

# **National Population Health Survey**

## **2019**

**(Household Interview)**



**MINISTRY OF HEALTH**  
SINGAPORE

## **COPYRIGHT NOTICE**

### **NATIONAL POPULATION HEALTH SURVEY 2019**

(Household Interview)

ISBN 978-981-14-5641-1

**© Epidemiology & Disease Control Division, Ministry of Health, Republic of Singapore**

All rights reserved. Reproduction of this publication, in whole or in part, in any material form (including photocopying or storing it in any medium by electronic means whether transiently or not) is prohibited without the prior written permission of the copyright holder. Application for the copyright owner's written permission to reproduce any part of this publication should be addressed to:

Director  
Epidemiology & Disease Control Division  
Ministry of Health  
16 College Road  
College of Medicine Building  
Singapore 169854  
Republic of Singapore

Fax : (65) 6224 – 1677

Email : [moh\\_info@moh.gov.sg](mailto:moh_info@moh.gov.sg)

[www.moh.gov.sg](http://www.moh.gov.sg)

Material contained in this publication may be used without special permission. Citation to source, however, is appreciated.

#### Suggested Source Citation

Epidemiology & Disease Control Division and Policy, Research & Surveillance Group  
Ministry of Health and Health Promotion Board, Singapore

Commercial usage or sale of this work is prohibited.

# CONTENTS

Foreword	1
Executive Summary	2
Main Report	
1 Alcohol Consumption	6
2 Cigarette Smoking	12
3 Physical Activity	17
4 Self-Reported Diabetes Mellitus	25
5 Self-Reported Hypertension	28
6 Self-Reported Hyperlipidaemia	31
7 Chronic Disease Screening	34
8 Breast Cancer Screening	39
9 Cervical Cancer Screening	43
10 Colorectal Cancer Screening	47
11 Vaccination Coverage	51
12 Survey Methodology	55
References	62
Acknowledgements	64
Annexes	
A Survey Questionnaire	65
B Project Team	137

# Foreword

The National Population Health Survey (NPHS) is a new cross-sectional population health survey series to track the health and risk factors, as well as lifestyle practices of Singapore residents. This new survey replaces the 3 population health surveys (i.e. National Health Survey (NHS), National Health Surveillance Survey (NHSS) and Health Behaviour Surveillance of Singapore (HBSS)) previously conducted by the Ministry of Health and Health Promotion Board respectively.

The NPHS will be conducted annually to provide timely and regular information on the prevalence of non-communicable diseases such as diabetes mellitus, hypertension and related risk factors like smoking, alcohol consumption and physical inactivity from a representative sample of the resident population. Overall, the results from NPHS 2019 showed that more Singapore residents are engaged in healthier behaviours especially in physical activity and chronic disease screening. Smoking prevalence has also come down slightly. However, there are less favourable trends in the self-reported chronic disease prevalence and cancer screening coverage. These findings from the survey will help the Ministry of Health and Health Promotion Board to develop and evaluate policies and programmes and to improve the health of Singapore residents.

I would like to gratefully acknowledge all who have, in one way or another, contributed to the successful completion of the survey. In particular, I would like to thank all survey respondents who have given their time to take part, and whose support makes this report possible.

ASSOCIATE PROF KENNETH MAK

Director of Medical Services

September 2020

# Executive Summary

The National Population Health Survey (NPHS) is a new cross-sectional population health survey series jointly managed by the Ministry of Health and Health Promotion Board to track the health and risk factors, as well as lifestyle practices of Singapore residents. This new survey replaces the 3 population health surveys (i.e. National Health Survey (NHS), National Health Surveillance Survey (NHSS) and Health Behaviour Surveillance of Singapore (HBSS)) that were conducted in the earlier years.

The NPHS monitors the behavioural risk factors such as smoking and alcohol consumption; diseases such as diabetes mellitus and hypertension as well as preventive health behaviour such as the practice of health screening. The survey findings will be used by the Ministry of Health and Health Promotion to track progress towards national health targets; and for planning and evaluation of health programmes and health care services.

The NPHS consists of 2 components<sup>1</sup>: (i) Household Interview (ii) Health Examination. This report presents the survey findings from the Household Interview of all Singapore residents aged 18 to 74 years. The findings from the Health Examination, mainly measured indicators such as obesity and chronic disease prevalence, will be reported in 2021 based on a 2-year survey cycle so that there will be a larger sample for detailed data analysis. The reporting coverage differs from previous national health surveys and reflects the growing size of the older population. Survey results in the earlier publications of the national health surveys were based on Chinese, Malay and Indian residents aged 18 to 69 years. Time-series data for the new reporting coverage are available from 2007 onwards<sup>2</sup>.

---

<sup>1</sup> More details on the survey design, method and fieldwork are covered in “Chapter 12: Survey Methodology”.

<sup>2</sup> Data from the earlier national health surveys are presented for trend analysis over a longer time period. However, there are differences in the survey design across the health surveys and caution should be exercised in examining differences across the surveys.

## **Alcohol consumption**

- Prevalence of regular drinking remained low at around 2% in 2019, with 3.6% of male residents and 0.7% of female residents consuming alcohol regularly.
- Prevalence of binge drinking continued to increase from 8.8% in 2017 to 10.2% in 2019. The increase was more pronounced among younger age groups (18 to 29 and 30 to 39). Binge drinking was more common among males (14.9%) than females (5.7%).

## **Cigarette Smoking**

- Smoking prevalence has come down slightly, from 13.9% in 2010 to 10.6% in 2019. This decline was more pronounced in the males compared with females, with the prevalence for females remaining relatively constant in the recent years. Among the ethnic groups, the daily smoking prevalence showed declining trends in Chinese and Malays between 2010 and 2019 but not so in the Indians.
- About 1 in 5 (18.4%) males were daily smokers compared with approximately 1 in 31 (3.2%) females in 2019. Malays had the highest daily smoking prevalence (23.0%), followed by Indians (10.9%) and Chinese (8.6%).
- Male daily smokers smoked an average of 13 cigarettes a day whilst female daily smokers smoked an average of 9 cigarettes a day.
- 50.3% of daily smokers indicated that they had plans to quit smoking. However, only 19.7% of daily smokers planned to quit smoking within the next 12 months or less.

## **Physical Activity**

- The proportion of Singapore residents who engaged in regular leisure-time physical activity (i.e. regular exercise) has been on an increasing trend. Over 1 in 3 (35.2%) Singapore residents engaged in regular exercise during their leisure time in 2019, significantly higher than the 29.4% in 2017. More males (38.7%) exercised regularly compared with females (32.0%). Indians had the highest participation level in regular exercise (45.2%) for both males and females, followed by Chinese (34.7%) and Malays (30.0%).
- The proportion of Singapore residents who engaged in sufficient total physical activity (80.1% in 2019) remained relatively stable compared to the 80.9% in 2017. It remained high across all age groups and gender. A higher proportion of Indians (86.8%) and Malays (82.0%) had sufficient total physical activity than the Chinese (78.8%). The largest contributor to total physical activity was commuting (44.5%), followed by work-related physical activity (30.0%) and leisure-time physical activity (25.5%).

## Self-reported Chronic Disease

- The proportion of Singapore residents with self-reported chronic diseases continued to increase. Self-reported diabetes increased gradually from 4.9% in 2007 to 6.9% in 2019 while self-reported hypertension and hyperlipidemia showed more recent increases from 12.7% in 2017 to 15.6% in 2019; and 10.4% in 2013 to 13.6% in 2019 respectively. This is likely due to our ageing population and improvement in chronic disease screening.
- **Self-reported Diabetes:** About 1 in 15 (6.9%) Singapore residents reported that they had diabetes mellitus and were currently on prescribed medication in 2019. A higher proportion of males (8.3%) were reported as diabetic compared to females (5.6%). Indians had the highest prevalence of self-reported diabetes mellitus (11.5%), followed by Malays (8.8%) and Chinese (6.2%).
- **Self-reported Hypertension:** About 1 in 6 (15.6%) Singapore residents reported that they had hypertension (or high blood pressure) and were currently on prescribed medication. More males (16.8%) reported having hypertension than females (14.5%). Malays had the highest prevalence of self-reported hypertension (16.7%), followed by Chinese (15.8%) and Indians (12.6%).
- **Self-reported Hyperlipidaemia:** Close to 1 in 7 (13.6%) Singapore residents reported that they had hyperlipidaemia (or high blood cholesterol) and were currently on prescribed medication. Self-reported high blood cholesterol was more common among males (15.3%) than females (12.0%). The prevalence of self-reported high blood cholesterol was similar among the Chinese (13.9%), Malays (13.4%) and Indians (12.5%).

## Chronic Disease Screening

- The proportion of Singapore residents aged 40 to 74 years with no previous diagnosis of diabetes, high blood pressure, and high blood cholesterol (“DHL”) who were screened within the recommended screening frequency remained high at around 66% in recent years (66.4% in 2017 and 66.3% in 2019).
- Based on individual disease alone regardless of the co-morbidity with other chronic diseases, 81.0% of adults aged 40 to 74 years without known diabetes were screened for diabetes within the past 3 years, 86.0% of those without known high blood pressure had their blood pressure checked within the past 2 years, and 77.9% of those with no previous diagnosis of high blood cholesterol were screened for this disease within the past 3 years.

## Cancer Screening

- Screening rates for breast, cervical and colorectal cancers improved in 2019 but the population coverage can be further increased. Breast cancer screening rate showed the biggest improvement from 30.9% in 2017 to 38.7% in 2019 followed by colorectal cancer screening from 35.0% in 2017 to 42.0% in 2019. The screening rate for cervical cancer increased marginally from 46.3% in 2017 to 48.2% in 2019.
- **Breast Cancer Screening:** In 2019, 9 in 10 (94.4%) Singapore female residents aged 50 to 69 years had knowledge of mammography. However, only 38.7% of Singapore women in the 50 to 69 age group reported that they had gone for mammography in the last 2 years. A higher proportion of Indian (41.0%) and Chinese women (40.1%) had undergone mammography compared to their Malay counterparts (28.9%).
- **Cervical Cancer Screening:** In 2019, 88.5% of women aged 25 to 74 years reported having awareness of Pap smear tests while about 1 in 2 (48.2%) women had gone for a Pap smear test within the last 3 years. However, among women aged 25 to 29 years, the screening rate for cervical cancer decreased from 49.5% in 2007 to 21.0% in 2019. Chinese (49.9%) and Indian women (46.1%) were more likely to have undergone Pap smear tests compared to Malay women (34.8%).
- **Colorectal Cancer Screening:** Overall in 2019, 42.0% of Singapore residents aged 50 to 74 years had undergone colorectal screening within the recommended screening frequency (either a Faecal Occult Blood Test (FOBT) within the past 1 year, or a sigmoidoscopy or colonoscopy within the past 10 years). 26.8% reported having undergone a FOBT at least once in the past 1 year while 25.0% had undergone a sigmoidoscopy or colonoscopy in the past 10 years. The practice of FOBT or a sigmoidoscopy or colonoscopy was more prevalent among males (45.4%) than females (38.7%). Chinese (43.6%) reported to have higher screening rates than Malays (31.9%) and Indians (37.5%) for both tests.



## **Vaccination Coverage**

- Almost 1 in 5 (17.4%) Singapore residents reported they had an influenza vaccination in the past 12 months. The influenza vaccination coverage among females (18.7%) was higher than males (16.0%). Malays (19.9%) and Indians (19.8%) had higher influenza vaccination coverage than Chinese (16.7%).
- The proportion of elderly aged 65 to 74 years who reported ever having received pneumococcal vaccination was 10.3%.

# Chapter 1

## Alcohol Consumption

### Key Points

- 2.1% of Singapore residents aged 18 to 74 years consumed alcohol regularly.
- The prevalence of binge drinking was 10.2%, and it was more common among males (14.9%) than females (5.7%).
- Binge drinking was reported by 11.5% of Chinese and 10.5% of Indians.
- Young adults in the 18 to 29 age group (16.6%) were most likely to binge drink compared to other age groups.
- The most preferred alcoholic drink was beer (49.4%), followed by wine (28.2%), spirits (12.1%), and alcopops/other premixed drinks (6.2%).

### Introduction

Excessive alcohol consumption is associated with an increased risk of hypertension, stroke and certain cancers. It may lead to liver cirrhosis, inflammation of the pancreas and damage to the brain and heart. Excessive alcohol intake can also cause mental disorders such as alcohol dependence and other alcohol-induced disorders such as amnesia (*US Department of Health and Human Services 1997*).

### Definition

Alcohol consumption was classified according to the frequency of alcohol intake in Table 1.1.

**Table 1.1: Classification of alcohol consumption**

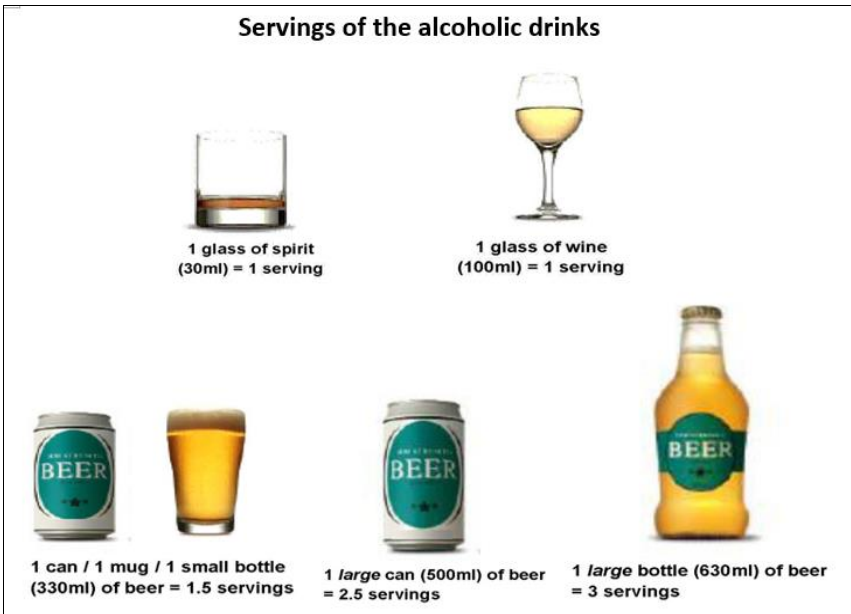
Classification	Frequency of alcohol consumption
Regular drinker	> 4 days a week
Frequent drinker	1 - 4 days a week
Occasional drinker	≤ 3 days a month

Binge drinking was defined as consumption of 5 or more alcoholic drinks<sup>3</sup> for males or 4 or more alcoholic drinks for females in any 1 drinking session during the past month preceding the survey.

**Method Used**

An interviewer-administered questionnaire was used. Respondents were shown a card with pictures of standard alcoholic drinks (Diagram 1) and asked questions on alcohol consumption within the past 12 months at the time of the survey.

**Diagram 1: Alcohol Card**



**Alcohol Consumption**

The survey found that among Singapore residents aged 18 to 74 years old, 2.1% consumed alcohol regularly, 8.8% frequently and 34.7% occasionally and 54.4% were non-drinkers (Table 1.2). Among those who consumed alcohol within the past 12 months at time of the survey, the most preferred alcoholic drink was beer (49.4%), followed by wine (including champagne and port) (28.2%), spirits (e.g. gin, whisky, rum, brandy, vodka) (12.1%), and alcopops/other premixed drinks (6.2%). 2.8% of the drinkers did not have any specific preference for alcoholic drinks.

<sup>3</sup> 1 alcoholic drink refers to 1 glass (~100 mls) of wine or 1 measure (~30 mls) of spirits. 1 can/ mug/ small bottle (330ml) of beer represents 1.5 servings of alcoholic drink.

**Table 1.2: Alcohol consumption (%) of Singapore residents aged 18 to 74 years by gender, 2019**

Alcohol Consumption	Total	Males	Females
Non-drinker	54.4	44.7	63.7
Occasional drinker	34.7	39.2	30.5
Frequent drinker	8.8	12.6	5.1
Regular drinker	2.1	3.6	0.7

### Prevalence of Regular Alcohol Consumption

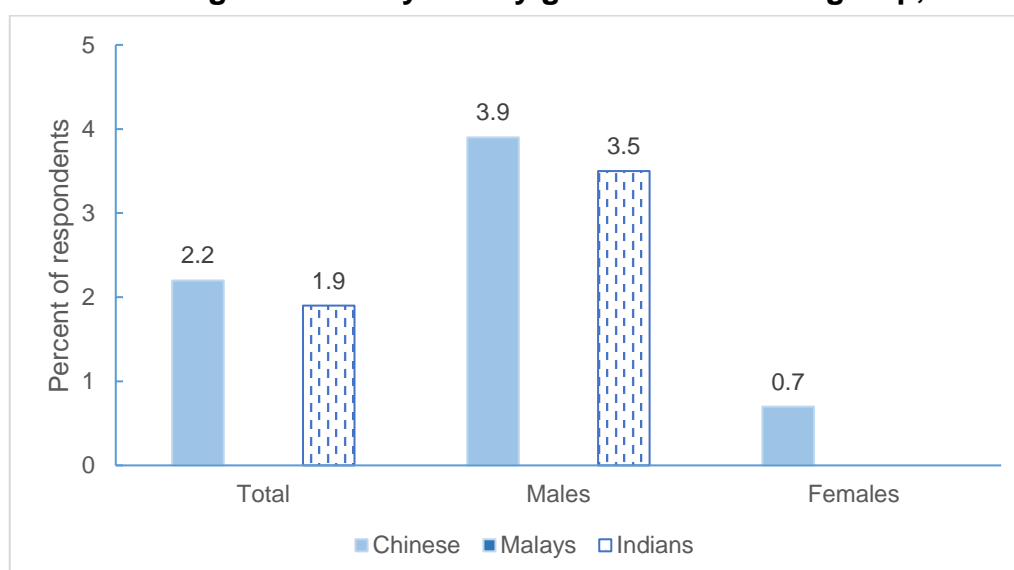
Among Singapore residents aged 18 to 74 years, 3.6% of males and 0.7% of females consumed alcohol regularly (Table 1.3). Similar to the overall prevalence, 2.2% of Chinese and 1.9% of Indians consumed alcohol on a regular basis (Graph 1.1). Regular alcohol intake was most common in males in the 60 to 74 age group (7.9%).

**Table 1.3: Age-specific crude prevalence (%) of regular alcohol consumption of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	s	s	s
30-39	1.1	1.9	s
40-49	2.1	3.0	s
50-59	2.4	4.1	s
60-74	4.3	7.9	s
18-74	2.1	3.6	0.7

s: Data have been suppressed due to small counts.

**Graph 1.1: Crude prevalence (%) of regular alcohol consumption of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



Note: Data for Malays and Indian females have been suppressed due to small counts.

## Trends in Regular Drinking

The crude prevalence of regular alcohol consumption has remained low at around 2% in recent years (Table 1.4).

**Table 1.4: Crude prevalence (%) of regular alcohol consumption of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2013, 2017, 2019**

	NHSS	NHSS	NPHS	NPHS
	2007	2013	2017	2019
Total	1.2	1.2	2.2 (1.6, 2.7)	2.1 (1.6, 2.6)
18-29	0.8	s	s	s
30-39	0.9	0.8	s	1.1 (0.5, 1.8)
40-49	1.2	2.0	2.3 (1.1, 3.4)	2.1 (1.0, 3.1)
50-59	1.9	1.5	3.8 (2.1, 5.4)	2.4 (1.3, 3.4)
60-74	1.3	1.4	3.7 (2.0, 5.4)	4.3 (2.7, 5.9)
Males	2.1	2.0	3.7 (2.7, 4.8)	3.6 (2.6, 4.5)
Females	0.3	0.4	0.6 (0.2, 1.0)	0.7 (0.3, 1.0)
Chinese	1.3	1.3	2.3 (1.6, 2.9)	2.2 (1.6, 2.8)
Malays	s	s	s	s
Indians	s	1.0	s	1.9 (0.7, 3.0)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

(2) s: Data have been suppressed due to small counts.

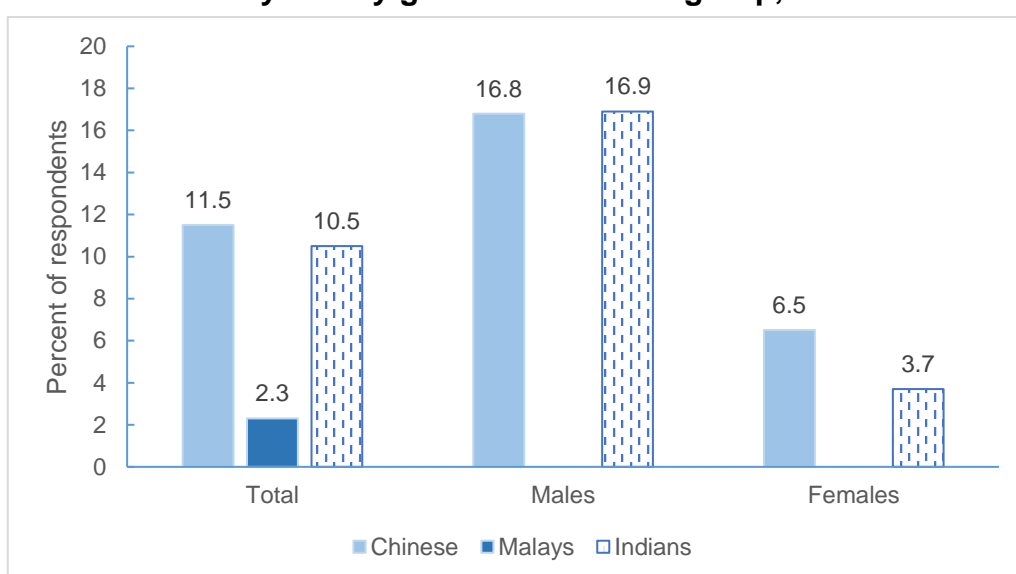
## Prevalence of Binge Drinking

The prevalence of binge drinking at least once in the past month preceding the survey was 10.2% (Table 1.5). Binge drinking was more prevalent among males (14.9%) than females (5.7%); and among Chinese (11.5%) and Indians (10.5%) compared to Malays (2.3%) (Graph 1.2). Both males and females had the highest proportion of binge drinkers in the 18 to 29 age group. About 1 in 5 males aged between 18 to 39 years had a habit of binge drinking.

**Table 1.5: Age-specific crude prevalence (%) of binge drinking of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	16.6	20.9	12.3
30-39	13.8	20.3	7.9
40-49	8.8	14.0	3.9
50-59	6.9	10.7	3.1
60-74	5.0	8.6	1.6
18-74	10.2	14.9	5.7

**Graph 1.2: Crude prevalence (%) of binge drinking of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



Note: Data for Malays have been suppressed due to small counts.

## Trends in Binge Drinking

The prevalence of binge drinking continued to increase from 8.8% in 2017 to 10.2% in 2019 (Table 1.6). This increase in binge drinking was seen mainly in the younger age groups (18 to 29 and 30 to 39).

**Table 1.6: Crude prevalence (%) of binge drinking of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2013, 2017, 2019**

	NHSS	NHSS	NPHS	NPHS
	2007	2013	2017	2019
Total	4.3	7.4	8.8 (7.6, 10.0)	10.2 (9.1, 11.3)
18-29	8.1	14.6	12.4 (9.2, 15.6)	16.6 (13.5, 19.7)
30-39	4.6	7.7	10.6 (7.5, 13.7)	13.8 (10.9, 16.6)
40-49	3.7	5.3	9.3 (6.8, 11.7)	8.8 (6.8, 10.7)
50-59	2.3	4.9	7.3 (5.0, 9.7)	6.9 (5.0, 8.8)
60-74	1.0	3.2	4.0 (2.4, 5.7)	5.0 (3.4, 6.6)
Males	6.4	10.7	13.1 (11.1, 15.1)	14.9 (13.1, 16.6)
Females	2.2	4.2	4.7 (3.4, 6.0)	5.7 (4.6, 6.8)
Chinese	4.7	8.6	9.4 (8.0, 10.9)	11.5 (10.1, 12.8)
Malays	1.1	1.5	s	2.3 (1.0, 3.6)
Indians	4.5	6.6	13.4 (9.2, 17.6)	10.5 (7.8, 13.1)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

(2) s: Data have been suppressed due to small counts.

## Chapter 2

### Cigarette Smoking

#### Key Points

- 10.6% of Singapore residents aged 18 to 74 years smoked cigarettes daily.
- About 1 in 5 (18.4%) males were daily smokers compared with approximately 1 in 31 (3.2%) females.
- Malays had the highest daily smoking prevalence (23.0%), followed by Indians (10.9%) and Chinese (8.6%).
- Daily smoking was most prevalent in adults aged 50 to 59 years (12.6%) and least prevalent among young adults in the 18 to 29 age group (8.4%).
- Male daily smokers smoked an average of 13 cigarettes a day whilst female daily smokers smoked an average of 9 cigarettes a day.
- 50.3% of daily smokers indicated that they had plans to quit smoking. However, only 19.7% of daily smokers planned to quit smoking within the next 12 months or less.

#### Introduction

Tobacco use is the single greatest cause of preventable death globally. It leads most commonly to diseases affecting the heart and lungs, with cigarette smoking being a major risk factor for heart attack, stroke, chronic obstructive pulmonary disease (COPD), and cancer (particularly lung cancer, cancers of the larynx and mouth, and pancreatic cancer). It also causes peripheral vascular disease and hypertension (*WHO, 1998*).



## Definition

The World Health Organization (WHO) classification criteria for cigarette smoking status was used in the survey (*WHO, 1998*) in Table 2.1.

**Table 2.1: Classification of smoking status**

Classification	Frequency of cigarette smoking
Daily smoker	Smokes cigarettes at least once a day (including people who smoke every day but have to stop temporarily because of religious fasting or medical reasons)
Occasional smoker	Smokes cigarettes but not every day
Ex-smoker	Formerly a daily smoker, but currently does not smoke at all
Non-smoker	Never smoked before or smoked too little in the past to be regarded as an ex-smoker

## Method Used

An interviewer-administered questionnaire was used. The questionnaire was based on WHO's recommended core questions for assessing smoking status (*WHO, 1998*).

## Smoking Status

The survey showed that among Singapore residents aged 18 to 74 years, 10.6% smoked daily, 3.1% were occasional smokers, 7.3% were ex-smokers and 79.0% were non-smokers (Table 2.2).

**Table 2.2: Smoking status (%) of Singapore residents aged 18 to 74 years by gender, 2019**

Smoking Status	Total	Males	Females
Daily smoker	10.6	18.4	3.2
Occasional smoker	3.1	4.9	1.4
Ex-smoker	7.3	12.8	2.1
Non-Smoker	79.0	63.9	93.4

**Prevalence of Daily Smoking**

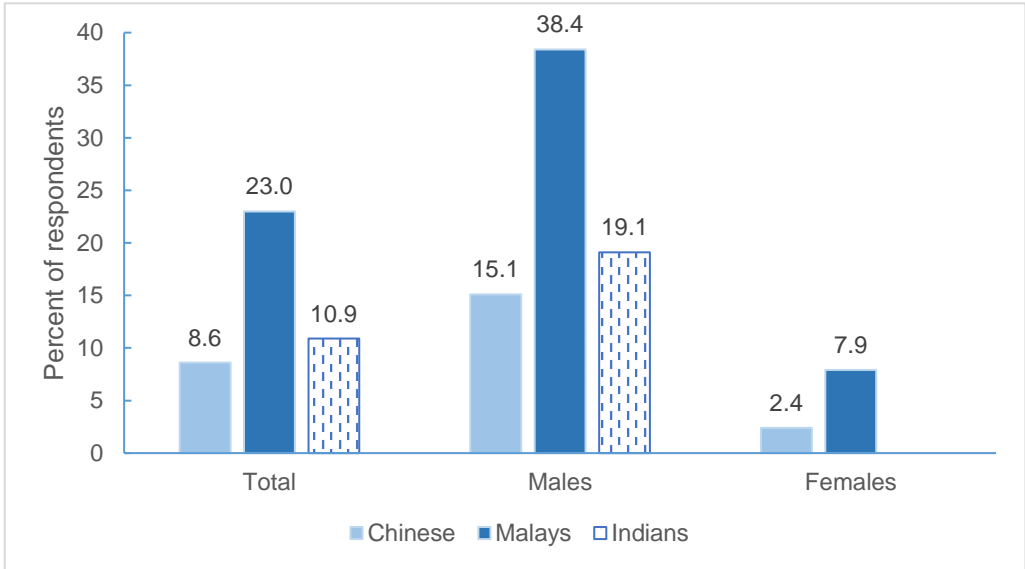
The crude prevalence of daily smoking among Singapore residents aged 18 to 74 years was 18.4% in males and 3.2% in females (Table 2.3). Smoking prevalence levels were consistently higher among males than females in all age groups. Daily smoking was most prevalent in males aged between 50 and 59 years (22.8%), while in females the highest rate was seen in females aged 40 to 49 years old (5.5%). Smoking rate was highest in Malays (23.0%) followed by Indians (10.9%) and Chinese (8.6%) (Graph 2.1).

**Table 2.3: Age-specific crude prevalence (%) of daily smoking of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	8.4	14.6	2.1
30-39	11.4	18.7	4.9
40-49	10.6	16.2	5.5
50-59	12.6	22.8	2.5
60-74	10.2	20.0	s
18-74	10.6	18.4	3.2

s: Data have been suppressed due to small counts.

**Graph 2.1: Crude prevalence (%) of daily smoking of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



Note: Data for Indian females have been suppressed due to small counts.

### **Onset of Daily Smoking Among Young Daily Smokers**

The mean age at which young smokers aged 18 to 24 years established their daily smoking habit was 18 years old and they first tried smoking at the mean age of 15 years old.

### **Smoking Intensity of Daily Smokers**

The mean number of cigarettes consumed by a daily smoker was 12 cigarettes per day. Male smokers tended to smoke more heavily than female smokers (13 cigarettes a day compared with 9 cigarettes a day). Daily smokers in the 50 to 59 age group smoked the most; 15 cigarettes a day compared to between 10 and 13 cigarettes a day in other age groups.

### **Quit Intention of Daily Smokers**

Daily smokers who had abstained from smoking for a period of at least 24 hours in the past 12 months reported that they had tried quitting smoking an average of 3 times during the past 12 months preceding the survey. Half of the daily smokers (50.3%) indicated that they had plans to quit smoking. However, only about 1 in 5 daily smokers (19.7%) planned to quit smoking within the next 12 months or less. 28.9% of daily smokers indicated that they did not plan to quit smoking at all but planned to cut down on the number of cigarettes smoked. 20.7% did not plan to quit smoking at all and also did not plan to reduce the number of cigarettes smoked.

### **Trends in Daily Smoking**

The crude prevalence of daily smoking declined steadily since 2010, from 13.9% in 2010 to 10.6% in 2019 (Table 2.4). This decline was more pronounced in the males compared with females, with the females' prevalence remaining relatively constant in recent years (3.3% in 2017 to 3.2% in 2019). Among the ethnic groups, the daily smoking prevalence showed declining trends in Chinese and Malays between 2010 and 2019 but not so in the Indians.

**Table 2.4: Crude prevalence (%) of daily smoking of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	NPHS
	2007	2010	2013	2017	2019
Total	13.3	13.9	13.1	11.8 (10.6, 13.0)	10.6 (9.5, 11.7)
18-29	17.4	16.0	12.6	9.8 (7.1, 12.5)	8.4 (6.5, 10.2)
30-39	12.5	16.0	14.7	12.6 (9.5, 15.7)	11.4 (9.3, 13.5)
40-49	12.8	14.3	15.4	14.5 (11.6, 17.4)	10.6 (8.7, 12.5)
50-59	12.7	11.4	13.3	11.9 (9.2, 14.6)	12.6 (10.0, 15.2)
60-74	9.8	10.1	8.5	10.2 (7.5, 12.8)	10.2 (8.0, 12.4)
Males	23.1	24.0	23.0	20.6 (18.5, 22.8)	18.4 (16.3, 20.5)
Females	3.8	4.1	3.6	3.3 (2.3, 4.3)	3.2 (2.4, 3.9)
Chinese	12.0	12.6	11.5	9.9 (8.6, 11.2)	8.6 (7.5, 9.7)
Malays	23.0	26.1	24.9	23.1 (19.0, 27.3)	23.0 (19.4, 26.6)
Indians	11.1	10.0	10.5	12.6 (8.4, 16.9)	10.9 (8.0, 13.8)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

(2) s: Data have been suppressed due to small counts.

## Chapter 3

### Physical Activity

#### Key Points

- Over 1 in 3 (35.2%) Singapore residents aged 18 to 74 years engaged in regular exercise during their leisure time.
- Leisure-time regular exercise was more prevalent among males (38.7%) than females (32.0%).
- Indians had the highest participation level in regular exercise (45.2%) for both males and females, followed by Chinese (34.7%) and Malays (30.0%).
- 40.2% of Singapore residents did not exercise during their leisure time (physically inactive).
- Including physical activity at work (paid or unpaid work including household chores) and walking or cycling (on bicycles) while travelling to and from places in addition to leisure-time physical activity, 80.1% of Singapore residents had sufficient total physical activity.

#### Introduction

Physical activity is important for maintaining good health. It has been shown to reduce the risk of premature death in general and in particular the risk of coronary heart disease, hypertension, and non-insulin-dependent diabetes mellitus. In addition, physical activity improves mental health, prevents unhealthy weight gain and is important for the health of muscles, bones and joints (*US Department of Health and Human Services 1996; Wellington National Health Committee 1998*). Participation in physical activity can also improve the quality of life among children and adults (*Hassmen et al. 2000; Laforge et al. 1999*).

## Definition

The classification for physical activity was adapted from the American College of Sports Medicine's classification (Table 3.1) (*American College of Sports Medicine, 1998*).

**Table 3.1: Classification of physical activity participation**

Classification	Frequency of physical activity
Regular exercise	Participation in any form of sports or exercise for at least 20 minutes per occasion, for 3 or more days a week
Occasional exercise	Participation in any form of sports or exercise for at least 20 minutes per occasion, for less than 3 days a week
No exercise (Physically inactive)	No participation in any form of sports or exercise that lasted for at least 20 minutes per occasion

## Method Used

An interviewer-administered questionnaire was used. Respondents were asked about the frequency, duration and intensity of physical activity that they did during their leisure time.

## Leisure-time Physical Activity Participation Status

The survey found that among Singapore residents aged 18 to 74 years, over one-third (35.2%) exercised regularly, 24.5% exercised occasionally, and 40.2% did not exercise at all (Table 3.2).

**Table 3.2: Leisure-time physical activity participation status (%) of Singapore residents aged 18 to 74 years by gender, 2019**

Physical Activity Participation	Total	Males	Females
Regular exercise	35.2	38.7	32.0
Occasional exercise	24.5	25.6	23.5
No exercise (Physically inactive)	40.2	35.7	44.5

**Prevalence of Leisure-time Regular Exercise**

A higher proportion of males (38.7%) than females (32.0%) exercised regularly (Table 3.3). There was a general decline in the prevalence of regular exercise with increasing age. The highest proportion was observed among young adults aged 18 to 29 years (46.9%) while the lowest was among older adults aged 60 to 74 years (30.3%). Among the females, the proportion who exercised regularly decreased from 37.2% among those aged 18 to 29 years to 28.6% among females in the 40 to 49 age group before increasing to 34.5% among older females aged 50 to 59 years. Whereas among the males, more than half (56.3%) of those aged 18 to 29 years exercised regularly and this percentage dropped to around one-third for males aged 30 years above.

Among the ethnic groups, Indians had the highest participation level in regular exercise, (45.2%) for both males and females, followed by Chinese (34.7%) and Malays (30.0%). (Graph 3.1). Half of all Indian men exercised regularly compared with over one-third among Chinese and Malay men. Malay women had the lowest participation level with only 1 in 4 having regular exercise.

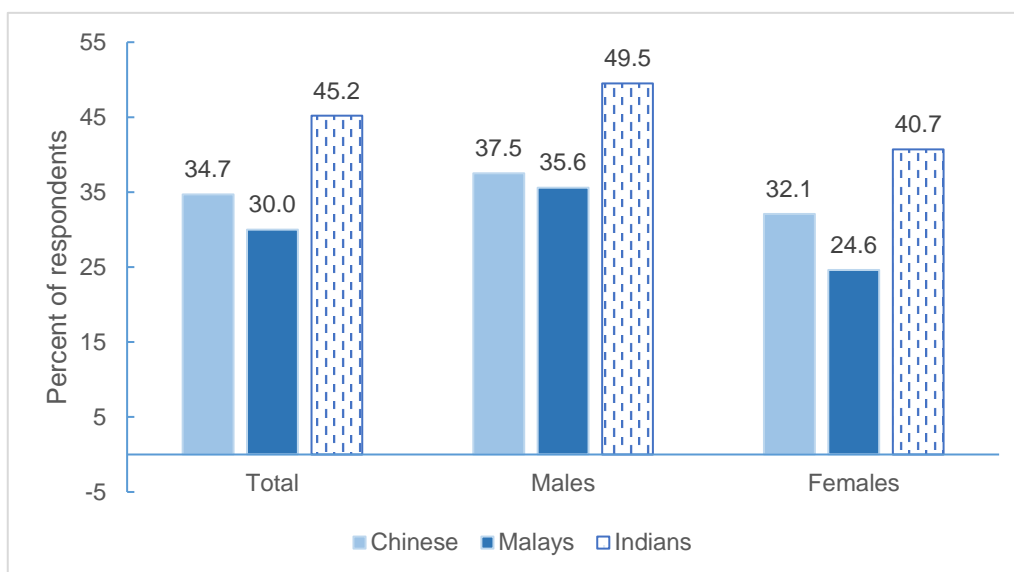
**Table 3.3: Age-specific crude prevalence (%) of leisure-time regular exercise of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	46.9	56.3	37.2
30-39	34.2	36.1	32.4
40-49	31.0	33.5	28.6
50-59	33.7	32.9	34.5
60-74	30.3	33.4	27.5
18-74	35.2	38.7	32.0

**Trend in Leisure-time Regular Exercise**

The crude prevalence of leisure-time regular exercise had been on an increasing trend since 2007 (24.1%) (Table 3.4). The proportion of Singapore residents who engaged in regular exercise was 35.2% in 2019 and was significantly higher than the 29.4% in 2017.

**Graph 3.1: Crude prevalence (%) of leisure-time regular exercise of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



**Table 3.4: Crude prevalence (%) of leisure-time regular exercise of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2013, 2017, 2019**

	NHSS	NHSS	NPHS	NPHS
	2007	2013	2017	2019
Total	24.1	23.5	29.4 (27.3, 31.6)	35.2 (33.3, 37.2)*
18-29	28.2	33.5	37.1 (32.1, 42.1)	46.9 (42.5, 51.3)*
30-39	18.8	20.9	33.2 (28.5, 37.9)	34.2 (30.4, 37.9)
40-49	22.1	18.6	29.2 (25.1, 33.3)	31.0 (27.7, 34.2)
50-59	24.4	20.4	23.7 (20.2, 27.3)	33.7 (29.6, 37.8)*
60-74	30.0	23.7	23.3 (19.7, 26.9)	30.3 (26.8, 33.9)
Males	25.4	28.1	30.1 (27.4, 32.8)	38.7 (36.1, 41.2)*
Females	22.8	19.0	28.8 (26.1, 31.6)	32.0 (29.4, 34.6)
Chinese	22.6	23.4	29.4 (27.0, 31.8)	34.7 (32.4, 37.1)*
Malays	22.2	20.1	27.7 (22.9, 32.6)	30.0 (26.7, 33.3)
Indians	37.0	26.7	29.7 (24.5, 34.8)	45.2 (40.0, 50.4)*

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).



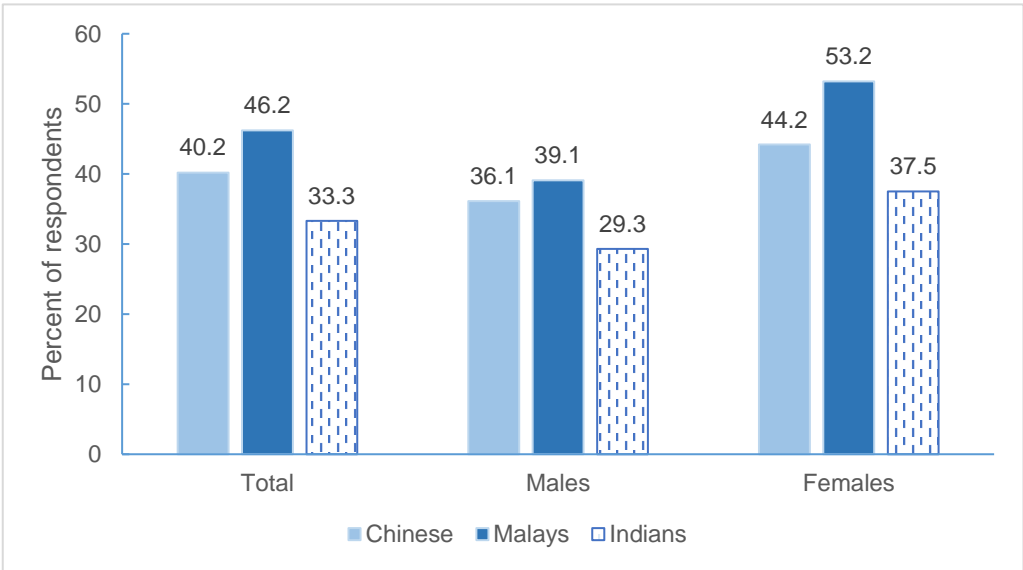
**Prevalence of Leisure-time Physical Inactivity**

Among Singapore residents aged 18 to 74 years old, 40.2% did not participate in any leisure-time physical activity (Table 3.5). A higher proportion of females (44.5%) than males (35.7%) were physically inactive during their leisure time. Physical inactivity increased with age, with the prevalence rising from 24.9% among adults aged between 18 and 29 years to 55.7% among adults aged between 60 and 74 years. Among the ethnic groups, close to 1 in 2 Malays (46.2%), 2 in 5 Chinese (40.2%) and 1 in 3 Indians (33.3%) did not engage in leisure-time physical activity (Graph 3.2). Malay women were most physically inactive with more than 1 in 2 (53.2%) not having leisure-time physical activity.

**Table 3.5: Age-specific crude prevalence (%) of leisure-time physical inactivity of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	24.9	17.3	32.6
30-39	35.6	28.2	42.2
40-49	39.3	34.0	44.3
50-59	45.3	45.2	45.3
60-74	55.7	53.7	57.5
18-74	40.2	35.7	44.5

**Graph 3.2: Crude prevalence (%) of leisure-time physical inactivity of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



**Total Physical Activity**

There have been changes in the WHO guidelines to recognise that physical activity with benefits to health could also occur in domains such as walking while commuting to and from places, and performing household chores and at work. The physical activity could be accumulated in bouts of at least 10 minutes throughout the day. The recommendation for sufficient total physical activity is at least 30 minutes of at least moderate-intensity activities or equivalent for at least 5 days a week.

Physical activity participation in all 3 domains - at work (paid or unpaid work including household chores), walking while travelling to and from places and leisure-time physical activity - was assessed using the Global Physical Activity Questionnaire (GPAQ) developed by the WHO. The 3 levels of total physical activity classification are low, moderate and high. The criteria for these levels are in Table 3.6.

**Table 3.6: Classification of total physical activity**

Classification	Criteria
High	Vigorous-intensity activity on at least 3 days achieving a minimum of at least 1,500 MET*-minutes per week <b>OR</b> 7 or more days of any combination of walking, moderate- or vigorous- intensity activities achieving a minimum of at least 3,000 MET-minutes per week.
Moderate	Not meeting the criteria for the "high" category, but meeting any of the following criteria is classified in this category: 3 or more days of vigorous intensity activity of at least 20 minutes per day <b>OR</b> 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day <b>OR</b> 5 or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 600 MET-minutes per week.
Low	Not meeting any of the above mentioned criteria.

\* MET (Metabolic Equivalents) is the ratio of a person's working metabolic rate relative to the resting metabolic rate. 1 MET is defined as the energy cost of sitting quietly, and is equivalent to a caloric consumption of 1 kcal/kg/hour.

**Total Physical Activity Level**

The survey showed that the proportion of Singapore residents aged 18 to 74 years who engaged in high, moderate and low total physical activity were 39.0%, 41.1% and 19.9% respectively (Table 3.7).

**Table 3.7: Total physical activity level (%) of Singapore residents aged 18 to 74 years by gender, 2019**

Total Physical Activity Level	Total	Males	Females
High	39.0	41.3	36.9
Moderate	41.1	39.0	43.1
Low	19.9	19.8	20.0

### Prevalence of Sufficient Total Physical Activity

80.1% of Singapore residents aged 18 to 74 years had sufficient (high and moderate) total physical activity (Table 3.8). Similar proportions of males (80.2%) and females (80.0%) had sufficient total physical activity. Young adults in the 18 to 29 age group had the highest level of sufficient total physical activity (84.4%). A higher proportion of Indians (86.8%) and Malays (82.0%) had sufficient total physical activity than the Chinese (78.8%) (Graph 3.3). The largest contributor to total physical activity was commuting (44.5%), followed by work-related physical activity (30.0%) and leisure-time physical activity (25.5%).

**Table 3.8: Age-specific crude prevalence (%) of sufficient total physical activity of Singapore residents aged 18 to 74 years by gender, 2019**

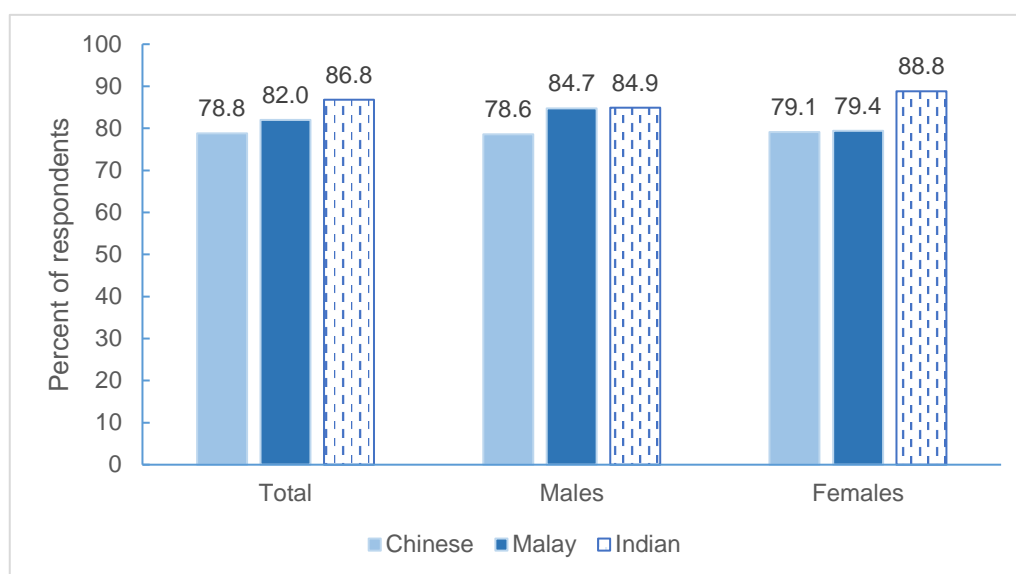
Age (years)	Total	Males	Females
18-29	84.4	89.3	79.5
30-39	78.0	78.9	77.2
40-49	79.8	76.7	82.7
50-59	79.0	75.4	82.6
60-74	79.3	80.2	78.4
18-74	80.1	80.2	80.0

Note: Sufficient: High and moderate

### Trend in Sufficient Total Physical Activity

The crude prevalence of sufficient total physical activity was 80.1% in 2019. This has remained relatively stable compared to the 80.9% in 2017 but increased from the 73.1% in 2013 (Table 3.9).

**Graph 3.3: Crude prevalence (%) of sufficient total physical activity of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



Note: Sufficient: High and moderate

**Table 3.9: Crude prevalence (%) of sufficient total physical activity of Singapore residents aged 18 to 74 years by age groups, gender and ethnic groups, 2007, 2013, 2017, 2019**

	NHSS	NHSS	NPHS	NPHS
	2007	2013	2017	2019
Total	82.3	73.1	80.9 (78.8, 83.0)	80.1 (78.5, 81.7)
18-29	84.0	79.5	85.9 (82.3, 89.5)	84.4 (81.3, 87.6)
30-39	79.5	73.0	80.5 (76.4, 84.7)	78.0 (74.9, 81.1)
40-49	82.2	73.9	78.5 (74.7, 82.2)	79.8 (76.6, 83.0)
50-59	83.6	71.9	80.5 (77.0, 84.0)	79.0 (75.7, 82.3)
60-74	82.3	65.1	78.6 (74.7, 82.6)	79.3 (76.5, 82.0)
Males	81.7	74.8	81.5 (78.7, 84.3)	80.2 (78.1, 82.4)
Females	82.9	71.5	80.3 (77.7, 83.0)	80.0 (78.1, 82.0)
Chinese	81.1	72.0	80.5 (78.2, 82.9)	78.8 (77.0, 80.7)
Malays	84.2	76.1	83.8 (79.6, 88.0)	82.0 (78.5, 85.6)
Indians	88.0	76.3	79.5 (74.6, 84.5)	86.8 (82.8, 90.7)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

## Chapter 4

### Self-Reported Diabetes Mellitus

#### Key Points

- About 1 in 15 (6.9%) of Singapore residents aged 18 to 74 years reported that they had diabetes mellitus and were currently on prescribed medication.
- A higher proportion of males (8.3%) were reported as diabetic compared to females (5.6%).
- Indians had the highest prevalence of self-reported diabetes mellitus (11.5%), followed by Malays (8.8%) and Chinese (6.2%).
- The prevalence of self-reported diabetes mellitus increased with age, from 0.9% in young adults aged 30 to 39 years to 9.8% among those aged 50 to 59 years and peaked at 21.4% among those aged 70 to 74 years.

#### Introduction

Diabetes mellitus represents a group of metabolic disorders characterised by high blood sugar (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both. Diabetes mellitus can lead to death and disability through long-term complications including blindness, kidney failure, coronary heart disease and stroke. Type 2 diabetes is the more common form of diabetes, occurring mainly in older adults and is associated with obesity (*Diabetes Mellitus MOH Clinical Practice Guidelines*).

#### Method Used

An interviewer-administered questionnaire was used. In order to obtain an indication of the prevalence of known diabetes mellitus in the community, respondents were asked whether they had ever been told by a western-trained doctor that they had diabetes and were currently prescribed medication for diabetes. Respondents who answered “yes” to both questions were classified as having “reported diabetes mellitus”. Diabetes mellitus prevalence estimates based on reported use of medication for diabetes mellitus are likely to under-estimate the true diabetes mellitus prevalence as a proportion of diabetics are undiagnosed. Among those with diabetes, they were also asked on the frequency of doctor’s visit and place of treatment to manage their diabetes.

## Prevalence of Self-Reported Diabetes Mellitus

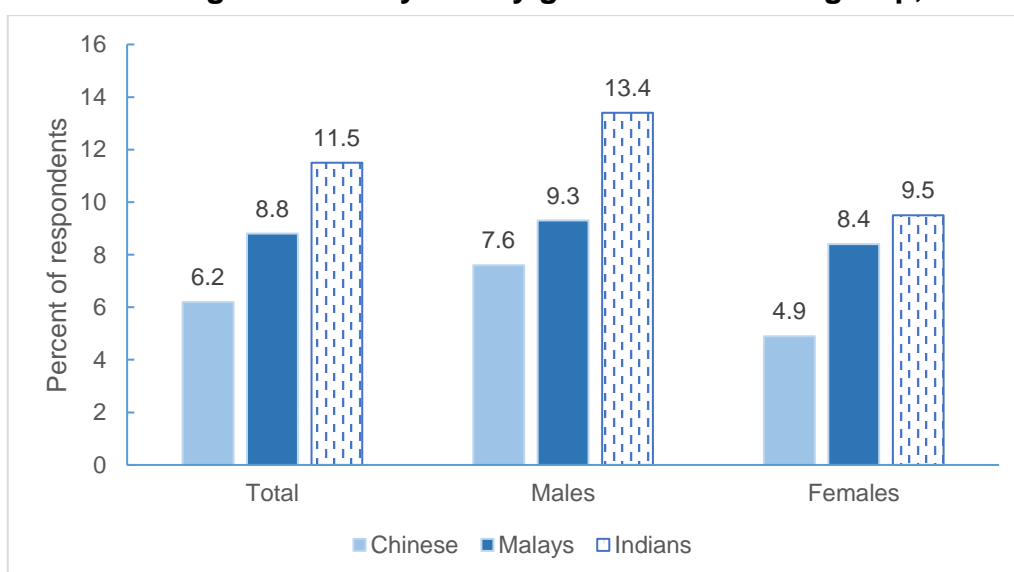
The prevalence of self-reported diabetes among Singapore residents aged 18 to 74 years was 6.9% (Table 4.1). A higher proportion of males (8.3%) were reported as diabetic compared to females (5.6%). Self-reported diabetes prevalence increased with age; from 0.9% among those aged 30 to 39 years to 9.8% of adults in the 50 to 59 age group and 21.4% in those aged 70 to 74 years. Indians had the highest prevalence of self-reported diabetes among the ethnic groups (11.5% compared to 8.8% in Malays and 6.2% in Chinese) (Graph 4.1). Residents with self-reported diabetes visited a doctor for their diabetes about 4 times in the past 12 months, mainly in polyclinic (60.4%), private GP clinic (19.0%) and specialist outpatient clinic in public hospital (18.8%).

**Table 4.1: Age-specific crude prevalence (%) of self-reported diabetes mellitus of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	s	s	s
30-39	0.9	s	s
40-49	5.0	6.7	3.5
50-59	9.8	11.7	8.0
60-69	17.0	20.3	13.9
70-74	21.4	24.9	18.5
18-74	6.9	8.3	5.6

s: Data have been suppressed due to small counts

**Graph 4.1: Crude prevalence (%) of self-reported diabetes mellitus of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



## Trends in Prevalence of Self-Reported Diabetes Mellitus

The crude prevalence of self-reported diabetes showed an increasing trend over the years from 4.9% in 2007 to 6.9% in 2019 (Table 4.2). After age-standardisation, the overall increase in prevalence was less pronounced, indicating that the increase was partly attributable to population ageing (Table 4.3).

**Table 4.2: Crude prevalence (%) of self-reported diabetes mellitus of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	4.9	5.0	5.4	6.7 (5.7, 7.7)	6.9 (6.1, 7.7)
18-29	s	s	s	s	s
30-39	0.7	1.2	1.1	s	0.9 (0.3, 1.5)
40-49	4.3	2.6	4.2	4.3 (2.5, 6.2)	5.0 (3.0, 7.0)
50-59	8.2	10.0	8.1	11.7 (8.7, 14.6)	9.8 (7.7, 12.0)
60-69	17.1	14.0	14.8	17.3 (13.6, 21.0)	17.0 (14.1, 20.0)
70-74	15.7	16.8	22.2	14.8 (9.9, 19.7)	21.4 (16.7, 26.0)
Males	5.3	5.1	5.8	7.7 (6.1, 9.2)	8.3 (7.0, 9.5)
Females	4.5	4.9	5.1	5.7 (4.5, 7.0)	5.6 (4.5, 6.6)
Chinese	4.1	4.1	4.6	5.6 (4.5, 6.7)	6.2 (5.3, 7.1)
Malays	6.2	7.5	8.2	8.2 (5.3, 11.1)	8.8 (6.5, 11.1)
Indians	10.8	9.7	9.6	14.7 (10.1, 19.3)	11.5 (8.8, 14.3)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).  
 (2) s: Data have been suppressed due to small counts.

**Table 4.3: Age-standardised# prevalence (%) of self-reported diabetes mellitus of Singapore residents aged 18 to 74 years by gender and ethnic group, 2007, 2010, 2013, 2017 and 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	5.2	5.0	5.2	5.8	5.7
Males	5.6	5.1	5.6	6.9	6.9
Females	4.8	4.9	4.7	4.8	4.5
Chinese	4.1	3.8	4.1	4.5	4.8
Malays	7.6	8.5	9.0	8.6	8.9
Indians	13.5	12.2	11.6	15.4	11.2

# The reference population is the Census 2010 resident population.

## Chapter 5

### Self-Reported Hypertension

#### Key Points

- About 1 in 6 (15.6%) Singapore residents aged 18 to 74 years reported that they had hypertension (or high blood pressure) and were currently on prescribed medication.
- More males (16.8%) reported having hypertension than females (14.5%).
- Malays had the highest prevalence of self-reported hypertension (16.7%), followed by Chinese (15.8%) and Indians (12.6%).
- The prevalence of self-reported hypertension increased from age 50 years onwards, from 22.8% among those aged 50 to 59 years old to 55.8% among those aged 70 to 74 years old.

#### Introduction

Hypertension or high blood pressure is a cardiac chronic medical condition in which the systemic arterial blood pressure is elevated. Persistent hypertension is one of the risk factors for stroke, myocardial infarction and heart failure. Dietary and lifestyle changes can improve blood pressure control and decrease the risk of associated health complications, although drug treatment may be necessary in patients for whom lifestyle changes prove ineffective or insufficient (*WHO, 1978*).

#### Method Used

An interviewer-administered questionnaire was used. In order to obtain an indication of the prevalence of known hypertension in the community, respondents were asked whether they had ever been told by a western-trained doctor that they had high blood pressure and were currently prescribed medication for high blood pressure. Respondents who answered “yes” to both questions were classified as having “reported hypertension”. Hypertension prevalence estimates based on reported use of medication for hypertension are likely to under-estimate the true hypertension prevalence as not all hypertensives are undiagnosed. Among those with hypertension, they were also asked on the frequency of doctor’s visit and place of treatment to manage their hypertension.



## Prevalence of Self-Reported Hypertension

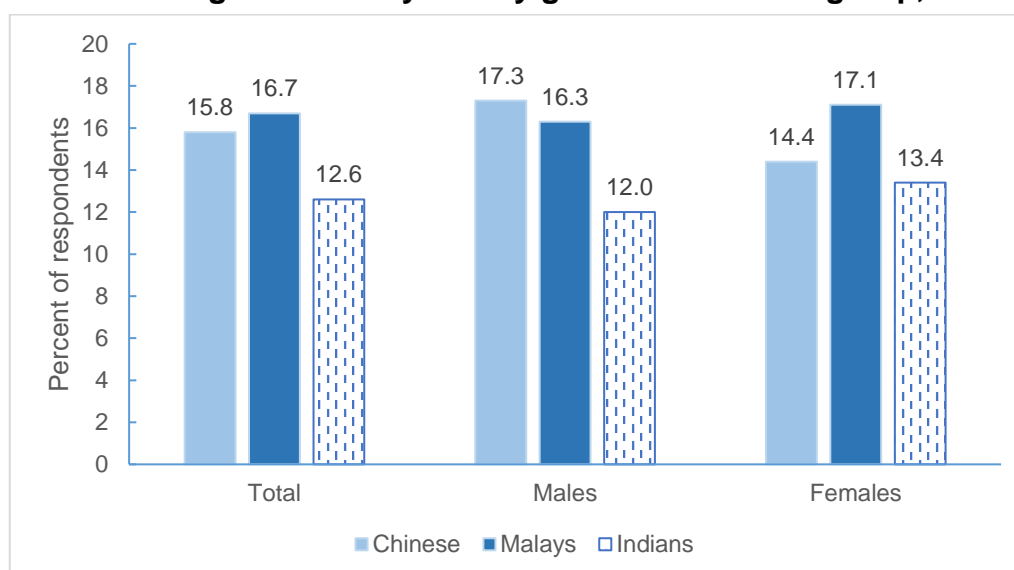
The prevalence of self-reported hypertension among Singapore residents aged 18 to 74 years was 15.6% (Table 5.1). More males (16.8%) reported having hypertension than females (14.5%). This pattern was also observed among the Chinese males (17.3%) and females (14.4%), however the reverse pattern was seen among the Malays and Indians (Graph 5.1). By ethnic group, Malays (16.7%) had the highest prevalence of self-reported hypertension followed by Chinese (15.8%) and Indians (12.6%). The prevalence of self-reported hypertension increased from age 50 years onwards, from 22.8% among those aged 50 to 59 years old to 55.8% among those aged 70 to 74 years old. Residents with reported hypertension visited a doctor for their condition about 4 times in the past 12 months, mainly in polyclinic (47.4%), private GP clinic (36.3%) and specialist outpatient clinic in public hospital (12.8%).

**Table 5.1: Age-specific crude prevalence (%) of self-reported hypertension of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	s	s	s
30-39	2.9	5.3	s
40-49	9.0	10.0	8.1
50-59	22.8	23.8	21.7
60-69	37.2	40.8	33.8
70-74	55.8	53.6	57.6
18-74	15.6	16.8	14.5

s: Data have been suppressed due to small counts

**Graph 5.1: Crude prevalence (%) of self-reported hypertension of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



## Trends in Prevalence of Self-Reported Hypertension

The overall crude and age-standardised prevalence of self-reported hypertension showed a declining trend over the years except in 2019 (Table 5.2 and Table 5.3). The overall increase in 2019 prevalence was less pronounced after age-standardisation, indicating that the increase was partly attributable to population ageing.

**Table 5.2: Crude prevalence (%) of self-reported hypertension of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	NPHS
	2007	2010	2013	2017	2019
Total	12.7	14.0	12.9	12.7% (11.4, 14.1)	15.6 (14.3, 16.9)*
18-29	s	s	s	s	s
30-39	2.1	3.7	2.7	s	2.9 (1.0, 4.7)
40-49	8.1	9.9	8.4	9.4 (6.7, 12.0)	9.0 (7.0, 11.0)
50-59	22.9	24.5	20.2	20.7 (17.1, 24.2)	22.8 (19.6, 25.9)
60-69	47.4	42.4	34.8	31.0 (26.2, 35.8)	37.2 (33.6, 40.8)
70-74	44.2	45.3	58.2	46.8 (39.0, 54.5)	55.8 (49.7, 61.9)
Males	12.9	14.8	13.5	13.8 (11.8, 15.7)	16.8 (14.9, 18.7)
Females	12.5	13.2	12.3	11.7 (10.1, 13.4)	14.5 (12.8, 16.1)
Chinese	13.3	14.4	13.4	13.0 (11.4, 14.6)	15.8 (14.3, 17.3)
Malays	12.4	14.3	11.5	10.5 (7.9, 13.1)	16.7 (13.5, 20.0)*
Indians	10.1	11.7	11.6	14.1 (9.9, 18.3)	12.6 (9.6, 15.7)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

(2) s: Data have been suppressed due to small counts.

**Table 5.3: Age-standardised<sup>#</sup> prevalence (%) of reported hypertension of Singapore residents aged 18 to 74 years by gender and ethnic group, 2007, 2010, 2013, 2017 and 2019**

	NHSS	NHS	NHSS	NPHS	NPHS
	2007	2010	2013	2017	2019
Total	13.4	14.0	12.2	11.3	12.8
Males	13.7	14.8	12.9	12.4	14.1
Females	13.2	13.1	11.4	10.2	11.5
Chinese	13.3	13.7	11.8	10.8	12.2
Malays	15.0	16.2	12.4	10.9	17.1
Indians	13.1	14.8	14.1	14.8	12.2

<sup>#</sup> The reference population is the Census 2010 resident population.

## Chapter 6

### Self-Reported Hyperlipidaemia

#### Key Points

- Close to 1 in 7 (13.6%) Singapore residents aged 18 to 74 years reported that they had hyperlipidaemia (or high blood cholesterol) and were currently on prescribed medication.
- Self-reported high blood cholesterol was more common among males (15.3%) than females (12.0%).
- The prevalence of self-reported high blood cholesterol was similar among the Chinese (13.9%), Malays (13.4%) and Indians (12.5%).
- The prevalence of self-reported high blood cholesterol increased sharply with age from 1.6% among those aged 30 to 39 years old to 42.4% among those aged 70 to 74 years old.

#### Introduction

Hyperlipidaemia or high blood cholesterol is a major risk factor for coronary heart disease. Elevated blood cholesterol, in particular LDL-cholesterol, causes atherosclerosis and increases the risk for coronary heart disease. HDL-cholesterol has been shown to have a protective effect against coronary heart disease. Low HDL-cholesterol has been shown to be an important independent risk factor for development of coronary heart disease. Diets high in saturated fat is the most common factor for elevated blood cholesterol (*US Department of Health and Human Services 1993*).

#### Method Used

An interviewer-administered questionnaire was used. In order to obtain an indication of the prevalence of known high blood cholesterol in the community, respondents were asked whether they had ever been told by a western-trained doctor that they had high blood cholesterol and were currently prescribed medication for high blood cholesterol. Respondents who answered “yes” to both questions were classified as having “reported high blood cholesterol”. High blood cholesterol prevalence estimates based on reported use of medication for high blood cholesterol are likely to under-estimate the true prevalence as many persons do not know their blood cholesterol status. Among those with high blood cholesterol, they were also asked on the frequency of doctor’s visit and place of treatment to manage their high blood cholesterol.

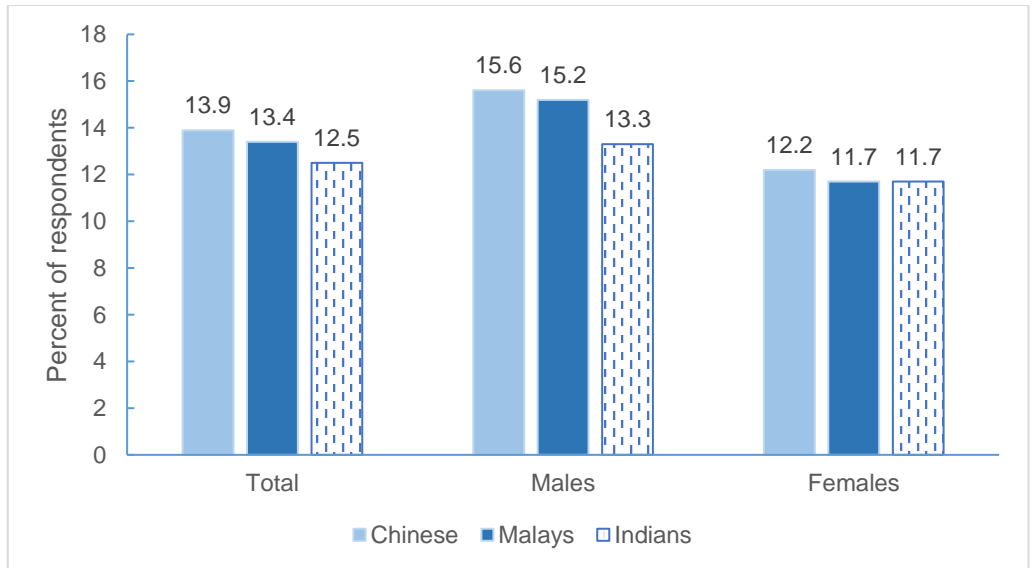
**Prevalence of Self-Reported Hyperlipidaemia**

The prevalence of self-reported hyperlipidaemia or high blood cholesterol among Singapore residents aged 18 to 74 years was 13.6% (Table 6.1). This disease was more common among males (15.3%) than females (12.0%). All 3 ethnic groups shared similar prevalence of self-reported high blood cholesterol especially among the females at around 12% (Graph 6.1). The prevalence of self-reported high blood cholesterol increased sharply with age from 1.6% among those aged 30 to 39 years old to 42.4% among those aged 70 to 74 years old. Residents with reported high blood cholesterol visited a doctor for their condition about 3 times in the past 12 months, mainly in polyclinic (55.8%), private GP clinic (24.6%) and specialist outpatient clinic in public hospital (17.2%).

**Table 6.1: Age-specific crude prevalence (%) of reported hyperlipidaemia of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	1.6	3.2	1.6
30-39	1.6	3.2	1.6
40-49	7.6	10.1	5.2
50-59	22.1	25.9	18.3
60-69	33.5	33.8	33.1
70-74	42.4	45.0	40.2
18-74	13.6	15.3	12.0

**Graph 6.1: Crude prevalence (%) of reported hyperlipidaemia of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**



## Trends in Prevalence of Self-Reported Hyperlipidaemia

The crude and age-standardised prevalence of self-reported high blood cholesterol showed a slight increasing trend (Table 6.2 and Table 6.3). The overall increase in 2019 prevalence was less pronounced after age-standardisation, indicating that the increase was partly attributable to population ageing.

**Table 6.2: Crude prevalence (%) of self-reported hyperlipidaemia of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	8.2	12.3	10.4	11.0 (9.7, 12.3)	13.6 (12.5, 14.6)*
18-29	s	s	s	s	s
30-39	2.1	2.4	1.3	1.7 (0.7, 2.7)	1.6 (0.7, 2.5)
40-49	5.0	7.2	6.7	6.4 (4.3, 8.6)	7.6 (6.0, 9.1)
50-59	15.9	22.9	17.9	19.9 (16.2, 23.6)	22.1 (19.1, 25.1)
60-69	29.0	37.7	28.7	26.3 (22.0, 30.7)	33.5 (30.0, 36.9)
70-74	25.3	46.8	40.7	36.5 (29.4, 43.6)	42.4 (35.9, 48.8)
Males	8.6	12.4	10.7	12.4 (10.6, 14.2)	15.3 (13.6, 16.9)
Females	7.9	12.1	10.1	9.6 (8.2, 11.1)	12.0 (10.6, 13.3)
Chinese	8.5	12.1	10.3	11.1 (9.7, 12.6)	13.9 (12.6, 15.1)
Malays	8.0	12.8	10.4	8.3 (5.2, 11.4)	13.4 (10.6, 16.2)
Indians	7.7	15.0	11.5	14.3 (9.8, 18.7)	12.5 (9.6, 15.4)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

(2) s: Data have been suppressed due to small counts.

**Table 6.3: Age-standardised# prevalence (%) of self-reported hyperlipidaemia of Singapore residents aged 18 to 74 years by gender and ethnic group, 2007, 2010, 2013, 2017 and 2019**

	NHSS	NHS	NHSS	NPHS	NPHS
	2007	2010	2013	2017	2019
Total	8.7	12.3	9.9	9.6	11.1
Males	9.1	12.5	10.3	11.2	13.0
Females	8.3	12.0	9.4	8.1	9.3
Chinese	8.5	11.3	9.2	9.1	10.8
Malays	10.0	14.4	11.3	8.5	13.2
Indians	9.3	18.8	13.6	14.8	10.5

# The reference population is the Census 2010 resident population.

## Chapter 7

### Chronic Disease Screening

#### Key Points

- Among Singapore residents aged 40 to 74 years with no previous diagnosis of diabetes, high blood pressure, and high blood cholesterol (“DHL”), (i.e. not told by a doctor that they have the diseases), close to two-third (66.3%) were screened for all 3 health conditions within the recommended screening guidelines.
- Among Singapore residents aged 40 to 74 years without known diabetes, 81.0% had their blood glucose tested within the past 3 years.
- Among Singapore residents aged 40 to 74 years without known high blood pressure, 86.0% did their blood pressure check in the past 2 years.
- Among Singapore residents aged 40 to 74 years without known high blood cholesterol, 77.9% were screened within the past 3 years.

#### Introduction

Health screening is an effective strategy for disease prevention in the population. It is important to go for appropriate and regular health screening as it helps to discover risk factors or diseases early even when there are no symptoms. Early detection of diabetes mellitus, high blood pressure and high cholesterol could result in better treatment, reduce complications and increase chances of better outcomes (*HPB, 2019*).

#### Method Used

An interviewer-administered questionnaire was used. Respondents were asked whether they were ever told by a doctor that they had diabetes, high blood pressure or high blood cholesterol. Respondents who reported that they were not told by a doctor that they have diabetes or high blood cholesterol were asked on the last time they had a blood test to check for these health conditions. Those who were not told by a doctor to have high blood pressure were asked on the last time they had checked their blood pressure. Respondents were also asked where they last had their screening for these chronic diseases. Under the national “Screen for Life” (SFL) screening programme, Singapore residents aged 40 years and above are encouraged to go for diabetes and hyperlipidaemia screening once every 3 years and hypertension screening once every 2 years.

## **Practice of Health Screening**

Health screening practice was relatively common among Singapore residents aged 40 to 74 years who were not told by a doctor to have any chronic diseases (diabetes, high blood pressure and high blood cholesterol (DHL)). 66.3% of them were screened for all 3 health conditions within the recommended screening guidelines (Table 7.1). The majority of them with no known DHL were screened at the private GP clinic (non-Screen for Life (SFL)) at 29.1%, followed by polyclinic (19.5%) and specialist outpatient clinic in the public hospitals (13.4%). The overall screening coverage remained the same compared with 2017 (66.4%) but improved from the 45.2% in 2010. (Table 7.2).

Health screening practice was found to be more prevalent among older adults. Among the ethnic groups, Indians (78.7%) have a higher screening prevalence for all chronic diseases, followed by Chinese (64.9%) and Malays (64.4%). Singapore residents with higher education level were more likely to have gone for chronic disease screening compared to those with lower education level.

Looking at the individual chronic disease alone regardless of the co-morbidity with other chronic diseases, 81.0% of adults aged 40 to 74 years without known diabetes were screened for diabetes within the past 3 years, 86.0% of those without known high blood pressure had their blood pressure checked within the past 2 years, and 77.9% of them with no previous diagnosis of high blood cholesterol were screened for this health condition within the past 3 years (Table 7.1). The overall individual screening coverage for all 3 chronic diseases were trending upwards over the years (Tables 7.3 to 7.5).

**Table 7.1: Health Screening Practice of Singapore residents aged 40 to 74 years by socio-demographic characteristics (%), 2019**

Characteristic	Screened for all 3 diseases within the recommended intervals	Diabetes screening at least once in the past 3 years	Hypertension screening at least once in the past 2 years	High blood cholesterol screening at least once in the past 3 years
<b>Total</b>	66.3	81.0	86.0	77.9
<b>Age (years)</b>				
40-49	62.6	75.4	84.6	73.3
50-59	66.2	81.4	85.7	76.9
60-69	72.1	85.7	88.1	84.0
70-74	79.0	91.2	90.8	89.8
<b>Gender</b>				
Males	67.5	82.6	85.5	79.0
Females	65.2	79.7	86.5	77.0
<b>Ethnic group</b>				
Chinese	64.9	80.5	85.8	77.9
Malays	64.4	77.7	81.4	75.1
Indians	78.7	89.3	92.5	83.6
<b>Educational qualification</b>				
No formal qualification/ Primary/ PSLE	57.2	77.8	78.4	74.2
Secondary/ GCE 'O'/'N' level	61.1	79.7	85.4	75.1
GCE 'A' Level/ Polytechnic & other diploma/ Degree & professional qualification	71.4	83.0	88.7	80.9



**Table 7.2: Coverage of chronic disease screening (%) of Singapore residents aged 40 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	58.1	45.2	56.0	66.4 (63.1, 69.6)	66.3 (63.7, 68.9)
40-49	54.5	44.7	55.0	60.7 (56.2, 65.1)	62.6 (58.6, 66.6)
50-59	60.4	47.9	54.8	69.1 (63.6, 74.5)	66.2 (61.5, 70.9)
60-69	68.6	37.4	61.8	71.1 (64.6, 77.5)	72.1 (67.3, 77.0)
70-74	68.9	53.3	56.9	85.2 (77.2, 93.2)	79.0 (71.6, 86.3)
Males	59.9	47.8	55.0	65.9 (61.3, 70.5)	67.5 (63.5, 71.5)
Females	56.4	42.8	56.9	66.8 (62.6, 71.0)	65.2 (61.7, 68.8)
Chinese	57.2	44.6	55.7	65.8 (62.1, 69.5)	64.9 (61.8, 67.9)
Malays	57.2	40.0	48.2	62.2 (53.4, 71.1)	64.4 (56.4, 72.3)
Indians	70.1	59.3	68.9	80.0 (71.9, 88.1)	78.7 (71.7, 85.7)

Notes: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

**Table 7.3: Coverage of diabetes screening (%) of Singapore residents aged 40 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	72.4	63.9	70.3	77.8 (75.6, 80.0)	81.0 (79.3, 82.8)
40-49	67.3	58.3	65.9	71.4 (67.7, 75.1)	75.4 (72.0, 78.8)
50-59	74.8	64.4	68.9	80.0 (76.2, 83.7)	81.4 (78.3, 84.5)
60-69	80.0	73.9	78.1	81.7 (77.3, 86.2)	85.7 (83.1, 88.3)
70-74	79.9	71.8	84.2	92.1 (87.7, 96.6)	91.2 (87.9, 94.5)
Males	73.1	64.7	70.2	78.9 (75.8, 82.0)	82.6 (80.2, 84.9)
Females	71.8	63.0	70.5	76.9 (73.8, 80.0)	79.7 (77.1, 82.3)
Chinese	72.7	64.4	70.0	76.9 (74.4, 79.5)	80.5 (78.5, 82.5)
Malays	68.4	54.5	65.7	76.5 (69.6, 83.3)	77.7 (71.9, 83.4)
Indians	79.2	74.2	79.9	88.1 (82.3, 94.0)	89.3 (84.8, 93.8)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

**Table 7.4: Coverage of hypertension screening (%) of Singapore residents aged 40 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	77.7	79.9	77.8	82.9 (80.8, 85.0)	86.0 (84.4, 87.6)
40-49	75.8	78.3	76.4	79.9 (76.1, 83.6)	84.6 (81.6, 87.6)
50-59	77.5	82.9	76.2	81.6 (78.1, 85.2)	85.7 (82.9, 88.5)
60-69	85.0	78.5	84.4	88.3 (84.6, 92.1)	88.1 (85.2, 91.1)
70-74	82.2	79.5	79.3	94.1 (89.9, 98.3)	90.8 (86.3, 95.2)
Males	77.1	80.5	77.0	81.3 (77.8, 84.8)	85.5 (83.1, 88.0)
Females	78.2	79.4	78.5	84.4 (81.7, 87.0)	86.5 (84.3, 88.6)
Chinese	76.7	79.9	76.9	82.2 (79.8, 84.6)	85.8 (84.0, 87.7)
Malays	79.3	76.6	76.4	82.6 (76.3, 88.8)	81.4 (76.0, 86.8)
Indians	87.6	86.7	86.7	92.8 (88.4, 97.3)	92.5 (88.5, 96.5)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

**Table 7.5: Coverage of hyperlipidaemia screening (%) of Singapore residents aged 40 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	78.1	61.1	73.0	78.2 (75.9, 80.5)	77.9 (76.0, 79.9)
40-49	74.8	59.3	70.8	73.0 (69.2, 76.7)	73.3 (69.7, 76.8)
50-59	79.9	62.9	70.7	78.7 (74.6, 82.9)	76.9 (73.3, 80.5)
60-69	86.2	63.1	79.4	84.1 (80.0, 88.2)	84.0 (80.9, 87.1)
70-74	77.9	61.5	84.8	90.3 (85.0, 95.7)	89.8 (85.2, 94.4)
Males	77.9	62.8	71.8	78.6 (75.2, 82.0)	79.0 (76.0, 82.0)
Females	78.3	59.5	74.1	77.8 (74.8, 80.9)	77.0 (74.5, 79.6)
Chinese	78.1	61.8	72.5	77.7 (75.1, 80.3)	77.9 (75.6, 80.2)
Malays	74.0	53.8	69.6	77.7 (70.8, 84.6)	75.1 (68.9, 81.4)
Indians	83.1	67.6	82.2	86.3 (80.7, 91.9)	83.6 (77.7, 89.4)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

## Chapter 8

### Breast Cancer Screening

#### Key Points

- 9 in 10 (94.4%) Singapore female residents aged 50 to 69 years had knowledge of mammography.
- Almost all women (99.3%) who had at least post-secondary education qualification were aware of mammography while only 85.9% of women with primary or lower education level had that awareness.
- 38.7% of Singapore women in the 50 to 69 age group reported that they had gone for mammography in the last 2 years.
- A higher proportion of Indian (41.0%) and Chinese women (40.1%) had undergone mammography compared to their Malay counterparts (28.9%).
- The top 3 reasons cited by women in the 50 to 69 age group who had never undergone mammography were:
  1. “Not necessary as I am healthy” (37.0%);
  2. “Painful test” (18.3%); and
  3. “Afraid of knowing the results” (12.3%)

#### Introduction

Breast cancer was consistently ranked as the most common cancer among Singapore women in the past 50 years, from 1968 to 2017 (*NRDO, Singapore Cancer Registry 50<sup>th</sup> Anniversary Monograph 1968-2017*). For the latest available 5-year period from 2013-2017, the age-standardised incidence of breast cancer was 69.8 per 100,000 women. It was the leading cause of cancer death among females in 2013 to 2017, accounting for 17.4% of cancer deaths among females.

Breast cancer has been linked to a number of risk factors including age, family history of breast cancer, smoking, high-fat diets and obesity. The earlier breast cancer is diagnosed the better the chances for successful treatment. As early breast cancer usually does not present with any symptoms, screening for early disease is therefore very important. Mammography for women over 50 years old is widely accepted as appropriate and beneficial. The Ministry of Health’s Clinical Practice Guidelines on Cancer Screening (2010) recommended women aged 50 to 69 years to go for mammography every 2 years.

## **Method Used**

An interviewer-administered questionnaire was used. Female subjects were asked on their knowledge and practice of mammography as well as where they took their mammography, and the reasons for not going for mammography (if applicable).

## **Knowledge and Practice of Mammography**

94.4% of women aged 50 to 69 years had knowledge of mammography (Table 8.1). Women aged 50 to 59 years (96.2%) were more likely to be aware of mammography compared to those aged 60 to 69 years (92.2%). A higher proportion of never married women (97.6%) demonstrated awareness of mammography than women who were ever-married (94.1%).

Almost all women (99.3%) who had at least post-secondary education qualification were aware of mammography while only 85.9% of women with primary or lower education level had that awareness.

Despite a high awareness level, only 38.7% of Singapore women in the 50 to 69 age group reported that they had gone for a mammography within the last 2 years, in accordance with the recommended frequency of mammography in this age group. A higher proportion of Indian (41.0%) and Chinese women (40.1%) had undergone mammography compared to their Malay counterparts (28.9%). Never married women (42.3%) were more likely to have undergone mammography than ever-married women (38.3%). Women with higher education were also more likely to have had the screening. Close to half of the women (48.3%) had their mammogram taken in the polyclinic, followed by public hospital (20.6%), private hospital (12.3%) and private X-ray centre (8.9%).

## **Reasons For Not Doing A Mammography**

Of those women aged 50 to 69 years who had never undergone mammography, the commonly cited reasons were:

1. "Not necessary as I am healthy" (37.0%);
2. "Painful test" (18.3%);
3. "Afraid of knowing the results" (12.3%);
4. "No time due to work/family commitment" (11.2%); and
5. "Never thought of it" (9.9%).

**Table 8.1: Knowledge and practice of mammography among Singapore female residents aged 50 to 69 years by socio-demographic characteristics (%), 2019**

<b>Characteristic</b>	<b>Knowledge of mammography</b>	<b>Had a mammography within the last 2 years</b>
<b>Total</b>	94.4	38.7
<b>Age (years)</b>		
50-59	96.2	40.2
60-69	92.2	36.9
<b>Ethnic group</b>		
Chinese	94.2	40.1
Malays	94.4	28.9
Indians	96.5	41.0
<b>Marital status</b>		
Never married	97.6	42.3
Ever-married	94.1	38.3
<b>Educational qualification</b>		
No formal qualification/ Primary/ PSLE	85.9	28.4
Secondary/ GCE 'O'/ 'N' level	96.3	37.0
GCE 'A' Level/ Polytechnic & other diploma/ Degree & professional qualification	99.3	49.6

## Trends in Breast Cancer Screening

The screening rates for breast cancer fluctuated over the years (from a low of around 31% in 2017 to a high of around 43% in 2013) (Table 8.2). There were improvements in screening rates across age groups and among Chinese and Malays women in 2019 compared with 2017.

**Table 8.2: Coverage of breast cancer screening (%) of Singapore female residents aged 50 to 69 years by age group and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	41.0	39.6	42.7	30.9 (26.9, 34.9)	38.7 (34.8, 42.6)
50-59	43.6	40.5	44.3	32.7 (27.3, 38.2)	40.2 (34.7, 45.7)
60-69	35.8	37.9	39.9	28.4 (23.0, 33.9)	36.9 (31.4, 42.4)
Chinese	41.9	41.7	44.4	32.2 (27.6, 36.8)	40.1 (35.7, 44.6)
Malays	35.0	23.5	28.1	10.4 (4.3, 16.5)	28.9 (20.5, 37.3)*
Indians	38.2	41.9	44.8	46.3 (30.2, 62.3)	41.0 (28.5, 53.5)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

## Chapter 9

### Cervical Cancer Screening

#### Key Points

- 88.5% of women aged 25 to 74 years were aware of Pap smear tests.
- About 1 in 2 (48.2%) women reported that they had gone for a Pap smear test within the last 3 years.
- Chinese (49.9%) and Indian women (46.1%) were more likely to have undergone Pap smear tests compared to Malay women (34.8%).
- Women with at least secondary education level were more likely to know what a Pap smear test was and to be screened within the last 3 years.
- The top 3 reasons cited by women who had never had a Pap smear test were:
  1. “Not necessary as I am healthy” (39.4%);
  2. “Never heard about Pap smear test” (13.6%); and
  3. “Not sexually active” (12.3%).

#### Introduction

Cervical cancer was the 10<sup>th</sup> most common cancer among women in Singapore for the 5-year period from 2013-2017 (*NRDO, Singapore Cancer Registry 50<sup>th</sup> Anniversary Monograph 1968-2017*). During this period, the age-standardised incidence of cervical cancer was 7.1 per 100,000 women and it accounted for 2.9% of all cancer deaths among females.

Major risk factors for cervical cancer include having sexual intercourse at an early age, having multiple sexual partners and infection with human papilloma virus or HPV (the cause of genital warts). Long term consumption of combined oral contraceptive pills and cigarette smoking are also risk factors. If cervical cancer is detected before it becomes invasive, it is almost certainly curable. Screening for cervical cancer with the Papanicolaou (Pap) smear test is inexpensive and is widely accepted as being effective and beneficial.

Based on the latest recommendations on cervical cancer screening in 2019<sup>4</sup>, women aged 25 to 29 years are recommended to undergo a Pap smear test at a 3 yearly interval while women aged 30 years and above are recommended to take the Human Papillomavirus (HPV) test at a 5 yearly interval.

### **Method Used**

An interviewer-administered questionnaire was used. Female subjects were asked on their knowledge and practice of Pap smear test as well as where they took the test; and the reasons for not performing a Pap smear test (if applicable). The survey did not collect information on the prevalence of HPV test as it was only introduced in May 2019.

### **Awareness and Practice of Pap Smear Testing**

The survey found that 88.5% of women aged 25 to 74 years were aware of Pap smear tests (Table 9.1). Women with at least secondary (90.0%) or post-secondary education levels (93.0%) were more likely to know what a Pap smear test was compared to those with PSLE or lower education (69.3%).

Among women aged 25 to 74 years, about 1 in 2 (48.2%) had undergone a Pap smear test within the last 3 years, in accordance with the recommended screening frequency. Chinese (49.9%) and Indian women (46.1%) were more likely to have undergone Pap smear tests compared to Malay women (34.8%). Women aged 30 to 59 years were the most likely to have undergone Pap smear tests.

The proportion of women who had undergone Pap smear tests was higher among ever-married women (55.7%) than those who were never married (17.5%). Women with at least secondary education level were more likely to have screened within the last 3 years.

The majority of the women had their last Pap smear test in a specialist outpatient clinic either in the public (23.3%) or private (22.8%) hospital. Another 19.8% of women had it in the polyclinic while 18.5% had taken their test at a private GP (Non-SFL).

---

<sup>4</sup> Based on Ministry of Health Circular No. 08/2019 dated 6 March 2019 on “Release of New Screening Test Review Committee Guidelines, Including Changes to Diabetes Mellitus, Lipid Disorders, And Cervical Cancer Screening”.



## Reasons For Not Doing Pap Smear Tests

Women who had never had a Pap smear test cited the following reasons for not doing the test:

1. “Not necessary as I am healthy” (39.4%);
2. “Never heard about Pap smear test” (13.6%);
3. “Not sexually active” (12.3%);
4. “No time due to work/family commitment” (11.0%); and
5. “Too young” (4.9%).

**Table 9.1: Knowledge and practice of Pap smear tests among Singapore women aged 25 to 74 years by socio-demographic characteristics (%), 2019**

Characteristic	Knowledge of Pap smear	Had a Pap smear within the last 3 years
<b>Total</b>	88.5	48.2
<b>Age (years)</b>		
25-29	76.5	21.0
30-39	89.1	55.9
40-49	96.1	58.8
50-59	93.2	56.5
60-69	83.7	37.0
70-74	72.5	25.1
<b>Ethnic group</b>		
Chinese	88.6	49.9
Malays	88.5	34.8
Indians	87.4	46.1
<b>Marital status</b>		
Never married	82.0	17.5
Ever-married	90.1	55.7
<b>Educational qualification</b>		
No formal qualification/ Primary/ PSLE	69.3	28.9
Secondary/ GCE 'O'/ 'N' level	90.0	49.8
GCE 'A' Level/ Polytechnic & other diploma/ Degree & professional qualification	93.0	52.8

## Trends in Cervical Cancer Screening

The screening rates for cervical cancer hovered around 46% to 49% since 2010 (Table 9.2) . Among women aged 25-29 years, the screening rate for cervical cancer decreased from 49.5% in 2007 to 21.0% in 2019 while the rates improved for those 40 years and above in 2019 compared with 2017.

**Table 9.2: Coverage of cervical cancer screening (%) of Singapore female residents aged 25 to 74 years by age group and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	57.9	46.8	48.9	46.3 (43.5, 49.1)	48.2 (45.8, 50.7)
25-29	49.5	32.3	29.4	21.5 (14.2, 28.9)	21.0 (15.1, 26.9)
30-39	69.5	59.5	53.9	57.5 (51.5, 63.4)	55.9 (51.0, 60.7)
40-49	64.6	57.1	54.6	56.8 (51.1, 62.6)	58.8 (54.1, 63.5)
50-59	59.8	43.8	48.4	48.8 (42.6, 54.9)	56.5 (51.5, 61.5)
60-69	33.3	29.0	44.2	33.9 (28.2, 39.5)	37.0 (31.2, 42.8)
70-74	13.3	12.5	47.5	18.0 (10.0, 26.1)	25.1 (17.8, 32.4)
Chinese	59.4	47.6	50.8	48.5 (45.3, 51.7)	49.9 (46.8, 52.9)
Malays	48.9	38.5	38.6	29.1 (22.2, 36.0)	34.8 (28.8, 40.8)
Indians	51.8	47.0	42.8	47.4 (39.6, 55.2)	46.1 (39.4, 52.8)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

## Chapter 10

### Colorectal Cancer Screening

#### Key Points

- Overall, 42.0% of Singapore residents aged 50 to 74 years had undergone colorectal screening within the recommended screening frequency.
- 26.8% reported having undergone Faecal Occult Blood Test (FOBT) at least once in the past 1 year while 25.0% had undergone sigmoidoscopy or colonoscopy in the past 10 years.
- The practice of FOBT, sigmoidoscopy or colonoscopy was more prevalent among males (45.4%) than females (38.7%).
- Chinese (43.6%) reported to have higher screening rates than Malays (31.9%) and Indians (37.5%) for both tests.
- About 1 in 2 (53.5%) Singapore residents with GCE 'A' level, polytechnic & other diploma, degree and professional qualification had completed the colorectal screening within the recommended screening frequency compared to about 1 in 3 (31.9%) among those with PSLE or lower education level.

#### Introduction

Colorectal cancer was the most common and 2<sup>nd</sup> most common cancer among Singapore men and women respectively for the 5-year period from 2013 to 2017 (*NRDO, Singapore Cancer Registry 50<sup>th</sup> Anniversary Monograph 1968-2017*). During this period, the age-standardised incidence rate of colorectal cancer was 38.2 per 100,000 men and 27.2 per 100,000 women respectively and there were a total of 4,082 deaths (more than 2 deaths per day on average).

Factors that have been associated with higher risk of colorectal cancer include specific hereditary conditions, older age, inflammatory bowel diseases, regular high saturated fat, low fiber diet, excessive alcohol intake and sedentary lifestyle.

FOBT, sigmoidoscopy and colonoscopy are able to detect the colorectal cancer at an early, curable stage. The Ministry of Health's Clinical Practice Guidelines on Cancer Screening (2010) recommend annual screening for colorectal cancer using FOBT for people aged 50 years and older who are at average risk for colorectal cancer. For a person who is tested positive for FOBT, sigmoidoscopy and colonoscopy are the confirmatory diagnostic investigations.

### **Method Used**

An interviewer administered questionnaire was used. Respondents were asked whether they had ever done FOBT, sigmoidoscopy or colonoscopy, and how long ago it had been since their last tests.

### **Practice of FOBT**

Based on the survey, 26.8% of Singapore residents aged 50 to 74 years reported to have a FOBT done in the last 1 year (Table 10.1). A higher proportion of males (27.9%) had undergone FOBT compared to females (25.7%). Chinese (27.4%) were more likely to have undergone the test compared to Malays (21.7%) and Indians (24.0%).

### **Practice of Sigmoidoscopy or Colonoscopy**

25.0% of Singapore residents aged 50 to 74 years reported to have undergone a sigmoidoscopy or colonoscopy in the last 10 years. Similar to the practice of FOBT, the practice of sigmoidoscopy or colonoscopy was more prevalent among males (29.1%) than females (21.1%) and among Chinese (25.7%) than Malays (21.1%) and Indians (21.3%).

Overall, 42.0% of Singapore residents aged 50 to 74 years had undergone colorectal screening within the recommended screening frequency. In general, Singapore residents with higher education levels were more likely to report to have had a FOBT within the last 1 year or a sigmoidoscopy or colonoscopy within the last 10 years. About 1 in 2 (53.5%) residents with GCE 'A' level, polytechnic & other diploma, degree and professional qualification had done the screening compared to about 1 in 3 (31.9%) among those with PSLE or lower education level.

**Table 10.1: Practice of FOBT, Sigmoidoscopy or Colonoscopy among Singapore residents aged 50 to 74 years by socio-demographic characteristics (%), 2019**

Characteristic	Had a FOBT in last 1 year	Had a sigmoidoscopy or colonoscopy in last 10 years	Had a FOBT in the last 1 year or a sigmoidoscopy or colonoscopy in last 10 years
<b>Total</b>	26.8	25.0	42.0
<b>Age (years)</b>			
50-59	26.5	21.9	39.7
60-69	28.3	27.2	44.3
70-74	23.6	30.4	43.7
<b>Gender</b>			
Males	27.9	29.1	45.4
Females	25.7	21.1	38.7
<b>Ethnic group</b>			
Chinese	27.4	25.7	43.6
Malays	21.7	21.1	31.9
Indians	24.0	21.3	37.5
<b>Educational qualification</b>			
No formal qualification/ Primary/ PSLE	19.7	17.5	31.9
Secondary/ GCE 'O'/ 'N' level	22.2	24.2	38.9
GCE 'A' level/ Polytechnic & other diploma/ Degree & professional qualification	37.6	31.7	53.5

## Trends in Colorectal Cancer Screening

The screening rate for colorectal cancer showed a constant increase from 14.6% in 2007 to 42.0% in 2019 (Table 10.2). This increasing trend has been seen across all age groups, gender and ethnic groups.

**Table 10.2: Coverage of colorectal cancer screening (%) of Singapore residents aged 50 to 74 years by age group, gender and ethnic group, 2007, 2010, 2013, 2017, 2019**

	NHSS	NHS	NHSS	NPHS	
	2007	2010	2013	2017	2019
Total	14.6	19.4	21.2	35.0 (32.0, 38.0)	42.0 (39.1, 44.8)*
50-59	13.7	18.6	19.1	33.4 (29.5, 37.4)	39.7 (35.9, 43.5)
60-69	16.6	21.3	21.9	37.7 (33.1, 42.4)	44.3 (39.8, 48.7)
70-74	13.8	18.5	30.4	32.6 (25.7, 39.5)	43.7 (37.0, 50.3)
Males	17.2	21.7	22.2	37.6 (33.1, 42.2)	45.4 (41.5, 49.2)
Females	12.1	17.2	20.3	32.5 (28.7, 36.2)	38.7 (35.5, 41.9)
Chinese	15.2	21.3	22.3	36.1 (32.8, 39.5)	43.6 (40.4, 46.8)*
Malays	10.0	6.9	12.4	21.1 (14.0, 28.1)	31.9 (24.7, 39.2)
Indians	14.8	18.7	22.1	38.0 (28.1, 48.0)	37.5 (29.3, 45.7)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

## Chapter 11

### Vaccination Coverage

#### Key Points

- Almost 1 in 5 (17.4%) Singapore residents aged 18 to 74 years reported they had an influenza vaccination in the past 12 months.
- The influenza vaccination coverage among females (18.7%) was higher than males (16.0%).
- Malays (19.9%) and Indians (19.8%) had higher influenza vaccination coverage than Chinese (16.7%).
- The proportion of elderly aged 65 to 74 years who reported ever having received pneumococcal vaccination was 10.3%.

#### Introduction

Influenza, which is commonly called the flu, is a respiratory illness which is highly contagious. For healthy individuals, influenza is usually self-limiting. However, it can sometimes lead to complications and even death. Those who are at risk of serious flu complications like older people, young children and people with certain chronic conditions should get vaccinated.

Pneumococcal vaccination helps to prevent pneumococcal disease caused by the bacteria *Streptococcus pneumoniae*. It can cause a wide spectrum of illness and the disease burden is heaviest at the extremes of ages, that is, those less than 5 years and those older than 65 years. These includes infection of the lungs (pneumonia), ear (otitis media), brain (meningitis), blood (bacteremia) and other serious infections. The National Adult Immunisation Schedule (2017) recommends all persons aged 65 years or older to be vaccinated against pneumococcal disease.

#### Method Used

An interviewer-administered questionnaire was used to measure the uptake of both vaccinations. Respondents were asked “In the past 12 months, have you had an injection to protect you from getting flu?” and “Have you ever had pneumococcal vaccination?”

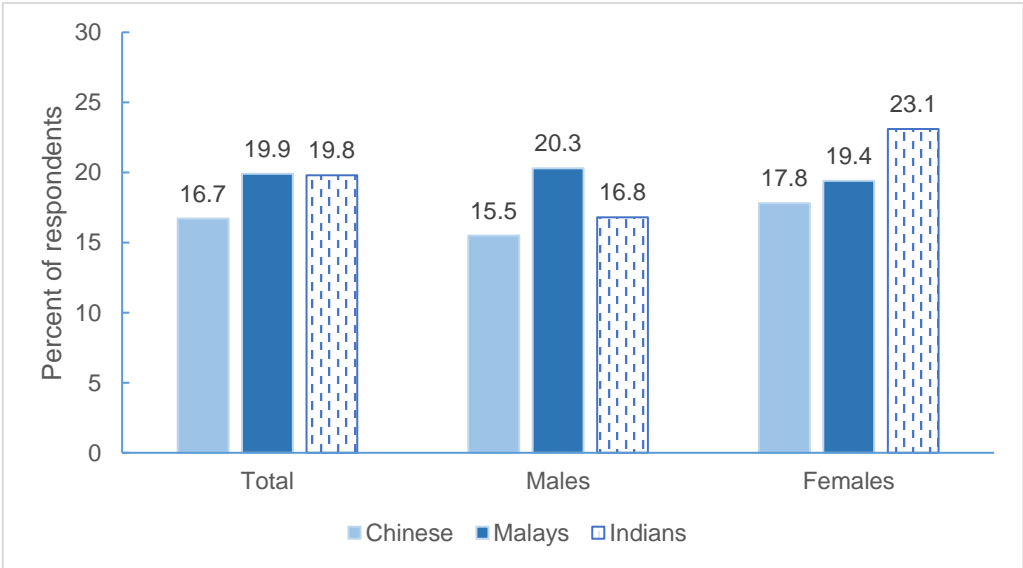
**Influenza Vaccination Coverage**

Adults aged 18 to 29 years and 60 to 74 years had the highest coverage compared to other age groups (Table 11.1). About one-fifth (21.2%) of the adults in both age groups reported that they had a flu injection in the past 12 months. Malays (19.9%) and Indians (19.8%) had higher flu vaccination coverage than Chinese (16.7%) (Graph 11.1). Influenza vaccination coverage among females was highest in Indians, followed by Malays and Chinese, whilst the coverage among males was highest in the Malays, followed by Chinese and Indians.

**Table 11.1: Age-specific coverage (%) of influenza vaccination of Singapore residents aged 18 to 74 years by gender, 2019**

Age (years)	Total	Males	Females
18-29	21.2	22.0	20.4
30-39	16.0	14.9	17.0
40-49	12.1	10.3	13.8
50-59	15.8	13.6	18.0
60-74	21.2	18.5	23.7
18-74	17.4	16.0	18.7

**Graph 11.1: Coverage of influenza vaccination (%) of Singapore residents aged 18 to 74 years by gender and ethnic group, 2019**





## Trends in Influenza Vaccination Coverage

Overall, among Singapore residents aged 18 to 74 years, influenza vaccination coverage was 17.4%, 4.3 percentage points higher than the previous survey (13.1%) in 2017 (Table 11.2).

**Table 11.2: Coverage of influenza vaccination (%) of Singapore residents aged 18 to 74 years by age group, gender and ethnic group, 2017 and 2019**

	NPHS	
	2017	2019
Total	13.1 (11.7, 14.5)	17.4 (16.0, 18.7)
18-29	17.8 (13.8, 21.8)	21.2 (17.7, 24.7)
30-39	14.2 (11.0, 17.3)	16.0 (13.2, 18.8)
40-49	9.6 (7.0, 12.2)	12.1 (9.9, 14.3)
50-59	10.1 (7.4, 12.7)	15.8 (12.9, 18.7)
60-74	13.9 (11.2, 16.6)	21.2 (18.4, 24.0)
Males	14.4 (12.1, 16.4)	16.0 (14.3, 17.7)
Females	12.0 (10.2, 13.8)	18.7 (16.6, 20.7)
Chinese	12.0 (10.4, 13.6)	16.7 (15.0, 18.3)
Malays	18.2 (13.8, 22.6)	19.9 (16.4, 23.4)
Indians	14.5 (10.6, 18.4)	19.8 (15.4, 24.3)

Note: (1) Figures in ( ) refer to the 95% confidence intervals. If the confidence intervals for NPHS 2017 and NPHS 2019 did not overlap, then the result for NPHS 2019 is significantly different statistically from NPHS 2017 at 5% significance level (\*).

**Pneumococcal Vaccination Coverage among Elderly**

Among Singapore residents aged 65 to 74 years, the proportion reporting ever having received pneumococcal vaccination decreased from 11.9% in 2017<sup>5</sup> to 10.3% in 2019. Close to 1 in 11 (8.9%) elderly reported that they were not aware/ unsure if they have taken the pneumococcal vaccination. The vaccination coverage was about 1 in 10 for both males and females (Table 11.3). Malays (12.9%) had the highest coverage followed by Chinese (9.9%) and Indians (6.0%).

**Table 11.3: Pneumococcal vaccination coverage (%) of Singapore residents aged 65 to 74 years by gender and ethnic group, 2019**

	NPHS
	2019
Total	10.3
Male	10.4
Female	10.2
Chinese	9.9
Malays	12.9
Indians	6.0

---

<sup>5</sup> Pneumococcal vaccination coverage by gender and ethnic group for 2017 have been suppressed due to small counts.

## Chapter 12 Survey Methodology

### Study Design and Objectives

The NPHS is a new cross-sectional population health survey series jointly managed by the Ministry of Health and Health Promotion Board to track the health and risk factors of the Singapore residents. The main objectives of the survey were to monitor the health of Singapore residents and track progress towards national targets in the areas of:

- (i) risk factors such as alcohol consumption, cigarette smoking and physical inactivity;
- (ii) diseases such as diabetes mellitus, hypertension and hyperlipidaemia;
- (iii) preventive health behaviour such as chronic disease screening; cervical, breast and colorectal cancer screening; and vaccinations.

The survey results were presented for age group 18 to 74 years for most chapters except chronic disease screening, cancer screening and vaccination coverage. Data for the “Others” ethnic group were included in the compilation of the survey results but suppressed in all statistical tables due to small counts.

### Ethics Approval

The NPHS methodology, protocol and procedures were approved by National Healthcare Group (NHG) Domain Specific Review Board (Domain F).

### Sample Design

A representative sample of residential addresses was obtained from the National Database of Dwelling in Singapore maintained by the Department of Statistics (DOS). The sample selection was based on a 2-stage design where the primary sampling units comprised of geographical areas and the secondary sampling units were the residential dwelling units.

The NPHS design comprised 2 components – (1) Household Interview and (2) Health Examination. In the first component, a household member aged 18 to 79 years old (also known as “reference person”) was identified using KISH tables within each selected address to participate in the household based face-to-face questionnaire interview (i.e. NPHS (Household Interview (HI))). Only Singapore citizens and permanent residents aged

18 years and above were recruited for the survey. All reference persons who completed NPHS HI would be invited to undergo a health examination at a designated clinic (i.e. NPHS (Health Examination (HE))). Physical measurements e.g. height, weight, hip and waist circumference, blood pressure levels and bio-specimens such as blood and urine samples of survey respondents were collected at the clinic. The blood and urine samples were sent to a medical laboratory to test for blood sugar, cholesterol, proteins in urine and other conditions. A full report on respondent's health status was mailed to them 6 to 8 weeks after the completion of the health examination.

### **Questionnaire**

An electronic structured questionnaire administered on a tablet was used in the survey to collect information on the demographic, socio-economic, lifestyle practices relating to the major non-communicable diseases and risk factors, health conditions, knowledge, attitude and practices on health screening as well as the general well-being of the respondents. The questionnaire was adopted from that of the National Population Health Survey 2017 and National Health Surveillance Survey 2013; and included elements of the instruments used in the WHO STEP-wise approach to Surveillance of Non-Communicable Diseases (STEPS) Instrument for Non-Communicable Disease Risk Factors and WHO's Global Physical Activity Questionnaire (GPAQ).

### **Invitation Letter and Publicity**

An invitation letter, in 4 official languages, was mailed to the selected household addresses 3 weeks prior to visitation by the assigned interviewers. The invitation letter provided information on the survey purpose, what the survey comprised and expected survey duration. It also informed that an interviewer from a research company commissioned by the Ministry of Health and Health Promotion Board would be visiting the household to select an eligible household member to take part in the survey, and assured the household on the confidentiality of all collected information.

A press release statement and a Frequently-Asked-Questions (FAQs) on the survey were also posted on the website of the Ministry of Health and Health Promotion Board at the start of the survey. A dedicated NPHS webpage was also set-up to provide detailed information on the conduct of the NPHS.

## **Training**

All survey interviewers were given an overview of the survey background and briefed extensively on the fieldwork procedures such as procurement of appointments, enumeration of household members, selection of eligible household members using KISH tables and consent taking for survey participation. They were given training slides on survey protocols and questionnaire administration as well as training in administering the electronic questionnaire on a tablet. Fieldworkers carrying out the health examination were given training on consent taking and the standard operation procedures for the conduct of health examination. These trainings helped to ensure compliance to standards and protocols of the survey, and consistency in data collection for the household interview and health examination.

## **Pilot Survey**

A pilot survey of the household interview was conducted in end July 2018 to estimate the time duration of the questionnaire administration, the suitability of the questions and appropriateness of the questionnaire translations as well as the fieldwork operation workflow. The necessary paraphrasing of the questionnaire and translation revision, and refinements to fieldwork workflow were completed and communicated to interviewers before the start of the actual survey.

## **Household Interview Fieldwork**

The survey fieldwork was conducted between 31 August 2018 and 31 July 2019. Survey interviewers from the appointed research company commissioned by the Ministry of Health and Health Promotion Board visited all the selected household addresses. For each address, a minimum of five visit attempts, at different times of the day and on different days of a week, were made to establish contact with a household member to obtain a survey appointment. On the appointment day, the interviewer performed an enumeration of the household members by gender and age, and then identified an eligible adult household member (Singapore Citizen or Permanent Resident aged 18 to 79 years) (also known as “reference person”) using the KISH table allocated for the household. Informed written consent was obtained from the selected household member before the interviewer administered the questionnaire face-to-face. A token of appreciation was given to the reference person who completed the survey interview.

All reference persons who completed the household interview would be invited to go for a health examination at a designated clinic at their preferred date and time. They would be given a letter of invitation for health examination by the interviewer.

### **Health Examination Fieldwork**

The health examination fieldwork was carried out between 21 November 2018 and 31 August 2019 by a healthcare service provider appointed by the Ministry of Health and Health Promotion Board. Appointment setting officers from the service provider provided a reminder call to reference persons 2 to 3 days prior to their appointments and managed any requests for changes to the appointments. At the appointed clinic, informed written consent was obtained by a fieldworker before the conduct of the health examination and a token of appreciation was given to the reference person after the completion of the health examination.

### **Data Quality Control**

#### *Informed consent forms validation*

All the informed consent forms from the household interview and health examination were checked for completeness and accuracy of information captured. This included checks for missing information, consistency of information and any data-entry errors in the datasets.

#### *Interview validation*

Data quality control was conducted by a separate team of staff who were not involved in the survey interview fieldwork. For each interviewer, 40% of their survey interviews were randomly selected and subjected to quality control checks via telephone validation or audio audit. At least 30% of all quality control checks were conducted through telephone validation where respondents were asked to verify their residential address and responses to 9 specific fields with the respondents concerned. The remaining 10% of the checks were audio audits where a quality control staff listened to segments of the interview and checked if the interviewer complied with the stipulated survey protocols in administering the questions.

### *Data verification and consistency check*

The electronic survey questionnaire had built-in features that prompt data entry for fields that required a response or prompt data re-entry if data entered was outside the logical or valid field range. Built-in checks for relational fields were also incorporated to ensure that responses for those fields across different sections of the questionnaire were consistent. The built-in features and checks ensured that missing values, data-entry errors and inconsistent responses were eradicated or kept to the minimum where possible. The database on the questionnaire records with the complete survey responses was subjected to a series of computer-programmed checks for missing values, valid field range and cross-field relational consistency. Missing values were obtained from respondents and data anomalies were clarified through direct verification with the respondents whenever necessary.

The database on the physical measurements and laboratory results were also checked for missing value, valid field range and cross-field relational consistency. Missing values and data anomalies were clarified with fieldworkers and corrected where possible.

### **Data Confidentiality**

Throughout all stages of the survey, strict confidentiality on individual respondent information was maintained. All information, including audio recordings, questionnaire answers, health examination records collected for this survey will be kept strictly confidential, and stored in a secure, password-protected environment. Any reporting of findings would be done on a grouped basis such that no individual survey respondents can be identified. The identity of the respondents would remain confidential in publications (e.g. in national reports).

### **Age-Standardisation**

Age-standardisation of prevalence rates take into account the changing age distribution of the population over the years and allows for more meaningful trend comparison, especially with an ageing population where prevalence rates of chronic diseases such as diabetes, hypertension, and hyperlipidaemia can be expected to increase. Age-standardisation of prevalence was calculated by the direct method, using the 2010 Census Singapore resident population as the standard (reference) population. The age-standardised rates were used for prevalence trends on diseases.

## Response Rate

From a sample of 10,719 eligible households, 6,254 reference persons aged 18 to 79 years participated in the household interview, forming a response rate of 58%. 4,284 reference persons (69%) initially agreed to participate in the follow-on health examination. However, only 2,390 (56%) of those who agreed eventually attended the health examination.

## Comparison of Demographic Profile between Survey Respondents and Resident Population

The demographic profiles of survey respondents from household interview were shown in Table 12.1. The survey sample was weighted to the age, ethnic group and gender distribution of the 2018 Singapore resident population to yield a similar population structure as the resident population. This was to ensure that the survey results apply to the general population.

**Table 12.1: Percentage distribution of the survey sample (unweighted) and 2018 Singapore resident population by demographic characteristics**

	Household Interview Survey Sample (Unweighted)	Singapore Resident 2018
Total	100.0%	100.0%
18-29	14.3%	20.2%
30-39	19.0%	18.5%
40-49	19.9%	19.3%
50-59	17.5%	19.4%
60-69	18.4%	15.3%
70-79	10.8%	7.2%
Males	45.2%	48.8%
Females	54.8%	51.2%
Chinese	74.1%	75.5%
Malays	12.6%	12.7%
Indians	10.4%	8.7%
Others	2.9%	3.1%



## **Sample Weights**

The sample weights were the composite of sample weights for the households and the selected household members. For each household, the sample weight ( $W_{HH}$ ) comprised weight for unequal probability of selection and weight for non-response stratified by planning regions and housing type. For each household member, the sample weight ( $W_{HH\_Mem}$ ) comprised weight for unequal probability of selection and weight for post-stratification stratified by age, gender and ethnic groups. The overall sample weight was the product of  $W_{HH}$  and  $W_{HH\_Mem}$ .

## REFERENCES

American College of Sports Medicine. Position Stand: The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in healthy adults. *Med. Sci. Sports Exerc.* 1998; 30(6).

Hassmén P, Koivula N, Uutela A. Physical exercise and psychological well-being: a population study in Finland. *Preventive Medicine* 2000; 30: 17–25.

Health Promotion Board, Singapore. *Screen for Life Booklet*, October 2019.

Laforge R, Rossi J, Prochaska J, Velicer W, Levesque D, McHorney C. Stage of regular exercise and health-related quality of life. *Preventive Medicine* 1999; 28: 349–60.

Ministry of Health, Singapore. *Cancer Screening MOH Clinical Practice Guidelines 1/2010*. Ministry of Health, Singapore 2010.

Ministry of Health, Singapore. *Diabetes Mellitus MOH Clinical Practice Guidelines 1/2014*. Ministry of Health, Singapore 2014.

Ministry of Health, Singapore. *National Adult Immunisation Schedule*. Ministry of Health, Singapore 2017.

National Registry of Diseases Office, Health Promotion Board, Singapore. *Singapore Cancer Registry 50<sup>th</sup> Anniversary Monograph 1968-2017*. Health Promotion Board, Singapore 2019.

Singapore Department of Statistics, Ministry of Trade & Industry, Singapore. *Resident Population by 5-Year Age Group, Sex and Ethnicity, 2018*.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion, *Ninth Special Report to the US Congress on Alcohol and Health from the Secretary of Health and Human Services*. Centers for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion, Rockville 1997.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion, *Physical Activity and Health: A Report of the Surgeon General*. Centers for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion, Atlanta 1997.

US Department of Health and Human Services 1996; Wellington National Health Committee 1998

WHO. *Guidelines for Controlling and Monitoring the Tobacco Epidemic*. WHO, Geneva 1998.

WHO. *MONICA Manual*. WHO, Geneva 1990.

WHO Global Physical Activity Questionnaire (GPAQ), Analysis Guide (Downloaded in 2010)

WHO. *The WHO STEPwise approach to Surveillance of non-communicable diseases (STEPS) STEPS Instrument for NCD Risk Factors*. WHO, Geneva 2004.  
([http://www.who.int/ncd\\_surveillance/steps/resources/en/](http://www.who.int/ncd_surveillance/steps/resources/en/))

## **ACKNOWLEDGEMENTS**

The National Population Health Survey 2019 Project Team would like to gratefully acknowledge Associate Professor Chua Tin Chiu, Department of Statistics and Applied Probability, Faculty of Science, National University of Singapore for kindly providing technical advice on sampling weights and other assistance. The team would also like to extend thanks to Dr Loh Tze Ping for his technical assistance in the conduct of the Health Examination.

The Team would also like to thank colleagues in the Ministry of Health and the Health Promotion Board who have given inputs to the design of the survey questionnaire, planning of the fieldwork processes and management of administrative matters.

Last but not least, the Team would like to thank all Singapore residents who have participated in this survey.

**Annex A**  
**Survey Questionnaire**

## NATIONAL POPULATION HEALTH SURVEY 2018/19

### QUESTIONNAIRE A [FOR PERSONS AGED 18 YEARS & ABOVE]

### 全国人口健康调查 2018/19 问卷 A [供 18 岁或以上的人]

Serialhi								
Date of Interview	D	D	M	M	Y	Y	Y	Y

Interviewer's Full Name		KISH Table Used	
<b>Household Information</b>			
Number of eligible PERSONS (Singapore citizens/PRs aged <u>18 to 79 years</u> ) in household: _____			
住户中合格的人士（ <u>18 至 79 岁以下</u> 的新加坡公民/永久居民）人数			
Number of eligible SENIORS (Singapore citizens/PRs aged <u>65 years &amp; above</u> ) in household: _____			
住户中合格的乐龄人士（ <u>65 岁或以上</u> 的新加坡公民/永久居民）人数			

## 1. REGISTRATION [C]

**Interviewer:** I would like to inform that your individual information collected for the Survey will be kept strictly confidential. Any reporting would be done on a collective basis such that no participants in the survey will be identifiable.

我想告诉您，本调查所收集的个人信息会严格保密。所有调查都会基于整体数据，因此不会泄漏您的任何个人信息。

1000. Year of birth: 

Y	Y	Y	Y
---	---	---	---

  
出生年份

Age: 

--	--	--

  
年龄

1001. Record gender of participant **[SA]**

请注明受访者的性别

1	Male	男性
2	Female	女性

1002. Ethnic group (as listed in NRIC) [SA]  
种族（以身份证（NRIC）为准）

READ ONLY IF NECESSARY		
1	Chinese	华族
2	Malay	马来族
3	Indian	印度族
DO NOT READ		
4	Others, please specify: 其它, 请注明: _____	
777	Refused	拒绝回答

1003. Are you a Singapore Citizen? [SA]  
您是新加坡公民吗？

READ		
1	Yes, I am a Singapore citizen	是, 我是新加坡公民
2	No, I am a Permanent Resident	否, 我是永久居民
DO NOT READ		
777	Refused	拒绝回答

1004. May I know your height in metres, centimetres, or feet and inches? [SA]  
请问您的身高是多少公尺、公分或英尺英寸？

	Height in cm, <b>OR</b> (nearest whole number)	公分, <b>或</b> (最近的整数)
	Height in metres, <b>OR</b> (nearest two decimal places)	公尺, <b>或</b> (最接近的两位小数)
	Feet (nearest whole number) 英尺 (最近的整数)	Inches (nearest whole number) 英寸 (最近的整数)
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

1005. May I know your weight in kilograms or pounds? [SA]  
请问您的体重是多少公斤或磅？

	Weight in kg, <b>OR</b> (nearest one decimal place)	公斤, <b>或</b> (最接近的一位小数)
	Weight in lbs (nearest whole number)	磅 (最近的整数)
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

END OF SECTION 1. GO TO SECTION 2.

## 2. DEMOGRAPHICS [C]

2000. What is your current marital status? [SA]

请问您目前的婚姻状况是？

USE SHOWCARD		
1	Never married	从未结婚
2	Married	已婚
3	Divorced	离婚
4	Separated	分居
5	Widowed	丧偶
DO NOT READ		
777	Refused	拒绝回答

2001. [R] Do you have any children, including adopted and step-children? Please do not include foster children. [SA]

请问您是否有孩子, 这包括领养的孩子、继子和继女? 请不要包括寄养的儿童。

READ			
1	Yes	有	[Go to Q2002]
2	No	没有	[Go to Q2003]
DO NOT READ			
777	Refused	拒绝回答	

2002. [R] Are any of your children within the following age range, including adopted and step-children? Please do not include foster children. [MA]

您是否有属于以下年龄段的孩子, 这包括领养的孩子、继子和继女? 请不要包括寄养的儿童。

READ			
1. Yes 有	2. No 没有	a) Aged 6 years and below	6 岁或以下
1. Yes 有	2. No 没有	b) Aged 7 to 12 years	7 岁至 12 岁
1. Yes 有	2. No 没有	c) Older than 12 years	12 岁以上
DO NOT READ			
777	Refused	拒绝回答	

**Interviewer Note:** Please circle all answers that apply. Multiple responses allowed.

请圈出所有合适的答案。允许多个答案。



2003. What is the highest level of education\* that you have attained? **[SA]**

请问您的最高教育程度是什么?

USE SHOWCARD AND DO NOT READ		
1	No formal education / Primary	未接受正规教育/小学
2	PSLE or equivalent	小六离校毕业证书或同等学历
3	Secondary	中学
4	'O' / 'N' level or NTC3 cert or its equivalent	'O' / 'N' 水准或全国技工证书第 3 级 (NTC 3) 或同等学历
5	'A' level / International Baccalaureate (IB)/ NTC 1-2 or Cert in office/ business skills or its equivalent, WSQ certificates	'A' 水准或/国际高中文凭 (IB)/ 全国技工证书第 1-2 级 (NTC 1-2) 或办公室/商业技能证书或同等学历, WSQ 证书
6	Polytechnic Diploma	理工学院文凭
7	Other diploma & professional qualification	其它文凭或专职业资格证书
8	University and above	大学及以上学历
9	Others, please specify: 其它, 请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

\* Refers to the highest level or standard which a person had passed or attained and was awarded a certificate, either through attendance at an institution of learning, through correspondence or self-study.

最高教育程度指的是一个人通过在教育机构学习、函授或自修并获得证书的最高教育水平或学位。

2004. Which of the following best describes your main work status\* over the last 12 months? **[SA]**

下列哪项最符合您在过去 12 个月中的主要工作情况?

USE SHOWCARD & READ ONLY IF NECESSARY			
1	Working	工作	[Go to Q2005a]
2	Full-time Student	全职学生	[Go to Q2006]
3	Serving National Service	在服兵役/国民服役	
4	Homemaker or housewife	家庭主妇/夫	
5	Retired	退休	[Go to Q2005a]
6	Unemployed	无工作	
DO NOT READ			
777	Refused	拒绝回答	[Go to Q2006]
888	Don't know / Not sure	不知道 / 不肯定	

\* Refers to what you spent most of the usual working hours on during the last 12 months.

主要工作情况指的是在过去 12 个月的平常工作时间, 您大部分的时间所做的事。

2005a. Which industry do you work in, or used to work in? **[SA]**  
 您目前或以前从事哪一个行业的工作？

<write response 写回应>

2005b. What is or was your occupation? **[SA]**  
 您的职业是什么？

<write response 写回应>

<b>DO NOT READ (for internal coding only)</b>		
<b>1</b>	Community, Social and Personal Services (e.g. education, nursing, arts, entertainment, public administration, defence, ...)	社区, 社会及个人服务业 (如教育, 护理, 艺术, 娱乐, 公共行政, 国防, 等等)
<b>2</b>	Manufacturing	制造业
<b>3</b>	Business Services (e.g. real estate, legal, accounting, architectural, R&D, travel, employment, ...)	商业服务业 (如房地产, 法律, 会计, 建筑设计, 科研开发, 旅游, 雇员介绍, 等等)
<b>4</b>	Wholesale and Retail Trade	批发及零售业
<b>5</b>	Financial and Insurance Activities	金融保险业
<b>6</b>	Information and Communications (e.g. publishing, media, telecommunications, information technology, ...)	资讯通信业 (如出版, 媒体, 电信, 资讯科技 等等)
<b>7</b>	Others (e.g. transport, hotels, restaurants, construction)	其它 (如交通, 酒店, 餐馆, 建筑业, 等等)
<b>8</b>	Have <b>never</b> worked	<b>从来没有</b> 工作过
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

2006. Over the last 12 months, what is the average earnings (S\$) of your household in one month, before any deductions? Please include all sources of income such as bonuses, rental and investment income, and other sources such as pension and contributions from relatives and friends who are not staying in the same household. **[SA]**

在过去 12 个月中，您全家每月的平均总收入，在任何扣除前，大概是多少新币？请包括红利、租金和投资所得到的收入，也包括退休金和非同住在一起的家人或朋友所给的现金零用钱/资助。

<b>USE SHOWCARD</b>		
<b>1</b>	Below 2,000 per month	每月收入低于 2,000
<b>2</b>	2,000 – 3,999 per month	每月收入在 2,000 – 3,999 之间
<b>3</b>	4,000 – 5,999 per month	每月收入在 4,000 – 5,999 之间
<b>4</b>	6,000 – 9,999 per month	每月收入在 6,000 – 9,999 之间
<b>5</b>	10,000 - 14,999 per month	每月收入在 10,000 – 14,999 之间
<b>6</b>	15,000 & above per month	每月收入 15,000 及以上
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 2. GO TO SECTION 3.**

### 3. PHYSICAL ACTIVITY [C]

**Interviewer:** The next questions are about the time you spend doing work. Think of work as the things that you **have to do** such as paid or unpaid work, household chores or looking for a job.

接着我要询问您关于工作中的体力活动。工作是指您**不得不**做的事情，如有偿或无偿工作、家务活以及找工作。

In answering the next few questions, ‘vigorous-intensity activities’ are activities that require hard physical effort and cause large increases in breathing or heart rate, ‘moderate-intensity activities’ are activities that require moderate physical effort and cause small increases in breathing or heart rate.

在以下的问题，“剧烈活动”是指需要大量体力并引起呼吸心跳显著增加的活动，“中等强度活动”是指需引起呼吸心跳轻度增加的活动。

#### Activity at work (在工作中的活动)

3000. In a typical week, on how many days do you do vigorous-intensity activities for at least 10 minutes continuously as part of your work? [SA]

您在工作中通常每周有多少天会做持续至少 10 分钟的剧烈活动？

USE SHOWCARD FOR EXAMPLES			
	Days a week	每周几天	[If 0 day, go to Q3001]
DO NOT READ			
777	Refused	拒绝回答	[Go to Q3001]
888	Don't know / Not sure	不知道 / 不肯定	

3000a. On a typical day on which you do *vigorous-intensity* activities for at least 10 minutes continuously, how much time do you spend doing such activities at work? [SA]

在您有做持续至少 10 分钟剧烈活动的平常一天里，您通常会花多长时间做此类活动？

	Hours	小时
	Minutes	分钟
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

3001. In a typical week, on how many days do you do *moderate-intensity* activities for at least 10 minutes continuously as part of your work? [SA]

您在工作中通常每周有多少天会做持续至少 10 分钟的中等强度活动？

USE SHOWCARD FOR EXAMPLES			
	Days a week	每周几天	[If 0 day, go to Q3002]
DO NOT READ			
777	Refused	拒绝回答	[Go to Q3002]
888	Don't know / Not sure	不知道 / 不肯定	

3001a. On a typical day on which you do *moderate-intensity* activities for at least 10 minutes continuously, how much time do you spend doing such activities at work? **[SA]**

在您有做持续至少 10 分钟中等强度活动的平常一天里，您通常会花多长时间做此类活动？

	Hours	小时
	Minutes	分钟
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**Interviewer:** The next questions **exclude** the physical activities at work that you have previously mentioned. Now, I would like to ask you about the usual way you travel to and from places. For example, going to work, shopping, market, or church, temple or mosque or going out for lunch.

以下的问题**不包括**上述工作时的体力活动。现在我要询问您通常的交通方式。例如，上班、购物、去市场、教堂、寺庙或清真寺，或出门用午餐。

Travel to and from places (出行时)

3002. In a typical week, on how many days do you walk or cycle (pedal cycle) for at least 10 minutes continuously to get to and from places? **[SA]**

您出行时，通常每周有多少天步行或骑脚踏车，持续至少 10 分钟？

	Days a week	每周几天	<b>[If 0 day, go to Q3003]</b>
<b>DO NOT READ</b>			
<b>777</b>	Refused	拒绝回答	<b>[Go to Q3003]</b>
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

3002a. On a typical day when you walk or cycle (pedal cycle) for at least 10 minutes continuously, how much time in total do you spend walking or cycling? **[SA]**

在您有步行或骑脚踏车持续至少 10 分钟的一天里，您总共会花多长时间做此类活动？

	Hours	小时
	Minutes	分钟
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

Recreational activities (娱乐性体力活动)

3003. In a typical week, on how many days do you do *vigorous-intensity* sports, fitness, recreational or leisure activities for at least 10 minutes continuously? **[SA]**  
您通常每周有多少天会做持续至少 10 分钟的 *剧烈*运动、健身或娱乐性体力活动?

USE SHOWCARD FOR EXAMPLES			
	Days a week	每周几天	<b>[If 0 day, go to Q3004]</b>
DO NOT READ			
<b>777</b>	Refused	拒绝回答	<b>[Go to Q3004]</b>
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

- 3003a. On a typical day, how much time in total do you spend doing *vigorous-intensity* sports, fitness, recreational or leisure activities for at least 10 minutes continuously? **[SA]**  
在您有做持续至少 10 分钟 *剧烈*运动、健身或娱乐性体力活动的平常一天里, 您总共会花多长时间做此类活动?

	Hours	小时
	Minutes	分钟
DO NOT READ		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

3004. In a typical week, on how many days do you do *moderate-intensity* sports, fitness, recreational or leisure activities for at least 10 minutes continuously? **[SA]**  
您通常每周有多少天会做持续至少 10 分钟的 *中等强度*运动、健身或娱乐性体力活动?

USE SHOWCARD FOR EXAMPLES			
	Days a week	每周几天	<b>[If 0 day, go to Q3005]</b>
DO NOT READ			
<b>777</b>	Refused	拒绝回答	<b>[Go to Q3005]</b>
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

- 3004a. On a typical day, how much time in total do you spend doing *moderate-intensity* sports, fitness, recreational or leisure activities for at least 10 minutes continuously? **[SA]**  
在您有做持续至少 10 分钟 *中等强度*运动、健身或娱乐性体力活动的平常一天里, 您总共会花多长时间做此类活动?

	Hours	小时
	Minutes	分钟
DO NOT READ		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**Interviewer:** The next question is about sitting or reclining at work, at home, getting to and from places, or with friends, including time spent sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television but DO NOT include time spent sleeping.

以下的问题是關於工作中、在家里、出行或与朋友相处时的坐卧情况，包括坐在桌前、与朋友坐在一起，乘坐汽车、巴士、地铁，阅读、打牌或看电视的时间，但不包括睡眠时间。

3005. On a typical day, how much time in total do you usually spend sitting or reclining? **[SA]**

您通常每天花多长时间坐着或靠着？

	Hours	小时
	Minutes	分钟
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 3. GO TO SECTION 4.**

## 4. TOBACCO USE [C]

**Interviewer:** The next questions are on cigarette smoking.

现在，我要问一些有关吸烟的问题。

4000. Have you ever smoked cigarettes? [SA]

您曾吸过烟吗？

READ			
1	Yes	有	[Go to Q4001]
2	No	没有	[Go to Q4016 Other Tobacco Products]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

4001. How old were you when you first tried or experimented with smoking? [SA]

您第一次尝试吸烟时是几岁？

	Age	岁
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

4002. Have you ever smoked at least 100 cigarettes, or about 5 packs in your **whole life**? [SA]

您一生中曾经吸过的烟总数是否有超过 100 支（约 5 包）？

READ			
1	Yes	有	[Go to Q4003]
2	No	没有	[Go to Q4016 Other Tobacco Products]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

4003. Have you ever smoked cigarettes daily? [SA]

您曾经每天吸烟吗？

READ			
1	Yes	有	[Go to Q4004]
2	No	没有	[Go to Q4005]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	



4004. At what age did you start smoking daily? [SA]  
您从几岁开始每天吸烟的？

	Age	岁
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

4005. How often do you smoke now, is it...? [SA]  
您目前吸烟的频率，是…？

<b>READ</b>			
<b>1</b>	Daily*	每天*	<b>[Go to Q4006]</b>
<b>2</b>	Occasionally	偶尔	
<b>3</b>	Have stopped smoking completely	已经彻底戒烟	<b>[Go to Q4011 Ex-Smoker]</b>
<b>DO NOT READ</b>			
<b>777</b>	Refused	拒绝回答	<b>[Go to Q4016 Other Tobacco Products]</b>
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

\* **Interviewer Note:** Please include respondents who have stop smoking daily temporarily because of religious fasting or medical reasons.  
请包括受访者因宗教禁食或医疗因素而暂时停止每天吸烟。

**[If Q4005 = “Daily” or “Occasionally”, ask the following question]**

4006. Can you show me the package of cigarettes that you are currently smoking?  
Do you mind if I take a photograph of it? [SA]  
您是否能让我看您所吸的烟的包装？您是否能让我拍下包装的照片？

<b>DO NOT READ</b>	
<b>1</b>	With photograph, please write down the brand of cigarette and variant in Q4006a: 有照片，请记下其烟的品牌与变式： _____
<b>2</b>	Refused to show the package of cigarettes, please <b>ask</b> and write down the brand of cigarette and variant in Q4006a: 若拒绝显出其烟的包装， <b>请问</b> 并记下其烟的品牌与变式： _____
<b>3</b>	Showed the package of cigarettes but <b>refused</b> to allow photograph to be taken, please write down the brand of cigarette and variant in Q4006a: 若愿显出其烟的包装但 <b>拒绝</b> 拍照，请记下其烟的品牌与变式： _____
<b>4</b>	Did not have a pack of cigarettes on hand, please <b>ask</b> and write down the brand of cigarette and variant in Q4006a: 若没有其烟的包装在手， <b>请问</b> 并记下其烟的品牌与变式： _____

4006a. Please specify the brand of cigarette and variant below. [SA]  
请记下其烟的品牌与变式。

---

**[If Q4005 = “Daily”, go to Q4007. Else, go to Q4016 Other Tobacco Products]**

4007. **[Daily Smoker]** On average, how many cigarettes do you smoke per day? **[SA]**

您平均每天吸多少支烟？

	Cigarettes daily	一天几支香烟
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

4008. **[Daily Smoker]** Do you have any intention to quit smoking? **[SA]**

您是否有戒烟的打算？

<b>READ AND USE SHOWCARD</b>		
<b>1</b>	Yes, I plan to quit smoking within the next month	有, 我打算在下个月内戒烟
<b>2</b>	Yes, I plan to quit smoking within the next 6 months	有, 我打算在未来 6 个月内戒烟
<b>3</b>	Yes, I plan to quit smoking within the next 12 months	有, 我打算在未来 12 个月内戒烟
<b>4</b>	Yes, I plan to quit smoking within the next 5 years	有, 我打算在未来 5 年内戒烟
<b>5</b>	Yes, I plan to quit smoking sometime in the future	有, 我打算在未来的某个时候戒烟
<b>6</b>	No, I do not plan to quit smoking completely, but plan to cut down on the number of cigarettes smoked	我没有打算完全戒烟, 但有打算减少吸烟
<b>7</b>	No, I do not plan to quit smoking or cut down on the number of cigarettes smoked	我没有打算戒烟或减少吸烟
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

4009. **[Daily Smoker]** In the last 12 months, have you tried to stop smoking for at least 24 hours? **[SA]**

在过去的 12 个月中, 您是否有尝试连续至少 24 小时不吸烟？

<b>READ</b>			
<b>1</b>	Yes	有	<b>[Go to Q4010]</b>
<b>2</b>	No	没有	
<b>DO NOT READ</b>			
<b>777</b>	Refused	拒绝回答	<b>[Go to Q4016 Other Tobacco Products]</b>
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

4010. **[Daily Smoker]** How many times did you try to quit smoking during the last 12 months? **[SA]**  
 在过去 12 个月中，您曾经几次尝试戒烟？

	Number of times	几次
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定
<b>[Go to Q4016 Other Tobacco Products]</b>		

4011. **[Ex-smoker]** How long has it been since you last smoked daily? **[SA]**  
 您已有多久停止每日吸烟的习惯？

	Number of years, <b>OR</b>	年, 或
	Number of months	月
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

4012. **[Ex-smoker]** How long did you smoke daily before you gave up smoking? **[SA]**  
 在戒烟之前，您曾经有多久每天吸烟？

	Number of years, <b>OR</b>	年, 或
	Number of months	月
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

4013. **[Ex-smoker]** What was the main reason which made you stop smoking completely? **[SA]**  
您彻底戒烟的主要原因是什么？

DO NOT READ		
1	Experienced the ill effects of smoking	身受吸烟之害
2	Pressure to stop from the environment (e.g. <b>smoking bans</b> )	迫于环境（例如 <b>禁烟令</b> ）的压力而戒烟
3	Concerned about the health of those around me (through <b>passive smoking</b> )	担心周围人群的健康（通过 <b>二手烟</b> ）
4	Concerned about the <b>harmful effects</b> of smoking	关注吸烟的 <b>害处</b>
5	Pressure/ advice to stop from <b>family/ friends/ colleague</b>	出于 <b>家庭/朋友/同事</b> 的压力/建议而戒烟
6	Cigarettes have become too <b>expensive</b>	香烟价格太 <b>贵</b>
7	<b>Social stigma</b> associated with smoking	吸烟不 <b>光彩</b>
8	Advised to stop smoking by my <b>doctor</b>	<b>医生</b> 建议我戒烟
9	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

4014. **[Ex-smoker]** How did you quit smoking? **[MA]**  
请问您是怎样戒烟的？

DO NOT READ		
1	Abstained from smoking on own accord	自我克制主动戒烟
2	Attended smoking cessation programme/counselling in public/private hospitals	参加公立/私人医院的戒烟计划/辅导
3	Attended smoking cessation programme/counselling in public/private clinics	参加公立/私人诊所的戒烟计划/辅导
4	Attended smoking cessation programme/counselling in the workplace	参加工作场所的戒烟计划/辅导
5	Attended smoking cessation programme/counselling through a community pharmacy (retail/polyclinic)	通过社区药店参加戒烟计划/辅导（零售/综合诊所）
6	Through talking to a quit advisor at Quitline	通过与戒烟热线的戒烟顾问沟通
7	By nicotine replacement therapy (e.g. nicotine patch, inhaler)	通过尼古丁替代治疗（例如尼古丁贴片、尼古丁吸入剂）
8	By herbal remedy	通过草药疗法
9	Used medication (e.g. Bupropion/ Zyban, Varenicline/Champix)	药物治疗（例如耐烟盼牌的安非他酮、戒必适牌的伐尼克兰）
10	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

4015. **[Ex-smoker]** How many times did you try to quit smoking before you succeeded? **[SA]**  
 在戒烟成功前，您曾经几次尝试戒烟？

	Number of times	几次
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

4016. **[Ask All]** Which of the following tobacco products do you currently smoke? **[SA]**  
 您目前吸的是以下哪种烟草产品？

<b>USE SHOWCARD</b>					
<b>List of other tobacco products</b> 其它烟草产品的列表	1) Yes, Daily 是, 每天	2) Yes, Occasionally 是, 偶尔	3) No 否	777) Refused 拒绝回答	888) Don't know / Not sure 不知道 / 不肯定
4016a. Cigar 雪茄	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016b. Cigarillos 迷你雪茄	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016c. E-cigarette 电子烟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016d. Heated Tobacco 加热烟草	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016e. Beedis 比迪烟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016f. Rolled cigarettes/ Ang Hun (loose tobacco) 卷烟/ Ang Hun 烟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016g. Pipe Tobacco 烟丝	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4016h. Others 其它 <b>[Go to Q4016h(i) for "1" or "2"]</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 4016h(i) [If respondent selected "1" or "2" for Q4016h, please specify below]:  
 其它（请注明）：

---

4017. [R] **[Ask All]** How often does anyone smoke inside your home? Would you say daily, weekly, monthly, less than monthly, or never? **[SA]**

您的家中多常会有人吸烟？您估计是每日，每星期，每月，少过每月或完全没有？

READ		
1	Daily	每日
2	Weekly	每星期
3	Monthly	每月
4	Less than Monthly	少过每月
5	Never	完全没有
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

4018. [R] Are you exposed to second-hand smoke at following food & beverage (F&B) outlets, such as...? **[MA]**

您是否在以下的餐饮地点中接触到二手烟？

USE SHOWCARD				
List of F&B outlets 餐饮地点	1) Yes 是	2) No 否	777) Refused 拒绝回答	888) Don't know / Not sure 不知道 / 不肯定
4018a. Pub 酒吧	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4018b. Coffee shop 咖啡店	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4018c. Hawker centre 熟食中心	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4018d. Restaurant 餐馆	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4018e. Others 其它 <b>[Go to Q4018e(i) for "1"]</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 4018e(i) [If respondent selected "1" for Q4018e, please specify below]:

其它（请注明）：

---

**END OF SECTION 4. GO TO SECTION 5.**

## 5. DIETARY PRACTICES [C]

**Interviewer:** Now I am going to ask you some questions about your eating practices. Please think about the food and drinks consumed at home and outside for the past one month.

现在，我想问您一些关于饮食习惯的问题。请您回想起过去 1 个月内在家和在外的饮食习惯。

5000. Excluding fruit juices, how many servings\* of fruits do you **USUALLY** eat? You can tell me in servings per day, per week or per month. **[SA]**

除了果汁以外，您**通常**吃几份水果？您的回答可以是以每天，每个星期或每个月几份。

USE SHOWCARD & EXPLAIN WHAT CONSTITUTES 1 SERVING		
	Servings per day, <b>OR</b>	每天几份， <b>或</b>
	Servings per week, <b>OR</b>	每星期几份， <b>或</b>
	Servings per month	每月几份
DO NOT READ		
<b>666</b>	Do not eat fruits	不吃水果
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

\* **Interviewer Note:** Please specify the number of servings to the nearest 0.5 serving.

请将份量注明为最接近的半份。

5001. How many servings\* of 100% or pure fruit juices such as orange or watermelon juice do you **USUALLY** drink? Please do not include cordials or syrups. You can tell me in servings per day, per week or per month. **[SA]**

您**通常**喝几份纯果汁，如橙汁或西瓜汁？请不要把浓缩果汁饮品或糖浆包括在内。您的回答可以是以每天，每个星期或每个月几份。

USE SHOWCARD & EXPLAIN WHAT CONSTITUTES 1 SERVING		
	Servings per day, <b>OR</b>	每天几份， <b>或</b>
	Servings per week, <b>OR</b>	每星期几份， <b>或</b>
	Servings per month	每月几份
DO NOT READ		
<b>666</b>	Do not drink fruit juice	不喝果汁
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

\* **Interviewer Note:** Please specify the number of servings to the nearest 0.5 serving.

请将份量注明为最接近的半份。

5002. How many servings\* of vegetables do you **USUALLY** eat? You can tell me in servings per day, per week or per month. **[SA]**

您**通常**吃几份蔬菜？您的回答可以是以每天，每个星期或每个月几份。

USE SHOWCARD & EXPLAIN WHAT CONSTITUTES 1 SERVING		
	Servings per day, <b>OR</b>	每天几份, <b>或</b>
	Servings per week, <b>OR</b>	每星期几份, <b>或</b>
	Servings per month	每月几份
DO NOT READ		
<b>666</b>	Do not eat vegetables	不吃蔬菜
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

\* **Interviewer Note:** Please specify the number of servings to the nearest 0.5 serving.

请将份量注明为最接近的半份。

5003. The next question is about wholegrain or wholemeal foods that you usually eat. How often do you eat wholegrain foods such as brown rice, wholemeal bread, wholemeal cereals or oats, wholemeal biscuits or noodles? You can answer me in number of times per day, per week or per month? **[SA]**

下一道问题与您常食用的全谷物或全麦食品有关，这些食品包括糙米、全麦面包、全麦片或燕麦、全麦饼干或面条。您多常食用这些食品？您的回答可以是以每天，每个星期或每个月几次。

USE SHOWCARD FOR TYPES OF WHOLEGRAINS		
	Times per day, <b>OR</b>	每天几次, <b>或</b>
	Times per week, <b>OR</b>	每星期几次, <b>或</b>
	Times per month	每月几次
DO NOT READ		
<b>666</b>	Do not eat wholegrain or wholemeal foods	不吃全谷物或全麦食品
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定



5004. How often do you drink canned, bottled or packet drinks? For example, fruit juice, soft drinks, fruit drinks, cordials, yoghurt drinks, Yakult/Vitagen, soya milk, 2 in 1 or 3 in 1 coffee or tea. You can tell me in number of times per day, per week or per month. **[SA]**

您多常饮用罐装，瓶装或纸包饮品？例如 果汁、汽水、果味饮品、浓缩果汁饮品、酸奶饮品、益力多/维他精(Yakult/Vitagen)、豆奶、二合一或三合一即溶咖啡或溶茶。您的回答可以是以每天，每个星期或每个月几次。

USE SHOWCARD FOR TYPES OF CANNED, BOTTLED OR PACKET DRINKS			
	Times per day, <b>OR</b>	每天几次， <b>或</b>	<b>[Go to Q5005]</b>
	Times per week, <b>OR</b>	每星期几次， <b>或</b>	
	Times per month	每月几次	
DO NOT READ			
<b>666</b>	Do not drink canned, bottled or packet drinks	不喝罐装，瓶装或纸包饮品	<b>[Go to 5006]</b>
<b>777</b>	Refused	拒绝回答	
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

5005. During the times that you drink canned, bottled or packet drinks, how many servings\* do you **USUALLY** drink? **[SA]**

当您饮用罐装，瓶装或纸包饮品时，您**通常**喝几份？

USE SHOWCARD & EXPLAIN WHAT CONSTITUTES 1 SERVING			
	Number of Servings	几份	
DO NOT READ			
<b>777</b>	Refused	拒绝回答	
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

\* **Interviewer Note:** Please specify the number of servings to the nearest 0.5 serving.

请将份量注明为最接近的半份。

5006. How often do you drink freshly prepared drinks? For example, coffee, tea, Milo, Horlicks, Ovaltine, hot/iced chocolate and bubble tea? You can tell me in the number of times per day, per week or per month. **[SA]**

您多常饮用新鲜冲制的饮品？例如 咖啡、茶、美禄、好立克、阿华田、热/冷巧克力饮品和泡泡茶。您的回答可以是以每天，每个星期或每个月几次。

USE SHOWCARD FOR TYPES OF FRESHLY PREPARED DRINKS			
	Times per day, <b>OR</b>	每天几次， <b>或</b>	<b>[Go to Q5007]</b>
	Times per week, <b>OR</b>	每星期几次， <b>或</b>	
	Times per month	每月几次	
DO NOT READ			
<b>666</b>	Do not drink freshly prepared drinks	不喝新鲜冲制的饮品	<b>[Go to Section 6]</b>
<b>777</b>	Refused	拒绝回答	
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

5007. Of the freshly prepared drinks, how often do you select the no sugar/less sugar option? **[SA]**  
 在这些新鲜冲制的饮品当中，您会多常选择无糖或少糖的饮品？

<b>READ</b>		
<b>1</b>	Always	每次
<b>2</b>	Mostly	时常
<b>3</b>	Half of the time	一半的时间
<b>4</b>	Sometimes	偶尔
<b>5</b>	Never / Almost rarely	完全没有/几乎没有
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 5. GO TO SECTION 6.**

## 6. ALCOHOL CONSUMPTION [C]

**Interviewer:** Now I am going to ask you some questions about alcohol consumption.  
现在，我想问您一些关于饮酒的问题。

6000. In the past 12 months, how frequent did you have at least one drink? [SA]  
在过去的 12 个月中，您喝至少一杯酒的频率是多少？

READ AND USE SHOWCARD			[Go to Q6001]
1	5 or more days a week	每周 5 天或更多	
2	1-4 days per week	每周 1 至 4 天	
3	1-3 days a month	每月 1 至 3 天	
4	Less than once a month	每月少于一天	
5	Did not drink alcohol in the past 12 months	在过去 12 个月没有喝酒	[Go to Section 7]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

6001. What alcoholic drink do you consume most often? [SA]  
您最常喝的是哪种酒？

READ AND USE SHOWCARD		
1	Beer	啤酒
2	Stout	烈性黑啤酒
3	Wines (champagne, port)	葡萄酒（香槟酒、波特酒）
4	Spirits (gin, whisky, rum, brandy, vodka)	烈酒（杜松子酒、威士忌酒、朗姆酒、白兰地酒、伏特加酒）
5	Alcoholic fruit drinks, premixed drinks or alcopops	酒精水果饮品或其他预混合酒
6	Others, please specify: 其它，请注明：_____	
7	No specific preference	没有特别的偏好
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

6002. How many times during the past month did you have X [**X = 5 for men, X = 4 for women**] or more drinks in any one drinking session? Please include all types of alcoholic drinks. **[SA]**  
 在过去一个月，您曾经有多少次在一次饮酒过程中喝了超过 X [男性 X = 5，女性 X = 4] 杯？  
 请包括所有类型的酒精饮品。

<b>USE SHOWCARD &amp; EXPLAIN WHAT CONSTITUTES 1 DRINK</b>		
	Times in the past month	几次（过去一个月内）
<b>DO NOT READ</b>		
<b>666</b>	Did not drink X [ <b>X = 5 for men, X = 4 for women</b> ] or more drinks in any one drinking session	没有在一次饮酒过程中喝超过 X [男性 X = 5，女性 X = 4] 杯
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 6. GO TO SECTION 7.**

## 7. DIABETES [C]

**Interviewer:** Now, I would like to ask you some questions about diabetes. Diabetes occurs when there is excess sugar in the blood. Oral medications and insulin injections may be required if a person with diabetes is unable to adequately control his blood sugar levels despite lifestyle changes.

现在，我要问您一些关于糖尿病的问题。血糖过高会导致糖尿病。若糖尿病患者改变生活方式之后仍然无法控制血糖，那他/她就或许需要以服用口服降糖药或胰岛素注射来控制病情。

7000. Can you tell me who in your immediate family\* has diabetes, excluding gestational diabetes?

**[MA]**

您的直系家庭\*中有人患有糖尿病(不包括妊娠糖尿病)吗?

READ (May choose more than one answer)		
1	Parents	父母
2	Siblings	兄弟姐妹
3	Children	儿女
4	No one in my family has diabetes	没有家人患有糖尿病
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

\* Exclude spouse and non-blood relatives

不包括配偶及无血缘关系的亲戚

7001. Have you ever been told by a western-trained doctor that you have diabetes? **[SA]**

西医是否曾经告诉过您，您患有糖尿病？

**[If 'Yes' and respondent is female, ask "Was this only when you were pregnant?"]**

**[如果回答“是”并且回答者是女性，则接着提问“这种情况是否只发生在您怀孕的时候？”]**

READ			
1	Yes	是	<b>[Go to Q7001a]</b>
2	Yes, but only during pregnancy	是，不过仅在怀孕时	
3	No	否	
4	No, pre-diabetes or borderline diabetes	否，糖尿病前期或临界性糖尿病	
DO NOT READ			
777	Refused	拒绝回答	<b>[Go to Q7004]</b>
888	Don't know / Not sure	不知道 / 不肯定	

7001a. Does your doctor currently give you treatment for your diabetes such as tablets or injections? **[SA]**  
 医生目前是否有给您治疗糖尿病的药物或注射？

READ			
1	Yes	有	[Go to Q7001b]
2	No	没有	[Go to 7002]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

7001b. What type of medication are you on? **[SA]**  
 您正在使用哪种治疗方式？

READ		
1	Insulin injections	胰岛素注射
2	Oral hypoglycemic agents	口服降糖药
3	Both insulin injections & oral hypoglycemic agents	同时使用胰岛素注射和口服降糖药
4	Others, please specify: 其它, 请注明: _____	
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

7002. How many times in the past 12 months have you seen a doctor for your diabetes? **[SA]**  
 在过去 12 个月中, 您曾经有几次因为糖尿病看医生？

	Number of times	几次
DO NOT READ		
666	Did not see a doctor for diabetes	没有因为糖尿病看医生
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

7003. Where do you seek treatment for your diabetes most of the time? **[SA]**

大多数时候，您是去哪里治疗糖尿病的？

DO NOT READ		
1	Private GP	家庭医生
2	Polyclinic	综合诊所
3	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
4	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
5	Others, please specify: 其它，请注明： _____	
666	None, do not seek treatment for diabetes	否，没有为糖尿病寻求治疗
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定
<b>[Go to Section 8]</b>		

**[If Q7001 = “Yes, but only during pregnancy”, “No”, “No, pre-diabetes or borderline diabetes”, “Refused” or “Don't know / Not sure”]**

7004. A blood sugar test is a method to check for diabetes. When was the last time you had a blood sugar test at a doctor's office? **[SA]**

血糖检验是一种测试糖尿病的方法。上一次您在诊所检查血糖是什么时候？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去1年或少于1年	<b>[Go to Q7005]</b>
2	More than 1 year to 2 years	超过1年但在2年以内	
3	More than 2 years to 3 years	超过2年但在3年以内	
4	More than 3 years to 5 years	超过3年但在5年以内	
5	More than 5 years ago	超过5年前	
6	Never been checked	从未检查过	
<b>DO NOT READ</b>			<b>[Go to Section 8]</b>
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

7005. Where did you go for your last blood sugar test? [SA]

您上次是在哪里验血检查糖尿病的？

DO NOT READ		
<b>1</b>	Private GP (Screen for Life)	家庭医生（“定期体检，益您一生”）
<b>2</b>	Private GP (Non-Screen for Life)	家庭医生（非“定期体检，益您一生”）
<b>3</b>	Polyclinic	综合诊所
<b>4</b>	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
<b>5</b>	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
<b>6</b>	Workplace	工作场所
<b>7</b>	Community venue	社区场所
<b>8</b>	Overseas clinic/ hospital	国外的诊所或医院
<b>9</b>	Army camp	军队兵营
<b>10</b>	Others, please specify: 其它，请注明： _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 7. GO TO SECTION 8.**



## 8. HYPERTENSION [C]

**Interviewer:** Next, I would like to ask you some questions about hypertension, also commonly known as high blood pressure.

接下来，我要问您一些关于高血压的问题。

8000. Can you tell me who in your immediate family\* has high blood pressure? [MA]

您的直系家庭\*中有人患有高血压吗？

READ (May choose more than one answer)		
1	Parents	父母
2	Siblings	兄弟姐妹
3	Children	儿女
4	No one in my family has high blood pressure	没有家人患有高血压
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

\* Exclude spouse and non-blood relatives

不包括配偶及无血缘关系的亲戚

8001. Have you been told by a western-trained doctor that you have high blood pressure? [SA]

西医是否曾经告诉过您，您患有高血压？

[If 'Yes' and respondent is female, ask "Was this only when you were pregnant?"]

[如果回答“是”并且回答者是女性，则接着提问“这种情况是否只发生在您怀孕的时候？”]

READ			
1	Yes	是	[Go to Q8002]
2	Yes, but only during pregnancy	是，不过仅在怀孕时	[Go to Q8005]
3	No	否	
4	No, borderline hypertension	否，临界性高血压	
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

**Interviewer Note:** A person with blood pressure  $\geq 140/90$ mmHg is defined to have high blood pressure or hypertension..

高血压指血压高于 140/90mmHg.

8002. Does your doctor currently give you medicine (e.g. tablets) for your high blood pressure? **[SA]**  
医生目前是否有给您治疗高血压的药物？

READ		
1	Yes	有
2	No	没有
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

8003. How many times in the past 12 months have you seen a doctor for your high blood pressure? **[SA]**  
在过去 12 个月中，您为了治疗高血压看过几次医生？

	Number of times	几次
DO NOT READ		
666	Did not see a doctor for high blood pressure	没有因为高血压看医生
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

8004. Where do you seek treatment for your high blood pressure most of the time? **[SA]**  
大多数时候，您是去哪里治疗高血压？

DO NOT READ		
1	Private GP	家庭医生
2	Polyclinic	综合诊所
3	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
4	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
5	Others, please specify: 其它，请注明： _____	
666	None, do not seek treatment for high blood pressure	否，没有为高血压寻求治疗
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定
[Go to Section 9]		

**[If Q8001 = “Yes, but only during pregnancy”, “No”, “No, borderline hypertension”, “Refused” or “Don’t know / Not sure”]**

8005. When was the last time you had your blood pressure checked? Please exclude checks by yourself. **[SA]**

您上一次检查高血压是什么时候（不包括自己检查）？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去1年或少于1年	<b>[Go to Q8006]</b>
2	More than 1 year to 2 years	超过1年但在2年以内	
3	More than 2 years to 3 years	超过2年但在3年以内	
4	More than 3 years to 5 years	超过3年但在5年以内	
5	More than 5 years ago	超过5年前	
6	Never been checked	从未检查过	
DO NOT READ			<b>[Go to Section 9]</b>
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

8006. Where did you go for your last blood pressure check-up? **[SA]**

您上次是在哪里检查血压的？

DO NOT READ		
1	Private GP (Screen for Life)	家庭医生（“定期体检，益您一生”）
2	Private GP (Non-Screen for Life)	家庭医生（非“定期体检，益您一生”）
3	Polyclinic	综合诊所
4	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
5	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
6	Workplace	工作场所
7	Community venue	社区场所
8	Overseas clinic/ hospital	国外的诊所或医院
9	Army camp	军队兵营
10	Others, please specify: 其它，请注明：_____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 8. GO TO SECTION 9.**

## 9. HYPERLIPIDEMIA [C]

9000. Have you been told by a western-trained doctor that you have high blood cholesterol or lipids? **[SA]**

西医是否曾经告诉过您，您患有高胆固醇或高血脂？

READ			
1	Yes	是	[Go to Q9001]
2	No	否	[Go to Q9004]
3	No, borderline high blood cholesterol	否，临界性高胆固醇	
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

9001. How many times in the past 12 months have you seen a doctor for your high blood cholesterol or lipids? **[SA]**

在过去 12 个月中，您为了治疗高胆固醇或高血脂看过几次医生？

	Number of times	几次
DO NOT READ		
666	Did not see a doctor for high blood cholesterol or lipids	没有因为高胆固醇或高血脂看医生
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

9002. Does your doctor currently give you medicine (e.g. tablets) for your high blood cholesterol or lipids? **[SA]**

医生目前是否有给您治疗高胆固醇或高血脂的药物？

READ		
1	Yes	有
2	No	没有
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

9003. Where do you seek treatment for your high blood cholesterol or lipids most of the time? **[SA]**  
 大多数时候，您是去哪里治疗高胆固醇或高血脂？

DO NOT READ		
1	Private GP	家庭医生
2	Polyclinic	综合诊所
3	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
4	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
5	Others, please specify: 其它，请注明： _____	
666	None, do not seek treatment for high blood cholesterol or lipids	否，没有为高胆固醇或高血脂寻求治疗
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定
<b>[Go to Section 10]</b>		

**[If Q9000 = “No”, “No, borderline high blood cholesterol”, “Refused” or “Don't know / Not sure”]**

9004. When was the last time you had your blood cholesterol checked at a doctor's office? **[SA]**  
 您上一次到诊所检查胆固醇是什么时候？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去1年或少于1年	<b>[Go to Q9005]</b>
2	More than 1 year to 2 years	超过1年但在2年以内	
3	More than 2 years to 3 years	超过2年但在3年以内	
4	More than 3 years to 5 years	超过3年但在5年以内	
5	More than 5 years ago	超过5年前	
6	Never been checked	从未检查过	
<b>DO NOT READ</b>			
777	Refused	拒绝回答	<b>[Go to Section 10]</b>
888	Don't know / Not sure	不知道 / 不肯定	

9005. Where did you go for your last blood test to check for cholesterol? [SA]  
 您上次是在哪里检查胆固醇的?

<b>DO NOT READ</b>		
<b>1</b>	Private GP (Screen for Life)	家庭医生（“定期体检，益您一生”）
<b>2</b>	Private GP (Non-Screen for Life)	家庭医生（非“定期体检，益您一生”）
<b>3</b>	Polyclinic	综合诊所
<b>4</b>	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
<b>5</b>	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
<b>6</b>	Workplace	工作场所
<b>7</b>	Community venue	社区场所
<b>8</b>	Overseas clinic/ hospital	国外的诊所或医院
<b>9</b>	Army camp	军队兵营
<b>10</b>	Others, please specify: 其它，请注明： _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 9. GO TO SECTION 10.**

## 10. HEALTH CONDITIONS [R]

10000. Have you been told by a western-trained doctor that you have asthma? [SA]

西医是否曾经告诉过您，您患有哮喘病？

READ			
1	Yes	是	[Go to Q10001]
2	No	否	[Go to Section 11]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

### IF YES:

10001. How old were you when you were first told you had asthma? [SA]

您是在几岁时被西医诊断患有哮喘病？

	Age	岁
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

10002. Do you still have asthma? [SA]

您还有哮喘病吗？

READ			
1	Yes	有	[Go to Q10003]
2	No	没有	[Go to Q10010]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

10003. During the last 12 months, have you had an episode of asthma or an asthma attack? [SA]

在过去 12 个月里，您的哮喘病是否有发作？

READ			
1	Yes	有	[Go to Q10004]
2	No	没有	[Go to Q10010]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

10004. Do you feel that the episode of asthma or asthma attack was caused by or made worse by work? **[SA]**

您觉得哮喘病的发作是否由工作引起或因工作而加重了？

READ			
1	Yes	是	[Go to Q10005]
2	No	否	[Go to Q10006]
3	Not applicable	不适用	
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

10005. In the past 12 months, how many days were you on medical leave or not able to go to work because of asthma? **[SA]**

在前 12 个月内，您有几天因为哮喘病而拿病假或无法上班？

	Number of days	几天
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

10006. During the last 12 months, how many times did you have to visit A&E or a doctor's clinic for urgent treatment of asthma? **[SA]**

在过去的 12 个月内，您有几次得去急诊室或医生诊所接受哮喘紧急治疗？

	Number of times	几次	[If 0 time, go to Q10008]
DO NOT READ			
777	Refused	拒绝回答	[Go to Q10008]
888	Don't know / Not sure	不知道 / 不肯定	

10007. During the last 12 months, how many times were you hospitalized for treatment of asthma? **[SA]**

在过去的 12 个月内，您有几次为治疗哮喘而入院就医？

	Number of times	几次
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定



10008. Over the past 30 days, on average, how many times **per week** did you need to use your inhaler medication for quick relief of asthma symptoms? **[SA]**

在过去的 30 天内，您平均**每周**需要使用几次吸入性药物来迅速减轻哮喘症状？

	Times per week	每周几次
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

10009. During the past 30 days, on how many days did symptoms of asthma make it difficult for you to stay asleep at night? **[SA]**

在过去的 30 天内，您有几天因哮喘症状而晚上难以保持睡眠？

	Number of days	几天
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

10010. Are you taking a long term preventive medication for asthma everyday? **[SA]**

您是否每天服用长期预防哮喘病的药物？

<b>READ</b>		
<b>1</b>	Yes	是
<b>2</b>	No	否
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 10. GO TO SECTION 11.**

## 11. HEALTH SCREENING PROGRAMMES

**IF respondent is male & below 50 years of age, go to Q11023.**

**IF respondent is male & aged 50 and above, go to Q11016.**

**IF respondent is female & aged 50 and above, go to Q11001.**

11000. [C] **[For women below 50 years of age]** To your knowledge, are you pregnant now? **[SA]**  
据您所知，您目前是否怀孕？

READ		
1	Yes	是
2	No	否
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11001. [R] **[For all women only]** Do you know what a Pap smear test is? **[SA]**  
您是否知道什么是宫颈抹片检查？

READ		
1	Yes	是
2	No	否
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11002. [C] **[For all women only]** A Pap smear is a simple test involving the scraping of cells from the mouth of the womb to detect cervical cancer. When was the last time you had a Pap smear? **[SA]**

宫颈抹片检查是一种通过检查刮取的子宫口细胞来检测是否患有宫颈癌的简单检查方法。您最后一次接受宫颈抹片检查是多久以前的事？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去 1 年或少于 1 年	<b>[Go to Q11003]</b>
2	More than 1 year to 2 years	超过 1 年但在 2 年以内	
3	More than 2 years to 3 years	超过 2 年但在 3 年以内	
4	More than 3 years to 4 years	超过 3 年但在 4 年以内	
5	More than 4 years to 5 years	超过 4 年但在 5 年以内	
6	More than 5 years ago	超过 5 年前	
7	Never been checked	从未检查过	<b>[Go to Q11006]</b>
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

11003. [C] **[For all women only]** Where did you go for your last Pap smear test? **[SA]**

您上次的宫颈抹片检查是在哪里做的？

DO NOT READ		
1	Private GP (Screen for Life)	家庭医生（“定期体检， 益您一生”）
2	Private GP (Non-Screen for Life)	家庭医生（非“定期体检， 益您一生”）
3	Polyclinic	综合诊所
4	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
5	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
6	Workplace	工作场所
7	Community venue	社区场所
8	Overseas clinic/ hospital	国外的诊所或医院
9	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11004. [R] Why did you go for your last Pap smear test? [MA]

您上次做宫颈抹片检查的原因是什么？

DO NOT READ		
1	Know the importance of screening	了解检查的重要性
2	Have current / previous gynaecological problem	当时/以前有妇科问题
3	Advised by doctors / nurses	医生/护士建议
4	My family members / friends / colleagues encouraged me	家庭成员/朋友/同事的鼓励
5	Read/ heard about it / saw an advertisement about Pap smear test	读到/听到这项检查/看到宫颈抹片检查的广告
6	Received a letter e.g. Screen for Life letter to encourage me to go for screening	收到鼓励我去检查的信件例如“定期体检，益您一生”的信件
7	Ad-hoc health screening	临时健康检查
8	Routine check-up	定期体检
9	Company / application health screening (e.g. pre-employment or permanent residency/ application)	公司/申请健康检查（例如入职前或永久居留申请）
10	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11005. [R] Can you tell me how often should women of your age go for Pap smear test? [SA]

与您同龄的女性做宫颈抹片检查的频率应该是多少？

Once every _____ year(s)		每几年一次
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定
[Go to Q11007]		

**[If Q11002 = “Never been checked”, “Refused” or “Don’t know / Not sure”]**

11006. [R] What are your reasons for not doing a Pap smear test? [MA]

您从未做宫颈抹片检查的原因有哪些？

<b>DO NOT READ (May choose more than one answer)</b>		
1	Not necessary as I am healthy	因为我很健康，所以不需要
2	Never heard about it	从未听说过
3	Too old	年纪太大
4	Not at risk	没有危险
5	Cost of the test is too expensive	检查费用太高
6	Afraid of knowing the results	害怕知道检查结果
7	Inconvenient (e.g. clinic/hospital too far away, wait at clinic/hospital too long, English signs at clinic/hospital too confusing)	不方便（例如诊所/医院太远，在诊所/医院等待的时间太长，诊所/医院的英文标示难以理解）
8	Not important	不重要
9	No time due to work/ family commitment (e.g. need to take leave, make alternative arrangement with family members)	由于工作/家庭责任，没时间（例如需要请假、和家庭成员另有安排）
10	Cannot afford cost of treatment if cervical cancer is detected	治疗费用太高
11	Afraid of possible side effects	害怕可能有副作用
12	Too young	年纪太小
13	Painful test	检查太痛苦
14	Embarrassing (e.g. need to undress for the procedure, operator may not be female)	尴尬（例如需要脱衣服检查，检查人员可能不是女性）
15	Not sexually active	性行为不活跃
16	I have been vaccinated	我已接种疫苗
17	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11007. [R] [For all women only] Do you know what a Human Papillomavirus (HPV) test is? [SA]

您是否知道什么是人乳头瘤病毒检查？

<b>READ</b>		
1	Yes	是
2	No	否
<b>DO NOT READ</b>		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11008. [R] **[For all women only]** A Human Papillomavirus (HPV) test involves scraping cells from mouth of the womb to check for HPV viruses. This test is done to detect cervical cancer. Have you ever had a HPV test? **[SA]**

人乳头瘤病毒检查是一种通过刮取子宫口细胞来检测是否感染人乳头瘤病毒的检查方法。这项检查是为了检测宫颈癌。您是否曾接受过人乳头瘤病毒检查？

READ		
1	Yes	是
2	No	否
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定
<b>[IF female respondent is <u>aged below 40</u>, go to Q11023]</b>		
<b>[IF female respondent is <u>aged 40 and above</u>, go to Q11009]</b>		

11009. [R] **[For all women aged 40 years and older]** Do you know what is a mammogram? **[SA]**

您是否知道什么是乳房 X 光检查？

READ		
1	Yes	是
2	No	否
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11010. [C] **[Only for Women aged 40 years and older]** A mammogram is an x-ray of each breast to look out for breast cancer. When was the last time you had a mammogram? **[SA]**

乳房 X 光检查是一种利用 X 光检查乳癌的方法。您最后一次接受乳房 X 光检查是多久以前的事？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去 1 年或少于 1 年	<b>[Go to Q11011]</b>
2	More than 1 year to 2 years	超过 1 年但在 2 年以内	
3	More than 2 years to 3 years	超过 2 年但在 3 年以内	
4	More than 3 years to 4 years	超过 3 年但在 4 年以内	
5	More than 4 years to 5 years	超过 4 年但在 5 年以内	
6	More than 5 years ago	超过 5 年前	
7	Never been checked	从未检查过	
DO NOT READ			
777	Refused	拒绝回答	<b>[Go to Q11015]</b>
888	Don't know / Not sure	不知道 / 不肯定	

11011. [R] Why did you go for your last mammogram? [MA]

您上次做乳房 X 光检查的原因是什么?

<b>DO NOT READ</b>		
<b>1</b>	Know the importance of screening	了解检查的重要性
<b>2</b>	Have current / previous breast-related problem	当时/以前有涉及乳房的问题
<b>3</b>	Advised by doctors / nurses	医生/护士建议
<b>4</b>	My family members / friends / colleagues encouraged me	家庭成员/朋友/同事的鼓励
<b>5</b>	Read/ heard about it / saw an advertisement about mammogram	读到/听到这项检查/看到乳房 X 光检查的广告
<b>6</b>	Received a letter e.g. Screen for Life letter to encourage me to go for screening	收到鼓励我去检查的信件例如“定期体检，益您一生”的信件
<b>7</b>	Ad-hoc health screening	临时健康检查
<b>8</b>	Routine check-up	定期体检
<b>9</b>	Others, please specify: 其它，请注明: _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

[If Q11010 = “3” to “6”]

11012. [R] Your last mammogram was more than 2 years ago, what are your reasons for not doing another mammogram since your last mammogram? [MA]

您最后一次的乳房 X 光检查是超过两年前,自从上次做乳房 X 光检查以后,您一直没再做该项检查的原因有哪些?

DO NOT READ (May choose more than one answer)		
1	Not necessary as I know my previous result	因为我知道上次结果,所以没必要再做
2	Too old	年纪太大
3	Cost of the test is too expensive	检查费用太高
4	Inconvenient (e.g. clinic/hospital too far away, wait at clinic/hospital too long, English signs at clinic/hospital too confusing)	不方便(例如诊所/医院太远,在诊所/医院等待的时间太长,诊所/医院的英文标示难以理解)
5	Not important	不重要
6	No time due to work/ family commitment (e.g. need to take leave, make alternative arrangement with family members)	由于工作/家庭责任,没时间(例如需要请假、和家庭成员另有安排)
7	Afraid of possible side effects	害怕可能有副作用
8	Painful test	检查太痛苦
9	Cannot do anything if breast cancer is detected	即使检查出乳房癌,也无能为力
10	Others, please specify: 其它,请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11013. [C] [Only for Women aged 40 years and older] Where did you go for your last mammogram? [SA]

您上次的乳房 X 光检查是在哪里做的?

DO NOT READ		
1	Polyclinic	综合诊所
2	Public hospital	公共医院
3	Private hospital	私人医院
4	Private X-ray centre	私人 X 光检查中心
5	Mammobus	乳房 X 光检查流动巴士
6	Workplace	工作场所
7	Community venue	社区场所
8	Overseas clinic/ hospital	国外的诊所或医院
9	Others, please specify: 其它,请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定



11014. [R] Can you tell me how often women of your age should go for mammogram? [SA]  
与您同龄的女性做乳房 X 光检查的频率应该是多少?

Once every _____ year(s)		每几年一次
<b>DO NOT READ</b>		
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

[If Q11010 = “Never been checked”, “Refused” or “Don't know / Not sure”]

11015. [R] What are your reasons for not doing a mammogram? [MA]  
您从未做乳房 X 光检查的原因有哪些?

<b>DO NOT READ (May choose more than one answer)</b>		
<b>1</b>	Not necessary as I am healthy	因为我很健康，所以不需要
<b>2</b>	Never heard about mammograms	从未听说过
<b>3</b>	Too old	年纪太大
<b>4</b>	Not at risk	没有危险
<b>5</b>	Cost of the test is too expensive	检查费用太高
<b>6</b>	Afraid of knowing the results	害怕知道检查结果
<b>7</b>	Inconvenient (e.g. clinic/hospital too far away, wait at clinic/hospital too long, English signs at clinic/hospital too confusing)	不方便 (例如诊所/医院太远, 在诊所/医院等待的时间太长, 诊所/医院的英文标示难以理解)
<b>8</b>	Not important	不重要
<b>9</b>	No time due to work/ family commitment (e.g. need to take leave, make alternative arrangement with family members)	由于工作/家庭责任, 没时间 (例如需要请假、和家庭成员另有安排)
<b>10</b>	Cannot afford cost of treatment if breast cancer is detected	治疗费用太高
<b>11</b>	Afraid of possible side effects	害怕可能有副作用
<b>12</b>	Too young	年纪太小
<b>13</b>	Painful test	检查太痛苦
<b>14</b>	Embarrassing (e.g. need to undress for the procedure, operator may not be female)	尴尬 (例如需要脱衣服检查, 检查人员可能不是女性)
<b>15</b>	Not suggested by doctors	医生没有建议
<b>16</b>	Never thought about it	从未想到过
<b>17</b>	Others, please specify: 其它, 请注明: _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**[For Male & Female respondents aged 50 years and above only]**

11016. [C] A blood stool test is a test to determine whether the stool contains blood. This test is done to detect colorectal cancer. When was the last time you had a blood stool test? **[SA]**

便血检查是一项判断粪便中是否含血的检查。该检查方法用来检测结肠直肠癌。您最后一次做便血检查是多久以前的事？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去 1 年或少于 1 年	<b>[Go to Q11017]</b>
2	More than 1 year to 2 years	超过 1 年但在 2 年以内	
3	More than 2 years to 3 years	超过 2 年但在 3 年以内	
4	More than 3 years to 5 years	超过 3 年但在 5 年以内	
5	More than 5 years ago	超过 5 年前	
6	Never been checked	从未检查过	
DO NOT READ			<b>[Go to Q11019]</b>
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

11017. [R] Why did you go for your last blood stool test? **[MA]**

您上次做便血检查的原因是什么？

DO NOT READ		
1	Know the importance of screening	了解检查的重要性
2	Show symptom of stool containing blood	出现大便带血的症状
3	Advised by doctors / nurses	医生/护士建议
4	My family members / friends / colleagues encouraged me	家庭成员/朋友/同事的鼓励
5	Read/ heard about it / saw an advertisement about blood stool test	读到/听到这项检查/看到便血检查的广告
6	Received a letter e.g. Screen for Life letter to encourage me to go for screening	收到鼓励我去检查的信件例如“定期体检，益您一生”的信件
7	Ad-hoc health screening	临时健康检查
8	Routine check-up	定期体检
9	Company / application health screening (e.g. pre-employment or permanent residency/ application)	公司/申请健康检查（例如入职前或永久居留申请）
10	Others, please specify: 其它，请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11018. [C] Where did you go for your last blood stool test? [SA]

您上次的便血检查是在哪里做的？

<b>DO NOT READ</b>		
<b>1</b>	Private GP (Screen for Life)	家庭医生（“定期体检，益您一生”）
<b>2</b>	Private GP (Non-Screen for Life)	家庭医生（非“定期体检，益您一生”）
<b>3</b>	Polyclinic	综合诊所
<b>4</b>	Specialist outpatient clinic (public hospital)	专科门诊诊所（公共医院）
<b>5</b>	Specialist outpatient clinic (private hospital)	专科门诊诊所（私人医院）
<b>6</b>	Workplace	工作场所
<b>7</b>	Community venue	社区场所
<b>8</b>	Overseas clinic/ hospital	国外的诊所或医院
<b>9</b>	Others, please specify: 其它，请注明： _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**[If Q11016 = “Never been checked”, “Refused” or “Don’t know / Not sure”]**

11019. [R] What are your reasons for not doing a blood stool test? [MA]

您从未做便血检查的原因有哪些？

<b>DO NOT READ (May choose more than one answer)</b>		
<b>1</b>	Not necessary as I am healthy	因为我很健康，所以不需要
<b>2</b>	Never heard about it	从未听说过
<b>3</b>	Too old	年纪太大
<b>4</b>	Not at risk	没有危险
<b>5</b>	Cost of the test is too expensive	检查费用太高
<b>6</b>	Afraid of knowing the results	害怕知道检查结果
<b>7</b>	Inconvenient (e.g. clinic/hospital too far away, wait at clinic/hospital too long, English signs at clinic/hospital too confusing)	不方便（例如诊所/医院太远，在诊所/医院等待的时间太长，诊所/医院的英文标示难以理解）
<b>8</b>	Not important	不重要
<b>9</b>	No time due to work/ family commitment (e.g. need to take leave, make alternative arrangement with family members)	由于工作/家庭责任，没时间（例如需要请假、和家庭成员另有安排）
<b>10</b>	Cannot afford cost of treatment if colorectal cancer is detected	治疗费用太高
<b>11</b>	Not suggested by doctors	医生没有建议
<b>12</b>	Never thought about it	从未想到过
<b>13</b>	Adverse to collecting stool	对于粪便收集感到反感
<b>14</b>	Others, please specify: 其它，请注明： _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**[Only for respondents aged 50 years and above]**

11020. [C] Sigmoidoscopy and colonoscopy are tests in which a tube is inserted in the large intestines to look for signs of colon cancer or other health problems. When was the last time you had a sigmoidoscopy or colonoscopy? **[SA]**

乙状结肠内窥镜检查 and 结肠内窥镜检查是一项把管子插入直肠来查看是否有结肠癌症或其它健康问题的测试。您最后一次接受乙状结肠内窥镜检查或结肠内窥镜检查是多久以前的事？

READ ONLY IF NECESSARY			
1	1 year ago or less	过去 1 年或少于 1 年	[Go to Q11021]
2	More than 1 year to 2 years	超过 1 年但在 2 年以内	
3	More than 2 years to 3 years	超过 2 年但在 3 年以内	
4	More than 3 years to 5 years	超过 3 年但在 5 年以内	
5	More than 5 years to 10 years	超过 5 年但在 10 年以内	
6	More than 10 years ago	超过 10 年前	
7	Never been checked	从未检查过	
DO NOT READ			
777	Refused	拒绝回答	[Go to Q11022 if male] [Go to Q11023 if female]
888	Don't know / Not sure	不知道 / 不肯定	

11021. [R] Why did you go for sigmoidoscopy or colonoscopy tests? **[MA]**

您去做乙状结肠内窥镜检查或结肠内窥镜检查的原因是什么？

DO NOT READ			
1	Routine check-up	定期体检	
2	I have symptoms (e.g. bleeding, change in bowel habits, pain, low blood count)	我有出现症状 (例如粪便出血、排便习惯改变、排便疼痛、血球计数低)	
3	I have abnormal results from the blood stool test	我的便血检查结果异常	
4	Others, please specify: 其它, 请注明: _____		
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

**[Only for Male respondents aged 50 years and above]**

11022. [R] A prostate specific antigen (PSA) test is a blood test for prostate cancer. When was the last time you had your PSA blood test? **[SA]**

前列腺特异性抗原检测是前列腺癌的血液测试。您最后一次进行前列腺特异性抗原检测是多久以前的事？

READ ONLY IF NECESSARY		
1	1 year ago or less	过去 1 年或少于 1 年
2	More than 1 year to 2 years	超过 1 年但在 2 年以内
3	More than 2 years to 5 years	超过 2 年但在 5 年以内
4	More than 5 years ago	超过 5 年前
5	Never been checked	从未检查过
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

**[For all Male & Female respondents]**

11023. [C] In the past 12 months, have you had an injection to protect you from getting flu? **[SA]**

在过去 12 个月里, 您有没有接受流行性感冒的免疫注射？

READ		
1	Yes	有
2	No	没有
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

11024. [C] Have you ever had pneumococcal vaccination before? **[SA]**

您是否曾有接种肺炎球菌疫苗？

READ		
1	Yes	有
2	No	没有
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 11. GO TO SECTION 12.**

## 12. PRIMARY CARE

12000. [C] Do you have a regular\* family doctor (i.e. a General Practitioner (GP) or Polyclinic) whom you will consult when you have a health problem? [SA]

您是否拥有固定的家庭医生或综合诊所，当您生病时可以去看病？

READ ONLY IF NECESSARY			
1	Yes, I have a regular family doctor in a private General Practitioner (GP) clinic	有，我有固定的家庭医生	[Go to Q12001]
2	Yes, I visit the same Polyclinic whenever I have a health problem	有，当我生病时我会探访同一所综合诊所看病	
3	No, I do not have a regular family doctor whom I consult	没有，我没有固定家庭医生去看病	[Go to Q12002]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

\* A regular family doctor is defined as a primary care physician/ Polyclinic who you turn to frequently or habitually for healthcare advice/consultation.

固定家庭医生指的是每当您需要医疗咨询，首先去求诊的医生或综合诊所。

12001. [C] What are the reasons you choose him/ her as your regular family doctor or visit the same polyclinic? [MA]

什么原因使您选择这位医生作为您的家庭医生或探访同一所综合诊所？

READ ONLY IF NECESSARY		
1	Professionally competent doctor / good doctor	医生的专业水平/医术高
2	Cheaper charges	医疗费用比较便宜
3	Convenient location, nearer to my home	地点方便，靠近住家
4	Convenient location, nearer to my workplace	地点方便，靠近工作地点
5	Have been seeing this doctor since young / for many years	从小就看这位医生/看这位医生很多年了
6	Others, please specify: 其它，请注明：_____	
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定
[Go to Q12003]		

12002. [C] What are the reasons that you do not have a regular family doctor? [MA]  
您没有固定的家庭医生或综合诊所的原因有哪些？

READ ONLY IF NECESSARY		
1	I see different doctors depending on convenience – whichever doctor is on duty near wherever I am	我会为了方便而选择看任何在值班的医生
2	I see different doctors depending on the health problems e.g. a general practitioner for mild illness such as cold or cough and a regular family doctor for chronic diseases (e.g. diabetes, hypertension, etc.)	我会随着不同的病情而选择看不同的医生。若是轻微疾病如咳嗽或感冒任何医生亦可。若是慢性疾病如糖尿病或高血压我会看 <u>固定</u> 的家庭医
3	I see different doctors because I compare the cost of visiting the different doctors	我会比较医疗费用而选择看不同的医生
4	I don't see the value / need to have a regular family doctor	我不认为有需要看固定的家庭医生
5	Others, please specify: 其它, 请注明: _____	
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

12003. [R] What would you do when you have a mild illness such as cold or cough? [SA]  
如果您患有感冒或咳嗽这类轻微疾病时, 您会怎么办？

DO NOT READ		
1	See a private GP	看家庭医生
2	See a polyclinic doctor	看综合诊所医生
3	Self-medicate	自行服药
4	Use complementary medicine	使用辅助医疗
5	Rest at home	在家休息
6	Others, please specify: 其它, 请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定



12004. [R] What would you do if you need urgent medical attention after office hours e.g. a sudden spike of high fever? [SA]

如果在办公时间后您要看急诊，例如突发高烧，您会怎么办？

DO NOT READ		
1	See a GP/ 24-hour GP clinic	看家庭医生/24 小时家庭医生诊所
2	Go direct to a 24-hour clinic at a private hospital	直接去私人医院的 24 小时门诊
3	Go direct to a public hospital A&E	直接去公共医院的急诊室
4	Go direct to a private hospital A&E	直接去私人医院的急诊室
5	Self-medicate	自行服药
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

12005. [R] What would you do if you think you may have a non-urgent but potentially serious medical problem e.g. you think you have some symptoms of cancer, diabetes, or chronic cough? [SA]

如果您认为自己可能患有严重（非急诊）疾病，例如您认为自己有癌症的一些症状，糖尿病，慢性咳嗽，您会怎么办？

DO NOT READ		
1	Make a private walk-in appointment with a public hospital Specialist Outpatient Clinic (SOC)	在公共医院的专科门诊非预约看病
2	See a private hospital specialist	找私人医院专科医生看病
3	See a GP / Family doctor	看家庭医生
4	See a polyclinic doctor	找综合诊所医生看病
5	Go direct to a public hospital A&E	直接去公共医院的急诊室
6	Go direct to a private hospital A&E	直接去私人医院的急诊室
7	Self-medicate	自行服药
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 12. GO TO SECTION 13.**

### 13. HEALTH STATE DESCRIPTIONS [R]

13000. Thinking about the last two weeks, how would you rate your level of stress on a scale of 1 to 5? Examples of stress include financial, work and emotional stress. **[SA]**

回想起前两周，您会如何衡量您的压力水平（以 1 为最少压力至 5 为最多压力）？  
（例如经济压力，工作压力以及情绪上的压力）

USE SHOWCARD		
1	One, little stress	一（最少压力）
2	Two	二
3	Three, moderate stress	三（适度的压力）
4	Four	四
5	Five, very stressed	五（最多压力）
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

13001. [R] When you experienced stressful situations over the past 2 weeks, how often were you able to cope with the stress? **[SA]**

回想起前两周，当您感到压力时，您是否能在大多数的情况下应付所面对的压力？

READ		
1	Most or all of the time	大多数的情况下都能应付
2	Could not cope most of the time	大多数的情况下都不能应付
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

13002. If you feel like you are constantly unable to cope with stress, would you be willing to seek help from a...? **[SA]**

若您觉得经常无法应付/面对压力时，您是否愿意向以下人士求助？

READ			
	1) Yes 是	2) No 否	777) Refused 拒绝回答
a. Healthcare professional, for example a counsellor, doctor, psychologist or psychiatrist? 医疗专业人士例如辅导员、医生、精神病医生、心理学家？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Friend, relative, colleague, religious leader or teacher in school? 朋友、亲戚、同事、宗教领袖、学校的老师？	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13003. [R] To your knowledge, what are the symptoms of dementia? [MA]  
据您所知，失智症有什么症状？

(Probe once if necessary: "any other symptoms?")

(若有需请再多问一次：“您还知道有什么其他的症状吗？”)

<b>DO NOT READ (for internal coding only)</b>		
<b>1</b>	Increasingly forgetful, affecting day-to-day life	越来越健忘以至影响到日常生活
<b>2</b>	Misplacing things and unable to find them	健忘以至找不到原先放置的东西
<b>3</b>	Difficulty completing familiar tasks and activities of daily living e.g. taking public transport, dressing themselves	在执行日常生活活动时面对困难例如乘搭公共交通或穿着衣服
<b>4</b>	Poor or decreased judgement e.g. wearing wrong clothes for the occasion	判断能力减少例如在某场合选择穿不适当的穿着
<b>5</b>	Difficulty expressing themselves and understanding what is going on, or call things by the wrong name	在表达自己时以及对于状况理解面对困难或把东西的名称混合
<b>6</b>	Confusion about the current time and place	把当前的时间和地点混合
<b>7</b>	Difficulty planning or solving problems	在规划/计划事情或解决问题时面对困难
<b>8</b>	Withdrawal from work or social activities	从工作或社交活动退出
<b>9</b>	Rapid changes in mood, emotions or behaviour	在情绪、情感、行为上有极速的转变
<b>10</b>	Change in personality, easily becoming suspicious and mistrustful	性情/性格大变，尤其变得易多疑与不信任他人
<b>11</b>	Others, please specify: 其它，请注明： _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**Interviewer:** Next, I would like to ask how you have been feeling, thinking and behaving over the last 2 weeks.

For each sentence, tell me which number on the scale ranging from 1: Strongly Disagree to 9: Strongly Agree best corresponds to how well each sentence describes you over the last 2 weeks.

接下来，我想问关于您在前两周内的心情、思想及行为。请仔细阅读以下句子。

请您在每个句子旁的比例表（从 1：强烈不同意至 9：强烈同意）选择最 代表您在前两周内的心情、思想及行为。

READ AND USE SHOWCARD								
1 Strongly Disagree 强烈不同意	2	3	4 Mildly Disagree 稍微不同意	5 Neither Agree Nor Disagree 不同意也不反对	6 Mildly Agree 稍微同意	7	8	9 Strongly Agree 强烈同意
								<b>Score [1 to 9]</b>
13101a.	I am optimistic about the future. 我对未来感到乐观。							
13101b.	I am spiritual. 我的心灵感到满足。							
13101c.	I am able to accept myself. 我能够接受自己。							
13101d.	I am able to accept reality. 我能够接受现实。							
13101e.	I am able to cope with life's challenges. 我能够应付生活的挑战。							
13101f.	I am calm. 我感到镇定。							
13101g.	I am not depressed. 我不会感到忧郁。							
13101h.	I am able to make friends. 我能够交朋友。							
13101i.	I have the strong support of my family and friends. 我有朋友与家人的支持及鼓励。							
13101j.	I seek for self-development/growth/cultivation. 我寻求自我提升/成长/修炼。							
13101k.	I am able to offer help to others. 我能够帮助其他人。							
13101l.	I am appreciative of life. 我对生活具有欣赏力。							
13101m.	I appreciate my own self-worth. 我赏识我的自我价值。							
13101n.	I am happy. 我感到开心。							
13101o.	I am able to think clearly. 我能够清楚地思考。							
13101p.	I am able to make good decisions. 我能够做好的决定。							

**END OF SECTION 13. GO TO SECTION 14.**

## 14. DENTAL HEALTH

**Interviewer:** Now, I would like to ask you some questions about your dental health.  
现在，我想问您关于口腔健康的问题。

14000. [C] How often do you visit a dentist? [SA]  
您多久一次看牙医？

READ ONLY IF NECESSARY			
1	Once every 6 months	每 6 个月一次	[Go to Q14001]
2	At least once a year	至少一年一次	
3	At least once every 2 years	至少每两年一次	
4	Only if there is pain or when I have a dental problem	只有在有牙疼或有口腔问题的时候	
5	Others, please specify: 其它，请注明：_____		
DO NOT READ			
666	Have never been to a dentist	从未看过牙医	[Go to Q14004]
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

14001. [C] When was the last time you visited a dentist? [SA]  
您上一次看牙医是什么时候？

READ ONLY IF NECESSARY			
1	Less than 6 months ago	过去 6 个月内	[Go to Q14002]
2	6-12 months ago	6 到 12 个月内	
3	More than a year, but less than 2 years ago	超过 1 年，但少过 2 年内	
4	2 years or more, but less than 5 years ago	2 年以上，但少过 5 年内	
5	At least 5 years ago	至少 5 年以前	
DO NOT READ			
777	Refused	拒绝回答	[Go to Q14004]
888	Don't know / Not sure	不知道 / 不肯定	

14002. [R] What was the reason for your most recent visit to a dentist? [SA]  
 您上一次探访牙医是什么原因?

USE SHOWCARD		
1	I was experiencing dental problems (e.g. toothache, swollen or bleeding gums)	我当时患有口腔问题（譬如：牙疼、牙龈肿胀或流血）
2	For treatment/ follow-up treatment (e.g. dentures, root canal treatment, teeth whitening)	为了牙科治疗（譬如：做假牙、根管治疗、美白牙齿）
3	I thought it was time for a check-up	我认为是进行检查的时候
4	The dentist reminded me it was time for a check-up	牙医提醒我是检查的时候
5	Others, please specify: 其它，请注明： _____	
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

[If Q14001 = “1” or “2”]

14003. [R] Where did you go for your dental visit in the past 12 months and how many times did you visit? [MA]

您在过去 12 月内到什么地方进行牙科治疗，探访次数是多少？

USE SHOWCARD				
	Location 地点	Number of times visited in the past 12 months 前 12 月内探访次数	777) Refused 拒绝回答	888) Don't know / Not sure 不知道 / 不肯定
a.	Polyclinic dental clinic 综合诊所牙科诊所			
b.	National Dental Centre (NDC) / National University Centre for Oral Health (NUCOH) (including NUH dental centre and NUS dental training centre) 全国牙科中心/国大口腔卫生中心 (包括国大医院牙科中心和牙科 训练中心)			
c.	Public hospital dental clinic (including <ul style="list-style-type: none"> <li>• Changi General Hospital (CGH)</li> <li>• Ng Teng Fong General Hospital (NTFGH)</li> <li>• Khoo Teck Puat Hospital (KTPH)</li> <li>• KK Women's and Children Hospital (KKH)</li> <li>• Sengkang General Hospital (SKH)</li> <li>• Tan Tock Seng Hospital (TTSH))</li> </ul> 公共医院牙科诊所 (包括 <ul style="list-style-type: none"> <li>• 樟宜综合医院 (CGH)</li> <li>• 黄廷芳综合医院 (NTFGH)</li> <li>• 邱德拔医院 (KTPH)</li> <li>• 竹脚妇幼医院 (KKH)</li> <li>• 盛港综合医院 (SKH)</li> <li>• 陈笃生医院 (TTSH))</li> </ul>			
d.	Private dental clinic (including dental clinic in private hospitals) 私人牙科诊所 (包括私人医院的 牙科诊所)			
e.	Others, please specify: 其它, 请注明: _____			

**[If Q14001 NOT = “1” or “2”]**

14004. [R] What were the reason(s) for not visiting a dentist in the past 12 months? [MA]

您在过去 12 月内没有探访牙医的原因是？

<b>DO NOT READ</b>		
<b>1</b>	No time	没有时间
<b>2</b>	Too expensive	牙科服务费用太昂贵
<b>3</b>	No one to accompany/ take me to a dentist	没人陪伴/带我看牙医
<b>4</b>	Do not see the need to see a dentist	没有必要看牙医
<b>5</b>	Afraid of pain/ visiting a dentist	怕痛/ 怕看牙医
<b>6</b>	Long waiting time for a dental appointment*	牙科预约等候时间太长*
<b>7</b>	Have to travel too far to a dental clinic	牙医诊所太远
<b>8</b>	Difficult to get to a dental clinic	不方便探访牙科诊所
<b>9</b>	Others, please specify: 其它, 请注明: _____	
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

\* *Waiting time for a dental appointment refers to the duration between the date the patient makes a dental appointment, and the date he/she is seen by the dentist (NOT the waiting time at the dental clinic on the day of appointment itself).*

牙科预约等候时间指的是患者预约的日期和探访牙医的日期之间的等候时间（而不是患者在牙医诊所等候看牙医的时间。）

**END OF SECTION 14. GO TO SECTION 15.**



## 15. ADDITIONAL DIABETES QUESTIONS

15000. [C] Do you think diabetes is preventable? [SA]

您觉得糖尿病是否可以预防吗？

READ		
1	Yes	是
2	No	否
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

15001. [C] To your knowledge, what are some ways to prevent diabetes? [MA]

据您所知，有哪些方法可以预防糖尿病呢？

<write response 写回应>

DO NOT READ (for internal coding only)		
1	Exercise regularly	经常运动
2	Exercise for at least 150 minutes per week	每周运动至少 150 分钟
3	Go for regular health screening	定期体检
4	Go for blood sugar / blood glucose screening / testing	检查血糖/血糖检验/测试
5	Eat a balanced diet	注意饮食平衡
6	Eat more fruits and/or vegetables	多吃水果和/或蔬菜
7	Eat wholegrains / brown rice	吃全谷物/糙米
8	Eat less sweetened food	少吃甜食
9	Eat less carbohydrate rich food (e.g. rice/ bread/ noodle)	少吃碳水化合物（比如米饭/面包/面条）
10	Eat lower calorie meals / foods	吃低卡路里的食物
11	Limit processed foods	减少工业加工的食品
12	Have "siu dai" / lower sugar beverage	喝少糖的饮品
13	Do not smoke / quit smoking	不吸烟/戒烟
14	Control your blood pressure	控制血压
15	Manage / Lose weight	控制体重/减肥
16	Manage stress	调节压力
17	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

15002. [C] I am now going to read out some statements to you, for each statement you may answer Yes, No or Maybe. [SA]

现在，我会读几个句子给您听，请告诉我您对每一个句子的答案是对，错或是也许。

Statement 句子	1) Yes 是	2) No 错	3) Maybe 也许	DO NOT READ	
				777) Refused 拒绝回答	888) Don't know / Not sure 不知道 / 不肯定
(a) A person with diabetes can lead a normal life if his sugar level is well controlled. 患糖尿病的人如果能够控制好血糖水平，可以有正常的生活。					
(b) A person with diabetes should avoid exercise. 患糖尿病的人不应该做体育运动。					
(c) Eating exclusively starchy food such as white rice and white bread increases a person's chance of getting diabetes. 只吃高淀粉食物，比如白米饭和白面包会增加患糖尿病的几率。					
(d) People with diabetes cannot eat sweets or sugar. 患糖尿病的人不能吃甜食或糖。					

15003. [R] Have you heard of the condition "pre-diabetes"? [SA]

您是否有听说过“糖尿病前期”这个病症？

READ		
1	Yes	有
2	No	没有
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

15004. [C] Diabetes can lead to some health conditions. What are some of these conditions? [MA]  
 糖尿病能够引起一些其它病症。下面哪些病症可能由糖尿病引发呢？

READ (May choose more than one answer)		
1	Kidney Disease	肾病
2	Stroke	中风
3	Heart Disease / Heart Attack	心脏病/心脏病发作
4	Foot Amputation	截肢
5	Blindness	眼盲
6	Cancer	癌症
7	Others, please specify: 其它, 请注明: _____	
DO NOT READ		
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

[If respondent does not have diabetes, Q7001 = "2", "3", "4", "777" or "888"]

15005. [R] On a scale of 1 to 7, how severe do you think diabetes is? [SA]  
 您觉得糖尿病的严重性多大？

USE SHOWCARD		
1	One (Not severe at all)	一 (不严重)
2	Two	二
3	Three	三
4	Four (Normal / Average)	四 (平常 / 平等)
5	Five	五
6	Six	六
7	Seven (Extremely severe)	七 (非常严重)
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

**[If respondent does not have diabetes, Q7001 = “2”, “3”, “4”, “777” or “888”]**

15006. [R] On a scale of 1 to 7, how likely do you think you are to have diabetes? [SA]

您觉得您患糖尿病的可能性有多大？

USE SHOWCARD		
1	One (Not likely)	一（不可能）
2	Two	二
3	Three	三
4	Four (Neutral)	四（一般）
5	Five	五
6	Six	六
7	Seven (Very likely)	七（非常可能）
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 15. GO TO SECTION 16.**

## 16. BREASTFEEDING (FOR WOMEN WITH CHILDREN BELOW 7 YEARS OLD ONLY) [R]

16000. Did you breastfeed your youngest child? [SA]

您是否有为您最年幼的孩子进行母乳喂养？

READ			
1	Yes	有	[Go to Q16001]
2	No	没有	[Go to Section 17]
DO NOT READ			
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

16001. How old was your youngest child when you stopped breastfeeding him/her completely? [MA]

请问您最年幼的孩子在您完全停止母乳喂养时是几岁？

	Days	天
	Months	月
	Years	年
DO NOT READ		
666	Currently still breastfeeding	目前仍然进行母乳喂养
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

16002. How old was your youngest child when he/she was first fed formula milk? [SA]

请问您最年幼的孩子第一次喝配方奶粉时是几岁？

READ ONLY IF NECESSARY			
1	0 to 6 months, please specify: ____months	0 到 6 个月, 请注明: ____ 月	[Go to Q16003]
2	More than 6 months	超过 6 个月	[Go to Section 17]
DO NOT READ			
666	Have not started on formula milk	未开始喝配方奶粉	
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

16003. How old was your youngest child when he/she was first fed baby foods such as purees, rice cereals and solid food? **[SA]**

请问您最年幼的孩子第一次吃婴儿食品时（例如泥状食物、米谷物及固体食物）是几岁？

<b>READ ONLY IF NECESSARY</b>		
<b>1</b>	0 to 3 months old	0 到 3 个月
<b>2</b>	4 to 6 months old	4 到 6 个月
<b>3</b>	7 to 9 months old	7 到 9 个月
<b>4</b>	After 9 months old	超过 9 个月
<b>DO NOT READ</b>		
<b>666</b>	Have not started on baby foods	未开始吃婴儿食品
<b>777</b>	Refused	拒绝回答
<b>888</b>	Don't know / Not sure	不知道 / 不肯定

**END OF SECTION 16. GO TO SECTION 17.**

## 17. TRADITION CHINESE MEDICINE (TCM) [R]

**Interviewer:** I would like to ask questions on consultations with a traditional Chinese medicine (TCM) practitioner. A TCM practitioner could be a TCM physician, a Chinese sinseh, herbalist, bone setter or an acupuncturist.

我要问一些有关您去找中医师看病的情况。TCM 执业医师可以是中医师，中医 sinseh，草药师，正骨师或针灸师。

17000. When was your last visit to a TCM practitioner for a medical condition? **[SA]**

您最近一次看中医是什么时候？

READ ONLY IF NECESSARY			
<b>1</b>	Less than 6 months ago	过去 6 个月内	<b>[Go to Q17001]</b>
<b>2</b>	6 months to less than 1 year	6 个月至少过 1 年内	
<b>3</b>	1 year to less than 2 years	1 至少过 2 年内	
<b>4</b>	2 years to less than 5 years	2 至少过 5 年内	
<b>5</b>	At least 5 years ago	至少 5 年以前	
<b>6</b>	Never visit a TCM practitioner before	从未看过中医师	<b>[Go to Section 18]</b>
DO NOT READ			
<b>777</b>	Refused	拒绝回答	
<b>888</b>	Don't know / Not sure	不知道 / 不肯定	

17001. What were the medical conditions you sought treatment for from a TCM practitioner? [MA]  
您找中医师治疗哪方面的健康问题？

DO NOT READ		
1	Acute minor illnesses like flu / cough / cold	伤风感冒/咳嗽/感冒等急性轻微疾病
2	Acute major illnesses like pneumonia / heart attack	肺炎/心脏病等急性重大疾病
3	Acute minor injuries like sprains / strains	扭伤/拉伤等急性轻微外伤
4	Acute major injuries like fractures / dislocation	骨折/脱臼等急性重大外伤
5	Cancer	癌症
6	Chronic aches and pain like headache / backache / rheumatism	头痛/背痛/风湿病等慢性疼痛
7	Chronic conditions like diabetes / hypertension / high blood cholesterol / asthma	糖尿病/高血压/ 高血脂/哮喘缓解期 (非急性哮喘)
8	Gastro-intestinal problems like poor appetite / indigestion / constipation / diarrhoea	胃肠道问题, 如食欲不振/消化不良/便秘/腹泻
9	General well-being	整体调理
10	Gynaecological / Obstetric conditions e.g. infertility / menstrual problem	妇科/产科, 如不孕不育/月经问题
11	Mental health e.g. sleep disorders / depression/ anxiety	心理健康如睡眠问题/忧郁症/焦虑
12	Rehabilitative treatments e.g. post-stroke/ facial paralysis	康复治疗如中风/面瘫
13	Others, please specify: 其它, 请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定



17002. What were the medical conditions you sought treatment for from **both** a TCM practitioner and a Western-trained doctor? **[MA]**

您找中医师及西医治疗哪方面的健康问题?

DO NOT READ			
1	Acute minor illnesses like flu / cough / cold	伤风感冒/咳嗽/感冒等急性轻微疾病	<b>[Go to Q17003]</b>
2	Acute major illnesses like pneumonia / heart attack	肺炎/心脏病等急性重大疾病	
3	Acute minor injuries like sprains / strains	扭伤/拉伤等急性轻微外伤	
4	Acute major injuries like fractures / dislocation	骨折/脱臼等急性重大外伤	
5	Cancer	癌症	
6	Chronic aches and pain like headache / backache / rheumatism	头痛/背痛/风湿病等慢性疼痛	
7	Chronic conditions like diabetes / hypertension / high blood cholesterol / asthma	糖尿病/高血压/ 高血脂/哮喘 缓解期（非急性哮喘）	
8	Gastro-intestinal problems like poor appetite / indigestion / constipation / diarrhoea	胃肠道问题，如食欲不振/消化不良/便秘/腹泻	
9	General well-being	整体调理	
10	Gynaecological / Obstetric conditions e.g. infertility / menstrual problem	妇科/产科，如不孕不育/月经问题	
11	Mental health e.g. sleep disorders / depression/ anxiety	心理健康如睡眠问题/忧郁症/焦虑	
12	Rehabilitative treatments e.g. post-stroke/ facial paralysis	康复治疗如中风/面瘫	
13	Others, please specify: 其它，请注明: _____		
14	None	无	<b>[Go to Q17004]</b>
777	Refused	拒绝回答	
888	Don't know / Not sure	不知道 / 不肯定	

17003. What were the reasons you consulted both a Western-trained doctor and a TCM practitioner for the medical condition(s) indicated in Q17002? **[MA]**

什么原因使您找西医及中医师治疗 Q17002 所列的健康问题?

DO NOT READ		
1	Get a medical certificate (MC) from my Western-trained doctor as MC from my TCM practitioner is not recognised by my company	我的工作单位不承认我的中医师所开的病假单，所以得找西医发病假单
2	Seek TCM consultation as I have not recovered after western medicine treatment	西医治疗后还没康复，所以找中医治疗
3	Seek western medicine consultation as I have not recovered after TCM treatment	中医治疗后还没康复，所以找西医治疗
4	Believe concurrent treatment will lead to faster / better outcome	我相信同时接受中西医治疗可得到更快、更好的效果
5	First treatment by Western-trained doctor is expensive and would like to seek TCM consultation as it is cheaper	西医的第一次治疗诊费昂贵，找中医治疗比较便宜
6	First treatment by TCM practitioner is expensive and would like to seek Western medicine treatment as it is cheaper	中医的第一次诊费价格昂贵，找西医看诊比较便宜
7	Others, please specify: 其它，请注明: _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

17004. Does the TCM practitioner usually prescribe/ perform the following during your consultation?

在您接受诊治期间，中医师是否通常为您开以下的药方/进行下述治疗?

USE SHOWCARD					
	Treatment 治疗	1) Yes 是	2) No 否	777) Refused 拒绝回答	888) Don't know / Not sure 不知道 / 不肯定
a.	Herbal medicine (raw herbs) <b>[SA]</b> 草药 (原草药)				
b.	Herbal medicine (processed in powder, tablet or liquid form) <b>[SA]</b> 草药 (已提炼成药粉、药丸或药水)				
c.	Needle acupuncture <b>[SA]</b> 针灸				
d.	Cupping <b>[SA]</b> 拔罐				
e.	TCM tuina / massage <b>[SA]</b> 推拿/按摩				
f.	Bone setting/ manipulations <b>[SA]</b> 正骨				
g.	Others 其它 <b>[Go to Q17004g(i) for "1"]</b>				

17004g(i) [If respondent selected "1" for Q17004g, please specify below]:

其它（请注明）：

17005. Where do you usually go to consult a TCM practitioner? [SA]

您通常到哪里看中医师？

USE SHOWCARD		
1	Charitable clinics such as Thong Chai, Chung Hwa or Public Free Clinic	慈善诊所如同济医院 (Thong Chai)、中华医院 (Chung Hwa) 或大众医院
2	Private TCM clinics e.g. in HDB estates (including those found in Chinese medical halls), shopping malls and specialist medical centres	私立中医诊所如在 HDB 组屋区的中医诊所（包括中药店内的诊所）、购物中心、专科医疗中心的中医诊所
3	Co-located private TCM clinics located in hospitals and nursing homes e.g. <ul style="list-style-type: none"> <li>Beijing Tongren Tang in Institute of Mental Health (IMH)</li> <li>Eu Yan Sang TCM Clinic in Khoo Teck Puat Hospital (KTPH)</li> <li>Raffles Chinese Medicine Clinic in Raffles Hospital (RH)</li> <li>Thomson Chinese Medicine Clinic in Thomson Medical Centre (TMC)</li> <li>Thye Hua Kwan TCM Medical Centre in Ang Mo Kio-Thye Hua Kwan Hospital (AMK-THK)</li> <li>Kwong Wai Shiu TCM Centre in Kwong Wai Shiu Hospital (KWSH)</li> </ul>	设在医院内或疗养院的私立中医诊所如： <ul style="list-style-type: none"> <li>新加坡心理卫生医院内的北京同仁堂中医诊所</li> <li>邱德拔医院内的余仁生中医诊所</li> <li>莱佛士医院内的莱佛士中医诊所</li> <li>康生医院里的康生中医诊所</li> <li>宏茂桥太和观医院的宏茂桥太和观中医诊所</li> <li>广惠肇留医院的广惠肇中医诊所</li> </ul>
4	In-house pain management/acupuncture services in public hospitals e.g. <ul style="list-style-type: none"> <li>Ang Mo Kio-Thye Hua Kwan Hospital (AMK-THK)</li> <li>Alexandra Hospital (AH)</li> <li>National University Hospital (NUH)</li> <li>Singapore General Hospital (SGH)</li> <li>Tan Tock Seng Hospital (TTSH)</li> <li>Khoo Teck Puat Hospital (KTPH)</li> <li>Institute of Mental Health (IMH) under the National Addictions Management Services (NAMS)</li> </ul>	公共医院内的疼痛管理/针灸诊所如： <ul style="list-style-type: none"> <li>宏茂桥太和观医院</li> <li>亚历山大医院</li> <li>国立大学医院</li> <li>新加坡中央医院</li> <li>陈笃生医院</li> <li>邱德拔医院</li> <li>新加坡心理卫生医院内的国立成瘾治疗服务中心</li> </ul>
5	In-house acupuncture services in nursing homes e.g. <ul style="list-style-type: none"> <li>Econ Medicare Centre</li> <li>Society for the Aged Sick</li> <li>Moral Home</li> <li>Man Fut Tong Nursing Home</li> <li>Kwong Wai Shiu Hospital</li> <li>Bright Hill Evergreen Home</li> </ul>	疗养院内提供的针灸服务如： <ul style="list-style-type: none"> <li>宜康医疗保健中心</li> <li>安老协会</li> <li>德教济疗养院</li> <li>万佛堂疗养院</li> <li>广惠肇留医院</li> <li>光明山修身院</li> </ul>
6	Others, please specify: 其它，请注明： _____	
777	Refused	拒绝回答
888	Don't know / Not sure	不知道 / 不肯定

17006. What are the reasons you seek TCM treatment?

您寻找中医治疗的原因是什么？

USE SHOWCARD					
		1) Yes 是	2) No 否	777) Refused 拒绝回答	888) Don't know / Not sure 不知道 / 不肯定
a.	TCM is effective for the condition I am suffering from <b>[SA]</b> 中医能有效治疗我的病				
b.	TCM is holistic and takes care of the whole body <b>[SA]</b> 中医重视整体治疗				
c.	TCM products has less side effects than Western medicine <b>[SA]</b> 中药物比西药副作用少				
d.	I have tried Western medicine but it does not work <b>[SA]</b> 我曾接受西医诊疗，但是没有效果				
e.	I have been seeing a TCM practitioner since I was young <b>[SA]</b> 我从小就一直找中医师看病				
f.	It is cheaper to see a TCM practitioner than a Western doctor <b>[SA]</b> 找中医师看病要比找西医便宜				
g.	Others 其它 <b>[Go to Q17006g(i) for "1"]</b>				

17006g(i) [If respondent selected "1" for Q17006g, please specify below]:

其它（请注明）：

---

END OF SECTION 17.

**Annex B**  
**Project Team**

<b>Survey Planning, Preparation, Fieldwork &amp; Survey Report</b>	<b>Survey Report (Writers)</b>
<p style="text-align: center;"><u>MOH</u> Dr Derrick Heng Dr Lyn James Dr Stefan Ma Irene Soh Lee Chee Min</p> <p style="text-align: center;"><u>HPB</u> Dr Annie Ling Dr Foo Ling Li Daniel Lin Angela Koh Karthikayen Jayasundar</p>	<p style="text-align: center;"><u>MOH</u> Irene Soh (Editor) Lily Chua Ai Vee Chua Yi Xian Chaw Wei Liang</p>