15 and above by agreement on “results of a medical checkup should preferably be interpreted and explained by a doctor” by age group

Agreement on “results of a medical checkup should preferably be interpreted and explained by a doctor”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	822.6 (94.9%)	903.5 (95.0%)	1 088.0 (95.5%)	1 168.3 (95.5%)	702.2 (94.5%)	412.4 (92.3%)	335.4 (88.5%)	5 432.5 (94.5%)
No	28.1 (3.2%)	32.6 (3.4%)	34.1 (3.0%)	35.7 (2.9%)	21.7 (2.9%)	12.0 (2.7%)	10.6 (2.8%)	174.8 (3.0%)
Don't know	16.5 (1.9%)	15.3 (1.6%)	17.4 (1.5%)	19.4 (1.6%)	19.5 (2.6%)	22.3 (5.0%)	32.8 (8.7%)	143.1 (2.5%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.9 Views on the Statement “inclusion of history taking is always necessary in a medical checkup”

When asked about their views on medical checkups, 90.5% of the persons aged 15 and above believed that “inclusion of history taking is always necessary in a medical checkup”. Little differences were found between the rates of agreement in males (90.9%) and females (90.1%) (Table 3.1.1.9a).

The rates of agreement among persons aged 15 to 54 were similar (between 91.0% and 92.2%). It then decreased with increasing age to the lowest rate of 83.1% in elders aged 75 and above. This age group also showed the highest rate of responding “don’t know” to this statement (13.3%) (Table 3.1.1.9b).

Table 3.1.1.9a: Persons aged 15 and above by agreement on “inclusion of history taking is always necessary in a medical checkup” by sex

Agreement on “inclusion of history taking is always necessary in a medical checkup”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 536.4	90.9	2 667.3	90.1	5 203.7	90.5
No	123.4	4.4	135.6	4.6	259.0	4.5
Don't know	131.1	4.7	156.7	5.3	287.7	5.0
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.9b: Persons aged 15 and above by agreement on “inclusion of history taking is always necessary in a medical checkup” by age group

Agreement on “inclusion of history taking is always necessary in a medical checkup”	Age group (Number of persons ('000) / %)							Overall
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	
Yes	789.2 (91.0%)	872.6 (91.7%)	1 050.6 (92.2%)	1 123.2 (91.8%)	667.5 (89.8%)	386.0 (86.4%)	314.8 (83.1%)	5 203.7 (90.5%)
No	41.2 (4.7%)	43.3 (4.6%)	51.5 (4.5%)	56.8 (4.6%)	30.1 (4.1%)	22.5 (5.0%)	13.6 (3.6%)	259.0 (4.5%)
Don't know	36.9 (4.3%)	35.5 (3.7%)	37.5 (3.3%)	43.4 (3.6%)	45.8 (6.2%)	38.3 (8.6%)	50.4 (13.3%)	287.7 (5.0%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.1.10 Views on the Statement “inclusion of physical examination by a doctor is always necessary in a medical checkup”

When asked about their views on medical checkups, 92.5% of those aged 15 and above believed that “inclusion of physical examination by a doctor is always necessary in a medical checkup”. Similar rates of agreement were also observed in both sexes (92.4% for males and 92.6% for females) (Table 3.1.1.10a).

Younger persons aged 15 to 64 had higher rates of agreement (ranging from 92.4% to 93.4%) than those aged 65 to 74 (90.9%) and those aged 75 and above (86.9%). Again, those aged 75 and above showed the highest rate of responding “don’t know” to this statement (9.7%) (Table 3.1.1.10b).

Table 3.1.1.10a: Persons aged 15 and above by agreement on “inclusion of physical examination by a doctor is always necessary in a medical checkup” by sex

Agreement on “inclusion of physical examination by a doctor is always necessary in a medical checkup”	Male		Female		Overall	
	Number of person ('000)	%	Number of person ('000)	%	Number of person ('000)	%
Yes	2 579.4	92.4	2 739.4	92.6	5 318.9	92.5
No	126.9	4.5	122.2	4.1	249.1	4.3
Don't know	84.6	3.0	98.0	3.3	182.5	3.2
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.1.1.10b: Persons aged 15 and above by agreement on “inclusion of physical examination by a doctor is always necessary in a medical checkup” by age group

Agreement on “inclusion of physical examination by a doctor is always necessary in a medical checkup”	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Yes	810.0 (93.4%)	882.4 (92.8%)	1 064.0 (93.4%)	1 140.1 (93.2%)	687.2 (92.4%)	406.2 (90.9%)	329.1 (86.9%)	5 318.9 (92.5%)
No	32.4 (3.7%)	50.4 (5.3%)	53.5 (4.7%)	52.6 (4.3%)	32.8 (4.4%)	14.4 (3.2%)	13.0 (3.4%)	249.1 (4.3%)
Don't know	24.8 (2.9%)	18.6 (2.0%)	22.1 (1.9%)	30.7 (2.5%)	23.4 (3.2%)	26.2 (5.9%)	36.7 (9.7%)	182.5 (3.2%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

3.1.2 Misconceptions on Medical Checkups

The following section summarized the percentage of misconceptions on medical checkups by persons aged 15 and above. Over 50% of persons aged 15 and above had misconceptions on the three statements, “the most advanced investigations are most effective in detecting diseases” (87.8%), “abnormal findings in a medical checkup mean that the person must be suffering from certain diseases” (false positive) (74.2%) and “normal findings in a medical checkup mean that the person must be free from diseases” (false negative) (59.4%) (Table 3.1.2a).

When analyzed by age groups, the rate of misconceptions for those aged 75 and above appeared to be lower than the others due to a higher percentage of “don’t know” in the corresponding statements. The results should hence be interpreted with caution (Table 3.1.2b).

Table 3.1.2a: Percentage of misconceptions and correct perceptions for some misconception statements

Some misconception statements	Percentage of misconception (%)	Percentage of correct perception (%)
The most advanced investigations are most effective in detecting diseases	87.8	7.3
Abnormal findings in a medical checkup mean that the person must be suffering from certain diseases	74.2	19.3
Normal findings in a medical checkup mean that the person must be free from diseases	59.4	35.1

Base: All respondents

Table 3.1.2b: Percentage of misconceptions, correct perceptions and choosing “don’t know” for some misconception statements by age group

Some misconception statements	Percentage of misconception (%)		Percentage of correct perception (%)		Percentage of choosing “don’t know” (%)	
	15-74 (ranges)	75 and above	15-74 (ranges)	75 and above	15-74 (ranges)	75 and above
The most advanced investigations are most effective in detecting diseases	83.6-90.4	77.1	6.1-7.6	5.9	2.4-10.4	17.1
Abnormal findings in a medical checkup mean that the person must be suffering from certain diseases	73.0-75.7	70.7	17.1-20.9	12.7	4.5-9.4	16.7
Normal findings in a medical checkup mean that the person must be free from diseases	58.8-60.3	59.0	31.8-37.5	25.9	3.7-8.7	15.1

Base: All respondents

3.2 Planning to Have Medical Checkup in Future

3.2.1 General Characteristics

At the time of enumeration, 1.33 million persons aged 15 and above planned to have medical checkup in future, accounting for 23.2% of all 5.75 million persons aged 15 and above. The rate was higher in females (25.8%) than males (20.4%). It peaked in the 35 to 44 age group (30.2%) (Table 3.2.1a).

Of the 1.33 million persons who planned to have medical checkup in the future, 57.3% were females and 42.7% were males. 26.4% were aged 45 to 54, and 25.8% were aged 35 to 44. The median age was 44 years (Table 3.2.1a).

In terms of educational attainment, it was found that persons with higher educational level were more likely to have plans for medical checkup. The rate increased from 12.1% in persons with no schooling or pre-primary education to 34.3% in persons with post-secondary education (Table 3.2.1b).

Except for persons without income, the rate of planning to have medical checkup increased consistently with monthly personal income. It increased from 16.8% in persons with monthly personal income of less than HK\$5,000 (excluding those with no income) to 54.0% in persons with monthly personal income of HK\$40,000 and above (Table 3.2.1c).

Table 3.2.1a: Persons aged 15 and above who planned to have medical checkup in future by age group and sex

Age group	Male			Female			Overall		
	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)
15- 24	50.8	8.9	11.5	63.1	8.3	14.8	113.9	8.5	13.1
25- 34	85.1	14.9	18.6	125.8	16.4	25.5	210.9	15.8	22.2
35- 44	135.7	23.8	26.0	208.2	27.2	33.7	343.9	25.8	30.2
45- 54	156.4	27.5	25.8	195.7	25.6	31.7	352.1	26.4	28.8
55- 64	78.2	13.7	20.8	95.3	12.5	26.0	173.5	13.0	23.3
65- 74	40.6	7.1	18.5	46.1	6.0	20.3	86.8	6.5	19.4
75 and above	22.9	4.0	13.4	30.5	4.0	14.7	53.4	4.0	14.1
Total	569.6	100.0 (42.7)	20.4	764.9	100.0 (57.3)	25.8	1 334.4	100.0 (100.0)	23.2
Median (years)	45.0			44.0			44.0		
Mean (years)	45.2			44.4			44.8		
Standard error of mean	0.3			0.3			0.2		

Base: All respondents who planned to have medical checkup in future

Notes: Figures in brackets represent the percentages in respect of all persons who had planned to have medical checkup.

* As a percentage of all persons in the respective age and sex sub-groups. For example, among all males aged 15-24, 11.5% planned to have medical checkup.

Table 3.2.1b: Persons aged 15 and above who planned to have medical checkup in future by educational attainment

Educational attainment	Number ('000)	%	Rate* (per 100 persons)
No schooling/Pre-primary	42.4	3.2	12.1
Primary	180.6	13.5	17.3
Secondary/Sixth-form [#]	706.7	53.0	22.3
Post-secondary	404.7	30.3	34.3
Total	1 334.4	100.0	23.2

Base: All respondents who planned to have medical checkup in future

Note: * As a percentage of all persons in the respective educational attainment sub-groups. For example, among all persons with no schooling or pre-primary education, 12.1% planned to have medical checkup.

[#] Persons with secondary educational attainment include those with Secondary 1 to Secondary 5 educational attainment while persons with sixth-form educational attainment include those with Secondary 6 to Secondary 7 educational attainment.

Table 3.2.1c: Persons aged 15 and above who planned to have medical checkup in future by monthly personal income

Monthly personal income (HK\$)	Number ('000)	%	Rate* (per 100 persons)
No income	305.4	22.9	19.4
1 – 4,999	143.7	10.8	16.8
5,000 – 9,999	208.1	15.6	17.6
10,000 – 14,999	198.3	14.9	22.3
15,000 – 19,999	127.5	9.6	30.0
20,000 – 29,999	162.2	12.2	36.3
30,000 – 39,999	76.9	5.8	46.6
40,000 and above	112.2	8.4	54.0
Total	1 334.4	100.0	23.2

Base: All respondents who planned to have medical checkup in future

Note: * As a percentage of all persons in the respective monthly personal income sub-groups. For example, among all persons without monthly personal income, 19.4% planned to have medical checkup

3.2.2 Anticipated Time of Having Medical Checkup

Among the 1.33 million persons who planned to have medical checkup in future, half of them (50.2%) planned to receive the medical checkup 7 to 12 months later, and a quarter (24.6%) planned to have it 1 to 6 months later. The median time of future medical checkup was 12 months later (Table 3.2.2).

Table 3.2.2: Anticipated time of next medical checkup for persons aged 15 and above planning to have medical checkup in future

Anticipated time of next medical checkup (month)	Number of persons ('000)	%
1-6	328.2	24.6
7-12	669.6	50.2
13-24	158.1	11.8
25-36	39.0	2.9
37 and above	8.6	0.6
Don't know	131.0	9.8
Total	1 334.4	100.0
<i>Median (months)</i>	<i>12.0</i>	
<i>Mean (months)</i>	<i>11.8</i>	
<i>Standard error of mean</i>	<i>0.2</i>	

Base: All respondents who planned to have medical checkup in the future

3.3 Having Regular Medical Checkups

3.3.1 General Characteristics

About 957 600 or 16.7% of persons aged 15 and above reported to have regular medical checkups. The rate was higher in females (19.2%) than males (14.0%). Persons aged 35 to 44 had the highest rate of regular medical checkups (21.6%), followed closely by those aged 45 to 54 (20.8%) (Table 3.3.1a).

Of those 957 600 persons, 59.3% were females and 40.7% were males. 26.5% were aged 45 to 54 and 25.8% were aged 35 to 44. The median age was 45 years (Table 3.3.1a).

The rate of having regular medical checkups rose with higher level of educational attainment. The rate increased from 9.8% in persons with no schooling or pre-primary education to 24.6% with post-secondary education (Table 3.3.1b).

In general, the rate of having regular medical checkups increased with monthly personal income. Except for persons with monthly personal income of less than HK\$5,000, the rate increased from 11.4% among those with monthly personal income of HK\$5,000 to HK\$9,999, to 43.2% among those with monthly personal income of HK\$40,000 and above (Table 3.3.1c).

Table 3.3.1a: Persons aged 15 and above who had medical checkups regularly by age group and sex

Age group	Male			Female			Overall		
	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)
15- 24	32.9	8.4	7.5	38.4	6.8	9.0	71.3	7.4	8.2
25- 34	52.2	13.4	11.4	88.9	15.7	18.0	141.1	14.7	14.8
35- 44	92.2	23.6	17.7	154.5	27.2	25.0	246.7	25.8	21.6
45- 54	105.5	27.1	17.4	148.5	26.2	24.0	254.0	26.5	20.8
55- 64	55.6	14.3	14.8	71.7	12.6	19.5	127.3	13.3	17.1
65- 74	32.0	8.2	14.6	39.8	7.0	17.5	71.8	7.5	16.1
75 and above	19.8	5.1	11.6	25.7	4.5	12.4	45.5	4.7	12.0
Total	390.1	100.0 (40.7)	14.0	567.5	100.0 (59.3)	19.2	957.6	100.0 (100.0)	16.7
Median (years)	46.0			45.0			45.0		
Mean (years)	46.3			45.4			45.7		
Standard error of mean	0.4			0.3			0.3		

Base: All respondents who had medical checkups regularly

Notes: Figures in brackets represent the percentages in respect of all persons who had medical checkups regularly.

* As a percentage of all persons in the respective age and sex sub-groups. For example, among all males aged 15-24, 7.5% had medical checkups regularly.

Table 3.3.1b: Persons aged 15 and above who had medical checkups regularly by educational attainment

Educational attainment	Number ('000)	%	Rate* (per 100 persons)
No schooling/Pre-primary	34.3	3.6	9.8
Primary	129.8	13.6	12.4
Secondary/Sixth-form [#]	503.2	52.5	15.9
Post-secondary	290.3	30.3	24.6
Total	957.6	100.0	16.7

Base: All respondents who had medical checkups regularly

Note: * As a percentage of all persons in the respective educational attainment sub-groups. For example, among all persons with no schooling or pre-primary education, 9.8% had medical checkups regularly.

[#] Persons with secondary educational attainment include those with Secondary 1 to Secondary 5 educational attainment while persons with sixth-form educational attainment include those with Secondary 6 to Secondary 7 educational attainment.

Table 3.3.1c: Persons aged 15 and above who had medical checkups regularly by monthly personal income

Monthly personal income (HK\$)	Number ('000)	%	Rate* (per 100 persons)
No income	221.0	23.1	14.0
1 – 4,999	103.2	10.8	12.1
5,000 – 9,999	134.6	14.1	11.4
10,000 –14,999	132.7	13.9	14.9
15,000 – 19,999	90.2	9.4	21.2
20,000 – 29,999	126.4	13.2	28.3
30,000 – 39,999	59.8	6.2	36.3
40,000 and above	89.8	9.4	43.2
Total	957.6	100.0	16.7

Base: All respondents who had medical checkups regularly

Note: * As a percentage of all persons in the respective monthly personal income sub-groups. For example, among all persons without monthly personal income, 14.0% had medical checkups regularly.

3.3.2 Frequency of Medical Checkups

Among the 957 600 persons aged 15 and above who had medical checkups regularly, most of them had their regular medical checkups once every 7 to 12 months (68.2%), followed distantly by every 13 to 24 months (21.6%). The median time interval of 2 consecutive checkups was 12 months (Table 3.3.2).

Table 3.3.2: Frequency of medical checkups for persons aged 15 and above who had medical checkups regularly

Interval of 2 consecutive medical checkups (month)	Number of persons ('000)	%
1-6	28.3	3.0
7-12	653.2	68.2
13-24	206.7	21.6
25-36	61.5	6.4
37 and above	7.9	0.8
Total	957.6	100.0
<hr/>		
<i>Median (months)</i>	12.0	
<i>Mean (months)</i>	15.8	
<i>Standard error of mean</i>	0.2	

Base: All respondents who had medical checkups regularly

3.4 *Having Medical Checkup(s) Before Enumeration*

3.4.1 *General Characteristics*

At the time of enumeration, it was estimated that 2.79 million or 48.5% of persons aged 15 and above had medical checkups before enumeration. The rate was higher in females (52.3%) than males (44.6%). Persons aged 35 to 74 had similar rates of having medical checkup(s) before enumeration (ranging between 53.1% and 55.0%). The rate then decreased to 47.6% for older persons aged 75 and above (Table 3.4.1a).

Among the 2.79 million persons aged 15 and above who had medical checkups before enumeration, 55.4% were females and 44.6% were males. 23.8% were aged 45 to 54, and 22.5% were aged 35 to 44. The median age was 45 years (Table 3.4.1a).

The rate of having medical checkup(s) before enumeration rose as the educational level advanced. It reached the peak of 60.5% for those with post-secondary education (Table 3.4.1b).

Among those who had a monthly personal income of HK\$5,000 and above, the rate of having medical checkup(s) before enumeration also increased with their monthly personal income. It rose from 41.2% for persons with monthly personal income of HK\$5,000 to HK\$9,999 to 81.9% for persons with monthly personal income of HK\$40,000 and above (Table 3.4.1c).

Table 3.4.1a: Persons aged 15 and above who had medical checkups before enumeration by age group and sex

Age group	Male			Female			Overall		
	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)
15- 24	129.2	10.4	29.4	139.6	9.0	32.6	268.8	9.6	31.0
25- 34	172.6	13.9	37.7	244.2	15.8	49.4	416.8	14.9	43.8
35- 44	262.2	21.1	50.3	364.6	23.6	59.0	626.9	22.5	55.0
45- 54	300.5	24.1	49.6	363.8	23.5	58.9	664.3	23.8	54.3
55- 64	188.8	15.2	50.2	208.1	13.5	56.7	396.9	14.2	53.4
65- 74	111.4	9.0	50.7	126.0	8.1	55.5	237.4	8.5	53.1
75 and above	79.8	6.4	46.8	100.4	6.5	48.2	180.2	6.5	47.6
Total	1 244.6	100.0 (44.6)	44.6	1 546.6	100.0 (55.4)	52.3	2 791.2	100.0 (100.0)	48.5
Median (years)	46.0			45.0			45.0		
Mean (years)	46.6			46.1			46.3		
Standard error of mean	0.2			0.2			0.2		

Base: All respondents who had medical checkups before enumeration

Notes: Figures in brackets represent the percentages in respect of all persons who had medical checkups before.

* As a percentage of all persons in the respective age and sex sub-groups. For example, among all males aged 15-24, 29.4% had medical checkups before.

Table 3.4.1b: Persons aged 15 and above who had medical checkups before enumeration by educational attainment

Educational attainment	Number ('000)	%	Rate* (per 100 persons)
No schooling/Pre-primary	153.6	5.5	44.0
Primary	470.0	16.8	44.9
Secondary/Sixth-form [#]	1 452.9	52.1	45.8
Post-secondary	714.6	25.6	60.5
Total	2 791.2	100.0	48.5

Base: All respondents who had medical checkups before enumeration

Note: * As a percentage of all persons in the respective educational attainment sub-groups. For example, among all persons with no schooling or pre-primary education, 44.0% had medical checkups before.

[#] Persons with secondary educational attainment include those with Secondary 1 to Secondary 5 educational attainment while persons with sixth-form educational attainment include those with Secondary 6 to Secondary 7 educational attainment.

Table 3.4.1c: Persons aged 15 and above who had medical checkups before enumeration by monthly personal income

Monthly personal income (HK\$)	Number ('000)	%	Rate* (per 100 persons)
No income	672.3	24.1	42.7
1 – 4,999	406.4	14.6	47.5
5,000 – 9,999	488.7	17.5	41.2
10,000 – 14,999	396.1	14.2	44.6
15,000 – 19,999	234.5	8.4	55.1
20,000 – 29,999	298.2	10.7	66.8
30,000 – 39,999	124.8	4.5	75.7
40,000 and above	170.2	6.1	81.9
Total	2 791.2	100.0	48.5

Base: All respondents who had medical checkups before enumeration

Note: * As a percentage of all persons in the respective monthly personal income sub-groups. For example, among all persons without monthly personal income, 42.7% had medical checkups before.

3.4.2 Main Reason of Never Having Medical Checkup

Of the 2.96 million persons who had never had medical checkup before, four commonly quoted reasons were “consider themselves healthy” (43.3%), followed by “never thought about it” (34.0%), “lack of money” (10.5%) and “lack of time” (7.0%). The main reasons for never having medical checkup were similar for both sexes (Table 3.4.2a).

When analyzed by age group, the commonest reason for never having medical checkup as quoted by persons aged 15 to 64 were “consider themselves healthy” (ranging from 35.6% to 52.0%), and followed by “never thought about it” (ranging from 31.5% to 35.0%) respectively. However, in older persons aged 65 and above, the commonest reason cited were “never thought about it” (ranging from 40.1% to 41.5%), followed by “consider themselves healthy” (ranging from 22.3% to 28.1%). A higher percentage of the older persons aged 65 and above mentioned “lack of money” as the main reason of never having medical checkup (ranging from 20.2% to 23.1%) (Table 3.4.2b).

Table 3.4.2a: Persons aged 15 and above who had never had medical checkup before by main reason of never having medical checkup and sex

Main reason of never having medical checkup	Male		Female		Overall	
	Number of persons ('000)	%	Number of persons ('000)	%	Number of persons ('000)	%
Consider myself healthy	680.0	44.0	600.7	42.5	1 280.7	43.3
Never thought about it	527.2	34.1	480.0	34.0	1 007.2	34.0
Lack of money	146.9	9.5	165.2	11.7	312.1	10.5
Lack of time	120.2	7.8	86.7	6.1	206.9	7.0
Lack of information	23.3	1.5	23.7	1.7	47.0	1.6
Fear of side effect or discomfort of procedure (e.g. radiation)	22.8	1.5	19.4	1.4	42.2	1.4
Others	25.9	1.7	37.3	2.6	63.2	2.1
Total	1 546.3	100.0	1 413.0	100.0	2 959.3	100.0

Base: The respondents who had never had medical checkup before

Table 3.4.2b: Persons aged 15 and above who had never had medical checkup before by main reason of never having medical checkup and age group

Main reason of never having medical checkup	Age group (Number of persons ('000) / %)							
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	Overall
Consider myself healthy	311.1 (52.0%)	262.3 (49.1%)	240.9 (47.0%)	239.9 (42.9%)	123.3 (35.6%)	58.9 (28.1%)	44.3 (22.3%)	1 280.7 (43.3%)
Never thought about it	197.8 (33.1%)	175.0 (32.7%)	161.7 (31.5%)	185.2 (33.1%)	121.1 (35.0%)	83.9 (40.1%)	82.5 (41.5%)	1 007.2 (34.0%)
Lack of money	37.7 (6.3%)	28.1 (5.3%)	44.3 (8.6%)	62.9 (11.3%)	51.0 (14.7%)	42.2 (20.2%)	45.8 (23.1%)	312.1 (10.5%)
Lack of time	32.4 (5.4%)	47.8 (8.9%)	42.7 (8.3%)	46.4 (8.3%)	26.0 (7.5%)	7.0 (3.4%)	4.6 (2.3%)	206.9 (7.0%)
Lack of information	7.3 (1.2%)	10.8 (2.0%)	7.6 (1.5%)	7.2 (1.3%)	6.9 (2.0%)	4.5 (2.2%)	2.7 (1.4%)	47.0 (1.6%)
Fear of side effect or discomfort of procedure (e.g. radiation)	7.5 (1.2%)	6.6 (1.2%)	9.9 (1.9%)	8.1 (1.4%)	6.0 (1.7%)	1.5 (0.7%)	2.6 (1.3%)	42.2 (1.4%)
Others	4.7 (0.8%)	4.0 (0.7%)	5.6 (1.1%)	9.4 (1.7%)	12.2 (3.5%)	11.3 (5.4%)	16.0 (8.1%)	63.2 (2.1%)
Total	598.4 (100.0%)	534.6 (100.0%)	512.7 (100.0%)	559.1 (100.0%)	346.5 (100.0%)	209.4 (100.0%)	198.6 (100.0%)	2 959.3 (100.0%)

Base: The respondents who had never had medical checkup before

3.4.3 Having Medical Checkup(s) in the 3 Years Before Enumeration

3.4.3.1 General Characteristics

When asked whether they had medical checkup(s) in the 3 years before enumeration, 1.9 million or 33.1% of persons aged 15 and above gave an affirmative answer. Again, the rate was higher in females (37.1%) than males (28.9%). The rate was highest in persons aged 35 to 44 (40.9%) across different age groups (Table 3.4.3.1a).

Among the 1.9 million persons aged 15 and above, 57.7% were females and 42.3% were males. 25.7% were aged 45 to 54, and 24.5% were aged 35 to 44. The median age was 45 years (Table 3.4.3.1a).

Likewise, the rate of having medical checkup(s) in the 3 years before enumeration increased with educational attainment. It increased from 21.2% in persons with no schooling or pre-primary education to 46.2% in persons with post-secondary education (Table 3.4.3.1b).

Analyzed by monthly personal income, except for persons with monthly personal income of less than HK\$5,000, the rate of having medical checkup(s) in the 3 years before enumeration increased from 24.9% in persons with monthly personal income of HK\$5,000 to HK\$9,999, to 70.1% in persons with monthly personal income of HK\$40,000 and above (Table 3.4.3.1c).

Table 3.4.3.1a: Persons aged 15 and above who had medical checkups in the 3 years before enumeration by age group and sex

Age group	Male			Female			Overall		
	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)
15- 24	70.6	8.8	16.1	84.0	7.7	19.7	154.7	8.1	17.8
25- 34	111.4	13.8	24.4	185.1	16.9	37.5	296.5	15.6	31.2
35- 44	185.1	23.0	35.5	281.2	25.6	45.5	466.3	24.5	40.9
45- 54	208.9	25.9	34.5	279.4	25.5	45.2	488.3	25.7	39.9
55- 64	122.7	15.2	32.6	142.0	12.9	38.7	264.8	13.9	35.6
65- 74	62.8	7.8	28.6	75.6	6.9	33.3	138.4	7.3	31.0
75 and above	44.2	5.5	25.9	50.3	4.6	24.2	94.5	5.0	24.9
Total	805.7	100.0 (42.3)	28.9	1 097.7	100.0 (57.7)	37.1	1 903.4	100.0 (100.0)	33.1
Median (years)	46.0			44.0			45.0		
Mean (years)	46.3			45.1			45.6		
Standard error of mean	0.3			0.2			0.2		

Base: All respondents who had medical checkups during the 3 years before enumeration

Notes: Figures in brackets represent the percentages in respect of all persons who had medical checkups during the 3 years before enumeration.

* As a percentage of all persons in the respective age and sex sub-groups. For example, among all males aged 15-24, 16.1% had medical checkups in the 3 years before enumeration.

Table 3.4.3.1b: Persons aged 15 and above who had medical checkups in the 3 years before enumeration by educational attainment

Educational attainment	Number ('000)	%	Rate* (per 100 persons)
No schooling/Pre-primary	73.9	3.9	21.2
Primary	280.7	14.7	26.8
Secondary/Sixth-form [#]	1 003.0	52.7	31.6
Post-secondary	545.9	28.7	46.2
Total	1 903.4	100.0	33.1

Base: All respondents who had medical checkups during the 3 years before enumeration

Note: * As a percentage of all persons in the respective educational attainment sub-groups. For example, among all persons with no schooling or pre-primary education, 21.2% had medical checkups in the 3 years before enumeration.

[#] Persons with secondary educational attainment include those with Secondary 1 to Secondary 5 educational attainment while persons with sixth-form educational attainment include those with Secondary 6 to Secondary 7 educational attainment.

Table 3.4.3.1c: Persons aged 15 and above who had medical checkups in the 3 years before enumeration by monthly personal income

Monthly personal income (HK\$)	Number ('000)	%	Rate* (per 100 persons)
No income	442.9	23.3	28.1
1 – 4,999	229.8	12.1	26.8
5,000 – 9,999	295.0	15.5	24.9
10,000 – 14,999	277.7	14.6	31.2
15,000 – 19,999	175.3	9.2	41.2
20,000 – 29,999	235.1	12.3	52.6
30,000 – 39,999	102.2	5.4	62.0
40,000 and above	145.5	7.6	70.1
Total	1 903.4	100.0	33.1

Base: All respondents who had medical checkups in the 3 years before enumeration

Note: * As a percentage of all persons in the respective monthly personal income sub-groups. For example, among all persons without monthly personal income, 28.1% had medical checkups during the 3 years before enumeration.

3.4.3.2 Frequency of Medical Checkup(s) in the 3 Years Before Enumeration

Of the 1.9 million persons aged 15 and above who had medical checkups in the 3 years before enumeration, nearly half of them (48.8%) had only one medical checkup within the said period. The proportion of persons who had two, three and four or more checkups during the 3 years before enumeration were 18.7%, 29.8% and 2.8% respectively. The median number of medical checkups done during that period was two (Table 3.4.3.2).

Table 3.4.3.2: Persons aged 15 and above who had medical checkups in the 3 years before enumeration by number of medical checkups done in the 3 years before enumeration

Number of medical checkups done in the 3 years before enumeration	Number of persons ('000)	%
1	928.0	48.8
2	355.4	18.7
3	567.6	29.8
4 and above	52.4	2.8
Total	1 903.4	100.0
<i>Median (Times)</i>	2.0	
<i>Mean (Times)</i>	1.9	
<i>Standard error of mean</i>	0.02	

Base: All respondents who had medical checkups in the 3 years before enumeration

3.4.4 Having Medical Checkup(s) in the 12 Months Before Enumeration

3.4.4.1 General Characteristics

1.13 million or 19.6% persons aged 15 and above reported to have medical checkups in the 12 months before enumeration. The rate was higher in females (22.5%) than males (16.6%). It was highest in persons aged 35 to 54, at around 24% (Table 3.4.4.1a).

About three-fifth (59.0%) of the 1.13 million persons were females and the remaining 41.0% were males. 26.4% were aged 45 to 54 and 24.6% were aged 35 to 44. The median age was 45 years (Table 3.4.4.1a).

The rate of having medical checkup(s) in the 12 months before enumeration also increased with educational attainment, from 11.8% in persons with no schooling or pre-primary education to 28.1% in persons with post-secondary education (Table 3.4.4.1b).

The rate of having medical checkup(s) in the 12 months before enumeration also increased substantially with monthly personal income. Except for persons with monthly personal income of less than HK\$5,000, the rate increased from 14.4% in persons with monthly personal income of HK\$5,000 to HK\$9,999 to 46.8% in persons with monthly personal income of HK\$40,000 and above (Table 3.4.4.1c).

Table 3.4.4.1a: Persons aged 15 and above who had medical checkups in the 12 months before enumeration by age group and sex

Age group	Male			Female			Overall		
	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)	Number of persons ('000)	%	Rate* (per 100 persons)
15- 24	43.5	9.4	9.9	48.8	7.3	11.4	92.3	8.2	10.6
25- 34	63.1	13.7	13.8	106.8	16.0	21.6	169.9	15.1	17.9
35- 44	102.7	22.2	19.7	174.8	26.2	28.3	277.5	24.6	24.4
45- 54	125.5	27.2	20.7	172.3	25.9	27.9	297.8	26.4	24.3
55- 64	67.0	14.5	17.8	84.5	12.7	23.0	151.6	13.4	20.4
65- 74	37.4	8.1	17.0	48.1	7.2	21.2	85.5	7.6	19.1
75 and above	22.9	5.0	13.4	30.8	4.6	14.8	53.7	4.8	14.2
Total	462.1	100.0 (41.0)	16.6	666.2	100.0 (59.0)	22.5	1 128.3	100.0 (100.0)	19.6
Median (years)	46.0			45.0			45.0		
Mean (years)	46.1			45.4			45.7		
Standard error of mean	0.4			0.3			0.2		

Base: All respondents who had medical checkups in the 12 months before enumeration

Notes: Figures in brackets represent the percentages in respect of all persons who had medical checkups in the 12 months before enumeration.

* As a percentage of all persons in the respective age and sex sub-groups. For example, among all males aged 15-24, 9.9% had medical checkups in the 12 months before enumeration.

Table 3.4.4.1b: Persons aged 15 and above who had medical checkups in the 12 months before enumeration by educational attainment

Educational attainment	Number ('000)	%	Rate* (per 100 persons)
No schooling/Pre-primary	41.4	3.7	11.8
Primary	161.0	14.3	15.4
Secondary/Sixth-form [#]	594.3	52.7	18.7
Post-secondary	331.6	29.4	28.1
Total	1 128.3	100.0	19.6

Base: All respondents who had medical checkups in the 12 months before enumeration

Note: * As a percentage of all persons in the respective educational attainment sub-groups. For example, among all persons with no schooling or pre-primary education, 11.8% had medical checkups in the 12 months before enumeration.

[#] Persons with secondary educational attainment include those with Secondary 1 to Secondary 5 educational attainment while persons with sixth-form educational attainment include those with Secondary 6 to Secondary 7 educational attainment.

Table 3.4.4.1c: Persons aged 15 and above who had medical checkups in the 12 months before enumeration by monthly personal income

Monthly personal income (HK\$)	Number ('000)	%	Rate* (per 100 persons)
No income	263.6	23.4	16.7
1 – 4,999	132.0	11.7	15.4
5,000 – 9,999	170.3	15.1	14.4
10,000 – 14,999	158.3	14.0	17.8
15,000 – 19,999	106.9	9.5	25.1
20,000 – 29,999	135.9	12.0	30.4
30,000 – 39,999	64.2	5.7	38.9
40,000 and above	97.2	8.6	46.8
Total	1 128.3	100.0	19.6

Base: All respondents who had medical checkups in the 12 months before enumeration

Note: * As a percentage of all persons in the respective monthly personal income sub-groups. For example, among all persons without monthly personal income, 16.7% had medical checkups in the 12 months before enumeration.

3.4.4.2 Frequency of Medical Checkup(s) in the 12 Months Before Enumeration

The vast majority (94.7%) of the 1.13 million persons who had medical checkup(s) in the 12 months before enumeration had only one medical checkup conducted in that period (Table 3.4.4.2).

Table 3.4.4.2: Persons aged 15 and above who had medical checkups in the 12 months before enumeration by number of medical checkups done in the 12 months before enumeration

Number of medical checkups done in the 12 months before enumeration	Number of persons ('000)	%
1	1 068.6	94.7
2	44.7	4.0
3	8.9	0.8
4 and above	6.1	0.5
Total	1 128.3	100.0
<hr style="border-top: 1px dashed black;"/>		
<i>Median (Times)</i>	1.0	
<i>Mean (Times)</i>	1.1	
<i>Standard error of mean</i>	0.01	

Base: All respondents who had medical checkup during the 12 months before enumeration

3.4.5 Main Reason of Not Having Medical Checkup in the 12 Months Before Enumeration

Among those who had medical checkups before enumeration, 1.66 million persons denied of having checkup in the 12 months before enumeration. The three common reasons quoted were that they “consider themselves healthy” (45.6%), followed by “lack of time” (16.3%) and “next checkup not due yet” (12.9%) (Table 3.4.5a).

It was found that a greater proportion of men cited the former two reasons than women. 47.6% of men and 43.8% of women reported that they “consider themselves healthy” as the main reason. Besides, 17.9% of men and 14.9% of females considered “lack of time” as the main reason of not having medical checkup in the 12 months before enumeration (Table 3.4.5a).

Table 3.4.5a: Persons aged 15 and above who had medical checkups before but did not have medical checkup during the 12 months before enumeration by main reason of not having medical checkup in the 12 months before enumeration and sex

Main reason of not having medical checkup in the 12 months before enumeration	Male		Female		Overall	
	Number of persons ('000)	%	Number of persons ('000)	%	Number of persons ('000)	%
Consider myself healthy	372.2	47.6	385.4	43.8	757.6	45.6
Lack of time	140.1	17.9	131.3	14.9	271.4	16.3
Next checkup not due yet	86.1	11.0	127.7	14.5	213.7	12.9
Lack of money	57.9	7.4	87.3	9.9	145.2	8.7
Never thought about it	67.0	8.6	75.0	8.5	142.0	8.5
Others	59.2	7.6	73.8	8.4	133.0	8.0
Total	782.5	100.0	880.4	100.0	1 662.9	100.0

Base: The respondents who had medical checkups before but did not have medical checkup in the 12 months before enumeration

Analyzed by age, for persons aged 15 to 74, the main reason of not having medical checkup during the 12 months before enumeration was that they “consider themselves healthy”. The proportion decreased with increasing age from 63.7% in young persons aged 15 to 24 to 34.3% in persons aged 65 to 74 (Table 3.4.5b).

Table 3.4.5b: Persons aged 15 and above who had medical checkups before but did not have medical checkup in the 12 months before enumeration by main reason of not having medical checkup in the 12 months before enumeration and age group

Main reason of not having medical checkup in the 12 months before enumeration	Age group (Number of persons ('000) / %)							Overall
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	
Consider myself healthy	112.5 (63.7%)	128.5 (52.0%)	158.9 (45.5%)	172.3 (47.0%)	103.7 (42.3%)	52.2 (34.3%)	29.6 (23.4%)	757.6 (45.6%)
Lack of time	21.8 (12.3%)	49.0 (19.9%)	81.1 (23.2%)	67.4 (18.4%)	34.4 (14.0%)	11.2 (7.4%)	6.6 (5.2%)	271.4 (16.3%)
Next checkup not due yet	8.2 (4.6%)	31.4 (12.7%)	58.9 (16.9%)	57.9 (15.8%)	29.4 (12.0%)	14.5 (9.5%)	13.4 (10.6%)	213.7 (12.9%)
Lack of money	8.6 (4.9%)	9.8 (4.0%)	18.7 (5.4%)	28.1 (7.7%)	31.7 (12.9%)	25.8 (17.0%)	22.6 (17.9%)	145.2 (8.7%)
Never thought about it	21.4 (12.1%)	22.3 (9.0%)	20.3 (5.8%)	23.3 (6.4%)	20.8 (8.5%)	16.1 (10.6%)	17.8 (14.1%)	142.0 (8.5%)
Others	4.1 (2.3%)	5.9 (2.4%)	11.4 (3.3%)	17.5 (4.8%)	25.4 (10.4%)	32.2 (21.2%)	36.5 (28.9%)	133.0 (8.0%)
Total	176.5 (100.0%)	246.9 (100.0%)	349.4 (100.0%)	366.5 (100.0%)	245.3 (100.0%)	151.9 (100.0%)	126.5 (100.0%)	1 662.9 (100.0%)

Base: The respondents who had medical checkups before but did not have medical checkup in the 12 months before enumeration

3.5 Characteristics of Medical Checkups in the 12 Months Before Enumeration

For the 1.13 million persons aged 15 and above who had medical checkup(s) in the 12 months before enumeration, they were asked to provide information on each and up to a maximum of three medical checkups during the said period. Details of 1.20 million checkups were collected accordingly. The following section presents the characteristics of these medical checkups.

3.5.1 Places for Medical Checkups

The vast majority of those 1.20 million medical checkups conducted during the 12 months before enumeration were in Hong Kong (94.5%) whereas the remaining 5.5% were outside Hong Kong. Among which the Mainland China was the most popular (68.2%) (Table 3.5.1a).

Among 44 900 medical checkups conducted in Mainland China during the 12 months before enumeration, over 80% took place in Guangdong province (84.5%), particularly in Shenzhen (36.9%) and Guangzhou (27.8%) (Table 3.5.1b).

Table 3.5.1 a: Medical checkups during the 12 months before enumeration by places for medical checkups

Places for medical checkups	Number ('000)	%
Hong Kong	1 137.2	94.5
Outside Hong Kong	65.8	5.5
Mainland China	44.9	3.7 (68.2)
Others	20.9	1.7 (31.8)
Total	1 202.9	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: Figures in brackets represent the percentages to the medical checkups conducted outside Hong Kong.

Table 3.5.1b: Medical checkups during the 12 months before enumeration by places for medical checkups in Mainland China

Places for medical checkups	Number ('000)	%
Guangdong province	37.9	84.5
Shenzhen	16.6	36.9
Guangzhou	12.5	27.8
Shanwei	1.5	3.4
Zhongshan	1.5	3.4
Jiangmen	1.1	2.4
Zhuhai	1.1	2.4
Dongguan	1.1	2.4
Others	2.6	5.8
Other province	6.9	15.5
Total	44.9	100.0

Base: The last and up to the last three medical checkups that were conducted in Mainland China by the respondents who had medical checkup(s) during the 12 months before enumeration

Among those 1.20 million medical checkups, 35.5% were conducted in doctors' clinics/offices. It was followed by medical laboratories (31.8%), hospitals under Hospital Authority (12.4%), Department of Health (9.2%) and private hospitals (6.2%) (Table 3.5.1c). Overall, about 70% of the medical checkups were conducted in local private settings.

Table 3.5.1c: Medical checkups during the 12 months before enumeration by type of institutions conducting medical checkups

Type of institutions conducting medical checkups [#]	Number ('000)	%
Doctor's clinic/office	427.5	35.5
Medical laboratories	382.6	31.8
Hospitals under Hospital Authority	149.7	12.4
Department of Health (such as Elderly Health Centre, Student Health Service Centre, Women Health Centre)	110.5	9.2
Private hospitals	74.5	6.2
Hospitals outside HK	35.8	3.0
Others	39.0	3.2

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: [#] Multiple answers were allowed.

3.5.2 Reason of Attending Medical Checkups

Among the 1.20 million medical checkups, nearly two-thirds (63.5%) were done without particular health concerns. Other reasons mentioned included prescription by doctors (9.3%), having persistent symptoms (7.8%), being requested (e.g. employment, insurance, emigration) (6.7%) (Table 3.5.2).

Table 3.5.2: Medical checkups during the 12 months before enumeration by main reason of having medical checkups

Main reason of having medical checkups	Number ('000)	%
No particular health concern, just want to know if there is any abnormality	763.4	63.5
Prescribed by doctors	111.5	9.3
Persistent symptoms (no diagnosed illness in relation to the symptoms)	93.2	7.8
Being requested (e.g. employment, insurance, emigration)	80.5	6.7
Free offer (e.g. by insurance, bank)	59.6	5.0
Family member(s) or friend(s)'s advice	29.7	2.5
Discounted offer or cost not being fully charged (e.g. by insurance, bank)	19.4	1.6
Planning to get married/have a baby	15.0	1.2
Health concern on getting illness recently reported by media	13.4	1.1
Health concern on getting disease(s) similar to that of family member(s) or friend(s)	9.8	0.8
Others	7.5	0.6
Total	1 202.9	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

3.5.3 Source of Information on Medical Checkups

The major source of information for the 1.20 million medical checkups was advice from doctors (50.3%). Other sources included advice from family members or friends (21.5%) and pamphlets/posters in clinics or medical laboratories (12.3%) (Table 3.5.3).

Table 3.5.3: Medical checkups during the 12 months before enumeration by source of information on medical checkups

Source of information on medical checkup [#]	Number ('000)	%
Advice from doctor(s) (Western doctor or Chinese medicine practitioner)	605.0	50.3
Advice from family member(s) or friend(s)	258.1	21.5
Pamphlet(s)/poster(s) in clinic or medical laboratory	147.5	12.3
Promotional call(s)/personal letter(s) from credit card company or insurance company	101.7	8.5
Advertisement(s) in housing estate (e.g. poster(s), leaflet(s)) from community organizations, board of owners or district council members, etc	48.1	4.0
Advice from healthcare worker(s) other than doctor	38.5	3.2
Pamphlet(s)/poster(s)/advice from schools or teachers	28.8	2.4
Pamphlet(s)/poster(s) in own company (other than medical consultancy company)	28.7	2.4
Advertisement(s) in television, radio, newspaper, magazine	27.9	2.3
Others	10.7	0.9

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: [#] Multiple answers were allowed.

3.5.4 Content of Medical Checkups

3.5.4.1 History Taking

Of those 1.20 million medical checkups, 69.6% of them included history taking session during the checkup (Table 3.5.4.1).

Table 3.5.4.1: Medical checkups during the 12 months before enumeration by whether history taking was included in medical checkup

Whether history taking was included in medical checkups	Number ('000)	%
Yes	837.5	69.6
No	365.4	30.4
Total	1 202.9	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

3.5.4.2 Physical Examination by Doctors

Physical examination was performed by doctors in 77.9% of those 1.20 million medical checkups (Table 3.5.4.2).

Table 3.5.4.2: Medical checkups during the 12 months before enumeration by whether physical examination by doctors was covered in medical checkups

Whether physical examination by doctors was covered in medical checkups	Number ('000)	%
Yes	937.4	77.9
No	265.6	22.1
Total	1 202.9	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

3.5.4.3 Type of Investigation Items

Of those 1.20 million medical checkups, blood test (80.1%) was the most prevailing investigation item during the medical checkup. It was followed by blood pressure (76.4%), body weight and height measurement (62.6%), urine test (50.5%) and electrocardiogram (ECG) (47.1%) (Table 3.5.4.3a).

Table 3.5.4.3a: Medical checkups during the 12 months before enumeration by type of investigation items included in medical checkups

Type of investigation items included in medical checkups [#]	Number ('000)	%
Blood test	963.6	80.1
<i>Blood sugar</i>	768.7	63.9
<i>Blood lipid profile (e.g. cholesterol, LDL)</i>	640.1	53.2
<i>Liver or renal function</i>	603.1	50.1
<i>Complete blood picture</i>	543.0	45.1
<i>Markers of infection- VDRL, HIV, HBSAG</i>	139.8	11.6
<i>Immunological markers (e.g. RF, ANF /ANA)</i>	128.8	10.7
<i>Cancer markers (e.g. CEA, alphafoetoprotein, CA-125, CA-19.9)</i>	122.7	10.2
<i>Not sure what kind of blood tests were being done</i>	83.6	6.9
Blood pressure	918.6	76.4
Body weight and height	752.7	62.6
Urine test	607.5	50.5
Electrocardiogram (ECG)	566.5	47.1
Pap smear (<i>for female</i>)	301.9	42.0 ^a
X-ray	416.3	34.6
Test for vision	388.9	32.3
Mammogram (<i>for female</i>)	172.2	24.0 ^a
Ultra-sound scan	203.7	16.9
Stool test	184.8	15.4
<i>Occult blood</i>	182.1	15.1
<i>Parasite</i>	100.7	8.4
Hearing test (<i>for aged ≥65</i>)	23.1	14.8 ^c
Memory test (<i>for aged ≥65</i>)	13.9	8.9 ^c
Balance test for fall risk (<i>for aged ≥65</i>)	13.0	8.3 ^c
Bone densitometry	81.7	6.8
Digital rectal (Prostatic) examination (<i>for male</i>)	24.6	5.1 ^b
Mood test (<i>for aged ≥65</i>)	6.3	4.0 ^c
Endoscopy (e.g. OGD, colonoscopy)	40.3	3.4
Magnetic resonance imaging (MRI)	27.2	2.3
Screening for scoliosis	6.1	0.5
Others	2.4	0.2
Don't know	33.6	2.8

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkups during the 12 months before enumeration

Notes: ^a As a percentage to the medical checkups conducted by female.

^b As a percentage to the medical checkups conducted by male.

^c As a percentage to the medical checkups conducted by persons aged 65 and above.

[#] Multiple answers were allowed.

Among the 1.20 million medical checkups, the two key factors for deciding which items to be included in medical checkups were advice from doctors (44.8%) and investigations included in the standard package (44.6%) (Table 3.5.4.3b).

Table 3.5.4.3b: Medical checkups during the 12 months before enumeration by factors to decide which items to be included in medical checkups

Factors to decide which items to be included in medical checkups[#]	Number ('000)	%
Advice from doctor	539.0	44.8
Investigation(s) included in the standard package	536.6	44.6
Advice from family member(s) or friend(s)	112.1	9.3
Price	43.4	3.6
Others	33.9	2.8

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: [#] Multiple answers were allowed.

3.5.4.4 Main Person to Interpret and Explain the Result

About four-fifths (82.5%) of the results of the medical checkups were interpreted and explained by doctors. It was followed by medical laboratory technician (4.8%) and nurse (3.8%). However, 6.1% of the medical checkups were not explained or interpreted by anybody (Table 3.5.4.4).

Table 3.5.4.4: Medical checkups during the 12 months before enumeration by the main person to interpret and explain the result

The main person to interpret and explain the result	Number ('000)	%
Doctor	992.1	82.5
No one	73.8	6.1
Medical laboratory technician	58.0	4.8
Nurse	45.7	3.8
Somebody explained but don't know who he/she is	31.1	2.6
Others	2.3	0.2
Total	1 202.9	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

3.5.5 Outcome of Medical Checkups

3.5.5.1 Confirmation of Disease by Medical Checkups

Only 10.7% of the 1.20 million medical checkups done during the 12 months before enumeration confirmed certain type of disease while 87.8% did not (Table 3.5.5.1).

Table 3.5.5.1: Medical checkups during the 12 months before enumeration by whether medical checkups confirmed any disease

Whether medical checkups confirmed any disease	Number ('000)	%
Yes	128.7	10.7
No	1 055.7	87.8
Pending the result	18.5	1.5
Total	1 202.9	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

3.5.5.2 Follow-Up After Medical Checkups

Among the 1.18 million medical checkups with investigation result, follow-up was required in 11.8% (or 139 700 medical checkups) after the checkups (Table 3.5.5.2a).

Of those 139 700 medical checkups done during the 12 months before enumeration which follow-ups were required, nearly all of them (96.1%) had been followed-up (Table 3.5.5.2b).

Table 3.5.5.2a: Medical checkups during the 12 months before enumeration by whether follow-up was required after medical checkups

Whether follow-up was required after medical checkups	Number ('000)	%
Yes	139.7	11.8
No	1 044.8	88.2
Total	1 184.4	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration where results of the medical checkups were available

Table 3.5.5.2b: Medical checkups during the 12 months before enumeration by whether the respondents attended the follow-up as requested

Whether the respondents attended the follow-up as requested	Number ('000)	%
Yes	134.2	96.1
No	5.5	3.9
Total	139.7	100.0

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration where follow-ups were required

3.5.5.3 Satisfaction Level with the Medical Checkups

Among the 1.20 million medical checkups, 85.2% of them were rated as very satisfied or satisfied; 13.8% were neither satisfied nor dissatisfied; and 1.0% were dissatisfied or very dissatisfied (Table 3.5.5.3).

Satisfaction with the medical checkups was highest among persons having their medical checkups done in private hospitals (91.0% being very satisfied or satisfied), followed by those in hospitals outside Hong Kong (89.8%), doctor's clinic/office (87.2%) and Department of Health (84.7%) (Table 3.5.5.3).

Table 3.5.5.3: Medical checkups during the 12 months before enumeration by satisfaction level with medical checkups and type of institutions

Satisfaction level with medical checkups	Type of institutions (Number ('000) / %)							Overall
	Doctor's clinic/office	Medical laboratories	Hospitals under Hospital Authority	Department of Health	Private Hospitals	Hospitals outside HK	Other Institutions	
Very satisfied or satisfied	372.9 (87.2%)	315.0 (82.3%)	126.3 (84.3%)	93.6 (84.7%)	67.8 (91.0%)	32.2 (89.8%)	31.7 (81.2%)	1 024.6 (85.2%)
Neither satisfied nor dissatisfied	52.1 (12.2%)	63.6 (16.6%)	21.3 (14.2%)	16.1 (14.6%)	5.5 (7.3%)	3.4 (9.5%)	6.1 (15.7%)	166.1 (13.8%)
Dissatisfied or very dissatisfied	2.5 (0.6%)	4.0 (1.0%)	2.2 (1.4%)	* (*)	1.3 (1.7%)	* (*)	1.2 (3.1%)	12.2 (1.0%)
Total	427.5 (100.0%)	382.6 (100.0%)	149.7 (100.0%)	110.5 (100.0%)	74.5 (100.0%)	35.8 (100.0%)	39.0 (100.0%)	1 202.9 (100.0%)

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: A medical checkup can be conducted in more than one institutions presented above.

* Figure less than 1 000 or related percentage derived from it.

3.5.6 Cost of Medical Checkups

3.5.6.1 Overall Cost

Among the 1.20 million medical checkups, 24.6% of them were free of charge. 17.1% cost less than HK\$500; 17.0% in the range of HK\$500 to HK\$999; 14.5% in the range of HK\$1,000 to HK\$1,499; 7.4% in the range of HK\$1,500 to HK\$1,999; and 17.2% had HK\$2,000 and above. The median total cost of medical checkup done over the 12 months before enumeration was HK\$600 (Table 3.5.6.1).

As informed by the enumerators engaged in the fieldwork, most of the free medical checkups were offered by insurance companies (e.g. after joining the insurance plan for some years), by credit card companies (e.g. after spending with the credit card for certain amount during a period), or by employer, etc. Readers are advised to note that when interpreting the results.

Table 3.5.6.1: Medical checkups conducted during the 12 months before enumeration by total cost of medical checkups

Total cost of medical checkups (HK\$)	Number ('000)	%
0	295.5	24.6
1 – 499	206.1	17.1
500 – 999	204.2	17.0
1,000 – 1,499	174.7	14.5
1,500 – 1,999	88.9	7.4
2,000 – 2,499	64.6	5.4
2,500 – 2,999	24.9	2.1
3,000 – 3,999	40.4	3.4
4,000 – 4,999	14.2	1.2
5,000 – 9,999	29.1	2.4
10,000 – 19,999	22.5	1.9
20,000 and above	10.8	0.9
Don't know the amount	27.1	2.3
Total	1 202.9	100.0
Median [#] (HK\$)	600	
Mean [#] (HK\$)	1,426	
Standard error of mean [#] (HK\$)	67	

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: [#] Figures were calculated based on the total cost reported to the nearest HK\$100 used in the questionnaire.

3.5.6.2 Cost by Type of Institutions

When analyzed by type of institutions, medical checkups done in private hospitals had the highest cost (median of HK\$4,000). On the other hand, those medical checkups conducted in Department of Health (HK\$0) had the lowest (Tables 3.5.6.2a - 3.5.6.2b).

Table 3.5.6.2a: Medical checkups conducted during the 12 months before enumeration by total cost of medical checkups in doctor's clinic/office, medical laboratories, private hospitals in Hong Kong and hospitals outside Hong Kong

Total cost of medical checkup (HK\$)	Type of institution (Number ('000) / %)							
	Doctor's clinic/office		Medical laboratories		Private Hospitals in Hong Kong		Hospitals outside Hong Kong	
	Number ('000)	%	Number ('000)	%	Number ('000)	%	Number ('000)	%
0	90.4	21.1	82.8	21.6	7.0	9.4	6.3	17.5
1 – 499	41.2	9.6	38.8	10.1	1.1	1.5	6.6	18.3
500 – 999	86.9	20.3	75.5	19.7	3.9	5.3	8.3	23.2
1,000 – 1,499	84.8	19.8	70.6	18.4	3.8	5.0	4.2	11.7
1,500 – 1,999	43.0	10.1	36.6	9.6	5.6	7.5	2.0	5.6
2,000 – 2,499	27.4	6.4	29.2	7.6	5.9	7.9	2.0	5.6
2,500 – 2,999	10.2	2.4	10.3	2.7	2.2	2.9	1.7	4.8
3,000 – 3,999	17.0	4.0	15.0	3.9	5.7	7.6	1.2	3.3
4,000 – 4,999	4.3	1.0	5.9	1.6	1.9	2.6	*	*
5,000 – 9,999	8.8	2.1	8.1	2.1	9.5	12.8	1.7	4.6
10,000 and above	3.4	0.8	3.7	1.0	25.1	33.7	*	*
Don't know the amount	9.9	2.3	6.1	1.6	2.8	3.7	*	*
Total	427.5	100.0	382.6	100.0	74.5	100.0	35.8	100.0
Median [#] (HK\$)	800		800		4,000		600	
Mean [#] (HK\$)	1,145		1,219		8,578		1,453	
Standard error of mean [#] (HK\$)	49		64		799		333	

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration in selected institutions

Notes: A medical checkup can be conducted in more than one type of institutions presented above.

[#] Figures were calculated based on the total cost reported to the nearest HK\$100 used in the questionnaire.

* Figure less than 1 000 or related percentage derived from it

Table 3.5.6.2b: Medical checkups conducted during the 12 months before enumeration by total cost of medical checkups in other institutions

Total cost for medical checkup (HK\$)	Type of institution (Number ('000) / %)					
	Hospitals under Hospital Authority		Department of Health		Others institutions	
	Number ('000)	%	Number ('000)	%	Number ('000)	%
0	51.4	34.3	54.3	49.1	6.0	15.3
1 – 499	59.2	39.5	44.0	39.8	15.9	40.9
500 – 999	16.2	10.8	5.7	5.2	9.8	25.2
1,000 – 1,499	9.1	6.1	1.8	1.6	4.4	11.2
1,500 and above	9.6	6.4	2.2	2.0	1.7	4.4
Don't know the amount	4.2	2.8	2.5	2.3	1.1	2.9
Total	149.7	100.0	110.5	100.0	39.0	100.0
Median [#] (HK\$)	100		0		300	
Mean [#] (HK\$)	441		190		492	
Standard error of mean [#] (HK\$)	57		44		53	

Base: The last and up to the last three medical checkups conducted by the respondents who had medical checkup(s) during the 12 months before enumeration in selected institutions

Notes: A medical checkup can be conducted in more than one type of institutions presented above.

[#] Figures were calculated based on the total cost reported to the nearest HK\$100 used in the questionnaire.

3.5.6.3 Source of Payment

Excluding 295 500 medical checkups which were free of charge, 91.6% of the 907 500 medical checkups were settled by the person who had the medical checkup(s) themselves or by their family members, 7.0% by medical schemes provided by employers, and 5.2% by the insurance companies (Table 3.5.6.3).

Table 3.5.6.3: Medical checkups which were not free of charge during the 12 months before enumeration by source of payment

Source of payment [#]	Number ('000)	%
Myself/family member(s)	831.2	91.6
Medical scheme provided by employer	63.4	7.0
Insurance company	46.9	5.2
Other sources	2.5	0.3

Base: The last and up to the last three medical checkups which were not free of charge conducted by the respondents who had medical checkup(s) during the 12 months before enumeration

Note: [#] Multiple answers were allowed.

3.6 Receiving Information on Medical Checkups

58.6% of the 5.75 million persons aged 15 and above had ever received information on medical checkups. The rate was higher in females (61.2%) than males (55.8%) (Table 3.6a).

A higher proportion of persons aged 35 to 44 (65.8%) and 45 to 54 (64.8%) had received information on medical checkups as compared with the young (44.9% for persons aged 15 to 24) and the old age groups (48.1% for persons aged 75 and above). (Table 3.6b).

Table 3.6a: Persons aged 15 and above by whether received any information on medical checkups and sex

Whether received any information on medical checkups	Male		Female		Overall	
	Number of persons ('000)	%	Number of persons ('000)	%	Number of persons ('000)	%
Yes	1 557.8	55.8	1 811.0	61.2	3 368.9	58.6
No	1 233.0	44.2	1 148.6	38.8	2 381.6	41.4
Total	2 790.9	100.0	2 959.6	100.0	5 750.5	100.0

Base: All respondents

Table 3.6b: Persons aged 15 and above by whether received any information on medical checkups and age group

Whether received any information on medical checkups	Age group (Number of persons ('000) / %)							Overall
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	
Yes	389.6 (44.9%)	558.7 (58.7%)	750.3 (65.8%)	792.3 (64.8%)	448.0 (60.3%)	248.0 (55.5%)	182.1 (48.1%)	3 368.9 (58.6%)
No	477.6 (55.1%)	392.7 (41.3%)	389.3 (34.2%)	431.1 (35.2%)	295.4 (39.7%)	198.8 (44.5%)	196.7 (51.9%)	2 381.6 (41.4%)
Total	867.2 (100.0%)	951.4 (100.0%)	1 139.6 (100.0%)	1 223.4 (100.0%)	743.4 (100.0%)	446.8 (100.0%)	378.8 (100.0%)	5 750.5 (100.0%)

Base: All respondents

Of those 3.37 million persons who had ever received information on medical checkups, the leading source of information was advice from doctors (35.1%). This was followed by pamphlets/posters in clinics or medical laboratories (30.2%), advertisements in housing estates from community organizations, board of owners or District Council members (26.2%), and promotional calls/personal letters from credit card companies or insurance companies (24.1%). No significant difference was observed between different genders (Table 3.6c).

Table 3.6c: Persons aged 15 and above who received information on medical checkups by source of information on the medical checkups and sex

Source of information on the medical checkups [#]	Male		Female		Overall	
	Number of persons ('000)	%	Number of persons ('000)	%	Number of persons ('000)	%
Advice from doctor(s) (Western doctor or Chinese medicine practitioner)	513.4	33.0	668.1	36.9	1 181.4	35.1
Pamphlet(s)/poster(s) in clinic or medical laboratory	465.7	29.9	551.6	30.5	1 017.3	30.2
Advertisement(s) in housing estate (e.g. poster(s), leaflet(s)) from community organizations, board of owners or District Council members, etc	397.7	25.5	483.6	26.7	881.3	26.2
Promotional call(s)/personal letter(s) from credit card company or insurance company	390.5	25.1	422.6	23.3	813.1	24.1
Advice from family member(s) or friend(s)	272.6	17.5	379.2	20.9	651.8	19.3
Advertisement(s) in television, radio, newspaper, magazine	191.0	12.3	256.8	14.2	447.8	13.3
Others	91.9	5.9	112.6	6.2	204.5	6.1

Base: The respondents who had received information on medical checkups

Note: # Multiple answers were allowed.

For older persons aged 45 and above, the major source of information on medical checkups was advice from doctors (36.2% to 63.9%). Pamphlets/posters in clinics or medical laboratories was the major source quoted by persons aged 15 to 24 (28.3%) and persons aged 35 to 44 (35.4%). Promotional calls/personal letters from credit card companies or insurance companies was the major source for persons aged 25 to 34 (36.1%) (Table 3.6d).

Table 3.6d: Persons aged 15 and above who received information on medical checkups by source of information on the medical checkups and age group

Source of information on the medical checkups [#]	Age group (Number of persons ('000) / %)							Overall
	15- 24	25- 34	35- 44	45- 54	55- 64	65- 74	75 and above	
Advice from doctor(s) (Western doctor or Chinese medicine practitioner)	73.2 (18.8%)	145.4 (26.0%)	242.2 (32.3%)	287.1 (36.2%)	182.0 (40.6%)	135.2 (54.5%)	116.3 (63.9%)	1 181.4 (35.1%)
Pamphlet(s)/poster(s) in clinic or medical laboratory	110.4 (28.3%)	168.1 (30.1%)	265.4 (35.4%)	255.4 (32.2%)	125.7 (28.1%)	53.3 (21.5%)	39.0 (21.4%)	1 017.3 (30.2%)
Advertisement(s) in housing estate (e.g. poster(s), leaflet(s)) from community organizations, board of owners or district council members, etc	107.1 (27.5%)	141.7 (25.4%)	182.6 (24.3%)	217.3 (27.4%)	126.4 (28.2%)	65.1 (26.3%)	41.1 (22.6%)	881.3 (26.2%)
Promotional call(s)/personal letter(s) from credit card company or insurance company	69.0 (17.7%)	201.6 (36.1%)	233.0 (31.1%)	197.2 (24.9%)	83.7 (18.7%)	20.2 (8.2%)	8.3 (4.6%)	813.1 (24.1%)
Advice from family member(s) or friend(s)	60.4 (15.5%)	101.0 (18.1%)	153.3 (20.4%)	161.2 (20.4%)	86.7 (19.4%)	54.1 (21.8%)	35.0 (19.2%)	651.8 (19.3%)
Advertisement(s) in television, radio, newspaper, magazine	63.9 (16.4%)	89.1 (16.0%)	115.9 (15.4%)	105.7 (13.3%)	47.5 (10.6%)	14.6 (5.9%)	11.0 (6.1%)	447.8 (13.3%)
Others	56.8 (14.6%)	32.0 (5.7%)	43.0 (5.7%)	37.1 (4.7%)	18.6 (4.1%)	8.9 (3.6%)	8.2 (4.5%)	204.5 (6.1%)

Base: The respondents who had received information on medical checkups

Note: [#] Multiple answers were allowed.

Chapter 4: Conclusion, Discussion and Recommendations

4.1 Conclusion and Discussion

Attending regular medical checkup is one of the tools for disease prevention. When applied properly, medical checkup can help to detect early stage of certain diseases and to identify disease risk factors so that timely interventions can be introduced to improve patient's prognosis. However, it is important to understand the limitations of medical checkups and appreciate the fact that not all diseases can be picked up readily by physical examination and laboratory investigations at an early stage. In fact, only a limited number of the tests are proven to be effective screening tools. Medical checkups are best to be conducted at regular intervals to match the natural history of disease e.g. cervical cancer screening. Furthermore, investigation may carry risk on its own especially those involving invasive procedures. Abnormal findings in a medical checkup do not necessarily mean that the person must be suffering from certain diseases (false positive) and vice versa for normal test results (false negative). Therefore, without adequate knowledge and counselling, people with normal findings may easily gain a false sense of security and overlook their medical problems.

Our survey showed that a vast majority of people aged 15 and above had positive views about the effectiveness of medical checkups. Over 90% of them had high expectations and believed that majority of diseases could be detected earlier through medical checkups and early detection would lead to improved prognosis.

Nowadays, there is a variety of medical checkup packages available in the market. It is a misconception to believe that the most advanced and most expensive investigations are always the best ones. For example, 87.8% of people in our survey believed that the most advanced investigations were most effective in detecting diseases. On the contrary, the components of medical checkups should be tailored to individual needs and undertaken upon the advice of doctor based on one's medical history and personal background.

Some misconceptions about medical checkups had also been identified in the survey. 74.2% believed that abnormal findings in a medical checkup mean that the person must be suffering from certain diseases (false positive). 59.4% thought that normal findings in a medical checkup mean that the person must be free from diseases (false negative).

In theory, positive health behavioural change occurs when people are equipped with adequate knowledge and skills and when they develop positive attitudes towards the health behaviours, self-efficacy with adequate social support. Health education remains to be a major task for the public health authority to motivate a favourable behavioural change among individuals. Overcoming public misconceptions is a major challenge in health education. The study has identified a few common misconceptions including some major concepts with reference to health screening (e.g. false positive and false negative). Medical checkups should be an informed choice. Lack of knowledge in the general public reiterates the importance of health education in this area. More intensive health education programmes should thus be provided to clear their uncertainties and misconceptions.

With regard to uptake of medical checkups, 48.5% of the 5.75 million persons aged 15 and above reported ever undertaken medical checkup(s). 33.1% and 19.6% had medical

checkup(s) in the 3 years and 12 months respectively before enumeration but the figure dropped to 16.7% for those with regular medical checkups.

The main reason for not attending medical checkup in the past 12 months among those who had conducted medical checkup before was “consider themselves healthy”. The second commonest reason cited by the younger age groups (aged 15 to 64) was “lack of time” while that by the older age groups (aged 65 and above) was “lack of money”.

To promote and advocate evidence-based screening, understanding the barriers and improving access to target groups are crucial. In our survey, health inequities were evident both in terms of knowledge and service uptake. Differences were observed between genders, age and socio-economic classes. For example, a greater proportion of women had or planned to have medical checkups than men. When asked about agreement on different statements concerning medical checkups, people aged 75 and above performed worst amongst the different age groups and reported the highest proportion of answering “don’t know”. The highest and lowest rates of having or planning to have medical checkups were in persons aged 35 to 44 and 15 to 24 respectively. Moreover, people with higher educational attainment and higher income were found consistently to have a higher rate of having or planning to have medical checkups than their counterparts.

The growth of private screening and body checkup packages had encouraged more people to attend medical checkups in private sectors. The survey revealed that a large proportion of the medical checkups were done in private setting and most of them were rated as of satisfactory quality. In fact, the majority of the checkups were not free offers. The respondents and their family members were willing to pay for the checkups. To better utilize the community healthcare resources, engaging private sectors in providing medical checkups could be an effective way of enhancing local preventive healthcare services.

Among 1.13 million persons aged 15 and above who had medical checkups in the 12 months before enumeration, details of 1.20 million medical checkups (the most recent three medical checkups) were collected. The vast majority (94.5%) of the medical checkups were conducted in Hong Kong. Doctor was the main party to provide information on medical checkups (50.3%), decide investigation items to be included in the checkups (44.8%), as well as interpret and explain the result of checkups (82.5%). The role of a family doctor in preventive medical checkups is clearly very important. Nevertheless, guidelines for the medical professionals on health checks and screening should be developed to guide evidence-based practice.

4.2 Recommendations

The following recommendations were made based on the survey results:

4.2.1 Developing Health Education Programmes

The survey showed that misconceptions with regard to medical checkups were common within the population. In particular, elders were found to have the highest rate of uncertainty and lowest rate of correct perception across different age groups. Public education, especially to the elders, should thus be enhanced. Information about the benefits and harms of the medical checkup procedures should be provided. On the other hand, the channels of dissemination should be diversified in view of the varying receptivity of different age groups on different channels.

These may include organization of health education programmes to raise public awareness on the importance of regular medical checkups for certain types of diseases, and provision of affordable and convenient checkup programme with financial subsidy to those in need. The public should be informed and made aware of screening tools that are proven to be effective in early detection of disease and improving patient's outcome. Messages on the objective of medical checkups in early detection of risk factors for early intervention and disease prevention should be reiterated. Special attention should be paid to those at the extremes of ages.

4.2.2 Facilitating Access on Effective Medical Checkup

The survey showed a considerable variability in the take-up rate of medical checkups among different socioeconomic backgrounds. In general, people with higher educational level or higher personal income were found to have a higher rate of having or planning to have medical checkups. The rate of having or planning to have medical checkups reached the peak for people aged 35 to 44 and the rate gradually dropped when it approached the extremes of ages. Strategies to improve the equity of access on effective medical checkup should be considered, in particular to those who had lower income, lower educational level or at extremes of ages.

For evidence-based screening tests, there should be concerted approach and intersectoral cooperation within our society to promote access and encourage uptake in the target groups.

For instance, Hong Kong is facing the challenge of an ageing population as a result of low birth rates and increased longevity. Promoting regular and evidence-based medical checkups for the elderly can help to relieve the healthcare burden in the society. The survey revealed that elders had a lower take-up rate and poorer knowledge on medical checkups across different age groups. Financial burden was their common barrier in attending medical checkups. Provision of affordable checkup programmes, intensive health education programmes and financial subsidy are possible options to improve the take-up rate. According to the survey, about 70% of the medical checkups were conducted in local private setting. Enlisting support from the private sector and other community organizations could improve the coverage and accessibility of medical checkup services. Provision of financial subsidy could be another effective means.

In 2009, the Government launched an Elderly Health Care Voucher Pilot Scheme (HCVS), under which all citizens aged 70 or above would be given annually five HK\$50 health care vouchers for use when attending primary medical services offered by non-subsidised health care provider in the private sector who had registered with the Scheme. Eligible elders could use the vouchers for preventive as well as curative services provided by 9 types of health care professionals. As part of public private partnership (PPP), the Scheme aimed at providing additional choices for the elders on top of the existing public primary health care services and allowing them to choose private primary health care services in their local communities that best suit their needs.

4.2.3 Developing Guidelines and Workforce Training

A set of comprehensive guidelines for the medical professionals on health checks and screening should be developed to guide and support evidence-based practice.

The Cancer Expert Working Group on Cancer Prevention and Screening (Working Group) under the Cancer Coordinating Committee (CCC) issued guidelines and

recommendations with regard to cancer screening in Hong Kong. It serves as a valuable source of reference for primary care clinicians in cancer prevention and screening. However, guidelines on other medical conditions have yet to be developed.

In the Health Care Reform Consultation Document entitled “Your Health, Your Life”¹ in 2008, the importance of improving primary healthcare services, strengthening preventive care and promoting healthy lifestyle to enhance individual’s health were reinforced. The Government is working on developing primary care service models that are locally relevant and feasible, emphasizing that preventive care should be viewed as a core component of comprehensive primary care.

To achieve its objectives, effective medical checkups will need careful assessment on the recipients’ characteristics. A professional staff equipped with essential knowledge and skills in exercising the principles of screening and the evidence-based preventive medicine plays an important role in offering the public useful advice on medical checkups. As primary healthcare service is the first point of contact, doctors in the primary care settings are in the best position to provide such advice. In the survey, doctors are identified as the credible healthcare professionals by the respondents in conducting and providing information on medical checkups. It is therefore important to keep them abreast of the latest development in the field of screening medicine. Relevant training workshops should also be provided for them regularly.

4.3 Limitation

The survey collected information from the respondents on their past experience of medical checkups. Information including the cost and investigation details on medical checkups in the 12 months before enumeration was asked. The fallibility of human memory might lead to recall bias affecting the internal validity of the survey adversely. According to the enumerators, some respondents found it difficult to recall the details of their medical checkups in the 12 months before enumeration. To minimize the bias, respondents were invited to check their medical checkup record(s) and result(s) when providing the relevant information. Besides, some dubious cases were selected for verification with respondents in order to ensure the accuracy of the data collected. Readers should note the limitation of the survey, and exercise cautions when interpreting the findings.

Despite the limitations of the survey, this report provided valuable data on the existing practice as well as the knowledge and attitude towards medical checkups held by the general public. The results would have significant reference value to help us understand primary health care and establish evidence-based health policy and programmes.

Reference

1. The Food and Health Bureau HKSAR Government (2008) *Healthcare Reform Document “Your Health Your Life”*