

# WHO STEPS survey on risk factors for noncommunicable diseases

## Maldives, 2011

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Country Office for the Republic of Maldives



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## Acronyms

BMI	body mass index
CDC	Centers for Disease Prevention and Control
DBP	diastolic blood pressure
GPAQ	Global Physical Activity Questionnaire
HDL	high-density cholesterol
MET	metabolic equivalent task
NCD	noncommunicable disease
SBP	systolic blood pressure
STEPS	WHO STEPwise approach to surveillance
TQS	tobacco questions in surveys
WHO	World Health Organization
WHO FCTC	WHO Framework Convention on Tobacco Control



## Acknowledgements

The World Health Organization (WHO) STEPS survey on risk factors for noncommunicable diseases (NCDs) is the second population-based survey on NCDs in the Republic of Maldives. It was undertaken to estimate the prevalence of risk factors for NCDs and review the impact of the National Strategic Plan 2008–2010 for Prevention and Control of NCDs. The survey was conducted within the framework of cooperation between the Ministry of Health (MOH) and WHO. Dr Aminath Jameel (Minister of Health, 2008–2012) and Dr Ahmed Jamsheed Mohamed (Minister of Health, 2012–2013) consistently provided leadership, support and guidance. Dr Akjemal Magtymova, WHO Representative to the Republic of Maldives, led the WHO coordination efforts and provided technical guidance throughout.

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## Executive summary

The first round of the WHO STEPwise approach to surveillance (STEPS) survey was conducted in the Maldives in 2004. A repeat STEPS survey was conducted in 2011 to estimate the prevalence of risk factors for noncommunicable diseases (NCDs) and evaluate the implementation of the National Strategic Plan 2008–2010 for the prevention and control of NCDs. The repeat survey was also intended for continuing surveillance of risk factors as recommended by the WHO STEPwise approach. The survey was restricted to the population of Malé city, the capital of the Maldives.

A total of 1780 individuals (664 men and 1116 women) aged 15–64 years and residing in Malé participated in the STEPS survey in 2011. The proportion of current smokers among the respondents was 18.8% (34.7% of men and 3.4% of women). Among the survey population, 15.5% (29.1% of men and 2.2% of women) smoked daily. The mean age at which respondents started smoking was 17.8 years. The average number of manufactured cigarettes smoked per day by daily smokers was 14.0. The proportion of current drinkers (who had drunk alcohol in the past 30 days) accounted for 0.9% of respondents (1.6% of men and 0.2% of women).

In a typical week, study respondents consumed fruits and vegetables on 3.3 days and 3.8 days, respectively. On average, 92.6% of men and 94.6% of women ate less than five servings of fruits and/or vegetables per day. The percentage of respondents who reported low levels of physical activity, i.e. those not meeting the current recommendations for physical activity for health was 45.9% (39.1% of men and 52.4% of women). The median number of minutes spent by the respondents on physical activity per day was 34.3 minutes (60.0 minutes among men and 21.4 minutes among women), indicating that half the population engaged in less than 34.3 minutes of physical activity per day.

The mean body mass index (BMI) was  $23.7 \text{ kg/m}^2$ , with men and women having a mean BMI of  $23.2 \text{ kg/m}^2$  and  $24.2 \text{ kg/m}^2$ , respectively. Obesity was present in 8.6% of men and 14.5% of women. The average systolic blood pressure (SBP) and diastolic blood pressure (DBP) was 122.8 mmHg and 76.5 mmHg, respectively, for men and 116.7 mmHg and 74.5 mmHg, respectively, for women. The prevalence of raised blood pressure (SBP  $\geq 140 \text{ mmHg}$  and/or DBP  $\geq 90 \text{ mmHg}$  or currently on medication for raised blood pressure) among the respondents was 16.6% (19.0% among men and 14.3% among women). It was observed that 83% of respondents with raised BP were not getting treatment; this proportion was higher among men (86.2%) than women (79%). A comparison of the risk factor distribution with the 2004 survey showed only a slight decrease in current smoking rates and increasing prevalence of hypertension, which point to the need for further public health action.



## 1. Introduction

Rapid changes in demography and social and economic development play an important role in the emergence of noncommunicable diseases (NCDs) as a public health problem (1). The growing burden of NCDs represents a major challenge, not only for developed countries but also for developing countries. The risk factors underlying major NCDs (heart disease, stroke, diabetes, cancer and respiratory disease) have been well documented and are well known (2).

Data show that chronic NCDs are responsible for 63% of all deaths globally (1,3). The magnitude of morbidity, mortality and economic loss resulting from NCDs calls for an immediate and concerted effort to strengthen health systems through multisectoral actions. Examples of such actions include better city planning and transport regulations to avoid pollution and promote walking, and improving agricultural produce so that fruits and vegetables can be made available at affordable prices. The WHO STEPwise approach to risk factor surveillance (STEPS) is one of the key steps in this direction. Surveillance involves ongoing collection of data for better decision-making, which can help in public health action and health promotion activities.

The STEPS approach was developed by WHO in 2002 (4). It focuses on obtaining core data on the established risk factors that determine the major disease burden. WHO has identified eight major risk factors that play a significant role in the development of chronic NCDs. These have been included in the STEPS risk factor surveillance on the bases that these have the greatest impact on mortality and morbidity due to NCDs, modification of these risk factors is possible through effective prevention, and measurement of these risk factors has been proven to be valid and can be obtained using appropriate ethical standards. These include four behavioural risk factors – tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity – and four biological risk factors – overweight and obesity, raised blood pressure, raised blood glucose and abnormal blood lipids, including raised total cholesterol.

The most crucial aspect of these risk factors is the fact that alterations in these factors reduce morbidity and mortality. A study in Finland noted that modifications in blood pressure, smoking and serum cholesterol resulted in a 66% and 60% fall in mortality due to stroke among men and women, respectively, and a 55% and 68% fall in mortality from ischaemic heart disease among men and women, respectively, during a 20-year period (5,6).

Thus, understanding these risk factors plays an important role in reducing the incidence of NCDs. Social structure, and environmental, lifestyle and physiological influences are important in predicting cardiovascular morbidity and mortality.

Interventions to modify major risk factors such as blood pressure, tobacco use, diet and weight are crucial to achieving a healthy life free from NCDs.

The Maldives responded to WHO's call to Member countries to implement risk factor surveillance for NCDs, focusing on selected risk factors as a means for prevention and control of NCDs. The Maldives carried out the first STEPS survey in the capital Malé in the year 2004. This survey found that 22% of the respondents were current daily smokers; 93.9% of the respondents consumed inadequate quantities of fruits and vegetables; 42.6% were inactive in all domains of physical activity; 47.1% were overweight with a BMI  $\geq 25$  and 9.8% had hypertension (7).

A repeat STEPS survey was conducted after seven years, with the intention of continuing surveillance for risk factors, as recommended by the WHO STEPwise approach. A second objective was to examine the prevalence and trends of NCDs, and evaluate implementation of the National Strategic Plan 2008–2010 for the prevention and control of NCDs.

## 2. Rationale and objectives of the study

Following the NCD STEPS survey of 2004, direct interventions targeted at the population of Malé region have been few. The limitation has been the lack of institutional capacity for delivering health promotion programmes in the Malé region. Although public health programmes are centrally directed from the Malé region, there is no public health unit in operation in Malé except for one centre dedicated to vaccination and child health activities.

Despite the lack of specific interventions, behavioural and structural changes have taken place in Malé since 2004. Malé, being the capital of the Maldives, has over a third of the population of the Maldives, i.e. 120 000 people living within 1 sq.km. Despite having a higher per capita income, there are wide income disparities and joblessness with the associated susceptibility to violence, leading to injuries and mental health issues. Moreover, families and persons who migrate to Malé for economic reasons are often isolated from their relatives, live in poor housing conditions and consume food that is poor in nutrition.

However, Malé is also home to an educated population that has access to health information through various media. The population of Malé is regularly exposed to advice from available experts through television. Some radio channels host regular health programmes. The number of people who use public recreational spaces for exercise has risen over the years. This especially includes the elderly and the normally homebound "housewives".

At a structural level, changes have been seen in the demographics, incomes and physical environment of Malé during the past five years, all of which have a bearing on the risk exposure and risk development in the population. In particular, the changed physical environment has a bearing on the stress levels and recreational spaces available for physical activity and mental relaxation. While Malé is congested, the other two islands in the capital region, Vilingili and Hulhumale, are less congested and, in future surveys, it may be of interest to see the effect of these different living environments on the risk profile.

Some other risk-promoting factors have also increased in Malé, such as the number of motorized vehicles and availability of imported food items, especially processed foods.

### 2.1 Study objectives

The overall objective of the STEPS survey was to study the prevalence of major risk factors for NCDs and the distribution pattern of these among the Malé population. For logistical reasons, the survey was restricted to Malé.

The specific objectives were:

- to collect consistent data in Malé
- to help the health services plan and determine public health priorities
- to predict the future caseload of chronic diseases
- to monitor and evaluate populationwide interventions.

### **3. Research methodology**

#### **3.1 Research design**

This was a cross-sectional study to assess the prevalence of risk factors for NCDs among the population in Malé city. The purpose was to generalize from a study sample to the overall urban population so that inferences could be made about the different characteristics and behaviour patterns among the urban population.

#### **3.2 Data collection: selection, training and implementation**

Trained interviewers visited households to collect data for the interview and physical measurement components of the survey. All interviewers were educated at least to the secondary level. Efforts were made to see that the interviewer characteristics were as similar as possible. Each interviewer signed a contract outlining the terms of reference for his/her task in order to ensure that full confidentiality and privacy of the respondents were maintained at all times.

Selected participants from households were interviewed using a structured questionnaire. Survey respondents were then referred to trained health-care workers familiar with clinical procedures, who collected blood samples for the clinical modules of the survey. Training specific to data collection procedures for surveys was provided to these health-care workers for carrying out field work. These clinical field personnel also signed a contract outlining their terms of reference.

A supervisor was responsible for quality control and all administrative and logistic matters while in the field. A chief investigator from the Decision Support Division of the Ministry of Health and Family was in charge of planning and implementing the field work, carrying out analysis and disseminating the results of the study. A central core team of members was formed to oversee implementation at various stages of the survey.

#### **3.3 Study area**

The capital city, Malé, whose population accounts for one third of the total population of the Maldives, was the study area for this survey. It would have been ideal to have data that was representative of the entire country; however, due to resource constraints, especially related to the cost of transportation between islands, it was decided to restrict the survey to Malé alone. As the first STEPS survey in 2004 had also been conducted in Malé (7), a repeat survey in the same city would highlight the changes that had taken place in NCD risk factors.

#### **3.4 Study population, sample design and sample selection**

The target population of the study was individuals, both men and women, between the ages of 15 and 64 years residing in households of Malé. Stratified multistage sampling was used to select samples of individuals from all six wards of the capital. A listing of households from these six wards was obtained from the Census 2006 household lists. The

second stage of sampling involved the selection of respondents to interview from the households selected. The total sample size of the survey was 2000, and the Kish method recommended by STEPS surveillance was used to select an eligible person from each of the selected households (2).

The number of households selected per ward was based on proportional stratification across the six wards. Table 1 gives the names of the wards, the total number of households in the wards available from the Census 2006 and the proportionate number of the households selected from each ward.

**Table 1. Total number of households in the wards and proportionate number of household selected**

S. No.	Name of ward	Total households (N)	Proportionate household size (n)
1	Henevuru	3 321	471
2	Galolhu	2 719	385
3	Machchangolhi	2 577	365
4	Maafannu	4 136	587
5	Villingili	1 006	143
6	Hulhumale	344	49
<b>Total</b>		<b>14 103</b>	<b>2 000</b>

Households were selected using systematic random sampling. The sampling interval for selecting households was obtained by dividing the number of cumulative households in the ward by the number of households selected from the ward ( $N/n$  in Table 1). To select the first household, a number was randomly chosen between 1 and the sampling interval, and started from the top of the list.

Sampling was primarily done without replacement. However, where a selected household was found to no longer be a household, it was replaced by selecting another household using the same selection procedures. This was done because the household listing was from the Census 2006, and updating the household listing would have been an expensive and time-consuming task.

Oversampling at the household level was done because it was difficult to obtain a sufficient number of respondents due to age structure. This was particularly true in the age group of 55–64 years. The procedure described in the Kish methodology was used for the purpose (2). In households with individuals in this age group, one person was selected from the entire age range of the survey and a second person was selected from the 55–64 years age group.

### 3.5 Instruments and materials

A generic instrument developed by WHO for STEPS surveys with core and expanded items was used to conduct the survey. Slight modifications to the generic instrument were

made as per the requirements of the survey (Annexure 1). These modifications are detailed below.

The data collection instrument consisted of modules, each representing the assessment of different risk factors, as follows:

- **STEP 1** included demographic information and behavioural questions described below:
  - Respondent identification and demography, which included information on age, sex, occupation, education, marital status and household income;
  - Key behavioural risk factors for NCDs, such as tobacco use, alcohol use, dietary behaviour, patterns of physical inactivity, history of raised blood pressure and diabetes.
- **STEP 2** included physical measurements of height, weight, waist and hip circumference, and blood pressure.
- **STEP 3** included the biochemical measurements of blood glucose, total cholesterol, triglycerides and high-density lipoprotein (HDL) cholesterol.

### ***Modification to the STEPS instrument for the 2011 Maldives Risk Factor Survey***

#### *Use of TQS questions on tobacco use*

Additional questions developed by the Centers for Disease Control and Prevention, USA (CDC) and WHO for Tobacco Questions for Surveys (TQS) were included to monitor additional aspects of tobacco policy and exposure. The format of the TQS questions was adjusted to fit the STEPS instrument. It should be noted that both STEPS and TQS questionnaires had very similar questions to collect data for similar indicators.

#### *Use of alcohol use module*

The alcohol use questions were not used in the 2004 STEPS survey. In the 2011 survey, data were collected on alcohol use and only core questions were asked. Slight modifications to the questions, mainly on the basic administrative information, and other minimal changes were made to conform to the local situation.

#### *Questionnaire translation*

The questionnaire was translated into the local language, Dhivehi, for use in interviews. However, English was used for data entry and data processing purposes. The questionnaire was pilot-tested to further increase its face validity. Households not selected within the sample were visited to conduct the pilot and field-testing. This procedure was undertaken to improve the format of the questionnaire, wordings of the questions and scales to make it more reliable.

### **Definition of terms and description of variables**

Definitions of the main terms and description of some of the variables and measurements used for the purposes of the study are as follows:

#### *Demographic variables*

- Age – age in completed years
- *Education* – highest level of educational achievement based on the level of formal schooling in the country's education system
- *Income* – Total average monthly earning of the household
- *Profession/occupation* – Main work status during the past one year (past 12 months).

#### *Dietary habits*

For the purposes of this study, questions on dietary habits focused mainly on the intake of fruits and vegetables and the number of servings consumed per day. One serving of fruit or vegetable represents 80 g and was measured as follows:

- One serving of fruit
  - If eaten raw (fruits such as apples, papaya, etc.) = 1 medium-sized fruit or  $\frac{1}{2}$  cup
  - If cooked or canned =  $\frac{1}{2}$  cup
  - If fresh vegetable juice =  $\frac{1}{2}$  cup
- One serving of vegetables
  - If green leafy vegetable = 1 cup
  - If other type of vegetables and cooked vegetables =  $\frac{1}{2}$  cup
  - If fresh vegetable juice =  $\frac{1}{2}$  cup

Respondents were given a show card to help with reporting the amount consumed.

#### *Physical activity*

The following three domains of physical activity were assessed to measure physical activity:

- Physical activity at work
- Physical activity during transportation
- Physical activity during leisure time.

Taking all three domains into account, the three overall levels of physical activity suggested for classifying populations were *low*, *moderate* and *high*. The criteria for these levels were as follows:

- *High*. A person reaching any of the following criteria was classified in this category: Vigorous-intensity activity on at least 3 days in a week, achieving a minimum of at least 1500 metabolic equivalent task (MET)-minutes per week

OR

- Seven or more days of any combination of walking, moderate- or vigorous-intensity activities, achieving a minimum of at least 3000 MET-minutes per week.

- *Moderate*. A person not meeting the criteria for the *high* category, but meeting any of the following criteria was classified in this category:

Three or more days of vigorous-intensity activity of at least 20 minutes per day

OR

Five or more days of moderate-intensity activity or walking of at least 30 minutes per day

OR

Five 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*. A person not meeting any of the above-mentioned criteria was placed in this category.

#### *Taking physical measurements of weight and height*

Standard digital weighing scales were used for measuring the weight. Wooden height measuring boards were used to measure height. Based on these measurements, body mass index (BMI) was calculated.

#### *Body mass index*

BMI is measured as weight (kg) per height squared ( $m^2$ ). A BMI of  $\geq 25 \text{ kg}/m^2$  was taken as overweight and  $\geq 30 \text{ kg}/m^2$  was taken as obese.

#### *Blood pressure*

Blood pressure was measured using digital blood pressure monitoring devices by the standard method as recommended by WHO. Three measurements were taken on the left

arm. The average of the second and third values for blood pressure was used in analysis. The definitions and classification of blood pressure levels were as recommended by WHO for STEPS analysis (2).

### 3.6 Data processing and analysis

A multistage process was followed for data processing and analysis.

- **Stage 1:** A list of tables, based on the WHO STEPS generic tools, was generated and tables were constructed based on the data collected before data analysis.
- **Stage 2:** Quality control measures were taken in the field with random selection of questionnaires to look for completion. At the end of the field work, all questionnaires were scrutinized for consistency and completion.
- **Stage 3:** Data entry was done using a data entry programme developed with Microsoft Access.
- **Stage 4:** Data analysis was done using the Epi Info software and STEPS analysis code produced by WHO. Data were cleaned and range and consistency checks were applied. Unweighted analysis was followed by weighted calculations. Weighted analysis, data tables and summary fact sheets were generated. Sample weights could not be calculated due to a lack of detailed sampling information. However, population adjustment weights were calculated to correct for differences in the age–sex structure of the sample versus that of the underlying target population.

### 3.7 Ethical considerations

Written informed consent was obtained from the respondents after explaining the objectives of the survey. Their participation was voluntary and confidentiality was maintained of the personal information of the participants. Ethical approval for the study was obtained from the National Health Research Committee.

This study involved some physical measurements, including anthropometry and biochemical testing. Trained health-care workers from the field-work teams visited respondents' households to collect data and take physical measurements of height, weight, waist and hip circumference, and blood pressure. Standard height boards and weighing scales were used for height and weight measurements. Measuring tapes and digital blood pressure apparatuses were used to take the measurements of waist and hip circumference and blood pressure. A training programme was conducted in order to familiarize health-care workers with their tasks and enhance their competence. Samples for biochemical tests were collected and tested in the hospital laboratory. The respondents were instructed by the visiting data collection officers who conducted the interviews in the households on whether and how long they should be fasting before sample collection, and the schedule of visits to the hospital for blood collection.

## 4. Results

Data have been reported for STEP 1 (demographic and behavioural risk factors) and STEP 2 (physical measurements). Data related to STEP 3 (biochemical measurements) were excluded from the report because of a very high non-response rate.

### 4.1 STEP 1: Demographic characteristics and behavioural risk factors

#### *Demographic characteristics*

A total of 1780 individuals (664 men and 1116 women) residing in Malé participated in the STEPS survey. The demographic and socioeconomic characteristics of the sample are given in Table 2. Nearly 30% (37.0% of men and 21.5% of women) of the respondents were in the age group of 15–24 years. The mean number of years of education was 9.1. Respondents who had completed secondary school education (35.5%) comprised the single largest group in the sample, both among men (41.8%) and women (31.7%). Around two thirds (63.0%) of the respondents (56.9% of men and 66.7% of women) were currently married. More than half (53.3%) of the subjects did not have paid employment, with 44.0% of the women listing their occupation as homemakers. According to the Maldives Household Income and Expenses Survey 2009–2010, the annual household income in Malé is MRF 249 246 and in the atolls it is MRF 135 936 (8).

*Table 2. Demographic characteristics of the study population*

Variables	Men (N=664)	Women (N=1116)
<b>Age group (in years)</b>	%	%
15–24	37.0	21.5
25–34	20.2	25.4
35–44	14.6	21.8
45–54	11.3	13.8
55–64	16.9	17.6
<b>Education</b>		
No formal schooling	1.7	1.2
Less than primary school	15.9	26.4
Primary school completed	22.8	25.9
Secondary school completed	41.8	31.7
High school completed	7.6	6.3
Graduation	7.7	7.7
Postgraduation	2.6	0.9

Variables	Men (N=664)	Women (N=1116)
<b>Occupation</b>		
Government job	23.6	14.4
Private job	29.9	11.6
Self-employed	17.5	6.4
Unpaid	29.0	67.7

### **Behavioural measurements**

#### *Tobacco use*

Table 3 shows the status of smoking among the study respondents. The proportion of current smokers was 18.8% (34.7% of men and 3.4% of women). Among the survey population, 15.5% (29.1% of men and 2.2% of women) smoked daily. The highest (37.6%) prevalence of current daily smokers among men was in the age group 25–34 years. Contrary to this, more women daily smokers were in the older age group of 55–64 years (9.2%). The mean age at which the respondents started smoking was 17.8 years. The average number of manufactured cigarettes smoked per day by the daily smokers was 14.0. The proportion of current users of smokeless tobacco was 3.7%, with 5.6% of men and 2.6% of women consuming smokeless tobacco daily.

*Table 3. Status of smoking*

Age group (years)	Men						
	N	Current smokers				% Non-smoker	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
15–24	244	24.2	18.8–29.6	4.9	2.2–7.6	70.9	65.2–76.6
25–34	133	37.6	29.3–45.8	8.3	3.6–13.0	54.1	45.6–62.6
35–44	97	30.9	21.7–40.2	5.2	0.7–9.6	63.9	54.3–73.5
45–54	75	28.0	17.8–38.2	4.0	0.0–8.4	68.0	57.4–78.6
55–64	112	23.2	15.4–31.1	0.9	0.0–2.6	75.9	68.0–83.8
<b>15–64</b>	<b>661</b>	<b>29.1</b>	<b>25.5–32.8</b>	<b>5.5</b>	<b>3.6–7.4</b>	<b>65.3</b>	<b>61.5–69.2</b>
Age group (years)	Women						
	N	Current smokers				% Non-smoker	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
15–24	239	0.4	0.0–1.2	1.7	0.0–3.3	97.9	96.1–99.7
25–34	281	1.8	0.2–3.3	1.1	0.0–2.3	97.2	95.2–99.1
35–44	243	3.7	1.3–6.1	0.4	0.0–1.2	95.9	93.4–98.4
45–54	153	5.9	2.2–9.6	0.7	0.0–1.9	93.5	89.5–97.4
55–64	196	9.2	5.1–13.2	0.5	0.0–1.5	90.3	86.2–94.5
<b>15–64</b>	<b>1112</b>	<b>2.2</b>	<b>1.4–3.0</b>	<b>1.2</b>	<b>0.4–2.0</b>	<b>96.6</b>	<b>95.5–97.7</b>

Age group (years)	Both sexes						
	N	Current smokers				% Non-smoker	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
15–24	483	11.7	8.9–14.5	3.2	1.7–4.8	85.1	82.0–88.2
25–34	414	19.7	15.1–24.2	4.7	2.2–7.1	75.7	70.8–80.6
35–44	340	17.4	12.4–22.4	2.8	0.5–5.1	79.8	74.5–85.1
45–54	228	17.4	11.6–23.2	2.4	0.0–4.8	80.2	74.2–86.3
55–64	308	16.4	11.8–20.9	0.7	0.0–1.7	82.9	78.3–87.5
<b>15–64</b>	<b>1773</b>	<b>15.5</b>	<b>13.5–17.5</b>	<b>3.3</b>	<b>2.3–4.3</b>	<b>81.2</b>	<b>79.1–83.4</b>

#### *Alcohol consumption*

Respondents who had consumed alcohol in the past 30 days were considered as current drinkers. The proportion of current drinkers among the study population was 0.9% (1.6% of men and 0.2% of women) among respondents aged 15–64 years.

#### *Fruit and vegetable consumption*

In a typical week, study respondents consumed fruits and vegetables on 3.3 days and 3.8 days, respectively. The mean number of servings of both fruits and vegetables per day was 1.0. The proportion of respondents who reported that they ate less than one serving or no serving of fruits and/or vegetables per day was 35.3% among men and 37.1% among women. Among men, 43.8% ate one to two servings of fruits and/or vegetables compared with 44.9% of women. Only 7.4% of men and 5.4% of women ate five or more servings of fruits and/or vegetables per day (Table 4).

*Table 4. Number of servings of fruit and/or vegetables on average per day*

Age group (years)	Men								
	N	% No fruit and/or vegetables	95% CI	% 1–2 servings	95% CI	% 3–4 servings	95% CI	% ≥5 servings	95% CI
15–24	223	41.3	34.8–47.7	39.0	32.6–45.5	14.4	9.7–19.0	5.4	2.4–8.4
25–34	125	36.8	28.3–45.3	45.6	36.8–54.4	10.4	5.0–15.8	7.2	2.7–11.8
35–44	90	26.7	17.5–35.8	52.2	41.9–62.6	12.3	5.4–19.0	8.9	3.0–14.8
45–54	74	25.7	15.7–35.7	46.0	34.6–57.3	18.9	10.0–27.9	9.5	2.8–16.1
55–64	101	29.7	20.8–38.6	39.6	30.0–49.2	15.8	8.7–23.0	14.8	7.9–21.8
<b>15–64</b>	<b>613</b>	<b>35.3</b>	<b>31.3–39.3</b>	<b>43.8</b>	<b>39.6–48.0</b>	<b>13.5</b>	<b>10.7–16.4</b>	<b>7.4</b>	<b>5.2–9.5</b>

Age group (years)	Women								
	N	% No fruit and/or vegetables	95% CI	% 1–2 servings	95% CI	% 3–4 servings	95% CI	% ≥5 servings	95% CI
15–24	233	37.3	31.1–43.6	48.9	42.5–55.3	9.9	6.0–13.7	3.9	1.4–6.3
25–34	270	37.8	32.0–43.6	45.2	39.2–51.1	11.9	8.0–15.7	5.2	2.5–7.8
35–44	228	37.7	31.4–44.0	38.2	31.8–44.5	17.1	12.2–22.0	7.0	3.7–10.3
45–54	148	32.4	24.9–40.0	39.2	31.3–47.1	18.2	12.0–24.5	10.1	5.3–15.0
55–64	178	38.8	31.6–45.9	38.8	31.6–45.9	15.7	10.4–21.1	6.7	3.1–10.4
<b>15–64</b>	<b>1057</b>	<b>37.1</b>	<b>33.7–40.5</b>	<b>44.9</b>	<b>41.4–48.4</b>	<b>12.6</b>	<b>10.3–14.8</b>	<b>5.4</b>	<b>3.9–6.9</b>

On average, 92.6% of men and 94.6% of women ate less than five servings of fruits and/or vegetables per day, which is the recommended level for good nutrition. For cooking their meals, 96.6% households used vegetable oil (including sunflower oil, olive oil or corn oil) most often.

### *Physical inactivity*

Low levels of physical activity were reported by 45.9% of respondents (39.1% of men and 52.4% of women). Moderate levels of physical activity were reported by 14.8% of men and 26.1% of women, while high levels of physical activity were reported by 46.1% of men and 21.5% of women (Table 5).

*Table 5. Level of total physical activity*

Age group (years)	Men						
	N	% Low	95% CI	% Moderate	95% CI	% High	95% CI
15–24	230	37.8	31.5–44.1	15.2	10.6–19.9	46.9	40.5–53.5
25–34	121	39.7	30.9–48.4	9.1	4.0–14.3	51.3	42.3–60.2
35–44	92	42.4	32.3–52.6	17.4	9.7–25.2	40.3	30.2–50.3
45–54	70	34.3	23.2–45.4	21.5	11.8–31.1	44.3	32.6–56.0
55–64	106	45.3	35.8–54.8	17.0	9.9–24.2	37.7	28.5–47.0
<b>15–64</b>	<b>619</b>	<b>39.1</b>	<b>35.1–43.2</b>	<b>14.8</b>	<b>11.9–17.7</b>	<b>46.1</b>	<b>41.9–50.3</b>

Age group (years)	Women						
	N	% Low	95% CI	% Moderate	95% CI	% High	95% CI
15–24	228	63.2	56.9–69.4	18.4	13.4–23.5	18.4	13.4–23.5
25–34	272	46.3	40.4–52.3	33.1	27.5–38.7	20.6	15.8–25.4
35–44	232	43.5	37.2–49.9	30.2	24.3–36.1	26.3	20.6–32.0
45–54	146	34.9	27.2–42.7	37.0	29.2–44.8	28.1	20.8–35.4
55–64	183	47.5	40.3–54.8	25.7	19.4–32.1	26.8	20.4–33.2
<b>15–64</b>	<b>1061</b>	<b>52.4</b>	<b>48.9–55.9</b>	<b>26.1</b>	<b>23.1–29.1</b>	<b>21.5</b>	<b>18.7–24.4</b>

The median number of minutes spent by the study respondents on physical activity per day was 34.3 minutes (60.0 minutes among men and 21.5 among women). The median number of minutes spent by men and women on transport-related physical activity per day was 0.0 and 10.7, respectively. The median number of minutes spent on recreation-related physical activity by men and women was 12.9 and 0.0 minutes, respectively. The median number of minutes spent in sedentary activities by all respondents was 300.0 minutes, with 300.0 and 270.0 minutes spent by men and women, respectively.

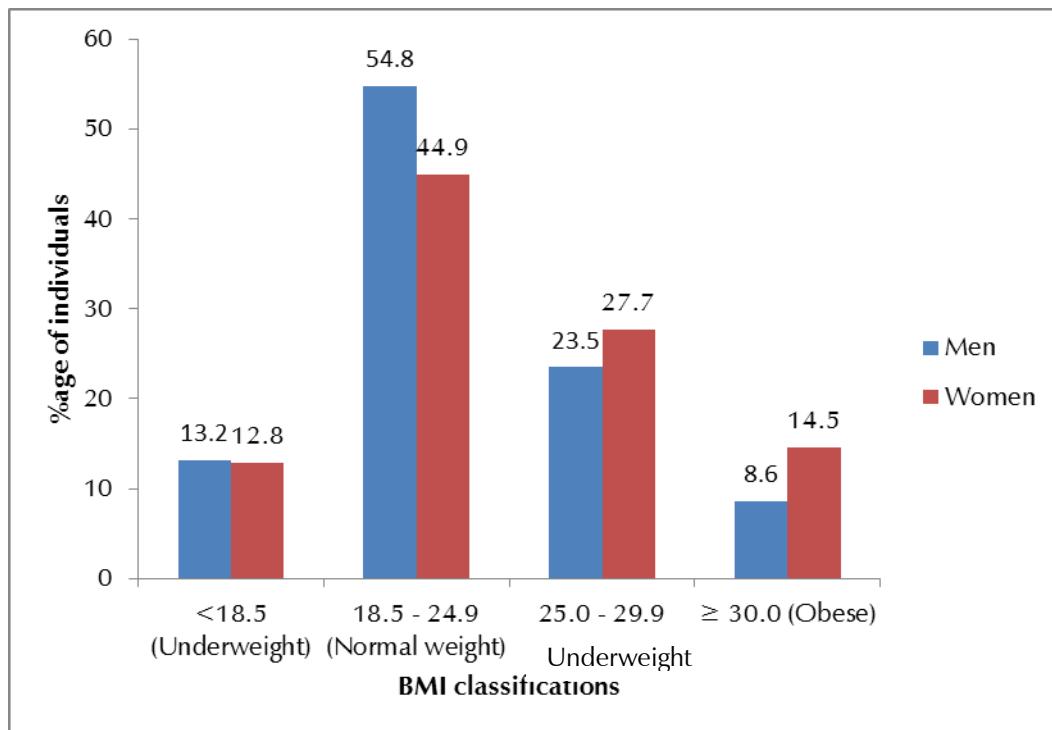
## **4.2 STEP 2: Anthropometric measurements**

The BMI, waist and hip circumference, blood pressure, and height and weight of the study respondents were measured in STEP 2 of the survey.

### **BMI**

Men had a mean BMI of 23.2 kg/m<sup>2</sup> and women a mean BMI of 24.2 kg/m<sup>2</sup>. The distribution of BMI measurements for men and women are presented in Figure 1 and Table 6. Among the study respondents, 54.8% of men and 44.9% of women had a normal BMI (18.5–24.9). Among men, 32.0% were overweight (BMI ≥25.0) and among women, 42.3%. Among men, 8.6% were obese (BMI ≥ 30 kg/m<sup>2</sup>) and among women, 14.5%. A general trend of increase in overweight and obesity was seen with age (Table 6).

**Figure 1.** Body mass index of respondents by sex



**Table 6. Body mass index of respondents by age**

Age group (years)	Men								
	N	% Under-weight (BMI <18.5)	95% CI	% Normal weight (BMI 18.5–24.9)	95% CI	% Over-weight (BMI 25.0–29.9)	95% CI	% Obese (BMI ≥30.0)	95% CI
15–24	242	22.3	17.1–27.6	62.0	55.8–68.1	9.9	6.1–13.7	5.8	2.8–8.7
25–34	134	9.7	4.7–14.7	57.5	49.1–65.8	25.4	18.0–32.8	7.5	3.0–11.9
35–44	97	5.1	0.7–9.6	47.4	37.5–57.4	36.1	26.5–45.7	11.3	5.0–17.7
45–54	75	4.0	0.0–8.5	38.7	27.6–49.8	41.3	30.2–52.5	16.0	7.7–24.3
55–64	111	1.8	0.0–4.3	39.7	30.5–48.8	45.9	36.6–55.3	12.7	6.4–18.8
<b>15–64</b>	<b>659</b>	<b>13.2</b>	<b>10.4–16.0</b>	<b>54.8</b>	<b>50.8–58.8</b>	<b>23.5</b>	<b>20.1–26.8</b>	<b>8.6</b>	<b>6.4–10.8</b>

Age group (years)	Women								
	N	% Under-weight (BMI <18.5)	95% CI	% Normal weight (BMI 18.5–24.9)	95% CI	% Over-weight (BMI 25.0–29.9)	95% CI	% Obese (BMI ≥30.0)	95% CI
15–24	224	23.7	18.1–29.3	56.3	49.8–62.8	13.8	9.3–18.4	6.3	3.1–9.4
25–34	253	7.9	4.6–11.2	37.9	32.0–43.9	36.4	30.5–42.3	17.8	13.1–22.5
35–44	236	1.3	0.0–2.7	38.6	32.4–44.8	40.7	34.5–47.0	19.5	14.4–24.6
45–54	153	0.7	0.0–1.9	31.4	24.1–38.7	38.6	30.8–46.3	29.4	22.2–36.7
55–64	190	1.6	0.0–3.4	24.8	18.6–30.9	46.3	39.2–53.5	27.4	21.1–33.7
<b>15–64</b>	<b>1056</b>	<b>12.8</b>	<b>10.1–15.5</b>	<b>44.9</b>	<b>41.4–48.5</b>	<b>27.7</b>	<b>24.8–30.7</b>	<b>14.5</b>	<b>12.4–16.8</b>

**Waist and hip circumference**

The mean waist circumference was 79.1 cm for men and 78.9 cm for women. The mean hip circumference was 92.1 cm for men and 94.3 cm for women. The mean waist and hip circumference increased with age (Table 7). Waist circumference above 94 cm for men and above 80 cm for women substantially increases the risk of NCDs. For the Asian population, the threshold for risk is at lower cut-off values.

**Table 7. Mean waist and hip circumference of the study respondents**

Waist circumference (cm)						
Age group (years)	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	242	72.7	71.8–74.3	227	71.0	69.6–72.5
25–34	132	79.9	78.0–81.7	253	82.1	80.5–83.7
35–44	96	83.5	81.1–85.8	235	85.4	83.9–86.9
45–54	74	89.7	86.4–93.0	151	90.2	88.2–92.3
55–64	109	92.3	89.7–95.0	184	92.8	90.8–95.0
<b>15–64</b>	<b>653</b>	<b>79.1</b>	<b>78.1–80.2</b>	<b>1050</b>	<b>78.9</b>	<b>77.9–80.0</b>
Hip circumference (cm)						
Age group (years)	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	239	88.5	86.9–90.2	226	89.7	88.3–91.1
25–34	130	93.8	91.9–95.7	252	97.1	95.8–98.4
35–44	95	94.7	92.6–96.9	235	97.9	96.6–99.1
45–54	74	95.9	92.5–99.3	149	100.1	98.3–101.9
55–64	108	96.0	93.8–98.1	185	99.5	97.9–101.2
<b>15–64</b>	<b>646</b>	<b>92.1</b>	<b>91.1–93.1</b>	<b>1047</b>	<b>94.3</b>	<b>93.5–95.1</b>

### Blood pressure

The mean systolic blood pressure (SBP) for both sexes was 119.7 mmHg and the diastolic blood pressure (DBP) was 75.5 mmHg. For men, the mean SBP was 122.8 mmHg and DBP was 76.5 mmHg, which was significantly higher than in women (116.7 mmHg and 74.5 mmHg). As expected, the BP increased with age. In the age group of 55–64 years, 62.7% of the population had hypertension or were on medication. The proportion of people with raised BP (SBP  $\geq 140$  and/or DBP  $\geq 90$  mmHg) or on medication for their hypertension was 16.6% (19.0% of men and 14.3% of women). Overall, 83.0% of respondents with raised BP were not under treatment (86.2% and 79% of men and women, respectively). Among men, 3.7% reported having confirmed or newly diagnosed hypertension in the past 12 months as compared to 5.4% among women.

### 4.3 STEPS 2004 and 2011: a comparison

The present STEPS survey was compared with the previous survey conducted in 2004. A total of 2028 individuals (934 men and 1094 women) residing in Malé participated in the STEPS survey undertaken in 2004. A total of 1780 individuals (664 men and 1116 women) participated in the 2011 survey, of whom 1294 were 25–64 years of age. Only

participants in this age group were used for comparison with the 2004 survey, since 15–24-year-olds were not included in the 2004 survey.

Little change was observed in the data from the 2004 and 2011 surveys, with a few notable exceptions (Table 8). While the percentage of daily smokers decreased slightly (18.3% in 2011 versus 22.0% in 2004), smokers started smoking earlier (19.0 years in 2011 versus 21.6 years in 2004). The prevalence of obesity increased from 13.4% in 2004 to 15.6% in 2011, as did the prevalence of overweight (47.1% in 2004 versus 51.5% in 2011). These increases were much greater among women (60.1% versus 52.2% for overweight, 21.2% versus 17.4% for obesity).

**Table 8. Comparison of the STEPS survey results: 2004 and 2011**

<b>Results for adults</b>	<b>2004</b>			<b>2011</b>		
	<b>Both sexes</b>	<b>Men</b>	<b>Women</b>	<b>Both sexes</b>	<b>Men</b>	<b>Women</b>
<b>STEP 1. Tobacco use</b>						
Percentage who currently smoke tobacco daily	22.0%	35.7%	10.4%	18.3%	32.7%	3.6%
Average age at starting smoking (years)	21.6	20.6	24.5	19.0	19.0	*
<b>STEP 1. Fruit and vegetable consumption (in a typical week)</b>						
Less than five servings of fruit and/or vegetables per day	93.9%	92.5%	95.3%	92.3%	91.3%	93.3%
<b>STEP 1. Physical activity</b>						
Percentage with low levels of activity (defined as <600 MET-minutes per week)	42.6%	40.8%	44.5%	41.9%	40.0%	43.7%
<b>STEP 2. Physical measurements</b>						
Mean body mass index – BMI ( $\text{kg}/\text{m}^2$ )	25.2	24.6	25.8	25.5	24.6	26.5
Percentage who are overweight (BMI 25.0–29.9 $\text{kg}/\text{m}^2$ )	47.1%	41.1%	52.2%	51.5%	43.6%	60.1%
Percentage who are obese (BMI $\geq 30 \text{ kg}/\text{m}^2$ )	13.4%	8.7%	17.4%	15.6%	10.5%	21.2%
Average waist circumference (cm)	–	85.2	83.1	–	83.7	85.4
Mean systolic blood pressure (SBP) (mmHg), including among those currently on medication for raised BP	123.5	122.3	123.6	123.9	124.8	123.1
Mean diastolic blood pressure (DBP) (mmHg), including among those currently on medication for raised BP	77.7	77.5	77.8	78.4	78.7	78.0

\* Indicates less than 50 respondents

## **5. Discussion**

The Maldives, being a developing country, is undergoing an epidemiological transition with an increasing number of people with NCDs contributing to the major disease burden. NCDs are estimated to account for 79% of all deaths in the country, taking up a large portion of the health-care resources (9). The first NCD STEPS survey carried out in the Malé region in 2004 was conducted to study the prevalence of NCD risk factors among the population of Malé so that appropriate interventions to reduce these risk factors could be taken (7).

The National Strategic Plan 2008–2010 was developed for the prevention and control of NCDs with funding for prevention, management and surveillance. Although no direct interventions have been carried out in Malé since 2004, many behavioural and structural changes have taken place. Behavioural transition and changing lifestyles are simultaneously occurring in the population. WHO has focused on eight risk factors – tobacco use, alcohol consumption, physical inactivity, low fruit and vegetable intake in the diet, excess body fat, raised blood pressure, raised serum lipid and glucose levels – to control and prevent the worldwide increase in the burden of NCDs. The prevalence of current smoking, physical inactivity, overweight/obesity, abdominal obesity and hypertension was found to be high in the present survey.

Tobacco use is causally linked to a number of chronic diseases – several cancers, chronic obstructive pulmonary disease and cardiovascular diseases. The prevalence of daily current smoking among the population has stayed nearly the same as in the previous survey, while the average age at starting to smoke has decreased, indicating that stronger interventions need to be put in place to reduce the number of tobacco users.

As seen from previous studies conducted on tobacco use, most people are aware of the health risks associated with smoking and tobacco use. As the Maldives is solely an importer of tobacco products and not a producer, placing stringent controls on tobacco importation could be a plausible measure for controlling tobacco use. Implementation of measures of the WHO Framework Convention on Tobacco Control (FCTC) also needs to be further strengthened in the country.

Not consuming a diet adequate in fruits and vegetables is an independent risk factor for cardiovascular disease and cancers, including lung, stomach, colorectal and oesophageal cancers. It has been epidemiologically shown that increasing the amount of fruits and vegetables in the diet can reduce the risk of certain cancers and cardiovascular disease. Considering the low intake of fruits and vegetables (93.6% eat less than five servings per day) seen in the present study, this area clearly needs priority attention. Measures have been taken to facilitate the availability of locally grown fruits and vegetables in the markets of Malé region. A policy change to reduce the prices could be a credible intervention for increasing the use of fruits and vegetables in the regular diet of the common people. Improved awareness and behaviour change programmes are needed to address this issue. Increasing the amount of vegetables and fruits in the diet is

likely to lead to reduced fat consumption, thereby reducing the risk of diabetes, cardiovascular diseases, stroke and hypertension.

A low level of physical activity (<600 MET-minutes per week) was found among 45.9% of the study respondents (39.1% and 52.4% among men and women, respectively). A sedentary lifestyle is increasing among women. Regular physical activity has health benefits, including the regulation of body weight and strengthening of the cardiovascular system. Physical activity also reduces the risk of cardiovascular disease, some cancers and type 2 diabetes, improves musculoskeletal health, controls body weight and reduces the symptoms of depression (1). In order to combat chronic diseases such as cancer and adopt related measures to improve unhealthy diets and physical inactivity, WHO adopted the Global Strategy on Diet, Physical Activity and Health in 2004 (10). This health promotion programme focuses on education as well as creation of an enabling environment for physical activity at schools and workplaces, and could be a useful tool for populationwide interventions.

Overweight- and obesity-related conditions include heart disease, stroke, type 2 diabetes and certain types of cancer, which are some of the leading causes of preventable death. The proportion of respondents classified as overweight ( $BMI \geq 25\text{kg}/\text{m}^2$ ) was 37.1% (32.0% of men and 42.3% of women). These figures are higher than those reported for the WHO South-East Asia Region (14% overweight among both sexes and 3% obesity) (1). It is alarming to note that 83.0% of respondents with raised BP were not getting treatment; this needs to be addressed urgently. Blood pressure levels have been shown to be associated with the risk of stroke and coronary heart disease.

The global status report on NCDs lays emphasis on prevention, management and surveillance for tackling the epidemic of NCDs (1). A global monitoring framework has been created with targets to be achieved by each country by 2025. The present survey will help to set a baseline for common risk factors prevailing in 2011, from which country projections can be made to achieve the targets by the year 2025.

Keeping in view the high prevalence of risk factors for NCDs, targeted interventions based on best buys are required, with overall health systems strengthening within the National Strategic Plan 2008–2010 of the Maldives.

## **6. Limitations of the study**

Despite efforts by the local team, the following serious limitations were observed, which should be kept in mind while interpreting the results of this STEPS survey report:

- **Study population.** The study was limited only to the population in the capital city of Malé and could not be generalized to the entire population of the Maldives.
- **Incomplete data.** Data on the detailed sampling, tracking sheets and response rate were not available. Because of high non-response rate, the results of STEP 3 of the survey were not included in the analysis. Due to this, biochemical measurements were not reported.
- **Difficulty in data analysis.** Due to weak supervision of data collection and data management, many critical data inputs such as sampling, selection of households, interview tracking sheets and non-responses were not available. Therefore, only population weights were used for analysis. The sample and non-response weights usually used could not be applied.
- **Inadequate quality control measures.** It was planned that all the collected data were to be entered and processed as per standard STEPS guidelines. This was not adhered to. Critical data were also found to be missing.
- **Generalizability.** The study is limited only to the urban population in the capital city of Malé and findings are thus a reflection of Malé city only.

The fact sheet for the STEPS survey 2011 is given in Annexure 2.

## **7. Recommendations**

The data generated from this survey showed that NCD risk factors pose a significant burden in the capital city of Malé. Based on the findings, the following recommendations were made:

- The Ministry of Health needs to focus more on implementation of the National Strategic Plan 2008–2010, which sets out priorities, actions and a timeframe for the prevention and control of NCDs between 2008 and 2010 at national and regional levels. The plan should be evaluated to identify its impact and identify gaps and weaknesses.
- A dissemination workshop with key stakeholders may be considered to discuss the findings of the survey and devise future courses of action.
- Advocacy, communication and community mobilization are required, focusing on behaviour change to reduce the risk factors leading to NCDs.
- Capacity building is required in all sectors to develop and implement NCD prevention and control plans and programmes, and build partnerships with key stakeholders.
- The survey findings can be used as a baseline for developing a roadmap for achieving targets under the global monitoring framework for NCDs.
- Scaling up the survey for wider coverage and expanding its scope to include biochemical measurements should be considered in future. The sustainability of NCD surveillance activities should be ensured.

## **8. References**

- (1) World Health Organization. Global status report on noncommunicable diseases, 2010. Geneva: WHO, 2010.
- (2) World Health Organization The WHO STEPwise surveillance manual: the WHO STEPwise approach to chronic disease risk factors surveillance. Geneva: WHO, 2008.
- (3) World Health Organization. Preventing chronic diseases: a vital investment: WHO global report. Geneva: WHO, 2005.
- (4) World Health Organization. STEPS: a framework for surveillance. WHO STEPSwise approach to surveillance of noncommunicable diseases (STEPS) - framework (final draft). Geneva: WHO, 2002.
- (5) Vartiainen E, Puska P, Pekkanen J, Toumilehto J, Jousilahti P. Changes in risk factors explain changes in mortality from ischaemic heart disease in Finland. *BMJ*. 1994;309:23-7.
- (6) Vartiainen E, Sarti C, Toumilehto J, Kuulasmaa K. Do changes in cardiovascular risk factors explain changes in mortality from stroke in Finland? *BMJ*. 1995;310:901-4.
- (7) Ministry of Health. Maldives STEPS report. Male, 2004. (<http://www.who.int/chp/steps/MaldivesSTEPSReport2004.pdf> - accessed 13 February 2014).
- (8) Department of Financial Planning, Ministry of Finance and Treasury. Maldives Household Income and Expenditure Survey, 2009-2010. Male: Statistics Division, Department of National Planning, 2012. (<http://planning.gov.mv/hies/HIES2012/FINAL%20HIES%20REPORT%20april%202012.pdf> - accessed 13 February 2014).
- (9) World Health Organization. Noncommunicable diseases country profiles 2011: WHO global report. Geneva: WHO, 2011.
- (10) World Health Organization. WHO global strategy on diet, physical activity and health. Geneva: WHO, 2004.

## Annex 1

### Survey instrument

#### WHO STEPS instrument for chronic disease risk factor surveillance

#### Maldives/Malé 2011

##### STEP 1: Sociodemographic information

Location and date		Response	Code
1	Participant (respondent) ID number	_____	I1
2	Ward name	_____	I2
3	Interviewer ID	____	I3
4	Date of completion of the instrument	_____ _____ _____	I4

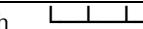
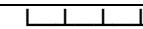
Participant ID Number		
Consent, interview and name		Response
		Code
5	Consent has been read and obtained	Yes 1 No 2 <b>If no, end</b>
7	Time of interview (24-hour clock)	_____ _____ h : _____ min
8	Family surname	
9	First name	
Additional information that may be helpful		
10	Contact phone number (where possible)	

Record and file identification information (I5 to I10) separately from the completed questionnaire.

CORE: Demographic information			
Question		Response	Code
11	Sex (record male / female as observed)	Male 1 Female 2	C1
12	What is your date of birth?	dd mm year If known, go to C4	C2
13	How old are you?	Years    □□	C3
14	In total, how many years have you spent at school or in full-time study (excluding pre-school)?	Years    □□	C4

EXPANDED: Demographic information			
15	What is the highest level of education you have completed?	No formal schooling 01 Basic literacy 02 Primary school completed 03 Secondary school completed 04 Higher secondary school completed 05 <input type="checkbox"/> <input checked="" type="checkbox"/> College/university completed 06 Postgraduate degree 07 Refused 88	C5
17	What is your marital status?	Never married 01 Currently married 02 Separated 03 Divorced 04 <input type="checkbox"/> <input checked="" type="checkbox"/> Widowed 05 Refused 88	C7
18	Which of the following best describes your main work status over the past 12 months?  [INSERT COUNTRY-SPECIFIC CATEGORIES]	Government employee 01 Nongovernment employee 02 Self-employed 03 Non-paid 04 Student 05 <input type="checkbox"/> <input checked="" type="checkbox"/> Homemaker 06 Retired 07 Unemployed (able to work) 08 Unemployed (unable to work) 09 Refused 88	C8

19	How many people older than 18 years, including yourself, live in your household?	Number of people 	C9
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EXPANDED: Demographic information (continued)			
Question	Response		Code
20  (RECORD ONLY ONE, NOT ALL 3)	Per week 	Go to T1	C10a
	OR per month 	Go to T1	C10b
	OR per year 	Go to T1	C10c
	Refused 88		C10d
21  [INSERT QUINTILE VALUES IN LOCAL CURRENCY] (READ OPTIONS)	≤ Quintile (Q)1 1		C11
	More than Q1, ≤Q2 2		
	More than Q2, ≤Q3 3		
	More than Q3, ≤Q4 4		
	More than Q4 5		
	Don't know 77		
	Refused 88		

## STEP 1: Behavioural measurements

CORE: Tobacco use			
Question	Response		Code
22  Do you currently smoke tobacco on a daily basis, less than daily, or not at all?	Daily 1	If Daily, go to T3	T1
	Less than daily 2		
	Not at all 3	If Not at all, go to T6	
	Don't know 7	If Don't Know, go to T14	
23  Have you smoked tobacco daily in the past?	Yes 1	Go to T5a	T2
	No 2	Go to T5a	
	Don't know 7	Go to T5a	
24  How old were you when you first started smoking daily?	Age (years) 	If known, go to T5a	T3
	Don't know 77		
25  Do you remember how long ago it was?	In years 	If known, go to T5a	T4a
	OR In months 	If known, go to T5a	

	(RECORD ONLY 1, NOT ALL 3) <i>Don't know 77</i>	OR    In weeks <input type="text"/> <input type="text"/>	T4c
26	<p>[If T1=1 (Current daily smokers), use "day"]  [If T1=2 (Current less than daily smokers), use "week"]</p> <p>On average, how many of the following products do you currently smoke each day/week? Also let me know if you smoke the product, but not every day/week</p> <p><i>IF RESPONDENT SMOKES THE PRODUCT BUT NOT EVERY DAY/WEEK, ENTER 88</i></p> <p><i>VERIFY ANSWER IS # OF CIGARETTES, NOT PACKS</i></p> <p><i>Don't know 77</i></p>	Manufactured cigarettes <input type="text"/> <input type="text"/>	T5a
		Hand-rolled cigarettes <input type="text"/> <input type="text"/>	T5b
		Pipes full of tobacco <input type="text"/> <input type="text"/>	T5c
		Cigars, cheroots, cigarillos <input type="text"/> <input type="text"/>	T5d
		Number of water pipe sessions <input type="text"/> <input type="text"/>	T5e
		Other <input type="text"/> <input type="text"/> <i>If Other, go to T5, else go to T9</i>	T5f
		Other (please specify): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <i>Go to T9</i>	T5other
27	In the past, have you smoked tobacco on a daily basis, less than daily, or not at all?  ( <i>IF BOTH DAILY AND LESS THAN DAILY IN THE PAST, CHECK DAILY</i> )	<p>Daily    1    <i>If Daily, go to T7</i></p> <p>Less than daily    2    <i>If Less than daily, go to</i></p> <p>T14</p> <p>Not at all    3    <i>If Not at all, go to T14</i></p> <p>Don't know    7    <i>If Don't know, go to T14</i></p>	T6

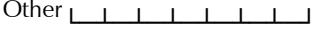
EXPANDED: Tobacco use			
Question		Response	Code
28	How old were you when you stopped smoking daily?	Age (years) <input type="text"/> <input type="text"/> <i>If known, go to T14</i> <i>Don't know 77</i>	T7
29	<p>How long ago did you stop smoking daily?</p> <p>(RECORD ONLY 1, NOT ALL 3)</p> <p><i>Don't know 77</i></p>	In years <input type="text"/> <input type="text"/> <i>If known, go to T14</i>	T8a
		OR    In months <input type="text"/> <input type="text"/> <i>If known, go to T14</i>	T8b
		OR    In weeks <input type="text"/> <input type="text"/> <i>Go to T14</i>	T8c
30	During the past 12 months, have you tried to stop smoking?	Yes    1 No    2	T9
31	Have you visited a doctor or other health-care provider in the past 12 months?	Yes    1 No    2 <i>Go to T12</i>	T10

32	During any visit to a doctor or health-care provider in the past 12 months, were you advised to quit smoking tobacco?	Yes 1 No 2	T11
33	In the past 30 days, did you notice any health warnings on cigarette packages?	Yes 1 No 2 Go to T14 Did not see any cigarette packages 3 Go to T14	T12
34	In the past 30 days, have warning labels on cigarette packages led you to think about quitting?	Yes 1 No 2	T13
35	In the past 30 days, did you notice any health warnings on tobacco products other than cigarettes?	Yes 1 No 2	T14
The next questions are about using smokeless tobacco, such as snuff, chewing tobacco and betel quid. Smokeless tobacco is tobacco that is not smoked, but is sniffed through the nose, held in the mouth or chewed.			
36	Do you currently use smokeless tobacco on a daily basis, less than daily, or not at all?	Daily 1 If Daily, go to T17a Less than daily 2 Not at all 3 If Not at all, go to T18 Don't know 7 If Don't know, go to T19	T15
37	Have you used smokeless tobacco daily in the past?	Yes 1 No 2 Don't know 7	T16
38	[If T15=1 (Current daily users), use "day"] [If T15=2 (Current less than daily users), use "week"]  On average, how many times a (day/week) do you use the following products? Also, let me know if you use the product, but not every day/week. IF RESPONDENT USES THE PRODUCT BUT NOT EVERY DAY/WEEK, ENTER 88  Don't know 77	Snuff, by mouth <input type="text"/>	T17a
		Snuff, by nose <input type="text"/>	T17b
		Chewing tobacco <input type="text"/>	T17c
		Betel quid with tobacco <input type="text"/>	T17d
		Other <input type="text"/> If Other, go to T17other, else go to T19	T17e
		Other (please specify): <input type="text"/> Go to T19	T17other
39	In the past have you used smokeless tobacco on a daily basis, less than daily, or not at all?	Daily 1 Less than daily 2 Not at all 3 Don't know 7	T18

40	How often does anyone smoke inside your home? Would you say daily, weekly, monthly, less than monthly, or never?	Daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5 Don't know 7	T19
41	Do you currently work outside of your home?	Yes 1 No/don't work 2 Go to T23	T20
42	Do you usually work indoors or outdoors?	Indoor 1 Outdoor 2 Go to T23 Both 3	T21
43	During the past 30 days, did anyone smoke in indoor areas where you work?	Yes 1 No 2 Don't know 7	T22
44	In the past 30 days, have you noticed information about the dangers of smoking cigarettes or that encourages quitting in newspapers or in magazines?	Yes 1 No 2 Not applicable 7	T23
45	In the past 30 days, have you noticed information about the dangers of smoking cigarettes or that encourages quitting on television?	Yes 1 No 2 Not applicable 7	T24
46	In the past 30 days, have you noticed any advertisements or signs promoting cigarettes in stores where cigarettes are sold? <i>(USE SHOWCARD)</i>	Yes 1 No 2 Not applicable 7	T25
47	In the past 30 days, have you noticed any advertisements or signs promoting cigarettes in restaurants, cafes, or tea shops?	Yes 1 No 2 Not applicable 7	T26
48	In the past 30 days, have you noticed any of the following types of cigarette promotions? <i>READ EACH ITEM</i>	Yes No Don't know	
		Free samples of cigarettes in cafés or restaurants? 1 2 7	T27a
		Free samples of cigarettes in other places? 1 2 7	T27b
		Cigarettes at sale prices? 1 2 7	T27c
		Coupons for cigarettes? 1 2 7	T27d

		Free gifts or special discount offers on other products when buying cigarettes?	1    2    7	T27e
		Clothing or other items with a cigarette brand name or logo?	1    2    7	T27f
		Cigarette promotions in the mail?	1    2    7	T27g

<b>CORE: Alcohol consumption</b>				
The next questions ask about the consumption of alcohol.				
Question	Response			Code
52  (USE SHOWCARD OR SHOW EXAMPLES)	Yes 1 No 2 If No, go to D1			A1a
53	Yes 1 No 2 If No, go to D1			A1b
54  (READ RESPONSES, USE SHOWCARD)	Daily 1 5–6 days per week 2 1–4 days per week 3 1–3 days per month 4 Less than once a month 5			A2
55	Yes 1 No 2 If No, go to D1			A3
56	Number Don't know 77			A4
57	Number Don't know 77			A5
58	Largest number Don't know 77			A6
59	Number of times Don't know 77			A7

EXPANDED: Diet				
50	<p>What type of <b>oil or fat is most often</b> used for meal preparation in your household?   <i>(USE SHOWCARD) (SELECT ONLY ONE)</i></p>	Vegetable oil	01	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		Sunflower oil	02	
		Olive oil	03	
		Corn oil	04	
		Butter or ghee	05	
		Margarine	06	
		Other other	07 If Other, go to D5	
		None in particular	08	
	None used	09		
Other		D5other		

CORE: Diet				
<p>The next questions ask about the fruits and vegetables that you usually eat. I have a nutrition card here that shows you some examples of local fruits and vegetables. Each picture represents the size of a serving. As you answer these questions please think of a typical week in the past year.</p>				
Question	Response			Code
60 In a typical week, on how many days do you <b>eat fruit</b> ?	Number of days			D1
47 How many <b>servings</b> of fruit do you eat on <b>one</b> of those days? <i>(USE SHOWCARD)</i>	Number of servings Don't know 77 			D2
48 In a typical week, on how many days do you <b>eat vegetables</b> ? <i>(USE SHOWCARD)</i>	Number of days Don't know 77  <i>If Zero days, go to D5</i>			D3
49 How many <b>servings</b> of vegetables do you eat on one of those days? <i>(USE SHOWCARD)</i>	Number of servings Don't know 77 			D4
51 On average, how many days per week do you use coconut milk to prepare meals at home?	None	1	<input type="checkbox"/>	D6
	1–3 days	2		
	4–6 days	3		
	Every day	4		
52 On average, how many days per week do you consume fizzy drinks? (include fizzy drinks, exclude diet coke and zero calorie drinks) <i>(USE SHOWCARD)</i>	None	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	D7
	1–3 days	2		
	4–6 days	3		
	Every day	7		
53 On average, how many days per week do you consume energy drinks?	None	1	<input type="checkbox"/>	D8
	1–3 days	2		
	4–6 days	3		
	Every day	7		

54	On average, how many meals per week do you eat that were not prepared at home? By meal, I mean breakfast, lunch and dinner.	Number Don't know 77	<input type="text"/> <input type="text"/>	D9
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**CORE: Physical activity**

Next I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.

Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing or hunting for food, seeking employment. *[Insert other examples if needed]*. In answering the following 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.

Question	Response	Code
<b>Work</b>		
52	Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like <i>[carrying or lifting heavy loads, digging or construction work]</i> for at least 10 minutes continuously? <i>[INSERT EXAMPLES] (USE SHOWCARD)</i>	Yes      1 <input type="checkbox"/> No      2      If No, go to P 4
53	In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days <input type="text"/>
54	How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours: minutes <input type="text"/> : <input type="text"/> h                  min <input type="checkbox"/>
55	Does your work involve moderate-intensity activity that causes small increases in breathing or heart rate such as brisk walking <i>[or carrying light loads]</i> for at least 10 minutes continuously? <i>[INSERT EXAMPLES] (USE SHOWCARD)</i>	Yes      1 No      2      If No, go to P 7
56	In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days <input type="text"/>

57	How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours: minutes [ ] : [ ] h min	<input type="checkbox"/>	P6 (a-b)
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#### Travel to and from places

The next questions exclude the physical activities at work that you have already mentioned.

Now I would like to ask you about the usual way you travel to and from places. For example to work, for shopping, to market, to place of worship. [Insert other examples if needed]

58	Do you walk or use a bicycle ( <i>pedal cycle</i> ) for at least 10 minutes continuously to get to and from places?	Yes 1 No 2      If No, go to P 10	<input type="checkbox"/>	P7
59	In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?	Number of days [ ]	<input type="checkbox"/>	P8
60	How much time do you spend walking or bicycling for travel on a typical day?	Hours: minutes [ ] : [ ] h min	<input type="checkbox"/>	P9 (a-b)

#### Core: Physical activity (continued)

Question	Response	Code	
<b>Recreational activities</b>			
The next questions exclude the work and transport activities that you have already mentioned.			
Now I would like to ask you about sports, fitness and recreational (leisure) activities, [Insert relevant terms].			
61	Do you do any vigorous-intensity sports, fitness or recreational ( <i>leisure</i> ) activities that cause large increases in breathing or heart rate like [ <i>running or football</i> ] for at least 10 minutes continuously? [INSERT EXAMPLES] (USE SHOWCARD)	Yes 1 No 2      If No, go to P 13	P10
62	In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational ( <i>leisure</i> ) activities?	Number of days [ ] [ ]	P11
63	How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours: minutes [ ] : [ ] h min	P12 (a-b)

64	Do you do any moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities that cause a small increase in breathing or heart rate such as brisk walking, [cycling, swimming, volleyball] for at least 10 minutes continuously? <i>[INSERT EXAMPLES] (USE SHOWCARD)</i>	Yes      1  No      2      If No, go to P16	<input type="checkbox"/>	P13
65	In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities?	Number of days	<input type="text"/>	P14
66	How much time do you spend doing moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities on a typical day?	Hours: minutes	<input type="text"/> : <input type="text"/> h            min	P15 (a–b)

<b>EXPANDED: Physical activity</b>			
<b>Sedentary behaviour</b>			
The following 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, traveling in car, bus, train, reading, playing cards or watching television, but do not include time spent sleeping. <i>[INSERT EXAMPLES] (USE SHOWCARD)</i>			
67	How much time do you usually spend sitting or reclining on a typical day?	Hours: minutes <input type="text"/> : <input type="text"/> h            min	P16

<b>CORE: History of raised blood pressure</b>				
<b>Question</b>		<b>Response</b>		<b>Code</b>
68	Have you ever had your blood pressure measured by a doctor or other health worker?	Yes      1  No      2      If No, go to H6	<input type="checkbox"/>	H1
69	Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?	Yes      1  No      2      If No, go to H6	<input type="checkbox"/>	H2a
70	Have you been told in the past 12 months?	Yes      1  No      2	<input type="checkbox"/>	H2b

EXPANDED: History of raised blood pressure					
	Are you currently receiving any of the following treatments/advice for high blood pressure prescribed by a doctor				
71	Drugs (medication) that you have taken in the past two weeks	Yes	1	<input type="checkbox"/>	H3a
		No	2	<input type="checkbox"/>	
	Advice to reduce salt intake	Yes	1	<input type="checkbox"/>	H3b
		No	2	<input type="checkbox"/>	
	Advice or treatment to lose weight	Yes	1	<input type="checkbox"/>	H3c
		No	2	<input type="checkbox"/>	
72	Advice or treatment to stop smoking	Yes	1	<input type="checkbox"/>	H3d
		No	2	<input type="checkbox"/>	
73	Advice to start or do more exercise	Yes	1	<input type="checkbox"/>	H3e
		No	2	<input type="checkbox"/>	
72	Have you ever seen a traditional healer for raised blood pressure or hypertension?	Yes	1	<input type="checkbox"/>	H4
		No	2	<input type="checkbox"/>	
73	Are you currently taking any herbal or traditional remedy for your raised blood pressure?	Yes	1	<input type="checkbox"/>	H5
		No	2	<input type="checkbox"/>	

CORE: History of diabetes					
	Question	Response			Code
74	Have you ever had your blood sugar measured by a doctor or other health worker?	Yes	1	<input type="checkbox"/>	H6
		No	2	<i>If No, go to M1</i> <input type="checkbox"/>	
75	Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?	Yes	1	<input type="checkbox"/>	H7a
		No	2	<i>If No, go to M1</i> <input type="checkbox"/>	
76	Have you been told in the past 12 months?	Yes	1	<input type="checkbox"/>	H7b
		No	2	<input type="checkbox"/>	

EXPANDED: History of diabetes					
	Are you currently receiving any of the following treatments/advice for diabetes prescribed by a doctor or other health worker?				
77	Insulin	Yes No	1 2	<input type="checkbox"/>	H8a
	Drugs (medication) that you have taken in the past two weeks	Yes No	1 2	<input type="checkbox"/>	H8b
	Special prescribed diet	Yes No	1 2	<input type="checkbox"/>	H8c
	Advice or treatment to lose weight	Yes No	1 2	<input type="checkbox"/>	H8d
	Advice or treatment to stop smoking	Yes No	1 2	<input type="checkbox"/>	H8e
	Advice to start or do more exercise	Yes No	1 2	<input type="checkbox"/>	H8f
78	Have you ever seen a traditional healer for diabetes or raised blood sugar?	Yes No	1 2	<input type="checkbox"/>	H9
79	Are you currently taking any herbal or traditional remedy for your diabetes?	Yes No	1 2	<input type="checkbox"/>	H10

### STEP 2: Physical measurements

CORE: Height and weight				
Question	Response			Code
80 Interviewer ID	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			M1
81 Device IDs for height and weight	Height Weight	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	M2a M2b
82 Height	in centimetres (cm) <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>			M3
83 Weight <i>If too large for scale 666.6</i>	in kilograms (kg) <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>			M4
84 <b>For women:</b> Are you pregnant?	Yes No	1 2	<i>If Yes, go to M 8</i> <input type="checkbox"/>	M5

<b>CORE: Waist</b>			
85	Device ID for waist	_____	M6
86	Waist circumference	in centimetres (cm) _____.	M7

<b>CORE: Blood pressure</b>			
87	Interviewer ID	_____	M8
88	Device ID for blood pressure	_____	M9
89	Cuff size used	Small 1 Medium 2 Large 3	M10
90	Reading 1	Systolic (mmHg) _____	M11a
		Diastolic (mmHg) _____	M11b
91	Reading 2	Systolic (mmHg) _____	M12a
		Diastolic (mmHg) _____	M12b
92	Reading 3	Systolic (mmHg) _____	M13a
		Diastolic (mmHg) _____	M13b
93	During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?	Yes 1 No 2	M14

<b>EXPANDED: Hip circumference and heart rate</b>			
94	Hip circumference	in centimeters (cm) _____.	M15
95	Heart rate		
	Reading 1	Beats per minute _____	M16a
	Reading 2	Beats per minute _____	M16b
	Reading 3	Beats per minute _____	M16c

### **STEP 3: Biochemical measurements**

#### **CORE: Blood glucose**

Question	Response	Code
96	During the past 12 hours have you had anything to eat or drink, other than water?  Yes 1 No 2	B1
97	Technician ID	B2

98	Device ID	_____	B3
99	Time of day blood specimen taken (24-hour clock)	Hours: minutes _____ : _____ h min	B4
100	Fasting blood glucose	mmol/L _____ . _____	B5
	<i>Choose accordingly: mmol/L or mg/dL</i>	mg/dL _____ . _____	
101	Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker for raised blood glucose?	Yes 1 No 2 <input type="checkbox"/>	B6

**CORE: Blood lipids**

102	Device ID	_____	B7
103	Total cholesterol	mmol/L _____ . _____	B8
	<i>Choose accordingly: mmol/L or mg/dL</i>	mg/dL _____ . _____	
104	During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor or other health worker?	Yes 1 No 2 <input type="checkbox"/>	B9

**EXPANDED: Triglycerides and HDL cholesterol**

105	Triglycerides <i>Choose accordingly: mmol/L or mg/dL</i>	mmol/L _____ . _____	B10
		mg/dL _____ . _____	
106	HDL cholesterol <i>Choose accordingly: mmol/L or mg/dL</i>	mmol/L _____ . _____	B11
		mg/dL _____ . _____	

## Annex 2

### Results of the STEPS survey

## Maldives (MALÉ) STEPS survey, 2011 Fact sheet

The STEPS survey of chronic disease risk factors in Maldives/Malé was carried out in 2011. The survey carried out STEP 1 and STEP 2. Sociodemographic and behavioural information was collected in STEP 1. Physical measurements such as height, weight and blood pressure were collected in STEP 2. This was a population-based survey of adults aged 15–64 years. A multistage sample design was used to produce representative data for that age range. A total of 1780 adults participated in the survey. The overall response rate was 89%. A repeat survey is planned for 2015 if funds permit.

<b>Results for adults aged 15–64 years (including 95% CI)</b>	<b>Both sexes</b>	<b>Men</b>	<b>Women</b>
<b>STEP 1 Tobacco use</b>			
Percentage who currently smoke tobacco	<b>18.8%</b> (16.7–20.9)	<b>34.7%</b> (30.8–38.5)	<b>3.4%</b> (2.2–4.5)
Percentage who currently smoke tobacco daily	<b>15.5%</b> (13.5–17.5)	<b>29.1%</b> (25.5–32.8)	<b>2.2%</b> (1.4–2.9)
<i>For those who smoke tobacco daily</i>			
Average age started smoking (years)	<b>17.8</b> (17.2–18.5)	<b>17.8</b> (17.1–18.5)	*
Percentage of daily smokers smoking manufactured cigarettes	<b>93.8%</b> (90.8–96.9)	<b>95.9%</b> (93.0–99.0)	*
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	<b>14.0</b> (12.7–15.3)	<b>14.3</b> (12.9–15.7)	*
<b>STEP 1 Alcohol consumption</b>			
Percentage who are lifetime abstainers	<b>96.2%</b> (95.1–97.3)	<b>92.9%</b> (90.7–95.0)	<b>99.5%</b> (99.1–100.0)
Percentage who are past 12 month abstainers	<b>1.7%</b> (0.9–2.4)	<b>3.2%</b> (1.7–4.7)	<b>0.2%</b> (0.0–0.4)
Percentage who currently drink (drank alcohol in the past 30 days)	<b>0.9%</b> (0.4–1.5)	<b>1.6%</b> (0.6–2.6)	<b>0.2%</b> (0.0–0.6)
Percentage who engage in heavy episodic drinking (men who had 5 or more / women who had 4 or more drinks on any day in the past 30 days)	—	<b>0.9%</b> (0.1–1.6)	<b>0.0%</b> (0.0–0.0)
<b>STEP 1 Fruit and vegetable consumption (in a typical week)</b>			
Mean number of days fruit consumed	<b>3.3</b> (3.2–3.5)	<b>3.3</b> (3.1–3.5)	<b>3.3</b> (3.2–3.5)

Mean number of servings of fruit consumed on average per day	<b>1.0</b> (0.9–1.0)	<b>1.0</b> (0.9–1.1)	<b>0.9</b> (0.8–1.1)
Mean number of days vegetables consumed	<b>3.8</b> (3.7–3.9)	<b>3.7</b> (3.5–4.0)	<b>3.9</b> (3.7–4.1)
Mean number of servings of vegetables consumed on average per day	<b>1.0</b> (0.9–1.0)	<b>1.0</b> (0.9–1.1)	<b>0.9</b> (0.8–1.0)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	<b>93.6%</b> (92.4–94.9)	<b>92.6%</b> (90.5–94.8)	<b>94.6%</b> (93.1–96.1)
<b>STEP 1 Physical activity</b>			
Percentage with low levels of activity (defined as <600 MET-minutes per week)**	<b>45.9%</b> (43.2–48.6)	<b>39.1%</b> (35.1–43.2)	<b>52.4%</b> (48.9–55.9)
Percentage with high levels of activity (defined as ≥3000 MET-minutes per week)**	<b>33.5%</b> (30.9–36.1)	<b>46.1%</b> (41.9–50.3)	<b>21.5%</b> (18.7–24.4)
Median time spent in physical activity on average per day (minutes) (presented with interquartile range)	<b>34.3</b> (0.0–120.0)	<b>60.0</b> (0.0–180.0)	<b>21.4</b> (0.0–68.6)
Percentage not engaging in vigorous activity	<b>73.8%</b> (71.4–76.3)	<b>58.8%</b> (54.6–62.9)	<b>88.1%</b> (85.8–90.5)

\* Indicates less than 50 respondents

\*\* Complete definitions of low and high levels of physical activity and other conditions are specified in the GPAQ Analysis Guide, available at: <http://www.who.int/chp/steps/GPAQ/en/index.html>

<b>Results for adults aged 15–64 years (including 95% CI)</b>	<b>Both sexes</b>	<b>Men</b>	<b>Women</b>
<b>STEP 2 Physical measurements</b>			
Mean body mass index – BMI (kg/m <sup>2</sup> )	<b>23.7</b> (23.4–23.9)	<b>23.2</b> (22.8–23.6)	<b>24.2</b> (23.8–24.5)
Percentage who are overweight (BMI ≥25 kg/m <sup>2</sup> )	<b>37.1%</b> (34.6–39.6)	<b>32.0%</b> (28.3–35.8)	<b>42.3%</b> (38.9–45.7)
Percentage who are obese (BMI ≥30 kg/m <sup>2</sup> )	<b>11.5%</b> (9.9–13.1)	<b>8.6%</b> (6.4–10.8)	<b>14.5%</b> (12.3–16.7)
Average waist circumference (cm)	—	<b>79.1</b> (78.0–80.2)	<b>78.9</b> (78.0–79.9)
Mean systolic blood pressure – SBP (mmHg), including those currently on medication for raised BP	<b>119.7</b> (118.9–120.5)	<b>122.8</b> (121.6–124.0)	<b>116.7</b> (115.6–117.7)
Mean diastolic blood pressure – DBP (mmHg), including those currently on medication for raised BP	<b>75.5</b> (74.9–76.1)	<b>76.5</b> (75.5–77.4)	<b>74.5</b> (73.7–75.3)
Percentage with raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP)	<b>16.6%</b> (14.9–18.4)	<b>19.0%</b> (16.0–22.1)	<b>14.3%</b> (12.4–16.3)
Percentage with raised BP (SBP ≥140 and/or DBP ≥90 mmHg) who are not currently on medication for raised BP	<b>83.0%</b> (78.6–87.4)	<b>86.2%</b> (79.8–92.6)	<b>79.0%</b> (73.2–84.9)
<b>Summary of combined risk factors</b>			
• Current daily smokers	• Overweight (BMI ≤25 kg/m <sup>2</sup> )		
• Less than 5 servings of fruits and vegetables per day	• Raised BP (SBP ≤140 and/or DBP ≤90 mmHg or currently on medication for raised BP)		
• Low level of activity			
Percentage with none of the above risk factors	<b>1.1%</b> (0.4–1.8)	<b>0.9%</b> (0.0–2.0)	<b>1.4%</b> (0.5–2.3)
Percentage with three or more of the above risk factors, aged 25–44 years	<b>34.2%</b> (30.1–38.2)	<b>38.1%</b> (31.3–45.0)	<b>30.1%</b> (25.8–34.4)

Percentage with three or more of the above risk factors, aged 45–64 years	<b>54.3%</b> (48.9–59.8)	<b>51.7%</b> (42.9–60.5)	<b>57.2%</b> (51.0–63.4)
Percentage with three or more of the above risk factors, aged 25–64 years	<b>39.5%</b> (36.2–42.9)	<b>41.8%</b> (36.3–47.4)	<b>37.1%</b> (33.5–40.8)

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## Annex 3

### Data book

#### WHO STEPS Chronic disease risk factor surveillance Data Book for Maldives/Malé, 2011

## 1. Demographic information results

Description: Summary information by age group and sex of the respondents

### 1.1 Age group by sex

Instrument question:

- Sex
- What is your date of birth?

Age group (years)	Age group and sex of respondents							
	Men		Women		Both sexes			
	N	%		N	%		N	%
15–24	246	37.0		240	21.5		486	27.3
25–34	134	20.2		283	25.4		417	23.4
35–44	97	14.6		243	21.8		340	19.1
45–54	75	11.3		154	13.8		229	12.9
55–64	112	16.9		196	17.6		308	17.3
<b>15–64</b>	<b>664</b>	<b>100.0</b>		<b>1116</b>	<b>100.0</b>		<b>1780</b>	<b>100.0</b>

### 1.2 Education

Description: Mean number of years of education among respondents

Instrument question:

- In total, how many years have you spent at school or in full-time study (excluding pre-school)?

Mean number of years of education						
Age group (years)	Men		Women		Both sexes	
	N	Mean	N	Mean	N	Mean
15–24	239	10.5	238	10.6	477	10.6
25–34	132	11.5	280	10.7	412	10.9
35–44	93	9.2	230	8.6	323	8.7
45–54	68	7.6	142	6.3	210	6.7
55–64	96	6.7	153	5.3	249	5.8
<b>15–64</b>	<b>628</b>	<b>9.6</b>	<b>1043</b>	<b>8.8</b>	<b>1671</b>	<b>9.1</b>

### 1.3 Highest level of education

Description: Highest level of education achieved by the survey respondents

Instrument question:

- What is the highest level of education you have completed?

Highest level of education								
Age group (years)	Men							
	N	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Postgraduate degree completed
15–24	246	0.4	1.2	14.6	67.9	11.0	4.1	0.8
25–34	133	0.0	2.3	21.1	42.9	10.5	18.8	4.5
35–44	97	1.0	14.4	40.2	27.8	6.2	5.2	5.2
45–54	74	2.7	37.8	28.4	21.6	1.4	5.4	2.7
55–64	112	6.3	50.9	24.1	8.9	1.8	6.3	1.8
<b>15–64</b>	<b>662</b>	<b>1.7</b>	<b>15.9</b>	<b>22.8</b>	<b>41.8</b>	<b>7.6</b>	<b>7.7</b>	<b>2.6</b>

Highest level of education								
Age group (years)	Women							
	N	% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Postgraduate degree completed
15–24	240	0.0	1.7	12.5	66.3	12.5	6.7	0.4
25–34	283	0.4	4.6	22.3	45.6	9.9	15.2	2.1
35–44	242	0.8	25.6	42.1	16.9	4.5	8.7	1.2
45–54	153	2.0	48.4	36.6	10.5	0.0	2.6	0.0
55–64	193	3.6	72.5	19.2	3.6	0.5	0.5	0.0
<b>15–64</b>	<b>1111</b>	<b>1.2</b>	<b>26.4</b>	<b>25.9</b>	<b>31.7</b>	<b>6.3</b>	<b>7.7</b>	<b>0.9</b>

Age group (years)	Highest level of education							
	N	Both sexes						
		% No formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/University completed	% Postgraduate degree completed
15–24	486	0.2	1.4	13.6	67.1	11.7	5.3	0.6
25–34	416	0.2	3.8	21.9	44.7	10.1	16.3	2.9
35–44	339	0.9	22.4	41.6	20.1	5.0	7.7	2.4
45–54	227	2.2	44.9	33.9	14.1	0.4	3.5	0.9
55–64	305	4.6	64.6	21.0	5.6	1.0	2.6	0.7
<b>15–64</b>	<b>1773</b>	<b>1.4</b>	<b>22.4</b>	<b>24.8</b>	<b>35.5</b>	<b>6.8</b>	<b>7.7</b>	<b>1.5</b>

## 1.4 Marital status

Description: Marital status of survey respondents

Instrument question:

- What is your marital status?

Age group (years)	Marital status					
	N	Men				
		% Never married	% Currently married	% Separated	% Divorced	% Widowed
15–24	245	86.5	13.5	0.0	0.0	0.0
25–34	134	22.4	69.4	0.0	8.2	0.0
35–44	97	5.2	91.8	1.0	2.1	0.0
45–54	75	4.0	82.7	2.7	8.0	2.7
55–64	111	1.8	90.1	1.8	5.4	0.9
<b>15–64</b>	<b>662</b>	<b>38.1</b>	<b>56.9</b>	<b>0.8</b>	<b>3.8</b>	<b>0.5</b>

Age group (years)	Marital status					
	N	Women				
		% Never married	% Currently married	% Separated	% Divorced	% Widowed
15–24	239	70.3	27.6	0.0	2.1	0.0
25–34	283	9.5	81.6	1.8	6.4	0.7
35–44	242	0.8	86.8	1.2	9.9	1.2
45–54	154	0.6	79.2	2.6	15.6	1.9
55–64	195	0.5	57.9	2.1	10.3	29.2
<b>15–64</b>	<b>1113</b>	<b>17.9</b>	<b>66.7</b>	<b>1.4</b>	<b>8.2</b>	<b>5.8</b>

Age group (years)	Marital status					
	Both sexes					
	N	% Never married	% Currently married	% Separated	% Divorced	% Widowed
15–24	484	78.5	20.5	0.0	1.0	0.0
25–34	417	13.7	77.7	1.2	7.0	0.5
35–44	339	2.1	88.2	1.2	7.7	0.9
45–54	229	1.7	80.3	2.6	13.1	2.2
55–64	306	1.0	69.6	2.0	8.5	19.0
<b>15–64</b>	<b>1775</b>	<b>25.4</b>	<b>63.0</b>	<b>1.2</b>	<b>6.5</b>	<b>3.8</b>

## 1.5 Employment status

Description: Proportion of respondents in paid employment and those who are unpaid. Unpaid includes persons who are non-paid, students, homemakers, retired and unemployed.

Instrument question:

- Which of the following best describes your main work status over the past 12 months?

Age group (years)	Employment status				
	Men				
	N	% Government employee	% Non-government employee	% Self-employed	% Unpaid
15–24	244	15.6	27.9	4.9	51.6
25–34	133	40.6	40.6	12.8	6.0
35–44	96	30.2	26.0	36.5	7.3
45–54	75	20.0	29.3	29.3	21.3
55–64	110	17.3	25.5	26.4	30.9
<b>15–64</b>	<b>658</b>	<b>23.6</b>	<b>29.9</b>	<b>17.5</b>	<b>29.0</b>

Age group (years)	Employment status				
	Women				
	N	% Government employee	% Non- government employee	% Self- employed	% Unpaid
15–24	237	11.8	22.8	2.1	63.3
25–34	282	23.8	17.7	3.9	54.6
35–44	243	13.2	6.2	9.5	71.2
45–54	152	12.5	1.3	12.5	73.7
55–64	194	6.7	3.6	6.7	83.0
<b>15–64</b>	<b>1108</b>	<b>14.4</b>	<b>11.6</b>	<b>6.4</b>	<b>67.7</b>

Age group (years)	Employment status				
	Both sexes				
	N	% Government employee	% Non- government employee	% Self- employed	% Unpaid
15–24	481	13.7	25.4	3.5	57.4
25–34	415	29.2	25.1	6.7	39.0
35–44	339	18.0	11.8	17.1	53.1
45–54	227	15.0	10.6	18.1	56.4
55–64	304	10.5	11.5	13.8	64.1
<b>15–64</b>	<b>1766</b>	<b>17.8</b>	<b>18.4</b>	<b>10.5</b>	<b>53.3</b>

## 1.6 Unpaid work and unemployed

Description: Proportion of respondents in unpaid work

Instrument question:

- Which of the following best describes your main work status over the past 12 months?

Unpaid work and unemployed							
Age group (years)	Men						Unemployed
	N	% Non-paid	% Student	% Home-maker	% Retired	% Able to work	% Not able to work
15–24	126	0.0	64.3	1.6	0.0	27.8	6.3
25–34	8	0.0	0.0	37.5	0.0	50.0	12.5
35–44	7	0.0	0.0	14.3	0.0	71.4	14.3
45–54	16	0.0	0.0	37.5	12.5	31.3	18.8
55–64	34	0.0	0.0	14.7	23.5	17.6	44.1
<b>15–64</b>	<b>191</b>	<b>0.0</b>	<b>42.4</b>	<b>8.9</b>	<b>5.2</b>	<b>28.8</b>	<b>14.7</b>

Unpaid work and unemployed							
Age group (years)	Women						Unemployed
	N	% Non-paid	% Student	% Home-maker	% Retired	% Able to work	% Not able to work
15–24	150	0.7	56.7	24.7	0.7	12.0	5.3
25–34	154	0.0	3.2	77.9	0.6	15.6	2.6
35–44	173	0.0	0.6	80.3	0.0	18.5	0.6
45–54	112	0.0	1.8	74.1	0.0	16.1	8.0
55–64	161	0.0	0.0	67.1	0.6	12.4	19.9
<b>15–64</b>	<b>750</b>	<b>0.1</b>	<b>12.4</b>	<b>64.9</b>	<b>0.4</b>	<b>14.9</b>	<b>7.2</b>

Unpaid work and unemployed							
Age group (years)	Both sexes						Unemployed
	N	% Non-paid	% Student	% Home-maker	% Retired	% Able to work	% Not able to work
15–24	276	0.4	60.1	14.1	0.4	19.2	5.8
25–34	162	0.0	3.1	75.9	0.6	17.3	3.1
35–44	180	0.0	0.6	77.8	0.0	20.6	1.1
45–54	128	0.0	1.6	69.5	1.6	18	9.4
55–64	195	0.0	0.0	57.9	4.6	13.3	24.1
<b>15–64</b>	<b>941</b>	<b>0.1</b>	<b>18.5</b>	<b>53.6</b>	<b>1.4</b>	<b>17.7</b>	<b>8.7</b>

## 2. Tobacco use

### 2.1 Current smoking

Description: Current smokers among all respondents

Instrument question:

- Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?

Age group (years)	Percentage of current smokers								
	Men			Women			Both sexes		
	N	% Current smoker	95% CI	N	% Current smoker	95% CI	N	% Current smoker	95% CI
15–24	244	29.1	23.4–34.8	239	2.1	0.3–3.9	483	14.9	11.8–18.1
25–34	133	45.9	37.4–54.4	281	2.9	0.9–4.8	414	24.3	19.5–29.2
35–44	97	36.1	26.5–45.7	243	4.1	1.6–6.7	340	20.2	14.9–25.5
45–54	75	32.0	21.4–42.6	153	6.5	2.6–10.5	228	19.8	13.7–25.8
55–64	112	24.1	16.2–32.1	196	9.7	5.6–13.9	308	17.1	12.5–21.7
<b>15–64</b>	<b>661</b>	<b>34.7</b>	<b>30.8–38.5</b>	<b>1112</b>	<b>3.4</b>	<b>2.3–4.5</b>	<b>1773</b>	<b>18.8</b>	<b>16.7–20.9</b>

### 2.2 Smoking status

Description: Smoking status of all respondents

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?
- Do you currently smoke tobacco products daily?

Age group (years)	Smoking status						
	N	Men				% Does not smoke	95% CI
		% Daily	95% CI	% Non- daily	95% CI		
15–24	244	24.2	18.8–29.6	4.9	2.2–7.6	70.9	65.2–76.6
25–34	133	37.6	29.3–45.8	8.3	3.6–13.0	54.1	45.6–62.6
35–44	97	30.9	21.7–40.2	5.2	0.7–9.6	63.9	54.3–73.5
45–54	75	28.0	17.8–38.2	4.0	0.0–8.4	68.0	57.4–78.6
55–64	112	23.2	15.4–31.1	0.9	0.0–2.6	75.9	68.0–83.8
<b>15–64</b>	<b>661</b>	<b>29.1</b>	<b>25.5–32.8</b>	<b>5.5</b>	<b>3.6–7.4</b>	<b>65.3</b>	<b>61.5–69.2</b>

Smoking status							
Age group (years)	Women						
	N	Current smoker			% Non-daily	95% CI	% Does not smoke
		% Daily	95% CI				
15–24	239	0.4	0.0–1.2	1.7	0.0–3.3	97.9	96.1–99.7
25–34	281	1.8	0.2–3.3	1.1	0.0–2.3	97.2	95.2–99.1
35–44	243	3.7	1.3–6.1	0.4	0.0–1.2	95.9	93.4–98.4
45–54	153	5.9	2.2–9.6	0.7	0.0–1.9	93.5	89.5–97.4
55–64	196	9.2	5.1–13.2	0.5	0.0–1.5	90.3	86.2–94.5
<b>15–64</b>	<b>1112</b>	<b>2.2</b>	<b>1.4–3.0</b>	<b>1.2</b>	<b>0.4–2.0</b>	<b>96.6</b>	<b>95.5–97.7</b>

Smoking status							
Age group (years)	Both sexes						
	N	Current smoker			% Non-daily	95% CI	% Does not smoke
		% Daily	95% CI				
15–24	483	11.7	8.9–14.5	3.2	1.7–4.8	85.1	82.0–88.2
25–34	414	19.7	15.1–24.2	4.7	2.2–7.1	75.7	70.8–80.6
35–44	340	17.4	12.4–22.4	2.8	0.5–5.1	79.8	74.5–85.1
45–54	228	17.4	11.6–23.2	2.4	0.0–4.8	80.2	74.2–86.3
55–64	308	16.4	11.8–20.9	0.7	0.0–1.7	82.9	78.3–87.5
<b>15–64</b>	<b>1773</b>	<b>15.5</b>	<b>13.5–17.5</b>	<b>3.3</b>	<b>2.3–4.3</b>	<b>81.2</b>	<b>79.1–83.4</b>

## 2.3 Frequency of smoking

Description: Percentage of current daily smokers among smokers

Instrument question:

- Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?
- Do you currently smoke tobacco products daily?

Current daily smokers among smokers									
Age group (years)	Men			Women			Both sexes		
	N	% Daily smokers	95% CI	N	% Daily smokers	95% CI	N	% Daily smokers	95% CI
15–24	71	83.1	74.3–91.9	5	20.0	0.0–56.3	76	78.5	69.1–87.9
25–34	61	82.0	72.2–91.7	8	62.5	27.8–97.2	69	80.8	71.4–90.2
35–44	35	85.7	74.0–97.4	10	90.0	70.8–100.0	45	86.1	75.5–96.8
45–54	24	87.5	74.2–100.0	10	90.0	70.8–100.0	34	87.9	76.3–99.5
55–64	27	96.3	89.1–100.0	19	94.7	84.4–100.0	46	95.9	90.0–100.0
<b>15–64</b>	<b>218</b>	<b>84.1</b>	<b>78.9–89.2</b>	<b>52</b>	<b>65.4</b>	<b>47.1–83.7</b>	<b>270</b>	<b>82.4</b>	<b>77.3–87.4</b>

## 2.4 Initiation of smoking

Description: Mean age of initiation and mean duration of smoking, in years, among daily smokers (no total age group for mean duration of smoking as age influences these values)

Instrument questions:

- How old were you when you first started smoking daily?
- Do you remember how long ago it was?

Mean age started smoking						
Age group (years)	Men			Both sexes		
	N	Mean age	95% CI	N	Mean age	95% CI
15–24	56	15.5	14.9–16.2	57	15.5	14.9–16.1
25–34	46	18.5	17.2–19.8	51	18.3	17.1–19.5
35–44	30	19.0	17.4–20.5	38	19.4	17.9–21.0
45–54	18	21.1	17.7–24.5	26	20.1	17.0–23.1
55–64	24	19.3	16.9–21.6	40	19.7	17.5–22.0
<b>15–64</b>	<b>174</b>	<b>17.8</b>	<b>17.1–18.5</b>	<b>212</b>	<b>17.8</b>	<b>17.2–18.5</b>

Mean duration of smoking						
Age group (years)	Men			Both sexes		
	N	Mean duration	95% CI	N	Mean duration	95% CI
15–24	56	4.3	3.6–5.0	57	4.4	3.7–5.1
25–34	46	10.0	8.5–11.5	51	10.2	8.8–11.6
35–44	30	20.4	18.6–22.3	38	20.2	18.4–22.0
45–54	18	28.2	24.5–32.0	26	29.3	25.9–32.6
55–64	24	39.4	36.7–42.0	40	38.8	36.3–41.2
<b>15–64</b>	<b>174</b>	<b>12.8</b>	<b>11.4–14.3</b>	<b>212</b>	<b>13.6</b>	<b>12.2–15.0</b>

## 2.5 Manufactured cigarette smokers

Description: Percentage of smokers who use manufactured cigarettes among daily smokers

Instrument question:

- On average, how many of the following do you smoke each day?

Manufactured cigarette smokers among daily smokers							
Age group (years)	Men				Both sexes		
	N	% Manufactured cigarette smoker	95% CI		N	% Manufactured cigarette smoker	95% CI
15–24	59	94.9	89.3–100.0		60	95.0	89.5–100.0
25–34	50	94.0	87.4–100.0		55	93.4	86.8–99.9
35–44	30	100.0	100.0–100.0		39	95.3	90.6–100.0
45–54	21	100.0	100.0–100.0		30	94.6	88.4–100.0
55–64	26	92.3	82.0–100.0		44	82.3	71.6–93.1
<b>15–64</b>	<b>186</b>	<b>95.9</b>	<b>92.9–98.9</b>		<b>228</b>	<b>93.9</b>	<b>90.8–96.9</b>

## 2.6 Amount of tobacco used among smokers by type

Description: Mean amount of tobacco used by daily smokers per day, by type

Instrument question:

- On average, how many of the following do you smoke each day?

Mean amount of tobacco used by daily smokers by type												
Age group (years)	Men											
	N	Mean # of manu-factured cig.	95% CI	N	Mean # of hand-rolled cig.	95% CI	N	Mean # of pipes of tobacco	95% CI	N	Mean # of other type of tobacco	95% CI
15–24	56	13.6	11.4–15.8	55	0.2	0.0–0.4	56	0.0	–	56	0.2	0.0–0.4
25–34	47	14.8	12.0–17.7	48	0.0	–	48	0.0	–	47	1.1	0.0–3.1
35–44	30	12.9	10.2–15.6	28	0.7	0.0–2.1	28	0.0	–	28	0.0	–
45–54	21	17.8	14.1–21.5	16	0.0	–	17	0.0	–	17	0.0	–
55–64	24	13.1	10.1–16.1	24	0.0	–	24	0.0	–	24	0.0	–
<b>15–64</b>	<b>178</b>	<b>14.3</b>	<b>12.9–15.7</b>	<b>171</b>	<b>0.2</b>	<b>0.0–0.5</b>	<b>173</b>	<b>0.0</b>	<b>–</b>	<b>172</b>	<b>0.4</b>	<b>0.0–1.1</b>

Mean amount of tobacco used by daily smokers by type												
Age group (years)	Both sexes											
	N	Mean # of manu-factured cig.	95% CI	N	Mean # of hand-rolled cig.	95% CI	N	Mean # of pipes of tobacco	95% CI	N	Mean # of other type of tobacco	95% CI
15–24	57	13.5	11.4–15.7	56	0.2	0.0–0.4	57	0.0	–	57	0.2	0.0–0.4
25–34	51	14.8	12.1–17.6	52	0.0	–	52	0.0	–	51	1.0	1.0–3.0
35–44	38	12.5	9.9–15.0	36	0.6	0.0–1.9	36	0.0	–	36	0.1	0.0–0.2
45–54	30	17.0	13.6–20.5	24	0.1	0.0–0.4	26	0.0	–	26	0.3	0.0–0.6
55–64	40	11.0	8.4–13.5	40	0.0	–	40	0.0	–	41	0.3	0.1–0.5
<b>15–64</b>	<b>216</b>	<b>14.0</b>	<b>12.7–15.3</b>	<b>208</b>	<b>0.2</b>	<b>0.0–0.4</b>	<b>211</b>	<b>0.0</b>	<b>–</b>	<b>211</b>	<b>0.5</b>	<b>0.0–1.1</b>

## 2.7 Percentage of ex-daily smokers in the population

Description: Percentage of ex-daily smokers among all respondents and the mean duration in years since ex-daily smokers quit smoking daily

Instrument questions:

- In the past did you ever smoke daily?
- How old were you when you stopped smoking daily?

Ex-daily smokers among all respondents									
Age group (years)	Men			Women			Both sexes		
	N	% Ex-daily smokers	95% CI	N	% Ex-daily smokers	95% CI	N	% Ex-daily smokers	95% CI
15–24	231	3.5	1.1–5.8	234	0.4	0.0–1.3	465	1.8	0.6–3.0
25–34	120	4.2	0.6–7.8	278	0.0	–	398	2.0	0.3–3.7
35–44	92	9.8	3.7–15.9	241	2.9	0.8–5.0	333	6.3	3.1–9.5
45–54	72	22.2	12.6–31.9	150	2.7	0.1–5.2	222	12.7	7.4–18.0
55–64	111	38.7	29.7–47.8	195	16.4	11.2–21.6	306	27.9	22.4–33.3
<b>15–64</b>	<b>626</b>	<b>8.5</b>	<b>6.4–10.7</b>	<b>1098</b>	<b>1.7</b>	<b>1.0–2.3</b>	<b>1724</b>	<b>5.0</b>	<b>3.9–6.0</b>

Mean years since cessation			
Age group (years)	Both sexes		
	N	Mean years	95% CI
15–24	0	–	–
25–34	2	9.0	6.1–11.9
35–44	8	13.6	11.2–16.0
45–54	7	15.6	10.7–20.5
55–64	41	20.7	17.4–24.1
<b>15–64</b>	<b>58</b>	<b>16.2</b>	<b>13.9–18.5</b>

## 2.8 Smokeless tobacco use

### 2.9 Current users of smokeless tobacco

Description: Percentage of current users of smokeless tobacco among all respondents

Instrument question:

- Do you currently use any smokeless tobacco such as snuff, chewing tobacco?

Age group (years)	Current users of smokeless tobacco								
	Men			Women			Both sexes		
	N	% Current users	95% CI	N	% Current users	95% CI	N	% Current users	95% CI
15–24	242	1.7	0.0–3.3	239	0.4	0.0–1.2	481	1.0	0.1–1.9
25–34	133	3.8	0.5–7.0	281	0.4	0.0–1.1	414	2.1	0.4–3.7
35–44	96	2.1	0.0–4.9	242	1.7	0.0–3.3	338	1.9	0.2–3.5
45–54	74	10.8	3.7–17.9	154	5.8	2.1–9.6	228	8.4	4.3–12.5
55–64	111	16.2	9.3–23.1	193	7.3	3.6–10.9	304	11.9	7.9–15.9
<b>15–64</b>	<b>656</b>	<b>3.9</b>	<b>2.5–5.4</b>	<b>1109</b>	<b>1.4</b>	<b>0.8–2.0</b>	<b>1765</b>	<b>2.6</b>	<b>1.9–3.4</b>

## 2.10 Status of smokeless tobacco use

Description: Status of using smokeless tobacco among all respondents

Instrument questions:

- Do you currently use any smokeless tobacco such as snuff, chewing tobacco?
- Do you currently use smokeless tobacco products daily?

Smokeless tobacco use							
Age group (years)	Men						
	N	Current user			% Does not use smokeless tobacco	95% CI	
		% Daily	95% CI	% Non- daily			
15–24	242	0.8	0.0–2.0	0.8	0.0–2.0	98.3	96.7–100.0
25–34	133	0.8	0.0–2.2	3.0	0.1–5.9	96.2	93.0–99.5
35–44	96	1.0	0.0–3.1	1.0	0.0–3.1	97.9	95.1–100.0
45–54	74	8.1	1.9–14.3	2.7	0.0–6.4	89.2	82.1–96.3
55–64	111	12.6	6.4–18.8	3.6	0.1–7.1	83.8	76.9–90.7
<b>15–64</b>	<b>656</b>	<b>2.2</b>	<b>1.2–3.2</b>	<b>1.8</b>	<b>0.7–2.8</b>	<b>96.1</b>	<b>94.6–97.5</b>

Smokeless tobacco use							
Age group (years)	Women						
	N	Current user			% Does not use smokeless tobacco	95% CI	
		% Daily	95% CI	% Non- daily			
15–24	239	0.0	–	0.4	0.0–1.2	99.6	98.8–100.0
25–34	281	0.4	0.0–1.1	0.0	–	99.6	98.9–100.0
35–44	242	1.7	0.0–3.3	0.0	–	98.3	96.7–100.0
45–54	154	5.2	1.7–8.7	0.6	0.0–1.9	94.2	90.4–97.9
55–64	193	5.7	2.4–9.0	1.6	0.0–3.3	92.7	89.1–96.4
<b>15–64</b>	<b>1109</b>	<b>1.1</b>	<b>0.6–1.6</b>	<b>0.3</b>	<b>0.0–0.7</b>	<b>98.6</b>	<b>98.0–99.2</b>

Smokeless tobacco use							
Age group (years)	Both sexes						
	N	Current user			% Does not use smokeless tobacco	95% CI	
		% Daily	95% CI	% Non- daily			
15–24	481	0.4	0.0–0.9	0.6	0.0–1.3	99.0	98.1–99.9
25–34	414	0.6	0.0–1.4	1.5	0.0–3.0	97.9	96.3–99.6
35–44	338	1.3	0.1–2.6	0.5	0.0–1.5	98.1	96.5–99.8
45–54	228	6.7	3.1–10.3	1.7	0.0–3.7	91.6	87.5–95.7
55–64	304	9.3	5.7–12.8	2.6	0.6–4.6	88.1	84.1–92.1
<b>15–64</b>	<b>1765</b>	<b>1.6</b>	<b>1.1–2.2</b>	<b>1.0</b>	<b>0.5–1.6</b>	<b>97.4</b>	<b>96.6–98.1</b>

## **2.11 Percentage of ex-daily users of smokeless tobacco in the population**

Description: Percentage of ex-daily users of smokeless tobacco among all respondents

Instrument question:

- In the past, did you ever use smokeless tobacco such as snuff, chewing tobacco daily?

Age group (years)	Ex-daily smokeless tobacco users								
	Men			Women			Both sexes		
	N	% Ex-daily users	95% CI	N	% Ex-daily users	95% CI	N	% Ex-daily users	95% CI
15–24	227	1.3	0.0–2.8	225	0.0	–	452	0.6	0.0–1.3
25–34	128	3.9	0.5–7.3	267	0.0	–	395	2.0	0.3–3.7
35–44	94	2.1	0.0–5.1	227	0.9	0.0–2.1	321	1.5	0.0–3.1
45–54	69	4.3	0.0–9.2	146	1.4	0.0–3.3	215	2.9	0.3–5.5
55–64	109	2.8	0.0–5.8	188	5.3	2.1–8.5	297	4.0	1.8–6.2
15–64	627	2.5	1.2–3.8	1053	0.5	0.2–0.8	1680	1.5	0.8–2.2

## **2.12 Current tobacco users**

Description: Percentage of daily and current (daily plus non-daily) tobacco users, including smoking and smokeless, among all respondents

Instrument questions:

- Do you currently smoke tobacco products daily?
- Do you currently use smokeless tobacco products daily?

Current tobacco users									
Age group (years)	Men			Women			Both sexes		
	N	% Current users	95% CI	N	% Current users	95% CI	N	% Current users	95% CI
15–24	241	29.0	23.3–34.8	238	2.1	0.3–3.9	479	14.9	11.7–18.0
25–34	133	45.9	37.4–54.4	280	2.9	0.9–4.8	413	24.4	19.5–29.2
35–44	96	36.5	26.8–46.1	242	5.8	2.8–8.7	338	21.2	15.8–26.5
45–54	74	37.8	26.8–48.9	153	11.8	6.7–16.9	227	25.2	18.7–31.7
55–64	111	36.9	27.9–45.9	193	16.6	11.3–21.8	304	27.1	21.7–32.5
<b>15–64</b>	<b>655</b>	<b>36.0</b>	<b>32.1–39.9</b>	<b>1106</b>	<b>4.4</b>	<b>3.2–5.6</b>	<b>1761</b>	<b>19.9</b>	<b>17.7–22.1</b>

Daily tobacco users									
Age group (years)	Men			Women			Both sexes		
	N	% Daily users	95% CI	N	% Daily users	95% CI	N	% Daily users	95% CI
15–24	241	24.5	19.0–29.9	238	0.4	0.0–1.2	479	11.8	9.0–14.6
25–34	133	38.3	30.1–46.6	280	1.8	0.2–3.3	413	20.1	15.5–24.7
35–44	96	31.3	22.0–40.5	242	5.4	2.5–8.2	338	18.4	13.3–23.5
45–54	74	33.8	23.0–44.6	153	11.1	6.1–16.1	227	22.8	16.5–29.1
55–64	111	33.3	24.5–42.1	193	14.5	9.5–19.5	304	24.2	19.0–29.5
<b>15–64</b>	<b>655</b>	<b>30.6</b>	<b>26.9–34.4</b>	<b>1106</b>	<b>3.2</b>	<b>2.3–4.1</b>	<b>1761</b>	<b>16.7</b>	<b>14.6–18.7</b>

## 2.12 Cessation

Description: Percentage of current smokers who have tried to stop smoking during the past 12 months

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?
- During the past 12 months, have you tried to stop smoking?

Current smokers who have tried to stop smoking									
Age group (years)	Men			Women			Both sexes		
	N	% Tried to stop smoking	95% CI	N	% Tried to stop smoking	95% CI	N	% Tried to stop smoking	95% CI
15–24	56	44.6	31.5–57.8	4	50.0	0.0–101.4	60	45.0	32.3–57.7
25–34	45	40.0	25.4–54.5	4	25.0	0.0–69.5	49	39.4	25.4–53.4
35–44	29	34.5	17.0–52.0	8	37.5	2.4–72.6	37	34.8	18.7–50.1
45–54	19	26.3	6.3–46.3	8	50.0	13.7–86.3	27	30.1	12.2–48.0
55–64	20	20.0	2.3–37.7	14	50.0	23.0–74.4	34	28.2	12.9–43.5
<b>15–64</b>	<b>169</b>	<b>38.6</b>	<b>30.9–46.4</b>	<b>38</b>	<b>43.6</b>	<b>35.8–77.0</b>	<b>207</b>	<b>39.0</b>	<b>31.8–46.3</b>

## 2.13 Advice to stop smoking

Description: Percentage of current smokers who have been advised by a doctor or other health worker to stop smoking, among those smokers who have had a visit to a doctor or other health worker in the past 12 months

Instrument questions:

- Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?
- During any visit to a doctor or other health worker in the past 12 months, were you advised to quit smoking tobacco?

Current smokers who have been advised by doctor to stop smoking									
Age group (years)	Men			Women			Both sexes		
	N	% Advised to stop smoking	95% CI	N	% Advised to stop smoking	95% CI	N	% Advised to stop smoking	
15–24	20	25.0	5.5–44.5	2	0.0	0.0	22	22.7	4.7–40.2
25–34	18	38.9	15.8–62.0	1	100.0	100.0–100.0	19	40.5	17.8–63.1
35–44	9	33.3	1.7–65.0	3	0.0	0.0–0.0	12	29.5	1.3–57.6
45–54	9	44.4	11.1–77.8	5	40.0	0.0–88.2	14	43.6	15.6–71.5
55–64	10	50.0	18.2–81.8	5	60.0	11.8–108.2	15	52.1	25.5–78.9
15–64	66	34.5	22.2–46.8	16	25.7	0.3–51.1	82	33.6	22.3–44.9

## 2.14 Exposure to second-hand smoke in home

Description: Percentage of respondents exposed to second-hand smoke in the home

Instrument question:

- How often does anyone smoke inside your home? Would you say daily, weekly, monthly, less than monthly, or never?

Exposed to second-hand smoke in home											
Age group (years)	Men										
	N	% Daily	95% CI	% Weekly	95% CI	% Monthly	95% CI	% Less than monthly	95% CI	% Never	95% CI
15–24	241	24.9	19.4–30.4	2.9	0.8–5.0	0.4	0.0–1.2	2.5	0.5–4.5	69.3	63.5–75.1
25–34	130	23.8	16.5–31.2	1.5	0.0–3.7	0.0	0.0–0.0	2.3	0.0–4.9	72.3	64.6–80.0
35–44	95	18.9	11.0–26.8	1.1	0.0–3.1	0.0	0.0–0.0	3.2	0.0–6.7	76.8	68.3–85.3
45–54	73	16.4	7.9–25.0	0.0	0.0–0.0	0.0	0.0–0.0	1.4	0.0–4.0	82.2	73.4–91.0
55–64	111	27.9	19.6–36.3	0.0	0.0–0.0	0.0	0.0–0.0	0.0	0.0–0.0	72.1	63.7–80.4
15–64	650	22.9	19.5–26.3	1.8	0.7–2.9	0.2	0.0–0.5	2.3	1.1–3.6	72.8	69.2–76.4

Exposed to second-hand smoke in home											
Age group (years)	Women										
	N	% Daily	95% CI	% Weekly	95% CI	% Monthly	95% CI	% Less than monthly	95% CI	% Never	95% CI
15–24	230	19.6	14.4–24.7	2.2	0.3–4.1	0.4	0.0–1.3	0.9	0.0–2.1	77.0	71.5–82.4
25–34	269	19.0	14.3–23.6	3.0	0.9–5.0	0.0	0.0–0.0	0.7	0.0–1.8	77.3	72.3–82.3
35–44	235	20.9	15.7–26.0	1.3	0.0–2.7	0.0	0.0–0.0	2.6	0.5–4.6	75.3	69.8–80.8
45–54	150	21.3	14.8–27.9	0.0	0.0–0.0	0.0	0.0–0.0	2.7	0.1–5.2	76.0	69.2–82.8
55–64	194	19.1	13.5–24.6	1.0	0.0–2.5	0.5	0.0–1.5	3.6	1.0–6.2	75.8	69.7–81.8
<b>15–64</b>	<b>1078</b>	<b>19.8</b>	<b>17.0–22.6</b>	<b>2.0</b>	<b>1.0–3.0</b>	<b>0.2</b>	<b>0.0–0.6</b>	<b>1.4</b>	<b>0.7–2.1</b>	<b>76.6</b>	<b>73.7–79.6</b>

Exposed to second-hand smoke in home											
Age group (years)	Both sexes										
	N	% Daily	95% CI	% Weekly	95% CI	% Monthly	95% CI	% Less than monthly	95% CI	% Never	95% CI
15–24	471	22.1	18.4–25.9	2.5	1.1–3.9	0.4	0.0–1.0	1.7	0.5–2.8	73.3	69.3–77.3
25–34	399	21.4	17.1–25.8	2.3	0.8–3.7	0.0	0.0–0.0	1.5	0.1–2.9	74.8	70.2–79.4
35–44	330	19.9	15.1–24.6	1.2	0.0–2.4	0.0	0.0–0.0	2.9	0.8–4.9	76.1	71.0–81.2
45–54	223	18.8	13.4–24.2	0.0	0.0–0.0	0.0	0.0–0.0	2.0	0.1–3.9	79.2	73.6–84.8
55–64	305	23.6	18.5–28.7	0.5	0.0–1.2	0.3	0.0–0.7	1.8	0.5–3.0	73.9	68.7–79.1
<b>15–64</b>	<b>1728</b>	<b>21.3</b>	<b>19.1–23.5</b>	<b>1.9</b>	<b>1.1–2.6</b>	<b>0.2</b>	<b>0.5–1.3</b>	<b>1.9</b>	<b>1.1–2.6</b>	<b>74.7</b>	<b>72.4–77.1</b>

## 2.15 Exposure to second-hand smoke in the workplace in past 30 days

Description: Percentage of respondents exposed to second-hand smoke in the workplace in the past 30 days

Instrument question:

- During the past 30 days, did someone smoke in closed areas in your workplace (in the building, in a work area or a specific office)?

Exposed to second-hand smoke in the workplace during the past 30 days									
Age group (years)	Men			Women			Both sexes		
	N	% Exposed	95% CI	N	% Exposed	95% CI	N	% Exposed	95% CI
15–24	81	18.5	10.0–27.0	69	14.5	6.1–22.9	150	16.5	10.6–22.5
25–34	89	19.1	10.9–27.3	92	5.5	1.4–11.6	181	15.0	9.2–20.8
35–44	51	27.5	15.1–39.8	38	5.3	0.0–12.4	89	22.4	12.6–32.2
45–54	36	13.9	2.5–25.3	16	25.0	3.6–46.4	52	15.8	5.6–25.9
55–64	42	26.2	12.8–39.6	11	18.2	0.0–41.1	53	25.2	13.2–37.2
<b>15–64</b>	<b>299</b>	<b>20.3</b>	<b>15.5–25.1</b>	<b>226</b>	<b>11.4</b>	<b>6.5–16.2</b>	<b>525</b>	<b>17.1</b>	<b>13.6–20.7</b>

### 3. Tobacco policy

#### 3.1 Anti-cigarette information

Description: Percentage of all respondents who noticed information in newspapers or magazines about the dangers of smoking or that encourages quitting during the past 30 days

Instrument question:

- During the past 30 days, have you noticed information about the dangers of smoking cigarettes or that encourages quitting in newspapers or in magazines?

Noticed information in newspapers or magazines about dangers of smoking or that encourages quitting									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	237	33.3	27.3–39.4	233	34.8	28.6–40.9	470	34.1	29.8–38.4
25–34	131	35.9	27.6–44.1	270	37.0	31.3–42.8	401	36.5	31.4–41.5
35–44	95	46.3	36.3–56.4	236	35.6	29.5–41.7	331	41.0	35.1–46.9
45–54	72	31.9	21.1–42.7	149	32.2	24.7–39.7	221	32.1	25.4–38.7
55–64	106	33.0	24.0–42.0	186	28.5	22.0–35.0	292	30.8	25.2–36.4
<b>15–64</b>	<b>641</b>	<b>36.1</b>	<b>32.2–40.0</b>	<b>1074</b>	<b>35.0</b>	<b>31.6–38.3</b>	<b>1715</b>	<b>35.5</b>	<b>32.9–38.1</b>

#### 3.2 Anti-cigarette information

Description: Percentage of all respondents who noticed information on television about the dangers of smoking or that encourages quitting during the past 30 days

Instrument question:

- During the past 30 days, have you noticed information about the dangers of smoking cigarettes or that encourages quitting on television?

Noticed information on television about dangers of smoking or that encourages quitting									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	241	57.3	51.0–63.6	228	63.2	56.9–69.4	469	60.3	55.9–64.7
25–34	130	57.7	49.2–66.2	275	62.9	57.2–68.6	405	60.3	55.2–65.4
35–44	94	66.0	56.4–75.6	241	64.7	58.7–70.8	335	65.3	59.7–71.0
45–54	74	64.9	54.0–75.8	149	67.1	59.6–74.7	223	65.9	59.2–72.7
55–64	103	62.1	52.7–71.5	185	63.8	56.9–70.7	288	62.9	57.1–68.8
<b>15–64</b>	<b>642</b>	<b>59.9</b>	<b>55.9–63.9</b>	<b>1078</b>	<b>63.8</b>	<b>60.4–67.1</b>	<b>1720</b>	<b>61.8</b>	<b>59.2–64.4</b>

### 3.3 Cigarette advertising – cigarette shops

Description: Percentage of all respondents who noticed advertisements or signs promoting cigarettes in stores where cigarettes are sold during the past 30 days

Instrument question:

- During the past 30 days, have you noticed any advertisements or signs promoting cigarettes in stores where cigarettes are sold?

Age group (years)	Noticed advertisements or signs promoting cigarettes in stores								
	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	243	26.7	21.2–32.3	231	16.0	11.3–20.7	474	21.2	17.5–24.9
25–34	133	17.3	10.8–23.7	278	19.8	15.1–24.5	411	18.5	14.6–22.5
35–44	93	15.1	7.8–22.3	237	19.4	14.4–24.4	330	17.2	12.8–21.7
45–54	74	21.6	12.2–31.0	149	24.2	17.3–31.0	223	22.8	16.9–28.7
55–64	103	25.2	16.8–33.7	184	14.1	9.1–19.2	287	19.8	14.8–24.8
<b>15–64</b>	<b>646</b>	<b>21.7</b>	<b>18.4–25.1</b>	<b>1079</b>	<b>18.2</b>	<b>15.6–20.9</b>	<b>1725</b>	<b>19.9</b>	<b>17.8–22.1</b>

### 3.4 Cigarette advertising – restaurants, cafes and tea shops

Description: Percentage of all respondents who noticed advertisements or signs promoting cigarettes in restaurants, cafes, or tea shops during the past 30 days

Instrument question:

- In the past 30 days, have you noticed any advertisements or signs promoting cigarettes in restaurants, cafes or tea shops?

Age group (years)	Noticed advertisements or signs promoting cigarettes in cafes								
	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	243	18.1	13.3–23.0	231	5.2	2.3–8.1	474	11.4	8.6–14.3
25–34	132	15.9	9.7–22.2	273	8.8	5.4–12.2	405	12.4	8.8–16.0
35–44	95	9.5	3.6–15.4	225	7.6	4.1–11.0	320	8.5	5.1–12.0
45–54	74	13.5	5.7–21.3	142	2.1	0.0–4.5	216	8.2	3.8–12.6
55–64	101	9.9	4.1–15.7	174	2.3	0.0–4.5	275	6.2	3.0–9.5
<b>15–64</b>	<b>645</b>	<b>15.2</b>	<b>12.3–18.1</b>	<b>1045</b>	<b>6.1</b>	<b>4.4–7.8</b>	<b>1690</b>	<b>10.7</b>	<b>9.0–12.4</b>

### 3.5 Cigarette promotion

Description: Percentage of all respondents who noticed cigarette promotions during the past 30 days

Instrument question:

- During the past 30 days, have you noticed any of the following types of cigarette promotions?

Age group (years)	Noticed free samples of cigarettes in cafes or restaurants								
	Men			Women			Both sexes		
N	%	95% CI	N	%	95% CI	N	%	95% CI	
15–24	235	2.6	0.5–4.6	221	0.9	0.0–2.2	456	1.7	0.5–2.9
25–34	132	0.8	0.0–2.2	260	1.2	0.0–2.5	392	0.9	0.0–1.9
35–44	94	1.1	0.0–3.1	220	0.9	0.0–2.2	314	1.0	0.0–2.2
45–54	73	0.0	0.0–0.0	132	0.0	0.0–0.0	205	0.0	0.0–0.0
55–64	104	1.0	0.0–2.8	155	0.0	0.0–0.0	259	0.5	0.0–1.6
<b>15–64</b>	<b>638</b>	<b>1.5</b>	<b>0.5–2.5</b>	<b>988</b>	<b>0.9</b>	<b>0.2–1.5</b>	<b>1626</b>	<b>1.2</b>	<b>0.6–1.8</b>

Age group (years)	Noticed free samples of cigarettes in other places								
	Men			Women			Both sexes		
N	%	95% CI	N	%	95% CI	N	%	95% CI	
15–24	236	4.2	1.7–6.8	221	0.5	0.0–1.3	457	2.3	1.0–3.6
25–34	132	1.5	0.0–3.6	265	1.5	0.0–3.0	397	1.5	0.2–2.8
35–44	93	3.2	0.0–6.8	220	0.5	0.0–1.3	313	1.9	0.0–3.8
45–54	74	1.4	0.0–4.0	134	0.0	0.0–0.0	208	0.7	0.0–2.2
55–64	101	0.0	0.0–0.0	159	0.0	0.0–0.0	360	0.0	0.0–0.0
<b>15–64</b>	<b>636</b>	<b>2.9</b>	<b>1.5–4.2</b>	<b>999</b>	<b>0.7</b>	<b>0.1–1.2</b>	<b>1635</b>	<b>1.8</b>	<b>1.0–2.5</b>

Age group (years)	Noticed sale prices on cigarettes								
	Men			Women			Both sexes		
N	%	95% CI	N	%	95% CI	N	%	95% CI	
15–24	233	9.9	6.0–13.7	219	2.3	0.3–4.3	452	6.0	3.8–8.1
25–34	131	3.8	0.5–7.1	258	2.3	0.5–4.2	389	3.1	1.2–5.0
35–44	92	4.3	0.2–8.5	219	3.2	0.9–5.5	311	3.8	1.4–6.2
45–54	72	4.2	0.0–8.8	133	3.8	0.5–7.0	205	4.0	1.1–6.9
55–64	103	4.9	0.7–9.0	157	1.9	0.0–4.1	260	3.5	1.0–6.0
<b>15–64</b>	<b>631</b>	<b>6.5</b>	<b>4.5–8.5</b>	<b>986</b>	<b>2.6</b>	<b>1.4–3.7</b>	<b>1617</b>	<b>4.6</b>	<b>3.4–5.7</b>

Noticed free gifts or special discount offers on other products when buying cigarettes									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	233	6.4	3.3–9.6	217	0.5	0.0–1.4	450	3.4	1.7–5.0
25–34	130	5.4	1.5–9.3	258	0.4	0.0–1.1	388	3.0	0.9–5.0
35–44	94	4.3	0.2–8.3	219	0.9	0.0–2.2	313	2.7	0.4–4.9
45–54	71	0.0	0.0–0.0	133	0.0	0.0–0.0	204	0.0	0.0–0.0
55–64	101	1.0	0.0–2.9	154	0.0	0.0–0.0	255	0.5	0.0–1.6
<b>15–64</b>	<b>629</b>	<b>4.9</b>	<b>3.1–6.7</b>	<b>981</b>	<b>0.5</b>	<b>0.0–1.0</b>	<b>1610</b>	<b>2.7</b>	<b>1.7–3.7</b>

Noticed clothing or other items with a cigarette brand name or logo									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	233	13.7	9.3–18.2	221	5.9	2.8–9.0	454	9.7	7.0–12.4
25–34	132	4.5	1.0–8.1	262	2.7	0.7–4.6	394	3.6	1.6–5.7
35–44	93	7.5	2.2–12.9	219	0.9	0.0–2.2	312	4.3	1.5–7.2
45–54	72	2.8	0.0–6.6	135	0.7	0.0–2.2	207	1.8	0.0–4.0
55–64	99	2.0	0.0–4.8	154	0.6	0.0–1.9	253	1.4	0.0–3.0
<b>15–64</b>	<b>629</b>	<b>8.6</b>	<b>6.2–10.9</b>	<b>991</b>	<b>3.6</b>	<b>2.1–5.1</b>	<b>1620</b>	<b>6.1</b>	<b>4.7–7.5</b>

Noticed cigarette promotions in the mail									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	226	1.8	0.0–3.5	216	0.5	0.0–1.4	442	1.1	0.1–2.0
25–34	129	0.8	0.0–2.3	259	1.5	0.0–3.0	388	1.2	0.1–2.2
35–44	93	4.3	0.2–8.4	218	0.9	0.0–2.2	311	2.7	0.4–4.9
45–54	69	1.4	0.0–4.3	134	1.5	0.0–3.5	203	1.5	0.0–3.3
55–64	100	1.0	0.0–3.0	153	0.7	0.0–1.9	253	0.8	0.0–2.1
<b>15–64</b>	<b>617</b>	<b>1.9</b>	<b>0.7–3.0</b>	<b>980</b>	<b>0.9</b>	<b>0.3–1.5</b>	<b>1597</b>	<b>1.4</b>	<b>0.8–2.1</b>

### 3.6 Cigarette package health warnings

Description: Percentage of current smokers who noticed health warnings on cigarette packages and other products during the past 30 days

Instrument questions:

- During the past 30 days, did you notice any health warnings on cigarette packages?
- In the past 30 days, did you notice any health warnings on tobacco products other than cigarettes?

Current smokers who noticed health warnings on cigarette packages									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	55	92.7	85.8–99.7	4	100.0	100.0–100.0	59	93.3	86.9–99.7
25–34	49	89.8	81.2–98.4	5	100.0	100.0–100.0	54	90.3	82.1–98.4
35–44	27	92.6	82.6–100.0	7	100.0	100.0–100.0	34	93.3	84.2–100.0
45–54	19	100.0	100.0–100.0	6	83.3	52.0–100.0	25	97.9	93.8–100.0
55–64	21	100.0	100.0–100.0	14	92.9	78.7–100.0	35	98.1	94.4–100.0
<b>15–64</b>	<b>171</b>	<b>92.6</b>	<b>88.4–96.9</b>	<b>36</b>	<b>96.5</b>	<b>90.8–100.0</b>	<b>207</b>	<b>92.9</b>	<b>89.0–96.9</b>

Current smokers who noticed health warnings on other products									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	70	42.9	31.2–54.5	5	40.0	0.0–84.4	75	42.6	31.4–53.9
25–34	61	41.0	28.5–53.4	8	50.0	14.1–85.9	69	41.5	29.6–53.4
35–44	34	35.3	19.1–51.5	10	40.0	8.6–71.4	44	35.8	20.9–50.6
45–54	24	54.2	34.1–74.3	10	20.0	0.0–45.7	34	48.7	31.1–66.4
55–64	27	37.0	18.7–55.4	18	16.7	0.0–34.5	45	31.6	17.2–46.1
<b>15–64</b>	<b>216</b>	<b>41.8</b>	<b>34.9–48.7</b>	<b>51</b>	<b>35.6</b>	<b>18.6–52.7</b>	<b>267</b>	<b>41.2</b>	<b>34.8–47.6</b>

### 3.7 Quitting

Description: Percentage of current smokers who noticed health warnings on cigarette packages during the past 30 days and thought about quitting due to the health warnings they saw

Instrument questions:

- During the past 30 days, did you notice any health warnings on cigarette packages?
- During the past 30 days, have warning labels on cigarette packages led you to think about quitting?

Current smokers who saw health warnings on cigarette packages and thought of quitting									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	51	29.4	16.8–42.1	4	50.0	0.0–100.0	55	31.1	18.7–43.5
25–34	44	31.8	17.9–45.7	5	60.0	14.7–100.0	49	33.3	19.8–46.7
35–44	25	40.0	20.6–59.4	6	33.3	0.0–73.1	31	39.4	21.4–57.4
45–54	18	33.3	11.3–55.3	5	80.0	43.0–100.0	23	38.6	18.1–59.0
55–64	21	38.1	17.1–59.1	13	30.8	4.3–57.2	34	36.3	19.3–53.2
<b>15–64</b>	<b>159</b>	<b>32.8</b>	<b>25.1–40.5</b>	<b>33</b>	<b>50.4</b>	<b>27.8–73.0</b>	<b>192</b>	<b>34.3</b>	<b>27.0–41.6</b>

## 4. Alcohol consumption

### 4.1 Alcohol consumption status

Description: Alcohol consumption status of all respondents

Instrument questions:

- Have you ever consumed an alcoholic drink such as (give examples)?
- Have you consumed an alcoholic drink in the past 12 months?
- Have you consumed an alcoholic drink in the past 30 days?

Age group (years)	Alcohol consumption status								
	N	Men							
		% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
15–24	244	1.6	0.0–3.2	3.3	1.0–5.5	2.5	0.5–4.4	92.6	89.3–95.9
25–34	133	3.0	0.1–5.9	3.0	0.1–5.9	5.3	1.5–9.1	88.7	83.3–94.1
35–44	97	0.0	–	1.0	0.0–3.0	3.1	0.0–6.5	95.9	91.9–99.8
45–54	73	1.4	0.0–4.0	0.0	–	2.7	0.0–6.5	95.9	91.3–100.0
55–64	108	0.0	–	0.0	–	0.0	–	100.0	–
<b>15–64</b>	<b>655</b>	<b>1.6</b>	<b>0.6–2.6</b>	<b>2.3</b>	<b>1.1–3.6</b>	<b>3.2</b>	<b>1.7–4.7</b>	<b>92.9</b>	<b>90.7–95.0</b>

Age group (years)	Alcohol consumption status								
	N	Women							
		% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
15–24	237	0.4	0.0–1.2	0.0	–	0.0	–	99.6	98.8–100.0
25–34	274	0.0	–	0.4	0.0–1.1	0.7	0.0–1.7	98.9	97.7–100.0
35–44	234	0.0	–	0.0	–	0.0	–	100.0	–
45–54	148	0.0	–	0.0	–	0.0	–	100.0	–
55–64	189	0.0	–	0.0	–	0.0	–	100.0	–
<b>15–64</b>	<b>1082</b>	<b>0.2</b>	<b>0.0–0.6</b>	<b>0.1</b>	<b>0.0–0.3</b>	<b>0.2</b>	<b>0.0–0.4</b>	<b>99.5</b>	<b>99.1–100.0</b>

Age group (years)	Alcohol consumption status								
	N	Both sexes							
		% Current drinker (past 30 days)	95% CI	% Drank in past 12 months, not current	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
15–24	481	1.0	0.1–1.9	1.6	0.5–2.6	1.2	0.2–2.1	96.3	94.6–97.9
25–34	407	1.5	0.0–3.0	1.7	0.2–3.2	3.0	1.0–5.0	93.8	90.9–96.6
35–44	331	0.0	–	0.5	0.0–1.6	1.6	0.0–3.4	97.9	95.8–99.9
45–54	221	0.7	0.0–2.1	0.0	–	1.4	0.0–3.4	97.9	95.5–100.0
55–64	297	0.0	–	0.0	–	0.0	–	100.0	–
<b>15–64</b>	<b>1737</b>	<b>0.9</b>	<b>0.3–1.4</b>	<b>1.2</b>	<b>0.6–1.8</b>	<b>1.7</b>	<b>0.9–2.4</b>	<b>96.2</b>	<b>95.1–97.3</b>

## 5. Fruit and vegetable consumption

### 5.1 Mean number of days of fruit and vegetable consumption

Description: Mean number of days fruit and vegetables consumed

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- In a typical week, on how many days do you eat vegetables?

Age group (years)	Mean number of days fruit consumed in a typical week								
	Men			Women			Both sexes		
	N	Mean number of days	95% CI	N	Mean number of days	95% CI	N	Mean number of days	95% CI
15–24	224	2.8	2.5–3.1	232	3.1	2.8–3.4	456	3.0	2.7–3.2
25–34	118	3.3	2.9–3.7	263	3.3	3.0–3.6	381	3.3	3.1–3.6
35–44	93	3.6	3.1–4.1	233	3.8	3.5–4.2	326	3.7	3.5–4.0
45–54	74	4.0	3.3–4.6	145	4.0	3.5–4.4	219	4.0	3.6–4.3
55–64	105	4.3	3.7–4.8	183	3.3	3.0–3.7	288	3.8	3.5–4.2
<b>15–64</b>	<b>614</b>	<b>3.3</b>	<b>3.1–3.5</b>	<b>1056</b>	<b>3.4</b>	<b>3.2–3.5</b>	<b>1670</b>	<b>3.3</b>	<b>3.2–3.5</b>

Age group (years)	Mean number of days vegetables consumed in a typical week								
	Men			Women			Both sexes		
	N	Mean number of days	95% CI	N	Mean number of days	95% CI	N	Mean number of days	95% CI
15–24	227	3.4	3.1–3.7	233	3.7	3.4–4.1	460	3.6	3.3–3.8
25–34	127	3.8	3.3–4.3	275	3.8	3.6–4.1	402	3.9	3.6–4.1
35–44	93	4.2	3.7–4.7	239	4.1	3.8–4.5	332	4.2	3.9–4.5
45–54	75	4.2	3.6–4.8	149	4.1	3.7–4.6	224	4.2	3.8–4.5
55–64	108	4.1	3.6–4.6	184	4.0	3.6–4.4	292	4.1	3.7–4.4
<b>15–64</b>	<b>630</b>	<b>3.7</b>	<b>3.5–4.0</b>	<b>1080</b>	<b>3.9</b>	<b>3.7–4.1</b>	<b>1710</b>	<b>3.8</b>	<b>3.7–3.9</b>

## 5.2 Mean number of servings of fruit and vegetable consumption

Description: Mean number of fruit, vegetable, and combined fruit and vegetable servings on average per day

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Age group (years)	Mean number of servings of fruit on average per day								
	Men			Women			Both sexes		
	N	Mean number of servings	95% CI	N	Mean number of servings	95% CI	N	Mean number of servings	95% CI
15–24	211	0.9	0.7–1.2	227	0.8	0.7–1.0	438	0.9	0.7–1.0
25–34	111	1.0	0.8–1.3	254	0.9	0.8–1.1	365	1.0	0.9–1.1
35–44	89	1.1	0.8–1.4	220	1.1	0.9–1.2	309	1.1	0.9–1.2
45–54	71	1.2	0.8–1.7	140	1.1	0.9–1.3	211	1.1	0.9–1.4
55–64	95	1.3	1.1–1.5	172	0.9	0.8–1.1	267	1.1	0.9–1.3
<b>15–64</b>	<b>577</b>	<b>1.1</b>	<b>0.9–1.2</b>	<b>1013</b>	<b>0.9</b>	<b>0.8–1.0</b>	<b>1590</b>	<b>1.0</b>	<b>0.9–1.1</b>

Age group (years)	Mean number of servings of vegetables on average per day								
	Men			Women			Both sexes		
	N	Mean number of servings	95% CI	N	Mean number of servings	95% CI	N	Mean number of servings	95% CI
15–24	211	0.9	0.8–1.1	215	0.9	0.8–1.1	427	0.9	0.8–1.1
25–34	119	1.1	0.8–1.3	253	0.9	0.8–1.0	372	1.0	0.8–1.1
35–44	86	1.2	0.9–1.4	214	1.0	0.9–1.2	300	1.1	0.9–1.2
45–54	70	1.1	0.9–1.4	138	1.1	0.9–1.3	208	1.1	1.0–1.3
55–64	100	1.3	1.0–1.6	165	1.0	0.8–1.2	265	1.1	1.0–1.3
<b>15–64</b>	<b>587</b>	<b>1.1</b>	<b>0.9–1.1</b>	<b>985</b>	<b>0.9</b>	<b>0.8–1.1</b>	<b>1572</b>	<b>1.0</b>	<b>0.9–1.1</b>

Age group (years)	Mean number of servings of fruit and/or vegetables on average per day								
	Men			Women			Both sexes		
	N	Mean number of servings	95% CI	N	Mean number of servings	95% CI	N	Mean number of servings	95% CI
15–24	223	1.8	1.5–2.1	233	1.7	1.4–1.9	456	1.7	1.5–1.9
25–34	125	1.9	1.5–2.3	270	1.7	1.5–1.9	395	1.8	1.6–2.0
35–44	90	2.2	1.8–2.6	228	2.0	1.7–2.2	318	2.1	1.8–2.3
45–54	74	2.2	1.7–2.7	148	2.1	1.8–2.5	222	2.2	1.8–2.5
55–64	101	2.5	2.0–2.9	178	1.8	1.5–2.1	279	2.1	1.9–2.4
<b>15–64</b>	<b>613</b>	<b>2.0</b>	<b>1.8–2.2</b>	<b>1057</b>	<b>1.7</b>	<b>1.6–1.9</b>	<b>1670</b>	<b>1.8</b>	<b>1.7–1.9</b>

### 5.3 Fruit and vegetable consumption per day

Description: Frequency of fruit and/or vegetable consumption

Instrument questions:

- In a typical week, on how many days do you eat fruit?
- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Number of servings of fruit and/or vegetables on average per day									
Age group (years)	Men								
	N	% No fruit and/or vegetables	95% CI	% 1–2 servings	95% CI	% 3–4 servings	95% CI	% ≥5 servings	95% CI
15–24	223	41.3	34.8–47.7	39.0	32.6–45.5	14.4	9.7–19.0	5.4	2.4–8.4
25–34	125	36.8	28.3–45.3	45.6	36.8–54.4	10.4	5.0–15.8	7.2	2.7–11.8
35–44	90	26.7	17.5–35.8	52.2	41.9–62.6	12.3	5.4–19.0	8.9	3.0–14.8
45–54	74	25.7	15.7–35.7	46.0	34.6–57.3	18.9	10.0–27.9	9.5	2.8–16.1
55–64	101	29.7	20.8–38.6	39.6	30.0–49.2	15.8	8.7–23.0	14.8	7.9–21.8
<b>15–64</b>	<b>613</b>	<b>35.3</b>	<b>31.3–39.3</b>	<b>43.8</b>	<b>39.6–48.0</b>	<b>13.5</b>	<b>10.7–16.4</b>	<b>7.4</b>	<b>5.2–9.5</b>

Number of servings of fruit and/or vegetables on average per day									
Age group (years)	Women								
	N	% No fruit and/or vegetables	95% CI	% 1–2 servings	95% CI	% 3–4 servings	95% CI	% ≥5 servings	95% CI
15–24	233	37.3	31.1–43.6	48.9	42.5–55.3	9.9	6.0–13.7	3.9	1.4–6.3
25–34	270	37.8	32.0–43.6	45.2	39.2–51.1	11.9	8.0–15.7	5.2	2.5–7.8
35–44	228	37.7	31.4–44.0	38.2	31.8–44.5	17.1	12.2–22.0	7.0	3.7–10.3
45–54	148	32.4	24.9–40.0	39.2	31.3–47.1	18.2	12.0–24.5	10.1	5.3–15.0
55–64	178	38.8	31.6–45.9	38.8	31.6–45.9	15.7	10.4–21.1	6.7	3.1–10.4
<b>15–64</b>	<b>1057</b>	<b>37.1</b>	<b>33.7–40.5</b>	<b>44.9</b>	<b>41.4–48.4</b>	<b>12.6</b>	<b>10.3–14.8</b>	<b>5.4</b>	<b>3.9–6.9</b>

Number of servings of fruit and/or vegetables on average per day									
Age group (years)	Both sexes								
	N	% No fruit and/or vegetables	95% CI	% 1–2 servings	95% CI	% 3–4 servings	95% CI	% ≥5 servings	95% CI
15–24	456	39.1	34.6–43.6	44.4	39.8–48.9	11.9	9.0–14.9	4.6	2.7–6.5
25–34	395	37.3	32.2–42.4	45.4	40.1–50.7	11.1	7.8–14.4	6.2	3.6–8.8
35–44	318	32.2	26.6–37.8	45.2	39.1–51.3	14.7	10.5–18.9	8.0	4.6–11.3
45–54	222	28.9	22.5–35.2	42.7	35.7–49.8	18.6	13.1–24.1	9.8	5.6–14.0
55–64	279	34.1	28.4–39.9	39.2	33.2–45.2	15.8	11.3–20.3	10.9	6.7–14.9
<b>15–64</b>	<b>1670</b>	<b>36.3</b>	<b>33.6–38.9</b>	<b>44.4</b>	<b>41.7–47.1</b>	<b>13.0</b>	<b>11.2–14.8</b>	<b>6.4</b>	<b>5.1–7.6</b>

## 5.4 Fruit and vegetable consumption per day

Description: Percentage of those eating less than five servings of fruit and/or vegetables on average per day

Instrument questions:

- In a typical week, on how many days do you eat fruit?

- How many servings of fruit do you eat on one of those days?
- In a typical week, on how many days do you eat vegetables?
- How many servings of vegetables do you eat on one of those days?

Less than five servings of fruit and/or vegetables on average per day									
Age group (years)	Men			Women			Both sexes		
	N	% <5 servings per day	9x5% CI	N	% <5 servings per day	95% CI	N	% <5 servings per day	95% CI
15–24	223	94.6	91.6–97.6	233	96.1	93.6–98.6	456	95.5	93.6–97.4
25–34	125	92.8	88.3–97.3	270	94.8	92.2–97.5	395	93.8	91.2–96.4
35–44	90	91.1	85.2–97.0	228	93.0	89.6–96.3	318	92.1	88.7–95.4
45–54	74	90.5	83.8–97.2	148	89.9	85.0–94.7	222	90.2	86.0–94.4
55–64	101	85.2	78.2–92.1	178	93.3	89.6–97.0	279	89.1	85.1–93.1
<b>15–64</b>	<b>613</b>	<b>92.6</b>	<b>90.5–94.8</b>	<b>1057</b>	<b>94.6</b>	<b>93.1–96.1</b>	<b>1670</b>	<b>93.6</b>	<b>92.4–94.9</b>

## 6. Type of oil used for meal preparation

### 6.1 Type of oil used most frequently

Description: Type of oil or fat most often used for meal preparation in households (presented only for both sexes because results are for the household and not individuals)

Instrument question:

- What type of oil or fat is most often used for meal preparation in your household?

Type of oil or fat most often used for meal preparation in household						
N (households)	% Vegetable oil	95% CI	% Butter or margarine	95% CI	% Other	95% CI
1741	96.6	95.6–97.6	0.0	–	1.4	0.8–2.1

Type of oil or fat most often used for meal preparation in household				
N (households)	% None in particular	95% CI	% None used	95% CI
1741	1.6	0.9–2.3	0.4	0.1–0.7

## 7. Physical activity

### 7.1 Introduction

A population's physical activity (or inactivity) can be described in different ways. The two most common ways are:

- (1) To estimate a population's mean or median physical activity using a continuous indicator such as MET-minutes per week or time spent in physical activity.
- (2) To classify a certain percentage of a population as "inactive" by setting up a cut-off point for a specific amount of physical activity.

When analysing Global Physical Activity Questionnaire (GPAQ) data, both continuous as well as categorical indicators are used.

### 7.2 Metabolic equivalent (MET)

Metabolic equivalent tasks (METs) are commonly used to express the intensity of physical activities, and are also used for the analysis of GPAQ data.

Applying MET values to activity levels allows us to calculate total physical activity. MET is the ratio of a person's working metabolic rate relative to the resting metabolic rate. One MET is defined as the energy cost of sitting quietly, and is equivalent to a caloric consumption of 1 kcal/kg/hour. For the analysis of GPAQ data, existing guidelines have been adopted. It is estimated that compared to sitting quietly, a person's caloric consumption is four times as high when being moderately active, and eight times as high when being vigorously active.

Therefore, for the calculation of a person's total physical activity using GPAQ data, the following MET values are used:

Domain	MET value
Work	<ul style="list-style-type: none"><li>• Moderate MET value = 4.0</li><li>• Vigorous MET value = 8.0</li></ul>
Transport	Cycling and walking MET value = 4.0
Recreation	<ul style="list-style-type: none"><li>• Moderate MET value = 4.0</li><li>• Vigorous MET value = 8.0</li></ul>

### 7.3 Categorical indicator

For the calculation of a categorical indicator, the total time spent in physical activity during a typical week – the number of days as well as the intensity of the physical activity – are taken into account.

The three levels of physical activity suggested for classifying populations are low, moderate and high. The criteria for these levels are shown below.

➤ High

A person reaching any of the following criteria is classified in this category:

- Vigorous-intensity activity on at least 3 days achieving a minimum of at least 1500 MET-minutes/week, OR
- 7 or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 3000 MET-minutes per week.
- Moderate

A person 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, OR
- 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day, OR
- 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

A person not meeting any of the above-mentioned criteria falls in this category.

## **7.4 Levels of total physical activity**

Description: Percentage of respondents classified into three categories of total physical activity

Instrument questions:

- Activity at work
- Travel to and from places
- Recreational activities

Level of total physical activity							
Age group (years)	Men						
	N	% Low	95% CI	% Moderate	95% CI	% High	95% CI
15–24	230	37.8	31.5–44.1	15.2	10.6–19.9	46.9	40.5–53.5
25–34	121	39.7	30.9–48.4	9.1	4.0–14.3	51.3	42.3–60.2
35–44	92	42.4	32.3–52.6	17.4	9.7–25.2	40.3	30.2–50.3
45–54	70	34.3	23.2–45.4	21.5	11.8–31.1	44.3	32.6–56.0
55–64	106	45.3	35.8–54.8	17.0	9.9–24.2	37.7	28.5–47.0
<b>15–64</b>	<b>619</b>	<b>39.1</b>	<b>35.1–43.2</b>	<b>14.8</b>	<b>11.9–17.7</b>	<b>46.1</b>	<b>41.9–50.3</b>

Level of total physical activity							
Age group (years)	Women						
	N	% Low	95% CI	% Moderate	95% CI	% High	95% CI
15–24	228	63.2	56.9–69.4	18.4	13.4–23.5	18.4	13.4–23.5
25–34	272	46.3	40.4–52.3	33.1	27.5–38.7	20.6	15.8–25.4
35–44	232	43.5	37.2–49.9	30.2	24.3–36.1	26.3	20.6–32.0
45–54	146	34.9	27.2–42.7	37.0	29.2–44.8	28.1	20.8–35.4
55–64	183	47.5	40.3–54.8	25.7	19.4–32.1	26.8	20.4–33.2
<b>15–64</b>	<b>1061</b>	<b>52.4</b>	<b>48.9–55.9</b>	<b>26.1</b>	<b>23.1–29.1</b>	<b>21.5</b>	<b>18.7–24.4</b>

Level of total physical activity							
Age group (years)	Both sexes						
	N	% Low	95% CI	% Moderate	95% CI	% High	95% CI
15–24	458	51.1	46.7–55.8	16.9	13.5–20.4	31.9	27.7–36.2
25–34	393	43.1	37.9–48.3	21.5	17.5–25.5	35.4	30.2–40.7
35–44	324	43.0	37.0–49.0	23.8	18.8–28.7	33.3	27.4–39.1
45–54	216	34.6	27.8–41.4	29.0	22.7–35.4	36.5	29.4–43.5
55–64	289	46.4	40.4–52.4	21.2	16.4–26.0	33.5	30.9–36.1
<b>15–64</b>	<b>1680</b>	<b>45.9</b>	<b>43.2–48.7</b>	<b>20.6</b>	<b>18.5–22.7</b>	<b>33.5</b>	<b>30.9–36.1</b>

## 7.5 Total physical activity – mean

Description: Mean minutes of total physical activity on average per day

Instrument questions:

- Activity at work

- Travel to and from places
- Recreational activities.

Mean minutes of total physical activity on average per day									
Age group (years)	Men			Women			Both sexes		
	N	Mean minutes	95% CI	N	Mean minutes	95% CI	N	Mean minutes	95% CI
15–24	230	127.2	103.3–151.2	228	50.2	38.5–61.8	458	86.6	73.2–99.9
25–34	121	144.1	107.6–180.7	272	74.2	58.0–90.6	393	108.1	88.1–127.9
35–44	92	162.1	105.7–218.5	232	77.4	61.4–93.2	324	119.8	90.1–149.6
45–54	70	178.1	120.6–235.6	146	78.6	60.8–96.4	216	129.7	98.2–161.3
55–64	106	149.7	101.3–198.1	183	77.5	59.1–95.8	289	114.8	88.0–141.7
<b>15–64</b>	<b>619</b>	<b>143.9</b>	<b>125.9–162.0</b>	<b>1061</b>	<b>64.6</b>	<b>57.2–72.0</b>	<b>1680</b>	<b>103.2</b>	<b>93.3–113.0</b>

## 7.6 Total physical activity – median

Description: Median minutes of total physical activity on average per day

Instrument questions:

- Activity at work
- Travel to and from places
- Recreational activities

Median minutes of total physical activity on average per day									
Age group (years)	Men			Women			Both sexes		
	N	Median minutes	95% CI	N	Median minutes	95% CI	N	Median minutes	95% CI
15–24	230	60.0	11.4–154.3	228	12.9	0.0–53.6	458	30.0	0.0–120.0
25–34	121	64.3	7.1–182.1	272	21.4	0.0–80.0	393	34.3	0.0–128.6
35–44	92	50.0	0.0–197.1	232	30.0	6.4.0–90.0	324	40.0	0.0–120.0
45–54	70	42.9	0.0–240.0	146	42.9	10.0–120.0	216	42.9	0.0–171.4
55–64	106	34.3	0.0–120.0	183	25.7	0.0–90.0	289	30.0	0.0–120.0
<b>15–64</b>	<b>619</b>	<b>60.0</b>	<b>0.0–180.0</b>	<b>1061</b>	<b>21.4</b>	<b>0.0–68.6</b>	<b>1680</b>	<b>34.3</b>	<b>0.0–120.0</b>

## 7.7 Domain-specific physical activity – mean

Description: Mean minutes spent in work-, transport- and recreation-related physical activity on average per day

Instrument questions:

- Activity at work

- Travel to and from places
- Recreational activities

Mean minutes of work-related physical activity on average per day									
Age group (years)	Men			Women			Both sexes		
	N	Mean minutes	95% CI	N	Mean minutes	95% CI	N	Mean minutes	95% CI
15–24	230	30.7	16.0–45.5	228	11.4	3.4–19.5	458	20.5	12.4–28.7
25–34	121	64.8	35.8–93.9	272	27.4	16.1–38.8	393	45.5	30.2–60.8
35–44	92	89.4	47.5–131.4	232	26.1	13.9–38.2	324	57.8	35.7–80.1
45–54	70	84.9	45.6–124.3	146	21.2	8.8–33.6	216	53.9	32.4–75.5
55–64	106	53.7	20.6–86.9	183	22.7	9.6–36.0	289	38.8	20.4–57.2
<b>15–64</b>	<b>619</b>	<b>56.3</b>	<b>43.3–69.3</b>	<b>1 061</b>	<b>19.3</b>	<b>14.1–24.5</b>	<b>1680</b>	<b>37.3</b>	<b>30.4–44.2</b>

Mean minutes of transport-related physical activity on average per day									
Age group (years)	Men			Women			Both sexes		
	N	Mean minutes	95% CI	N	Mean minutes	95% CI	N	Mean minutes	95% CI
15–24	230	43.8	33.3–54.3	228	25.2	19.3–31.1	458	34.0	28.1–39.9
25–34	121	31.6	18.1–45.1	272	35.6	27.2–44.1	393	33.7	25.8–41.5
35–44	92	37.2	17.6–56.8	232	37.5	30.1–45.0	324	37.3	26.9–47.9
45–54	70	72.7	40.1–105.3	146	39.8	29.9–49.8	216	56.7	39.1–74.3
55–64	106	69.5	40.7–98.3	183	38.4	28.5–48.5	289	54.5	38.8–70.3
<b>15–64</b>	<b>619</b>	<b>43.8</b>	<b>36.3–51.4</b>	<b>1 061</b>	<b>31.8</b>	<b>28.1–35.6</b>	<b>1680</b>	<b>37.6</b>	<b>33.5–41.8</b>

Mean minutes of recreation-related physical activity on average per day									
Age group (years)	Men			Women			Both sexes		
	N	Mean minutes	95% CI	N	Mean minutes	95% CI	N	Mean minutes	95% CI
15–24	230	52.7	43.0–62.4	228	13.6	8.1–19.1	458	32.1	26.4–37.8
25–34	121	47.7	35.1–60.4	272	11.2	7.2–15.2	393	28.9	22.1–35.6
35–44	92	35.5	17.5–53.5	232	13.7	9.6–18.0	324	24.6	15.3–34.0
45–54	70	20.5	9.8–31.2	146	17.6	9.3–26.0	216	19.1	12.3–26.0
55–64	106	26.5	13.0–40.0	183	16.3	10.6–21.9	289	21.5	14.0–29.1
<b>15–64</b>	<b>619</b>	<b>43.8</b>	<b>37.6–50.1</b>	<b>1 061</b>	<b>13.5</b>	<b>10.6–16.4</b>	<b>1680</b>	<b>28.2</b>	<b>24.8–31.7</b>

## 7.8 No physical activity by domain

Description: Percentage of respondents classified as doing no work-, transport- or recreation-related physical activity

Instrument questions:

- Activity at work

- Travel to and from places
- Recreational activities

Age group (years)	No work-related physical activity								
	Men			Women			Both sexes		
N	% No activity at work	95% CI	N	% No activity at work	95% CI	N	% No activity at work	95% CI	
15–24	230	85.3	80.7–89.9	228	90.8	87.0–94.6	458	88.2	85.2–91.1
25–34	121	23.2	15.7–30.7	272	83.5	79.1–87.9	393	80.3	76.0–84.6
35–44	92	30.5	21.0–39.9	232	83.2	78.4–88.0	324	76.4	71.0–81.7
45–54	70	68.6	57.7–79.5	146	86.3	80.7–91.9	216	77.2	70.8–81.7
55–64	106	84.9	78.1–91.8	183	87.5	82.7–92.3	289	86.1	81.9–90.4
<b>15–64</b>	<b>619</b>	<b>78.7</b>	<b>75.3–82.1</b>	<b>1061</b>	<b>87.1</b>	<b>84.9–89.4</b>	<b>1680</b>	<b>83.0</b>	<b>81.0–85.1</b>

Age group (years)	No transport-related physical activity								
	Men			Women			Both sexes		
N	% No activity for transport	95% CI	N	% No activity for transport	95% CI	N	% No activity for transport	95% CI	
15–24	230	53.5	47.0–60.1	228	46.1	39.6–52.6	458	49.6	45.0–54.2
25–34	121	62.8	54.2–71.5	272	40.5	34.7–46.3	393	51.3	46.0–56.6
35–44	92	59.8	49.8–69.8	232	34.1	28.0–40.2	324	47.0	40.9–53.1
45–54	70	50.0	38.3–61.8	146	34.9	27.2–42.7	216	42.7	35.5–49.9
55–64	106	48.1	38.6–57.7	183	42.7	35.5–49.8	289	45.5	39.5–51.5
<b>15–64</b>	<b>619</b>	<b>56.3</b>	<b>52.2–60.4</b>	<b>1061</b>	<b>41.5</b>	<b>38.0–45.0</b>	<b>1680</b>	<b>48.7</b>	<b>46.0–51.5</b>

Age group (years)	No recreation-related physical activity								
	Men			Women			Both sexes		
	N	% No activity at recreation	95% CI	N	% No activity at recreation	95% CI	N	% No activity at recreation	95% CI
15–24	230	39.6	33.3–45.9	228	79.8	74.6–85.1	458	60.8	56.4–65.3
25–34	121	44.7	35.8–53.5	272	77.9	73.0–82.9	393	61.8	56.5–67.1
35–44	92	56.6	46.4–66.7	232	73.7	68.0–79.4	324	65.1	59.2–71.0
45–54	70	67.2	56.1–78.2	146	69.9	62.4–77.3	216	68.5	61.8–75.2
55–64	106	66.1	57.0–75.1	183	69.4	62.7–76.1	289	67.7	62.0–73.3
<b>15–64</b>	<b>619</b>	<b>48.0</b>	<b>43.8–52.1</b>	<b>1061</b>	<b>77.0</b>	<b>74.1–80.0</b>	<b>1680</b>	<b>62.9</b>	<b>60.2–65.5</b>

## 7.9 Composition of total physical activity

Description: Percentage of work, transport and recreational activity contributing to total activity

Instrument questions:

- Activity at work
- Travel to and from places
- Recreational activities

Composition of total physical activity							
Age group (years)	Men						
	N	% Activity at work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
15–24	179	10.9	7.1–14.7	34.9	4.8–12.9	54.3	48.4–60.2
25–34	92	22.5	15.0–30.0	27.2	9.7–18.3	50.3	41.4–59.2
35–44	64	31.7	21.7–41.7	31.6	10.3–19.3	36.8	26.7–46.9
45–54	51	30.1	19.6–40.6	46.0	7.7–18.9	23.9	14.1–33.7
55–64	71	13.8	7.1–20.7	54.8	6.6–16.1	31.4	22.2–40.6
<b>15–64</b>	<b>457</b>	<b>19.3</b>	<b>16.0–22.6</b>	<b>34.4</b>	<b>9.7–14.2</b>	<b>46.3</b>	<b>42.3–50.5</b>

Composition of total physical activity							
Age group (years)	Women						
	N	% Activity at work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
15–24	141	8.9	29.3–40.4	70.3	63.8–76.9	20.8	15.0–26.6
25–34	200	14.0	19.4–35.1	65.0	59.2–70.9	21.0	16.0–26.0
35–44	180	14.8	21.8–41.3	66.8	61.0–72.7	18.4	13.9–23.0
45–54	112	13.3	34.4–57.8	61.5	53.8–69.1	25.2	18.4–32.2
55–64	126	11.3	45.3–64.4	60.6	53.4–67.9	28.1	21.5–34.8
<b>15–64</b>	<b>759</b>	<b>11.9</b>	<b>30.7–38.2</b>	<b>66.9</b>	<b>63.6–70.3</b>	<b>21.2</b>	<b>18.3–24.1</b>

Age group (years)	Composition of total physical activity						
	Both sexes						
	N	% Activity at work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
15–24	320	9.9	7.2–12.7	51.5	46.9–56.2	38.5	34.0–43.1
25–34	292	18.2	13.9–22.5	46.4	41.1–51.8	35.4	30.1–40.8
35–44	244	22.8	17.4–28.2	50.1	44.1–56.2	27.1	21.6–32.7
45–54	163	21.7	15.6–27.9	53.7	46.7–60.8	24.6	18.6–30.6
55–64	197	12.6	8.5–16.8	57.6	51.6–63.7	29.8	24.1–35.5
<b>15–64</b>	<b>1216</b>	<b>15.6</b>	<b>13.6–17.7</b>	<b>50.4</b>	<b>47.7–53.2</b>	<b>33.9</b>	<b>31.3–36.6</b>

## 7.10 No vigorous physical activity

Description: Percentage of respondents not engaging in vigorous physical activity

Instrument questions:

- Activity at work
- Recreational activities

Age group (years)	No vigorous physical activity								
	Men			Women			Both sexes		
	N	% No vigorous activity	95% CI	N	% No vigorous activity	95% CI	N	% No vigorous activity	95% CI
15–24	230	52.2	45.7–58.7	228	86.9	82.5–91.3	458	70.5	66.3–74.6
25–34	121	53.7	44.8–62.7	272	89.0	85.3–92.5	393	71.9	66.8–77.0
35–44	92	65.3	55.5–75.0	232	88.3	84.3–92.5	324	76.8	71.3–82.3
45–54	70	77.2	67.3–87.0	146	91.1	86.5–95.7	216	84.0	78.3–89.6
55–64	106	79.3	71.5–87.0	183	88.5	83.9–93.2	289	83.7	79.1–88.3
<b>15–64</b>	<b>619</b>	<b>58.8</b>	<b>54.6–62.9</b>	<b>1061</b>	<b>88.1</b>	<b>85.8–90.5</b>	<b>1680</b>	<b>73.8</b>	<b>71.4–76.3</b>

## 7.11 Sedentary

Description: Minutes spent in sedentary activities on a typical day

Instrument question:

- Sedentary behaviour

<b>Minutes spent in sedentary activities on average per day</b>					
<b>Age group (years)</b>	<b>Men</b>				
	<b>N</b>	<b>Mean minutes</b>	<b>95% CI</b>	<b>Median minutes</b>	<b>Inter-quartile range (P25–P75)</b>
15–24	246	345.5	319.1–372.1	300.0	180.0–480.0
25–34	134	310.9	274.1–347.6	300.0	120.0–480.0
35–44	97	277.9	244.6–311.2	240.0	120.0–360.0
45–54	75	267.9	228.7–307.1	240.0	120.0–360.0
55–64	112	263.5	227.7–299.5	180.0	120.0–360.0
<b>15–64</b>	<b>664</b>	<b>313.0</b>	<b>296.6–329.5</b>	<b>300.0</b>	<b>180.0–420.0</b>

<b>Minutes spent in sedentary activities on average per day</b>					
<b>Age group (years)</b>	<b>Women</b>				
	<b>N</b>	<b>Mean minutes</b>	<b>95% CI</b>	<b>Median minutes</b>	<b>Inter-quartile range (P25–P75)</b>
15–24	240	351.4	327.2–375.7	360.0	180.0–480.0
25–34	283	279.8	257.0–302.7	240.0	120.0–420.0
35–44	243	213.4	190.1–236.7	180.0	60.0–300.0
45–54	154	206.1	182.6–229.6	180.0	60.0–300.0
55–64	196	243.0	215.8–270.2	180.0	120.0–315.0
<b>15–64</b>	<b>1116</b>	<b>292.4</b>	<b>278.7–306.1</b>	<b>270.0</b>	<b>120.0–420.0</b>

<b>Minutes spent in sedentary activities on average per day</b>					
<b>Age group (years)</b>	<b>Both sexes</b>				
	<b>N</b>	<b>Mean minutes</b>	<b>95% CI</b>	<b>Median minutes</b>	<b>Inter-quartile range (P25–P75)</b>
15–24	486	348.6	330.8–366.5	300.0	180.0–480.0
25–34	417	295.3	273.7–317.0	255.0	120.0–420.0
35–44	340	245.8	225.2–266.6	180.0	120.0–360.0
45–54	229	238.1	214.5–261.7	180.0	120.0–360.0
55–64	308	253.5	230.9–276.2	180.0	120.0–360.0
<b>15–64</b>	<b>1780</b>	<b>302.5</b>	<b>292.0–313.2</b>	<b>300.0</b>	<b>120.0–420.0</b>

## 8. Blood pressure and diabetes history

### 8.1 Blood pressure measurement and diagnosis

Description: Blood pressure measurement and diagnosis among all respondents

Instrument questions:

- Have you ever had your blood pressure measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- Have you been told in the past 12 months?

Blood pressure measurement and diagnosis									
Age group (years)	Men								
	N	% Never measured	95% CI	% Measured, not diagnosed	95% CI	% Diagnosed, but not within past 12 months	95% CI	% Diagnosed within past 12 months	95% CI
15–24	245	46.5	40.3–52.8	51.8	45.6–58.1	1.2	0.0–2.6	0.4	0.0–1.2
25–34	134	30.6	22.8–38.4	68.7	60.8–76.5	0.7	0.0–2.2	0.0	–
35–44	97	20.6	12.5–28.7	70.1	61.0–79.2	2.1	0.0–4.9	7.2	2.1–12.4
45–54	74	20.3	11.1–29.5	63.5	52.5–74.5	5.4	0.2–10.6	10.8	3.7–17.9
55–64	111	12.6	6.4–18.8	58.6	49.4–67.7	5.4	1.2–9.6	23.4	15.5–31.3
<b>15–64</b>	<b>661</b>	<b>33.6</b>	<b>29.8–37.5</b>	<b>60.9</b>	<b>56.9–64.8</b>	<b>1.9</b>	<b>0.9–2.9</b>	<b>3.7</b>	<b>2.3–5.0</b>

Blood pressure measurement and diagnosis									
Age group (years)	Women								
	N	% Never measured	95% CI	% Measured, not diagnosed	95% CI	% Diagnosed, but not within past 12 months	95% CI	% Diagnosed within past 12 months	95% CI
15–24	239	38.1	31.9–44.3	61.1	54.9–67.3	0.5	0.0–1.2	0.5	0.0–1.2
25–34	281	17.4	13.0–21.9	76.2	71.2–81.2	4.3	1.9–6.7	2.1	0.5–3.8
35–44	240	13.4	9.1–17.7	74.6	69.1–80.1	3.8	1.4–6.2	8.4	4.8–11.8
45–54	153	6.5	2.7–10.5	69.9	62.7–77.2	5.2	1.7–8.8	18.3	12.2–24.4
55–64	193	6.7	3.2–10.3	52.4	45.3–59.4	5.2	2.1–8.3	35.8	29.0–42.5
<b>15–64</b>	<b>1106</b>	<b>24.5</b>	<b>21.3–27.7</b>	<b>67.5</b>	<b>64.2–70.8</b>	<b>2.6</b>	<b>1.7–3.5</b>	<b>5.4</b>	<b>4.3–6.5</b>

Age group (years)	Blood pressure measurement and diagnosis								
	Both sexes								
	N	% Never measured	95% CI	% Measured, not diagnosed	95% CI	% Diagnosed, but not within past 12 months	95% CI	% Diagnosed within past 12 months	95% CI
15–24	484	42.1	37.7–46.5	56.7	52.3–61.1	0.8	0.0–1.6	0.4	0.0–1.0
25–34	415	24.0	19.5–28.6	72.4	67.7–77.1	2.5	1.1–3.9	1.1	0.2–1.9
35–44	337	17.0	12.4–21.6	72.3	67.0–77.7	2.9	1.0–4.8	7.8	4.6–10.9
45–54	227	13.6	8.4–18.8	66.6	59.9–73.3	5.3	2.2–8.5	14.4	9.7–19.2
55–64	304	9.8	6.1–13.4	55.5	49.7–61.4	5.3	2.7–7.9	29.4	24.1–34.7
<b>15–64</b>	<b>1767</b>	<b>29.0</b>	<b>26.5–31.5</b>	<b>64.2</b>	<b>61.7–66.8</b>	<b>2.2</b>	<b>1.6–2.9</b>	<b>4.5</b>	<b>3.7–5.4</b>

## 8.2 Blood pressure treatment among those diagnosed

Description: Treatment results for raised blood pressure among those previously diagnosed with raised blood pressure

Instrument questions:

- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- Are you currently receiving any treatment for high blood pressure prescribed by a doctor or other health worker?
- What drugs (medication) have you taken in the past 2 weeks?

Currently taking blood pressure drugs prescribed by doctor or health worker among those diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	% Taking meds	95% CI	N	% Taking meds	95% CI	N	% Taking meds	95% CI
15–64	54	55.6	39.0–72.2	154	49.5	40.2–58.9	208	51.9	43.4–60.4

## 8.3 Blood pressure lifestyle advice

Description: Percentage of respondents who received lifestyle advice from a doctor or health worker to treat raised blood pressure among those previously diagnosed with raised blood pressure

Instrument questions:

- When was your blood pressure last measured by a health professional?

- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- Are you currently receiving any advice for high blood pressure prescribed by a doctor or other health worker?

Advised by doctor or health worker to reduce salt intake among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	54	54.5	38.0–71.0	135	56.1	46.5–65.6	207	55.5	46.9–64.0

Advised by doctor or health worker to lose weight among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	54	57.5	41.3–73.8	152	51.3	41.9–60.8	206	53.8	45.3–62.3

Advised by doctor or health worker to stop smoking among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	53	32.6	17.0–48.1	152	4.3	1.0–7.6	205	15.4	8.6–22.3

Advised by doctor or health worker to start or do more exercise among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	54	69.5	54.6–84.3	152	54.3	44.7–63.8	206	60.2	51.8–68.6

## 8.4 Blood pressure advice by a traditional healer

Description: Percentage of respondents who have sought advice or received treatment from traditional healers for raised blood pressure among those previously diagnosed with raised blood pressure

Instrument questions:

- When was your blood pressure last measured by a health professional?
- Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?
- Have you ever seen a traditional healer for raised blood pressure?
- Are you currently taking any herbal or traditional remedy for your high blood pressure?

Seen a traditional healer among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	54	0.0	–	153	4.6	1.1–8.1	207	2.8	0.7–4.9

Currently taking herbal or traditional remedy for high blood pressure among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	54	0.9	0.0–2.8	151	3.3	0.2–6.4	205	2.4	0.3–4.4

## 8.5 Diabetes measurement and diagnosis

Description: Diabetes measurement and diagnosis among all respondents

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- Have you been told in the past 12 months?

Blood sugar measurement and diagnosis									
Age group (years)	Men								
	N	% Never measured	95% CI	% Measured, not diagnosed	95% CI	% Diagnosed, but not within past 12 months	95% CI	% Diagnosed within past 12 months	95% CI
15–24	243	75.3	69.9–80.7	24.7	19.3–30.1	0.0	–	0.0	–
25–34	132	53.0	44.5–61.6	44.7	36.2–53.2	0.8	0.0–2.2	1.5	0.0–3.6
35–44	97	39.2	29.4–48.9	56.7	46.8–66.6	1.0	0.0–3.0	3.1	0.0–6.5
45–54	75	28.0	17.8–38.2	65.3	54.5–76.1	2.7	0.0–6.3	4.0	0.0–8.4
55–64	111	18.0	10.8–25.2	63.1	54.1–72.1	1.8	0.0–4.3	17.1	10.1–24.1
15–64	658	55.6	51.6–59.6	41.5	37.5–45.4	0.7	0.1–1.4	2.2	1.2–3.2

Blood sugar measurement and diagnosis									
Age group (years)	Women								
	N	% Never measured	95% CI	% Measured, not diagnosed	95% CI	% Diagnosed, but not within past 12 months	95% CI	% Diagnosed within past 12 months	95% CI
15–24	239	62.3	56.2–68.5	35.1	29.1–41.2	0.4	0.0–1.2	2.1	0.3–3.9
25–34	279	28.0	22.7–33.2	64.5	58.9–70.1	4.3	1.9–6.7	3.2	1.2–5.3
35–44	240	24.6	19.1–30.0	69.2	63.3–75.0	2.5	0.5–4.5	3.8	1.3–6.2
45–54	154	16.2	10.4–22.1	70.1	62.9–77.4	1.3	0.0–3.1	12.3	7.1–17.5
55–64	194	13.4	8.6–18.2	62.4	55.6–69.2	4.6	1.7–7.6	19.6	14.0–25.2
<b>15–64</b>	<b>1106</b>	<b>41.1</b>	<b>37.6–44.6</b>	<b>52.5</b>	<b>49.1–56.0</b>	<b>2.0</b>	<b>1.2–2.8</b>	<b>4.4</b>	<b>3.2–5.6</b>

Blood sugar measurement and diagnosis									
Age group (years)	Both sexes								
	N	% Never measured	95% CI	% Measured, not diagnosed	95% CI	% Diagnosed, but not within past 12 months	95% CI	% Diagnosed within past 12 months	95% CI
15–24	482	68.5	64.3–72.7	30.2	26.1–34.3	0.2	0.0–0.7	1.1	0.1–2.1
25–34	411	40.5	35.3–45.6	54.6	49.4–59.8	2.5	1.1–3.9	2.4	0.9–3.8
35–44	337	32.0	26.3–37.6	62.9	57.0–68.7	1.8	0.3–3.2	3.4	1.3–5.5
45–54	229	22.3	16.3–28.3	67.6	61.1–74.2	2.0	0.0–4.1	8.0	4.6–11.5
55–64	305	15.8	11.4–20.1	62.7	57.0–68.4	3.2	1.3–5.1	18.3	13.8–22.8
<b>15–64</b>	<b>1764</b>	<b>48.2</b>	<b>45.6–50.9</b>	<b>47.1</b>	<b>44.5–49.7</b>	<b>1.4</b>	<b>0.9–1.9</b>	<b>3.3</b>	<b>2.5–4.1</b>

## 8.6 Diabetes treatment among those diagnosed

Description: Diabetes treatment results among those previously diagnosed with raised blood sugar or diabetes

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- Are you currently receiving any of the following treatments/advice for diabetes prescribed by a doctor or other health worker?

Currently taking insulin prescribed for diabetes among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	% Taking insulin	95% CI	N	% Taking insulin	95% CI	N	% Taking insulin	95% CI
15–64	28	31.2	8.7–53.6	103	15.1	6.6–23.6	131	19.4	10.8–27.9

Currently taking oral drugs prescribed for diabetes among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	% Taking meds	95% CI	N	% Taking meds	95% CI	N	% Taking meds	95% CI
15–64	28	87.5	73.1–100.0	103	54.4	42.2–66.7	131	63.2	52.7–73.7

## 8.7 Diabetes advice by traditional healer

Description: Percentage of respondents who have sought advice or treatment from traditional healers for diabetes among those previously diagnosed

Instrument questions:

- Have you ever had your blood sugar measured by a doctor or other health worker?
- Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?
- Have you ever seen a traditional healer for diabetes or raised blood sugar?
- Are you currently taking any herbal or traditional remedy for your diabetes?

Seen a traditional healer for diabetes among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	27	2.2	0.0–6.9	104	0.0	–	131	0.6	0.0–1.7

Currently taking herbal or traditional treatment for diabetes among those previously diagnosed									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–64	28	0.0	–	104	2.1	0.0–5.0	132	1.5	0.7–3.7

## 9. Physical measurements

### 9.1 Height, weight and BMI

Description: Mean height, weight, and BMI among all respondents (excluding pregnant women for weight and BMI)

Instrument questions:

- Height
- Weight

Age group (years)	Mean height (cm)					
	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	244	166.1	165.1–167.1	239	154.7	153.7–155.8
25–34	134	165.2	164.1–166.5	279	153.0	152.2–153.8
35–44	97	163.5	162.5–164.6	240	151.1	150.3–151.8
45–54	75	161.8	160.4–163.3	153	150.2	149.0–151.4
55–64	111	159.9	158.3–161.5	192	149.2	148.1–150.3
<b>15–64</b>	<b>661</b>	<b>164.7</b>	<b>164.1–165.3</b>	<b>1103</b>	<b>153.0</b>	<b>152.5–153.6</b>

Age group (years)	Mean weight (kg)					
	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	243	58.5	56.7–60.3	227	50.7	49.1–52.2
25–34	134	64.7	62.7–66.7	255	59.7	58.2–61.2
35–44	97	67.0	64.7–69.2	237	60.8	59.5–62.1
45–54	75	67.6	64.7–70.6	154	63.1	61.2–65.0
55–64	112	65.6	63.7–67.4	194	62.8	61.1–64.4
<b>15–64</b>	<b>661</b>	<b>62.9</b>	<b>61.8–63.9</b>	<b>1067</b>	<b>56.3</b>	<b>55.4–57.2</b>

Age group (years)	Mean BMI (kg/m <sup>2</sup> )					
	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	242	21.2	20.6–21.7	224	21.3	20.7–21.9
25–34	134	23.7	23.0–24.4	253	25.5	24.9–26.2
35–44	97	25.1	24.3–25.8	236	26.6	26.1–27.2
45–54	75	25.8	24.8–26.9	153	27.9	27.1–28.7
55–64	111	25.7	25.0–26.5	190	28.2	27.4–28.9
<b>15–64</b>	<b>659</b>	<b>23.2</b>	<b>22.8–23.6</b>	<b>1056</b>	<b>24.2</b>	<b>23.8–24.6</b>
	Both sexes					
	N	Mean	95% CI	N	Mean	95% CI
	466	21.2	20.8–21.7	387	24.6	24.1–25.1
	333	25.8	25.3–26.3	228	26.8	26.1–27.5
	301	26.9	26.3–27.5	1715	23.7	23.4–23.9

## 9.2 BMI categories

Description: Percentage of respondents (excluding pregnant women) in each BMI category

Instrument questions:

- Height
- Weight

BMI categories									
Age group (years)	Men								
	N	% Under-weight BMI <18.5	95% CI	% Normal weight BMI 18.5–24.9	95% CI	% Overweight BMI 25.0–29.9	95% CI	% Obese BMI ≥30.0	95% CI
15–24	242	22.3	17.1–27.6	62.0	55.8–68.1	9.9	6.1–13.7	5.8	2.8–8.7
25–34	134	9.7	4.7–14.7	57.5	49.1–65.8	25.4	18.0–32.8	7.5	3.0–11.9
35–44	97	5.1	0.7–9.6	47.4	37.5–57.4	36.1	26.5–45.7	11.3	5.0–17.7
45–54	75	4.0	0.0–8.5	38.7	27.6–49.8	41.3	30.2–52.5	16.0	7.7–24.3
55–64	111	1.8	0.0–4.3	39.7	30.5–48.8	45.9	36.6–55.3	12.7	6.4–18.8
<b>15–64</b>	<b>659</b>	<b>13.2</b>	<b>10.4–16.0</b>	<b>54.8</b>	<b>50.8–58.8</b>	<b>23.5</b>	<b>20.1–26.8</b>	<b>8.6</b>	<b>6.4–10.8</b>

BMI categories									
Age group (years)	Women								
	N	% Under-weight BMI <18.5	95% CI	% Normal weight BMI 18.5–24.9	95% CI	% Overweight BMI 25.0–29.9	95% CI	% Obese BMI ≥30.0	95% CI
15–24	224	23.7	18.1–29.3	56.3	49.8–62.8	13.8	9.3–18.4	6.3	3.1–9.4
25–34	253	7.9	4.6–11.2	37.9	32.0–43.9	36.4	30.5–42.3	17.8	13.1–22.5
35–44	236	1.3	0.0–2.7	38.6	32.4–44.8	40.7	34.5–47.0	19.5	14.4–24.6
45–54	153	0.7	0.0–1.9	31.4	24.1–38.7	38.6	30.8–46.3	29.4	22.2–36.7
55–64	190	1.6	0.0–3.4	24.8	18.6–30.9	46.3	39.2–53.5	27.4	21.1–33.7
<b>15–64</b>	<b>1056</b>	<b>12.8</b>	<b>10.1–15.5</b>	<b>44.9</b>	<b>41.4–48.5</b>	<b>27.8</b>	<b>24.8–30.7</b>	<b>14.5</b>	<b>12.4–16.8</b>

BMI categories									
Age group (years)	Both sexes								
	N	% Under-weight BMI <18.5	95% CI	% Normal weight BMI 18.5–24.9	95% CI	% Overweight BMI 25.0–29.9	95% CI	% Obese BMI ≥30.0	95% CI
15–24	466	23.0	19.2–26.8	59.1	54.6–63.5	11.9	9.0–14.9	6.1	3.9–8.2
25–34	387	8.8	5.8–11.9	48.2	42.9–53.6	30.6	25.7–35.4	12.4	9.1–15.7
35–44	333	3.3	0.9–5.7	43.1	37.2–49.1	38.3	32.6–44.1	15.3	11.2–19.4
45–54	228	2.4	0.0–4.8	35.2	28.4–41.9	40.1	33.2–46.9	22.5	16.9–28.1
55–64	301	1.7	0.2–3.3	32.5	26.9–38.1	46.2	40.2–52.0	19.7	15.2–24.2
<b>15–64</b>	<b>1715</b>	<b>13.0</b>	<b>11.1–14.9</b>	<b>49.9</b>	<b>47.3–52.6</b>	<b>25.6</b>	<b>23.4–27.8</b>	<b>11.5</b>	<b>10.1–13.1</b>

### 9.3 BMI $\geq 25$

Description: Percentage of respondents classified as overweight (BMI  $\geq 25$ )

Instrument questions:

- Height
- Weight

Age group (years)	BMI $\geq 25$							
	Men			Women			Both sexes	
	N	% BMI $\geq 25$	95% CI	N	% BMI $\geq 25$	95% CI	N	% BMI $\geq 25$
15–24	38	15.7	11.2–10.3	45	20.1	14.8–25.4	83	18.0
25–34	134	32.8	24.9–40.8	137	54.2	48.1–60.3	181	42.9
35–44	97	47.4	37.5–57.4	142	60.2	54.0–66.4	188	53.7
45–54	75	57.4	46.2–68.6	104	68.0	60.6–75.4	147	62.5
55–64	111	58.6	49.4–67.8	140	73.7	67.4–80.0	205	65.8
<b>15–64</b>	<b>659</b>	<b>32.0</b>	<b>28.3–35.8</b>	<b>568</b>	<b>42.3</b>	<b>38.9–45.7</b>	<b>804</b>	<b>37.1</b>
								<b>34.6–39.6</b>

### 9.4 Waist circumference

Description: Mean waist circumference among all respondents (excluding pregnant women)

Instrument question:

- Waist circumference measurement

Age group (years)	Waist circumference (cm)					
	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	242	72.7	71.8–74.3	227	71.0	69.6–72.5
25–34	132	79.9	78.0–81.7	253	82.1	80.5–83.7
35–44	96	83.5	81.1–85.8	235	85.4	83.9–86.9
45–54	74	89.7	86.4–93.0	151	90.2	88.2–92.3
55–64	109	92.3	89.7–95.0	184	92.8	90.8–95.0
<b>15–64</b>	<b>653</b>	<b>79.1</b>	<b>78.180.2</b>	<b>1 050</b>	<b>78.9</b>	<b>77.9–80.0</b>

### 9.5 Hip circumference

Description: Mean hip circumference among all respondents (excluding pregnant women)

Instrument question:

- Hip circumference measurement

Age group (years)	Hip circumference (cm)					
	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	239	88.5	86.9–90.2	226	89.7	88.3–91.1
25–34	130	93.8	91.9–95.7	252	97.1	95.8–98.4
35–44	95	94.7	92.6–96.9	235	97.9	96.6–99.1
45–54	74	95.9	92.5–99.3	149	100.1	98.3–101.9
55–64	108	96.0	93.8–98.1	185	99.5	97.9–101.2
<b>15–64</b>	<b>646</b>	<b>92.1</b>	<b>91.1–93.1</b>	<b>1047</b>	<b>94.3</b>	<b>93.5–95.1</b>

## 9.6 Waist / hip ratio

Description: Mean waist-to-hip ratio among all respondents (excluding pregnant women)

Instrument question:

- Waist and hip circumference measurement

Age group (years)	Mean waist / hip ratio					
	Men			Women		
	N	Mean	95% CI	N	Mean	95% CI
15–24	239	0.8	0.81–0.84	226	0.8	0.78–0.81
25–34	130	0.9	0.84–0.87	252	0.8	0.83–0.85
35–44	95	0.9	0.87–0.90	235	0.9	0.86–0.89
45–54	74	0.9	0.91–0.96	149	0.9	0.89–0.91
55–64	108	1.0	0.94–0.99	183	0.9	0.92–0.95
<b>15–64</b>	<b>646</b>	<b>0.9</b>	<b>0.85–0.87</b>	<b>1045</b>	<b>0.8</b>	<b>0.83–0.84</b>

## 9.7 Blood pressure

Description: Mean blood pressure among all respondents, including those currently on medication for raised blood pressure

Instrument question:

- Readings 1–3 of systolic and diastolic blood pressure

Mean systolic blood pressure (mmHg)									
Age group (years)	Men			Women			Both sexes		
	N	Mean	95% CI	N	Mean	95% CI	N	Mean	95% CI
15–24	243	120.1	118.4–121.7	240	108.9	107.6–110.1	483	114.2	113.0–115.3
25–34	133	119.8	117.5–122.1	280	114.5	112.9–116.0	413	117.1	115.7–120.4
35–44	96	123.2	120.1–126.3	240	121.4	119.3–123.4	336	122.3	120.4–124.2
45–54	75	131.4	126.7–136.2	154	138.4	134.6–142.1	229	134.8	131.7–137.9
55–64	112	142.4	138.1–146.6	194	145.4	142.0–148.9	306	143.8	141.1–146.6
<b>15–64</b>	<b>659</b>	<b>122.8</b>	<b>121.6–124.0</b>	<b>1108</b>	<b>116.7</b>	<b>115.6–117.7</b>	<b>1767</b>	<b>119.7</b>	<b>118.9–120.5</b>

Mean diastolic blood pressure (mmHg)									
Age group (years)	Men			Women			Both sexes		
	N	Mean	95% CI	N	Mean	95% CI	N	Mean	95% CI
15–24	243	73.4	71.9–74.8	240	70.2	69.0–71.4	483	71.7	70.7–72.6
25–34	133	75.9	74.1–77.7	280	74.1	72.9–75.3	413	75.0	73.9–76.1
35–44	96	79.3	77.0–81.7	240	78.3	76.9–79.7	336	78.8	77.4–80.2
45–54	75	82.5	79.5–85.5	154	84.8	82.5–87.0	229	83.6	81.7–85.5
55–64	112	83.3	81.0–85.7	194	84.8	83.1–86.5	306	84.0	82.6–85.5
<b>15–64</b>	<b>659</b>	<b>76.5</b>	<b>75.5–77.4</b>	<b>1108</b>	<b>74.5</b>	<b>73.7–75.3</b>	<b>1767</b>	<b>75.5</b>	<b>74.9–76.1</b>

## 9.8 Raised blood pressure

Description: Percentage of respondents with raised blood pressure

Instrument question:

- During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?
- Readings 1–3 of systolic and diastolic blood pressure

SBP ≥140 and/or DBP ≥90 mmHg, excluding those on medication for raised blood pressure									
Age group (years)	Men			Women			Both sexes		
	N	%	95% CI	N	%	95% CI	N	%	95% CI
15–24	243	11.5	7.5–15.6	239	2.1	0.3–1.0	482	6.6	4.4–8.7
25–34	133	10.6	5.3–15.8	278	8.3	5.1–11.5	411	9.4	6.4–12.5
35–44	92	21.8	13.3–30.2	231	16.5	11.7–21.3	323	19.2	14.3–24.0
45–54	69	34.8	23.5–46.1	143	49.7	41.5–57.9	212	42.0	34.9–49.1
55–64	100	58.0	48.3–67.7	157	54.2	46.4–61.9	257	56.3	49.9–62.6
<b>15–64</b>	<b>637</b>	<b>17.3</b>	<b>14.4–20.3</b>	<b>1048</b>	<b>12.1</b>	<b>10.3–13.9</b>	<b>1685</b>	<b>14.7</b>	<b>13.0–16.4</b>

<b>SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised blood pressure</b>									
<b>Age group (years)</b>	<b>Men</b>			<b>Women</b>			<b>Both sexes</b>		
	<b>N</b>	<b>%</b>	<b>95% CI</b>	<b>N</b>	<b>%</b>	<b>95% CI</b>	<b>N</b>	<b>%</b>	<b>95% CI</b>
15–24	243	11.5	7.5–15.5	240	2.5	0.5–4.5	483	6.8	4.6–9.0
25–34	133	10.5	5.3–15.8	280	8.9	5.6–12.3	413	9.7	6.7–12.8
35–44	96	25.0	16.3–33.7	240	19.6	14.6–24.6	336	22.3	17.3–27.4
45–54	75	40.0	28.9–51.1	154	53.3	45.4–61.1	229	46.4	39.5–53.4
55–64	112	62.5	53.5–71.5	194	62.9	56.1–69.7	306	62.7	57.0–68.4
<b>15–64</b>	<b>659</b>	<b>19.0</b>	<b>16.0–22.1</b>	<b>1108</b>	<b>14.3</b>	<b>12.4–16.3</b>	<b>1767</b>	<b>16.6</b>	<b>14.8–18.4</b>

<b>SBP ≥160 and/or DBP ≥100 mmHg, excluding those on medication for raised blood pressure</b>									
<b>Age group (years)</b>	<b>Men</b>			<b>Women</b>			<b>Both sexes</b>		
	<b>N</b>	<b>%</b>	<b>95% CI</b>	<b>N</b>	<b>%</b>	<b>95% CI</b>	<b>N</b>	<b>%</b>	<b>95% CI</b>
15–24	243	2.5	0.5–4.5	239	0.5	0.0–1.3	482	1.4	0.4–2.4
25–34	133	3.8	0.6–7.0	278	1.1	0.0–2.3	411	2.4	0.7–4.2
35–44	92	5.4	0.8–10.1	231	3.9	1.4–6.4	323	4.7	2.1–7.3
45–54	69	17.4	8.4–26.4	143	18.9	12.5–25.3	212	18.1	12.6–23.7
55–64	100	26.0	17.4–34.6	157	23.6	16.9–30.2	257	24.9	19.4–30.5
<b>15–64</b>	<b>637</b>	<b>5.8</b>	<b>4.1–7.6</b>	<b>1048</b>	<b>3.6</b>	<b>2.7–4.6</b>	<b>1685</b>	<b>4.7</b>	<b>3.7–5.7</b>

<b>SBP ≥160 and/or DBP ≥100 mmHg or currently on medication for raised blood pressure</b>									
<b>Age group (years)</b>	<b>Men</b>			<b>Women</b>			<b>Both sexes</b>		
	<b>N</b>	<b>%</b>	<b>95% CI</b>	<b>N</b>	<b>%</b>	<b>95% CI</b>	<b>N</b>	<b>%</b>	<b>95% CI</b>
15–24	243	2.5	0.5–4.4	240	0.8	0.0–2.0	483	1.6	0.5–2.7
25–34	133	3.8	0.5–7.0	280	1.8	0.3–3.4	413	2.8	1.0–4.6
35–44	96	9.4	3.5–15.2	240	7.5	4.2–10.8	336	8.5	5.1–11.8
45–54	75	24.0	14.3–33.7	154	24.7	17.9–31.5	229	24.4	18.4–30.3
55–64	112	33.9	25.1–42.7	194	38.2	31.3–45.0	306	36.0	30.4–41.6
<b>15–64</b>	<b>659</b>	<b>7.8</b>	<b>5.8–9.7</b>	<b>1108</b>	<b>6.0</b>	<b>4.9–7.3</b>	<b>1767</b>	<b>6.9</b>	<b>5.8–8.1</b>

## 9.9 Treatment and control of raised blood pressure

Description: Percentage of respondents with treated and/or controlled blood pressure among those with raised blood pressure (SBP ≥140 and/or DBP ≥90 mmHg) or currently on medication for raised blood pressure

Instrument questions:

- During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?
- Readings 1–3 for systolic and diastolic blood pressure

Respondents with treated and/or controlled raised blood pressure							
Age group (years)	Men						
	N	% On medication and SBP <140 and DBP <90 mmHg	95% CI	% On medication and SBP ≥140 and/or DBP ≥90 mmHg	95% CI	% Not on medication and SBP ≥140 and/or DBP ≥90 mmHg	95% CI
15–64	129	7.2	2.3–12.1	6.6	2.2–11.1	86.2	79.8–92.6
Respondents with treated and/or controlled raised blood pressure							
Age group (years)	Women						
	N	% On medication and SBP <140 and DBP <90 mmHg	95% CI	% On medication and SBP ≥140 and/or DBP ≥90 mmHg	95% CI	% Not on medication and SBP ≥140 and/or DBP ≥90 mmHg	95% CI
15–64	228	9.4	4.7–14.0	11.6	7.4–15.7	79.0	73.2–84.9
Respondents with treated and/or controlled raised blood pressure							
Age group (years)	Both sexes						
	N	% On medication and SBP <140 and DBP <90 mmHg	95% CI	% On medication and SBP ≥140 and/or DBP ≥90 mmHg	95% CI	% Not on medication and SBP ≥140 and/or DBP ≥90 mmHg	95% CI
15–24	29	3.8	0.0–11.1	0.0	–	96.2	88.9–100.0
25–34	32	4.6	0.0–11.0	0.0	–	95.4	89.0–100.0
35–44	60	12.6	3.0–22.2	8.2	1.2–15.2	79.3	68.0–90.5
45–54	88	6.5	0.6–12.4	14.7	6.4–23.0	78.8	69.3–88.4
55–64	148	12.5	6.9–18.0	18.2	11.9–24.4	69.3	61.7–77.0
15–64	357	8.2	4.8–11.6	8.8	5.8–11.9	83.0	78.6–87.4

## 9.10 Mean heart rate

Description: Mean heart rate (beats per minute)

Instrument question:

- Readings 1–3 of heart rate

Age group (years)	Mean heart rate (beats per minute)								
	Men			Women			Both sexes		
	N	Mean	95% CI	N	Mean	95% CI	N	Mean	95% CI
15–24	244	77.2	75.7–78.7	240	82.6	81.1–84.1	484	80.0	79.0–81.1
25–34	133	75.2	73.3–77.0	280	81.0	79.8–82.3	413	78.1	76.9–79.3
35–44	97	77.3	75.2–79.5	240	79.5	78.2–80.9	337	78.4	77.1–79.7
45–54	75	79.1	77.1–81.0	154	80.6	78.8–82.3	229	79.8	78.5–81.1
55–64	112	78.6	76.4–80.9	195	79.6	77.9–81.4	307	79.1	77.7–80.6
<b>15–64</b>	<b>661</b>	<b>77.0</b>	<b>76.1–77.9</b>	<b>1109</b>	<b>81.4</b>	<b>80.6–82.2</b>	<b>1770</b>	<b>79.2</b>	<b>78.6–79.8</b>

## 10. Summary of combined risk factors

### 10.1 Summary of combined risk factors

Description: Percentage of respondents with 0, 1–2, or 3–5 of the following risk factors:

- Current daily smoker
- Less than 5 servings of fruits and vegetables per day
- Low level of activity (<600 MET-minutes)
- Overweight or obese ( $BMI \geq 25 \text{ kg/m}^2$ )
- Raised BP (SBP  $\geq 140$  and/or DBP  $\geq 90 \text{ mmHg}$  or currently on medication for raised BP).

Instrument questions: Combined from Step 1 and Step 2

Age group (years)	Summary of combined risk factors						
	Men						
	N	% With 0 risk factors	95% CI	% With 1–2 risk factors	95% CI	% With 3–5 risk factors	95% CI
25–44	196	0.5	0.0–1.6	61.3	54.5–68.2	38.1	31.3–45.0
45–64	165	2.0	0.0–4.8	46.3	37.5–55.0	51.7	42.9–60.5
<b>25–64</b>	<b>361</b>	<b>0.9</b>	<b>0.0–2.0</b>	<b>57.3</b>	<b>51.7–62.8</b>	<b>41.8</b>	<b>36.3–47.4</b>

Summary of combined risk factors							
Age group (years)	Women						
	N	% With 0 risk factors	95% CI	% With 1–2 risk factors	95% CI	% With 3–5 risk factors	95% CI
25–44	437	1.4	0.3–2.5	68.5	64.2–72.9	30.1	25.8–34.4
45–64	301	1.4	0.0–2.9	41.4	35.2–47.6	57.2	51.0–63.4
<b>25–64</b>	<b>738</b>	<b>1.4</b>	<b>0.5–2.3</b>	<b>61.5</b>	<b>57.8–65.2</b>	<b>37.1</b>	<b>33.5–40.8</b>

Summary of combined risk factors							
Age group (years)	Both sexes						
	N	% With 0 risk factors	95% CI	% With 1–2 risk factors	95% CI	% With 3–5 risk factors	95% CI
25–44	633	0.9	0.2–1.7	64.9	60.8–69.0	34.2	30.1–38.2
45–64	466	1.7	0.1–3.3	44.0	38.5–49.4	54.3	48.9–59.8
<b>25–64</b>	<b>1099</b>	<b>1.1</b>	<b>0.4–1.8</b>	<b>59.3</b>	<b>56.0–62.7</b>	<b>39.5</b>	<b>36.2–42.9</b>

This report describes the findings of the WHO STEP wise approach to surveillance for noncommunicable diseases conducted in the Maldives in 2011. The survey collected information from a representative sample of 1780 individuals aged 15–64 years residing in Malé. The findings indicate that risk behaviours for noncommunicable diseases, such as tobacco use, unhealthy diet and physical inactivity are highly prevalent in the capital city, calling attention to the need for concrete urgent public health action to control noncommunicable diseases in the Maldives.

