



# **Malawi National STEPS Survey for Chronic Non-Communicable Diseases and their Risk Factors**

## **Final Report**

**COLLABORATION OF**



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## **LIST OF ABBREVIATIONS**

AIDS: Acquired –Immuno-deficiency Syndrome  
BMI: Body Mass Index  
CI: Confidence interval  
CVDs: Cardiovascular Diseases  
DHS: Demographic Health Survey  
GTT: Glucose Tolerance Test  
HDL-C: High Density Lipoprotein-Cholesterol  
HIV: Human-Immuno Deficiency Virus  
LDL-C: Low Density Lipoprotein-Cholesterol  
NCDs: Non-Communicable Diseases  
NSO: National Statistical Office  
PPS: Probability Proportion to Size  
QA/QC: Quality Assurance/ Quality Control  
SWAp: Sector Wide Approach  
SI: Systematic Interval  
VLDL-C: Very Low Density Lipoprotein-Cholesterol  
WHO: World Health Organization

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## EXECUTIVE SUMMARY

**Introduction/background:** With changes in life styles, chronic non-communicable diseases (NCDs) namely hypertension, heart diseases, stroke, cancer, diabetes, chronic respiratory condition such as asthma which used to be regarded as “*diseases of the west, affluent, rich, or urban people*” are increasingly becoming significant causes of morbidity and mortality in adults in developing countries. In Malawi, community data particularly on risk factors (tobacco smoking, overweight/obesity, excessive alcohol intake, physical inactivity etc) is scarce. Ministry of Health in collaboration with WHO therefore conducted a country wide population based survey to determine the magnitude of NCDs and their risk factors. The survey was conducted from July to September 2009.

**Objectives/rationale:** The Specific objectives of the survey were to determine the prevalence of hypertension, diabetes and raised total cholesterol levels and their risk factors (tobacco smoking, alcohol consumption, physical inactivity, overweight/obesity and inadequate vegetable and fruit intake).

**Materials and methods:** A multi-stage cluster sampling design was used to produce a national representative sample. Participants were people aged 25-64 years. Data was collected in steps 1, 2 and 3 using personal digital assistants (PDAs). Socio demographic and behavioural information was collected in Step 1. Physical measurements such as height, weight, blood pressure and waist and hip circumference were collected in Step 2. Biochemical measurements were collected to assess total cholesterol levels and fasting blood glucose in Step 3. Data was weighed for age, gender and population size for Malawi and analysed using WHO STEPS Survey software.

**Results:** A total of 5,206 participants were enrolled in the survey of which 67.5% were females. The overall response rate was 95.5%. About one third (32.9%) of the participants had raised blood pressure (BP) or currently on medication for raised BP. High blood pressure was significantly more common in males than females (37.2% vs 29.2%,  $p < 0.05$ ). Majority (94.9%) of the people with high blood pressure were not on medication and were not aware that they were hypertensive. The prevalence of diabetes was estimated to 5.6%. There were no significant differences observed between males and females (6.5% vs 4.7%). The magnitude of raised cholesterol in Malawi in adults aged 25-64 years was estimated at 8.7%. Raised cholesterol was significantly more common among females compared to males (11.0% vs 6.3%,  $p < 0.05$ ). In terms of risk factors, tobacco smoking and alcohol consumption were significantly more common in males than in females (25.9% vs 2.9%, 30.1% vs 4.2% respectively). Physical inactivity and overweight were significantly more common in females than males (12.6% vs 6.3%, 28.1% vs 16.1%). The overall (both sexes) national estimates of tobacco smoking, alcohol consumption, physical inactivity and overweight among adults aged 25-64 years were 14.1%, 16.9%, 9.5% and 21.9% respectively. About 16.5% of the participants had 3 or more NCD risk factors.

### **Conclusion/recommendations:**

This survey demonstrated that NCDs and their risk factors were public health problems in Malawi. In addition, it also revealed that majority of people with hypertension were not

aware that they had a problem. Establishing NCD Control Programme within the Ministry of Health, developing multi-sectoral Action Plan and strengthening the existing efforts may help to reduce NCDs and their risk factors and promote health life styles.

## **1.0: INTRODUCTION AND LITERATURE REVIEW**

### **1.1: Global perspective**

The global burden of disease is shifting from infectious to non-communicable diseases. Non-communicable diseases, principally cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases, caused an estimated 35 million deaths (60% of all deaths) world wide in 2005. Majority (80%) of deaths due to non-communicable diseases occur in low- and middle income countries. It is projected that the total number of deaths due to NCDs will increase from 60% in 2002 to 73% in 2020 (WHO 2008, Harries AD *et al.* 2008, Nigel U *et al.* 2001b). Non-communicable diseases may be prevented and their risk factors are well documented. These include tobacco smoking, harmful use of alcohol, physical inactivity, obesity and diets high in saturated fat and sodium and low in fruit and vegetables intake (Nigel U *et al.* 2001a).

### **1.2 Developing countries**

Most developing countries are affected by a double burden of communicable/infectious and non-communicable/non-infectious diseases (WHO 2000). Until recently, non-communicable diseases were considered as a significant health problem for developed and not for developing countries hence were sometimes referred to as “*diseases of the affluent, diseases of the west, or diseases of urbanisation*”. This is a misleading notion because it suggested that NCDs were not a public health problem in resource-poor countries or in rural areas (Nigel U 2001a, WHO 2000, Nigel U 2001b, Fourie J *et al.* 1995). This may be one of the reasons why in many developing countries NCDs were and are still not on the priority list of the public health problems. In the World Health Report of 2002 it was shown that even in the poorest regions of the world, NCDs and their risk factors are now causing a rising burden of serious disease and untimely deaths (WHO, 2003). In addition, a study in Tanzania showed that in the adult population, the probability of death from non-communicable diseases was higher than in developed countries Nigel U 2001a, Setel P *et al.* 2000).

### **1.3 Sub-Saharan Africa**

In sub-Saharan Africa (SSA), communicable diseases, particularly HIV/AIDS, tuberculosis (TB) and malaria are still responsible for the greatest burden of morbidity and mortality. However, non-communicable diseases (NCDs) are increasingly becoming a significant public health problem (Bainngana FK *et al.* 2006). The Global Burden of Disease Study, conducted in 2001, showed that 20% of deaths in SSA were due to NCDs (Lopez AD *et al.*, 2006), and this burden is predicted to rise to 40% by 2020 (Murray C *et al.* 1996). Non-communicable diseases are making significant demands on health care resources in this region (Nigel U, 2001b, Murray CJL 1996). Data from some African countries suggests that in urban settings, the prevalence of diabetes and hypertension has increased markedly over the past ten years Nigel U, 2001b). In South African townships about 8% of the populations have diabetes and between 20-33% have hypertension using the cut-of point > 160/95mmHg (Fourie J, *at al.*, 1995). NCD STEPS survey conducted in some of the countries in this region like Mozambique, Zimbabwe, Botswana showed that 8% of adult population aged 25-64 years has diabetes, 28-33% has hypertension, 7-16% has obesity,

12-20% smoke tobacco and 27-77% take alcohol (WHO 2008). It is also well documented that patients with NCDs are badly managed in sub-Saharan Africa (Harries AD et al., 2008). Table one below, shows the STEPS Survey findings on NCD risk factors from some countries in the sub-Saharan region.

Table one: Prevalence of NCD risk factors in some countries in the sub-Saharan regions- STEPS data

%	MAU	DZA	COG	ERI	CMR	MDG	MOZ	CIV	ZWE	BTW	ETH
Tobacco	18.9	12.8	14.4	8	4	20	18.7	9.5	12.1	19.5	4.6
Alcohol	-	5.1	62.5	39.6	11	42.5	77.2	71	74.7	27.4	61.6
Obesity	20.9	16.4	8.6	3.3	18	2.4	7.1	9.1	14.1	15.7	7.1
EBP	22.4	29.1	32.5	16	25	17.6	33.1	21.7	27.6	32.1	30.9
EBS	4.9	6	-	-	6		14		10	-	-

Source: WHO 2004

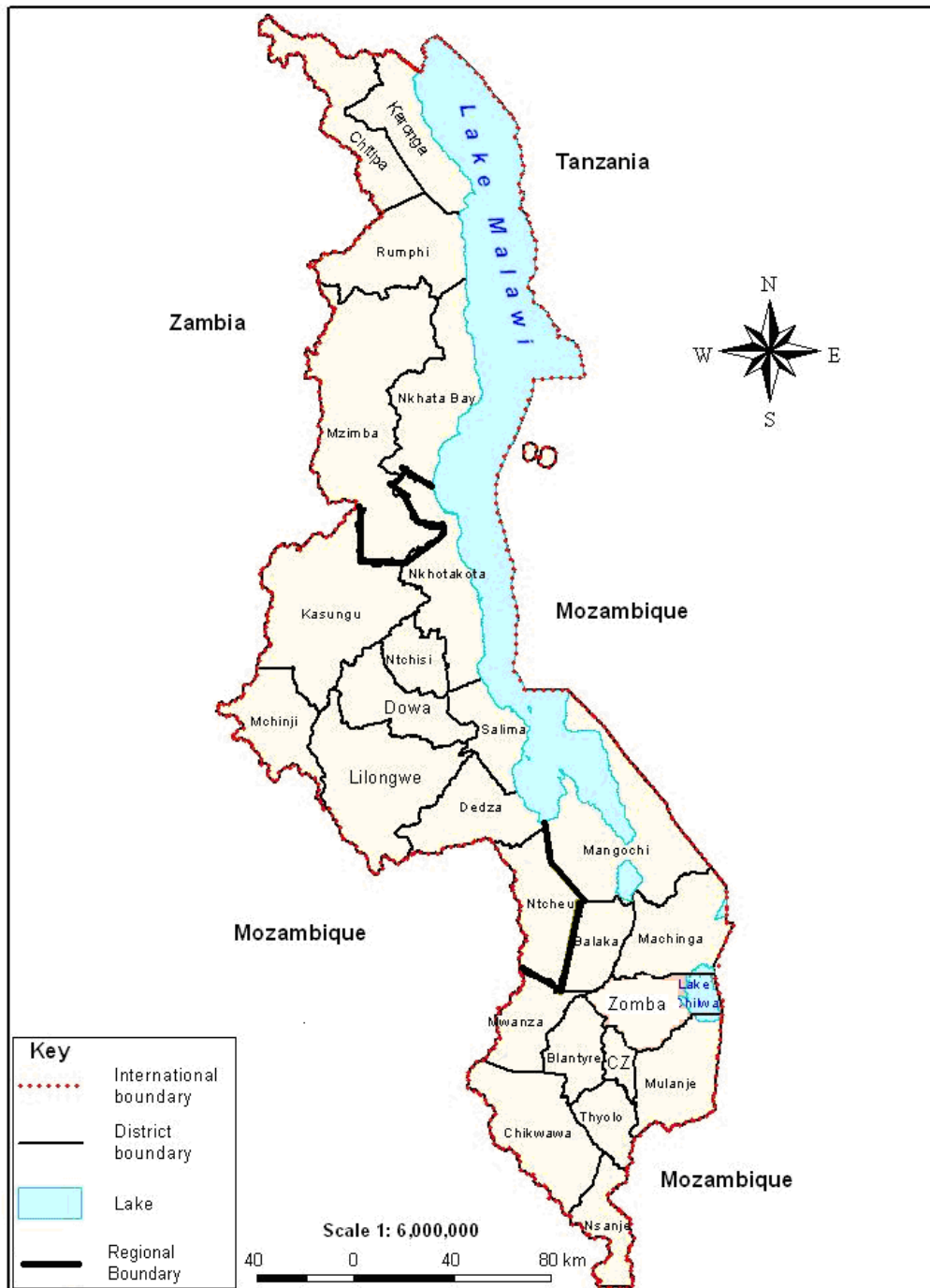
Key: EBS= elevated blood sugar, EBP= elevated blood pressure, MAU= Mauritius, DZA= Algeria, COG= Congo Brazzaville, ERI= Eritrea, CMR= Cameroon, CIV= Cote d'voire, MDG= Madagascar, MOZ= Mozambique, ZWE= Zimbabwe, BTW= Botswana, ETH= Ethiopia.

## 1.4 Malawi

### 1.4.1: Geographic location

Malawi is a land-locked country in Southern-Central Africa. It has a land area of about 118,484 square kilometres, one-third of which is occupied by Lake Malawi. According to the 2008 Population and Housing Census, the estimated population of Malawi is about 13 million, 85% of which lives in rural areas. The country shares borders to the north and northeast with Tanzania, to the Southeast, South and southwest with Mozambique and to the west with Zambia. It is divided into three regions, Northern, Central and Southern regions. The regions are further divided into districts and they are 28 districts in total. Figure one below is the map of Malawi showing bordering countries, regions and districts.

## MAP SHOWING REGIONS AND DISTRICTS IN MALAWI



Drawn by Jonathan Gwaligwali, Geography & Earth Sciences Department, Chancellor College, University of Malawi



### 1.4.2: Health services delivery

The Malawi Ministry of Health has the overall responsibility of providing leadership, coordination of policy development and provision of health services in the country. It is the largest provider of health services and accounts for 60% of health facilities. The health care delivery system is organized at three levels namely: primary, secondary and tertiary levels linked through a referral system. Primary health care is provided through community based out reach programmes, dispensaries/health posts, health centres as well as community hospitals. Secondary level care is provided through district and Christian Health Association of Malawi (CHAM) hospitals. Finally, Central Hospitals provide tertiary level care. However, this categorization is only a guide since, for instance, a large volume of services currently being provided by district, CHAM and central hospitals are primary level care due to unavailability of alternative facilities within the catchment areas of these facilities. Table two below shows the number of health facilities by level of care and provider/owner in the country.

For purposes of health administration, districts in Malawi are grouped into Health Zones. They are five zones, one in the Northern, two in the Central and two in Southern Region. Figure two below is the Map of Malawi showing the Health Zones.

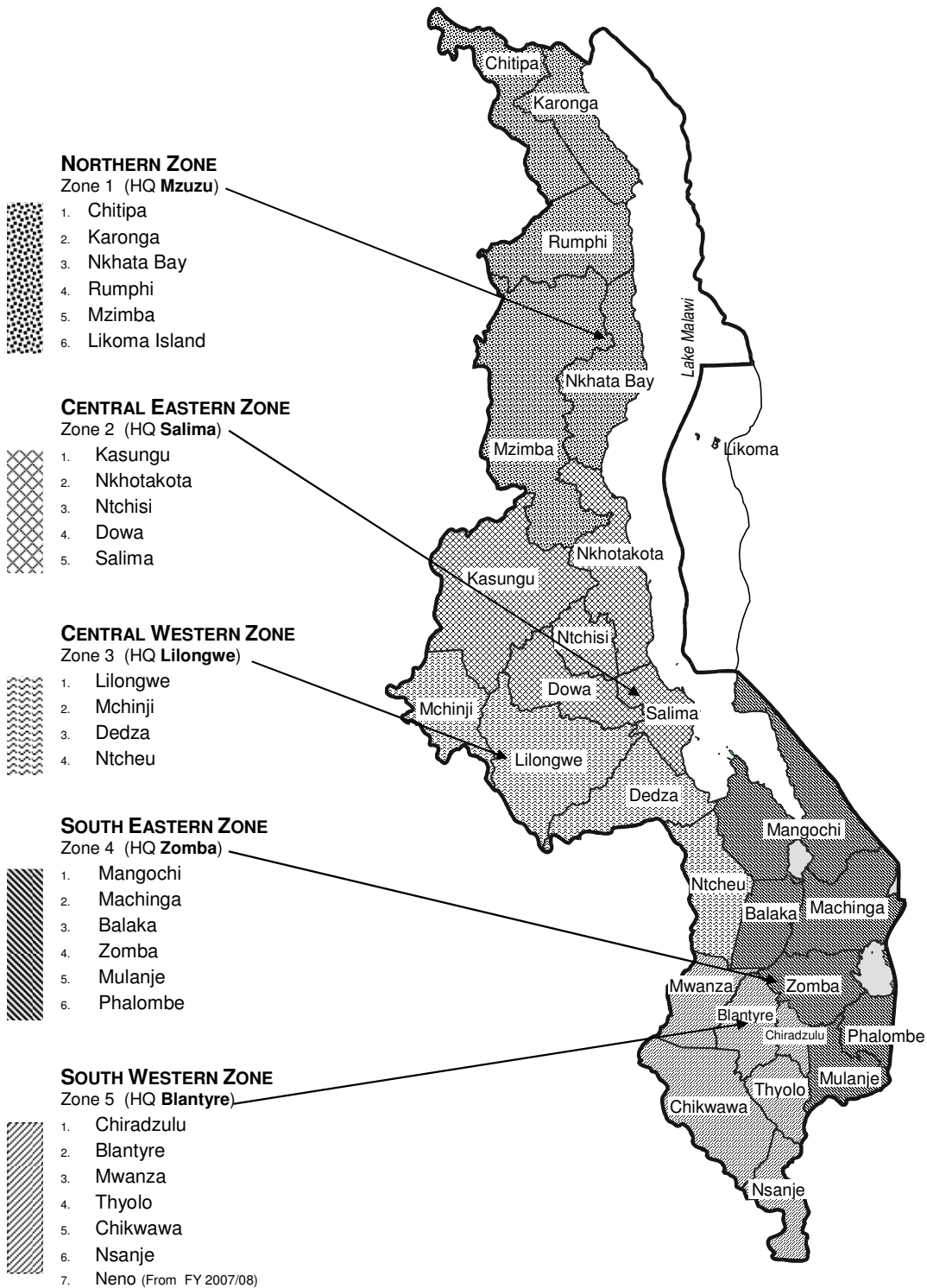
Table two: Health facilities by type and ownership

Ownership	Level of care				Total
	Primary	Secondary	Tertiary	Others	
<b>Total</b>	<b>901</b>	<b>100</b>	<b>6</b>	<b>52</b>	<b>1059</b>
Government	493	53	5	24	575
CHAM	96	42	1	8	147
NGO	56	1	0	13	70
Private for profit	196	4	0	0	200
Statutory Organisation	13	0	0	7	20
Company	47	0	0	0	47

Source: MoH 2008. Malawi Health Sector Employee Census Report

Key: CHAM= Christian Health Association of Malawi, NGO= Non-governmental organisation

Figure two: Map of Malawi showing Health Zones

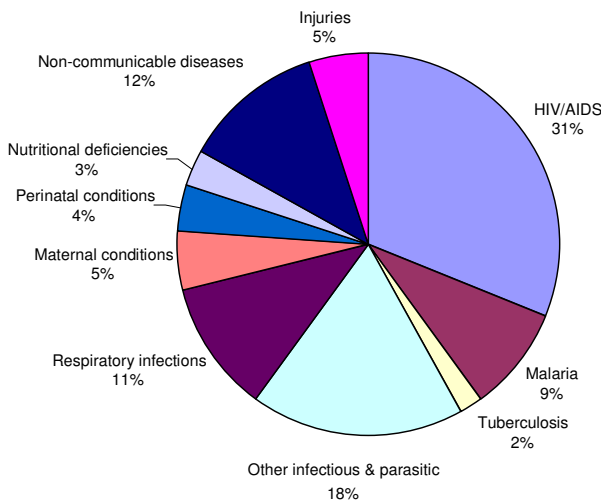


**Zonal Grouping of Districts of Malawi** (January 2007)  
**Five Zonal Health Support Offices (ZHSO)**

### 1.4.3: Disease Burden in Malawi

The burden of disease in Malawi has been dominated by the raging epidemic of HIV/AIDS. Meanwhile HIV/AIDS, Malaria and TB are the leading health concern in the country. Other infectious diseases, perinatal and nutritional disorders are also of major importance. The increasing burden of non-communicable disease in Malawi just like in most developing countries is a major setback for health systems that are already overburdened and under-funded (Murray and Lopez, 1997b). It is estimated that non-communicable diseases accounts for at least 12% of total Disability Adjusted Life Years (DALYs). As shown in figure 3 below, NCDs are fourth cause of all DALYs after HIV/AIDS, other infections and parasitic diseases and respiratory diseases. Non-communicable diseases are probably the second leading cause of deaths in adults after HIV/AIDS. World Health Survey- Malawi study conducted in 2003 estimated that 15% of adults smoke tobacco, 22% take alcohol and about 40% do not take sufficient fruits and or vegetables (WHS, Malawi Report 2003). These are the well known risk factors for non-communicable diseases. Figure three, table three and table four below show the estimated DALYs, common causes of deaths and prevalence of selected non-communicable diseases and their risk factors respectively in Malawi.

Figure three: Malawi estimated total DALYs by cause



Source: WHO 2004

Table three: Common causes of deaths in Malawi

<b>Cause</b>	<b>% all deaths (children &amp; adults)</b>
HIV/AIDS	33.6
Lower respiratory infections	11.3
Malaria	7.8
Diarrhoea	7.6
Cardiovascular diseases	5.4
Perinatal	3.2
Tuberculosis	2.6
Road Traffic Accident	1.3
Malnutrition	1.0

Source: Health Management Information System, 2003

Table four: Prevalence of the selected non-communicable diseases (self-reported) and risk factors in Malawi

<b>NCD/Risk factor</b>	<b>Prevalence</b>
Angina	13.7
Osteo-arthritis	32.2
Asthma	5.1
Diabetes	0.2
Mental disorder	2.4
Smoking	15.2
Alcohol intake	22.2
Insufficient fruit and vegetable intake	39.9
Insufficient physical activity	7.7

Source: World Health Survey Malawi Report 2003

## **1.5: SIGNIFICANCE AND RATIONALE OF SURVEY**

In most developing countries including Malawi diabetes and cardiovascular diseases in concert with other non-communicable diseases have not been addressed under specific control programmes such as those that exist for several infectious and communicable diseases. However, non-communicable diseases are now increasingly being prioritized and therefore well collected systematic nation-wide data is required to determine the right balance of resource allocation between prevention and care.

The World Health Organization has developed a standardized approach (the Stepwise approach) to enable comparisons of data across regions over time. The risk factors surveillance approach has been sited as the most efficient means of providing evidence based data to plan for control and reduction of the impact of non-communicable conditions (Jadue L. *et al.*, 2000).

This survey will therefore provide evidence to inform policy and advocate for resource allocation for treatment and prevention of non-communicable diseases in Malawi.

## **2.0: OBJECTIVES OF THE STUDY**

### **2.1: GENERAL OBJECTIVE**

To determine the magnitude of non-communicable diseases and their risk factors in Malawi.

### **2.2: SPECIFIC OBJECTIVES**

2.2.1 To assess the distribution of life-style factors (physical activity, tobacco and alcohol use), and anthropometric measurements (body mass index and central obesity) which may impact on diabetes and cardiovascular risk factors.

2.2.2 To determine the prevalence and determinants of hypertension, diabetes and raised cholesterol levels.

## **3.0: MATERIALS AND METHODS**

### **3.1: Survey design**

This was a national community based cross-sectional survey. STEPwise approach for assessing risk factors for chronic non-communicable diseases was used as described below.

### **3.2: STEPwise (STEPS) Approach**

STEPS is a sequential process starting with gathering information on key risk factors by the use of questionnaires (Step 1), then moving to simple physical measurement (Step 2) and then collection of blood samples for biochemical assessment (Step 3). (Bonita R, et al,

2002). In addition to the three steps used in risk factor assessment the conceptual framework of STEPS also includes three modules in the assessment of each risk factor, namely core, expanded and optional.

### 3.3: Adaptation of survey methods and tools

For this survey all the core, expanded and selected optional variables were collected.

### 3.4 Survey participants

Eligible participants for the survey were all adult males and females aged 25-64 years

### 3.5 Sample size

The sample size was calculated by using the formula: 
$$N = Z^2 \frac{P(1-P)}{e^2}$$

Where N= sample size, Z= level of confidence, P= baseline level of the selected indicator and e= margin of error

Given the estimated prevalence risk factors, P= 0.50, Z= 1.96 (at 95% confidence interval), e= 0.05, the initial estimated sample size was:

$$n = \frac{1.96^2 \cdot 0.5(1-0.5)}{0.05^2} = 384$$

Adjusting for:

Design effect for complex sample design=	1.50 (multiply)
Age-sex estimates 24-64 age range (8, 10 year- intervals)=	8 (multiply)

The estimated required sample size was therefore adjusted for design effect and age-sex estimates to:

$$N = 384 * 1.5 * 8 = 4,608$$

Assuming a non-response rate of 20%, the final sample size was therefore adjusted to:  
 $4,608 / 0.8 = 5,760$

The final minimum required sample size was therefore **4,608** participants aged 25-64 years after adjusting for design effect and age-sex estimates. This sample size was further adjusted upward to **5,760** for 20% non-response rate.

### 3.6: Sample design

This survey was designed to obtain data that would be a representation of the whole Malawi. To achieve this, a multi-stage sampling method was used to select enumeration areas (EAs), households and eligible participants (three stages).

### **Stage 1: Selection of enumeration areas (EAs):**

#### ***Sampling frame:***

Administratively, Malawi is divided into twenty-eight districts. In turn, each district is subdivided into smaller administrative units. Each administrative unit is sub-divided into enumeration areas (EAs) by the National Statistical Office (NSO). Enumeration areas are classified as urban or rural. Each EA has a sketch map drawn by NSO. The sketch map shows the EA boundaries, location of buildings, and other landmarks. The list of EAs in Malawi from the latest population and housing census conducted in June 2008 was obtained from NSO. This list was used as a sampling frame for random selection of EAs for the NCD STEPs Survey as described below.

#### ***Number of enumeration areas selected:***

In accordance with WHO STEPS Manual Part 2 Section 2, the recommended number of participants to be selected at each primary sampling unit (in our case in each EA) was 30-50 (WHO 2005). For this survey it was decided that at least 40 participants in each enumeration area were to be recruited. Given that the estimated required sample size was 5,760 (including the 20% non-response rate), the total number of EAs selected was therefore  $5,760/40 = 144$ .

Thus a total of 144 EAs were randomly selected from the list of all EAs in Malawi.

#### ***Sampling method for EA selection:***

Probability Proportional to Size (PPS) sampling method was used to randomly sample the 144 EAs from the whole country as follows:

The EAs in Microsoft Excel<sup>®</sup> were first sorted in descending order of population (largest to the smallest).

- Then the total population of all EAs in Malawi were calculated.
- A column of cumulative total population of EAs was then created.
- Then the sampling interval was calculated by dividing total population by 144 (total number of EAs to be selected).
- Random number (the seed) was generated by computer in the excel<sup>®</sup> using the formula RANDBETWEEN(sampling interval).
- The EA whose cumulative total contained the seed was the first to be selected.
- The 2<sup>nd</sup>, 3<sup>rd</sup>, ....., 144<sup>th</sup> EA was selected by systematically adding the random number to the sampling interval.

Appendix 1 is the list of EAs that were selected.

### **Stage 2: Selection of households**

The EA sampling frame obtained from NSO had information on the total number of households in each EA. Forty households were to be selected from each EA (as described above under of number of EAs to be selected). The sampling interval for household selection in each EA was therefore determined by dividing total EA population by 40. Systematic sampling method (every n<sup>th</sup> household) was then used to randomly select the required 40 households.

### **Stage 3: Selection of eligible participants at household level**

Only one eligible participant (an adult aged 25-64 years) in the selected households was enrolled in the survey. In households with more than one eligible participant, Kish Method sampling method was used to randomly select one. By Kish Method, eligible participants in each household were ranked in order of decreasing age, starting with males then females.

### **3.7: Conduct of the survey**

#### ***3.7.1: National Team***

The national team consisted of representatives from Department of Clinical Services (MoH), Health Education Unit (MoH), Health Management Information System (MoH), HIV and Nutrition Unit (OPC), Laboratory Diagnostics (MoH), Environment Health (MoH), Kamuzu Central Hospital (MoH), National Statistical Office, College of Medicine and World Health Organisation. The members of the team jointly developed the research proposal, conducted the adaptation of the survey tools, approached stakeholders for awareness and resource mobilisation and participated in the training of the data collectors. The survey was housed in the Department of Clinical Services, MoH.

#### ***3.7.2: Field Team***

They were 7 teams of 10 people as follows: 1 supervisor (planning and checking the completeness of questionnaires), 4 enumerators (for STEP 1 and STEP 2), 2 trained health workers (STEPS 3- dry chemistry), 1 Health Surveillance Assistant (notifying the village heads of the selected villages about the survey, day and time when the survey team will be coming to their villages and guiding the survey team to the selected villages), 1 Village Guider (to introduce the team to households) and 1 driver (transport).

#### ***3.7.3: Adaptation of survey tools and training manuals***

The generic WHO STEPS survey protocol and tools was adapted by the National Team at a workshop. The objectives of this workshop were to: (a) adopt the WHO STEPwise approach and training manuals (b) map out fieldwork activities (c) identify field team members (d) translate the tools into Chichewa and Tumbuka (the two main vernacular languages spoken in Central and Southern and Northern Regions respectively).

#### ***3.7.4: Training of Interviewers***

A 3-day training workshop for data collectors and supervisors was held. The objectives of the workshop were: (a) overview of the study-what the study is all about (b) how to gain entry into the study areas and households (c) how to conduct interviews (d) how to observe research ethics (e) how to data using personal digital assistant (PDA) (f) how to collect blood samples (g) how to keep records (h) how to ensure quality control of all field processes.

Interviewers conducted mock interviews and practiced taking both physical measurements and collection of blood samples. Team supervisors were further trained on: (a) checking and correcting interview data (b) editing questionnaires in the PDA (c) problem solving in the field.



### **3.7.5: Data collection**

Data was collected using personal digital assistants (PDAs). Ten PDAs were programmed for blood pressure biochemistry measurements. Forty PDAs were programmed for interviews and some physical measurements.

### **3.7.6: Field Activities**

Immediately after training, data collectors were into teams. Each team was provided with a field kit containing: a carrier bag, letters to the relevant authorities (Road blocks, Zone Managers, DHOs and local leaders), referral letter for those with abnormal results, consent forms, checklist, list of the selected EAs, EA maps, team field log book, operational manual, pens, pencils, clipboards, notebooks, tapes for measuring height and girth, scales for weight, blood pressure machines, lancets for finger pricks, sharp containers, gloves and PDAs. Each member of the research team had project bag, identity card and a unique code.

### **3.7.7: Survey period**

Data was collected over a period of 30 days from July to September 2009.

### **3.7.8: Ethical clearance**

Ethical clearance was granted by the Malawi National Research & Ethics Committee

### **3.7.9: Survey flow**

The flow of events will be as follows:

#### ***Obtaining informed written consent***

Informed written consent was obtained from eligible selected participant. Consent forms were in English, Chichewa and Tumbuka (please appendix 2A, 2B and 2C) and participants the language most convenient to them.

#### ***Step1: Questionnaire-based assessment:***

The survey questionnaire was programmed on the PDAs. It consisted of core (age, sex and education in years and current exposure to tobacco and alcohol, diet and physical activity), expanded (rural/urban setting, occupation, average household income) and optional (marital status, medical and health history, past history of smoking and alcohol consumption) variables. The medical and health history component included questions on medication, cigarette use, diabetes, hypertension and other cardiovascular conditions. The English questionnaire was translated into Chichewa and Tumbuka (please see appendix (3A, 3B)

#### ***Step 2: Physical measurements***

Physical assessment included blood pressure, height, weight, waist and hip circumference measurements.

### ***Blood pressure***

Blood pressure measurements were taken using battery powered digital blood pressure machine (Omron<sup>®</sup> M4-I). Three readings were taken 3-5 minutes apart. During the analysis the average of the last two readings was as the final blood pressure reading.

### ***Waist Circumference***

The waist circumference was measured using a tape-measure in centimetres. Measurement was made in the mid-axillary line midway between the last rib and the superior iliac crest. Measurements were made to the nearest 0.1 cm.

### ***Hip measurement***

Hip measurement was also made using a tape-measure placed horizontally at the point of maximum circumference over the buttocks. Measurements were taken to the nearest 0.1 cm.

### ***Height***

Height was measured with the participant standing upright against a wall on which a height mark was made. Measurements were taken with the participant in barefoot, standing with the back against the wall and head in the Frankfort position with heels together. The participant was asked to stretch to the fullest. After being appropriately positioned, the participant was asked to exhale and a mark with a white chalk was made to mark the height. The height was then measured in centimetres from the mark to the floor using the tape measures. Measurements were taken to the nearest 0.1 cm.

### ***Weight***

Weight measurements were taken on a pre-calibrated weighing scale (bathroom scale). The scales were calibrated daily using a known weight (1kg packet of sugar). Participants were weighed dressed in light clothing and barefoot. Measurements were taken to the nearest 0.1 kg.

### ***Step 3: Biochemical assessment***

On the first day of the survey after STEP 1 and part of STEP 2, participants were asked to starve overnight of that day. i.e. people were asked not to consume any food except for clear water after taking supper/dinner of that day until the survey team came again in morning of the following day (day 2). People in the selected EA converged at the agreed place in the EA where finger blood samples for biochemistry tests were taken. Those that complied with advice (starving overnight) were eligible for finger prick blood sample collection. Total cholesterol and fasting blood glucose were measured using Accutrend<sup>®</sup> Plus machines.

## **3.8.0: DEFINITIONS**

### ***3.8.1: Overweight and Obesity***

**Table 3.1: Body mass index (BMI) was calculated as follows: weight in kg/height in square meters.**

<b>Category of relative weight</b>	<b>BMI</b>
Underweight	<18.5
Normal	18.5-24.9
Overweight	25.0-29.9
Obesity	≥ 30.0

### **3.8.2: Central Obesity**

Central obesity was defined as waist hip ratio (waist circumference/hip circumference): >0.85 in women and >0.95 in men.

### **3.8.3: Hypertension**

Hypertension was defined as summarized in table 3.2 below. Participants on regular antihypertensive (documented) treatment were regarded as having hypertension regardless of their blood pressure readings.

**Table 3.2: Definition of hypertension**

	<b>Category Systolic (mmHg)</b>	<b>Diastolic (mmHg)</b>
Optimal	<120	<80
Normal	<130	<85
High – Normal	130-139	85-89
Subgroup: Borderline	140-149	90-94
Grade 1 Hypertension (mild)	140-159	90-99
Grade 2 Hypertension (moderate)	160-179	100-109
Grade 3 Hypertension (Severe)	≥ 180	≥ 110
Isolated Systolic Hypertension	≥ 140	<90

### 3.8.4: Diabetes and Impaired Glucose Tolerance

Diabetes was defined as fasting blood glucose level >7.0 mmol/L (WHO guidelines, 1999).

### 3.8.5: Cholesterol

**Table 3.3: Total cholesterol was defined as summarized in the table below.**

Profile	Levels(mmol/L)
<b>Total Cholesterol:</b>	
Level A Hypercholestromia	≥5.0 mmol/l
Level B Hypercholestromia	≥6.2 mmol/l

## 4.0: DATA MANAGEMENT

### 4.1 Downloading and Merging of data

Data was collected using PDAs. There were two groups of PDAs used to collect data: one set of PDAs was used to collect data for Step 1 (questionnaire) and part of Step 2 (height, weight, waist and hip circumference) and another set of PDAs was used to collect Step 3 (biochemical measures) and the remainder of Step 2 (blood pressure). A total of 50 PDAs were used. Data on the PDAs were downloaded into the computer installed with NCD STEPS software. The files of each participant (questionnaire, body measurements, biochemistry tests and Kish data) were then merged using the participant identity (PID) number cross checked with participant name, EA number or village/township name and other particulars where necessary.

### 4.2: Data cleaning

After merging, data was cleaned. Common variables in the dataset were matched and inconsistencies were corrected.

### 4.3. Weighting of data

Sample weights were calculated for all records using the probability of selection at each stage of sampling. Thus, for each participant his/her weight was calculated by first multiplying the probability of EA selection, the probability of household selection, the probability of selection within their household and age-sex distribution of the population in Malawi. The participant's weight would then be equal to the inverse of this product. It was not possible to determine the size of the household for each person due to difficulties with the participant IDs in the Kish Method data. Thus, the mean household size across all participants was used in calculating the weight for each participant.

#### **4.6: Data Analysis**

Data analysis was conducted in Epi Info, version 3.5.1. Preliminary survey report employed simple descriptive statistics with means, proportions and frequency distributions. 95% Confidence Intervals (CI) were used as a measure of precision on the estimated population parameters. Appropriate analyses were done to take into consideration the complex sample design of the survey.

In the full report, further analysis was performed as follows: T-tests to compare continuous data such as systolic Blood Pressure, cholesterol level between groups. Chi-square tests were used to assess relationships between variables and analysis of variance (ANOVA) for continuous variables for comparisons across more than two groups. In situations where the normality assumptions were not met, the non-parametric equivalents of the above tests were used (Fisher's exact test, Kruskal Wallis test, etc). Logistic regression analysis was employed to assess predictors of diabetes and hypertension in each particular group controlling for potential confounders.

#### **5.0: Funding**

The survey was co-funded by WHO and Ministry of Health. The actual cost for the survey including maps, lab materials and supplies, training, data collection was about MK20 million.

#### **6.0: Results**

##### **6.1: Characteristics of participants enrolled in the survey**

Of the 144 EAs that were selected, 143 were reached and data was collected. Only one EA was not reached and data was not collected because it was a high security area. A total of 5,451 eligible adults were selected and approached to participate in the survey. Of these, 245 (5.5%) refused while 5,206 (95.5%) consented to take part in the survey. Of the 5,206 participants that took part in the survey, about two thirds (67.5%) were females, 87.4% were from rural areas and about one in four (24.6%) had no formal education. Table 6.1 below shows characteristics of participants enrolled in the survey.

**Table 6.1: Characteristics of participants enrolled in the survey**

Characteristic	Male		Female		Total	
	n	%	n	%	n	%
<b>Age (years):</b>						
25-34	719	42.5	1,616	46.0	2,335	44.9
35-44	459	27.2	862	24.5	1,321	25.4
45-54	296	17.5	604	17.2	902	17.2
55-64	216	12.8	434	12.3	650	12.5
25-64	1,690	100.0	3,516	100.0	5,206	100.0
<b>Marital status:</b>						
Never married	91	5.4	70	2.0	161	3.1
Currently married	1,475	87.4	2,344	66.8	3,819	73.5
Separated/divorced	99	5.9	655	18.6	754	14.5
Widowed	22	1.2	442	12.6	464	8.9
Total	1,687	100.0	3,511	100.0	5,198	100.0
<b>Education:</b>						
None	237	14.0	1,048	29.8	1,285	24.7
Standard 1-5	558	33.0	1,249	35.6	1,807	34.8
Standard 6-8	539	31.9	852	24.2	1,391	26.7
Secondary and above	355	21.1	365	10.4	720	13.8
Total	1,689	100.0	3,514	100.0	5,203	100.0

n= number of respondents in the group

## Fact sheet for Malawi NCD STEPS Survey findings

Tobacco smoking, alcohol consumption, and excessive alcohol (harmful use of alcohol) were significant risk factors in males compared to females while overweight and physical inactivity were more significant in females than males. About one in three (32.9%) adult Malawian aged 25- 64 years had raised blood pressure or currently on medication. Raised blood pressure was significantly more common in males compared to females (37.2% vs 29.2%). Majority (94.9%) of the people with raised blood pressure were not on medication and or did not know that they a problem. Table 6.2 shows the fact sheet for Malawi NCD STEPS Survey findings.

**Table 6.2: Fact Sheet for Malawi NCD STEPS Survey findings**



# Malawi STEPS Survey 2009

## Fact Sheet

The STEPS survey of chronic disease risk factors in Malawi was carried out from July 2009 to September 2009. Malawi carried out Step 1, Step 2 and Step 3. Socio demographic and behavioural information was collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The STEPS survey in Malawi was a population-based survey of adults aged 25-64. A multi-stage cluster sample design was used to produce representative data for that age range in Malawi. A total of 5,206 adults participated in the Malawi STEPS survey, of which 67.5% were female. The overall response rate was 95.5%.

Results for adults aged 25-64 years (incl. 95% CI)	Both Sexes	Males	Females
<b>Step 1 Tobacco Use</b>	n=5,206	n= 1,690	n=3,516
Percentage who currently smoke tobacco	<b>14.1%</b> (12.7 – 15.6)	<b>25.9%*</b> (23.3 – 28.5)	<b>2.9%</b> (2.1 – 3.8)
Percentage who currently smoke tobacco daily	<b>12.4%</b> (11.0 – 13.7)	<b>22.8%*</b> (20.5 – 25.2)	<b>2.4%</b> (1.7 – 3.2)
<i>For those who smoke tobacco daily</i>			
Average age started smoking (years)	<b>22.1</b> (21.4 – 22.9)	<b>21.9</b> (21.2 – 22.7)	<b>24.6</b> (21.5 – 27.7)
Percentage of daily smokers smoking manufactured cigarettes	<b>46.4%</b> (40.3 – 52.4)	<b>49.9%*</b> (43.3 – 56.4)	<b>14.6%</b> (7.8 – 21.4)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	<b>2.8</b> (2.4 – 3.3)	<b>3.0</b> (2.5 – 3.5)	<b>1.5</b> (0.1 – 3.0)
<b>Step 1 Alcohol Consumption</b>	n=5,206	n= 1,690	n=3,516
Percentage who are lifetime abstainers	<b>68.1%</b> (65.8 – 70.4)	<b>47.4%</b> (43.9 – 50.9)	<b>87.8%*</b> (86.1 – 89.6)
Percentage who are past 12 month abstainers	<b>10.5%</b> (9.3 – 11.7)	<b>15.3%*</b> (13.1 – 17.3)	<b>6.0%</b> (5.0 – 7.0)
Percentage who currently drink (drank alcohol in the past 30 days)	<b>16.9%</b> (15.1 – 18.7)	<b>30.1%*</b> (27.2 – 33.1)	<b>4.2%</b> (3.2 – 5.2)
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>19.0%*</b> (16.5 – 21.5)	<b>2.3%</b> (1.6 – 3.1)

<b>Step 1 Fruit and Vegetable Consumption (in a typical week)</b>			
	n=5,177	n=1,679	n=3,498
Mean number of days fruit consumed	<b>2.0</b> (1.8 – 2.1)	<b>2.0</b> (1.8 – 2.1)	<b>2.0</b> (1.8 – 2.2)
Mean number of servings of fruit consumed on average per day	<b>0.5</b> (0.4 – 0.5)	<b>0.5</b> (0.4 – 0.5)	<b>0.5</b> (0.4 – 0.6)
Mean number of days vegetables consumed	<b>5.6</b> (5.5 – 5.7)	<b>5.5</b> (5.3 – 5.6)	<b>5.7</b> (5.6 – 5.9)
Mean number of servings of vegetables consumed on average per day	<b>1.6</b> (1.6 – 1.7)	<b>1.6</b> (1.5 – 1.6)	<b>1.7</b> (1.6 – 1.8)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	<b>97.5%</b> (96.8 – 98.2)	<b>98.0%</b> (97.2 – 98.7)	<b>97.1%</b> (96.2 – 98.0)
<b>Step 1 Physical Activity</b>			
	n=4,057	n=1,355	n=2,702
Percentage with low levels of activity (defined as < 600 MET-minutes per week)*	<b>9.5%</b> (8.0 – 10.9)	<b>6.3%</b> (4.8 – 7.8)	<b>12.6%*</b> (10.6 – 14.7)
Percentage with high levels of activity (defined as ≥ 3000 MET-minutes per week)*	<b>83.7%</b> (81.5 – 85.9)	<b>88.0%</b> (85.8 – 90.2)	<b>79.4%</b> (76.6 – 82.2)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	<b>261.4</b> (150.0 – 385.7)	<b>300.0</b> (188.6 – 428.6)	<b>231.4</b> (120.0 – 342.9)
Percentage not engaging in vigorous activity	<b>17.8%</b> (15.5 – 20.1)	<b>13.2%</b> (10.9 – 15.5)	<b>22.3%*</b> (19.3 – 25.3)
<b>Step 2 Physical Measurements:</b>			
<b>Body mass index (BMI):</b>	n=4,845	n=1,664	n=3,181
Mean body mass index - BMI (kg/m <sup>2</sup> )	<b>23.0</b> (22.8 – 23.1)	<b>22.4</b> (22.3 – 22.6)	<b>23.5</b> (23.3 – 23.7)
Percentage who are overweight (BMI ≥ 25 kg/m <sup>2</sup> )	<b>21.9%</b> (20.4 – 23.5)	<b>16.1%</b> (14.1 – 18.0)	<b>28.1%*</b> (25.9 – 30.2)
Percentage who are obese (BMI ≥ 30 kg/m <sup>2</sup> )	<b>4.6%</b> (4.0 – 5.3)	<b>2.0%</b> (1.3 – 2.6)	<b>7.3%*</b> (6.3 – 8.4)
Mean waist circumference (cm)	--	<b>77.3</b> (76.6 – 78.0)	<b>78.6</b> (77.8 – 79.4)
<b>Blood pressure (BP):</b>	n=3,910	n=1,183	n=2,727
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	<b>132.8</b> (131.8 – 133.8)	<b>135.8</b> (134.4 – 137.2)	<b>130.3</b> (129.2 – 131.4)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	<b>79.1</b> (78.5 – 79.8)	<b>79.1</b> (78.3 – 80.0)	<b>79.1</b> (78.4 – 79.8)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	<b>32.9%</b> (30.6 – 35.2)	<b>37.2%*</b> (33.6 – 40.8)	<b>29.2%</b> (27.1 – 31.3)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg) who are not currently on medication for raised BP	<b>94.9%</b> (93.5 – 96.3)	<b>96.4%</b> (94.7 – 98.1)	<b>93.3%</b> (91.1 – 95.5)
<b>Step 3 Biochemical Measurement</b>			
<b>Fasting blood sugar:</b>	n=3,056	n=911	n=2,144
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mg/dl)	<b>76.9</b> (74.6 – 79.2)	<b>77.9</b> (75.0 – 80.7)	<b>76.0</b> (74.0 – 78.0)
Percentage with impaired fasting glycaemia as defined below • plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) • capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl)	<b>4.2%</b> (3.0 – 5.4)	<b>5.7%</b> (3.9 – 7.5)	<b>2.7%</b> (1.6 – 3.8)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose • plasma venous value ≥ 7.0 mmol/L (126 mg/dl) • capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl)	<b>5.6%</b> (2.6 – 8.5)	<b>6.5%</b> (2.6 – 10.3)	<b>4.7%</b> (2.4 – 7.0)



<b>Total cholesterol:</b>	n=2,587	n=775	n=1,812
Mean total blood cholesterol, including those currently on medication for raised cholesterol (mg/dl)	<b>168.6</b> (167.0 – 170.3)	<b>166.9</b> (164.9 – 168.9)	<b>170.3</b> (168.7 – 171.9)
Percentage with raised total cholesterol ( $\geq 5.0$ mmol/L or $\geq 190$ mg/dl or currently on medication for raised cholesterol)	<b>8.7%</b> (7.4 – 10.0)	<b>6.3%</b> (4.6 – 8.1)	<b>11.0%*</b> (9.4 – 12.6)
<b>Summary of combined risk factors</b>			
<ul style="list-style-type: none"> <li>• current daily smokers</li> <li>• less than 5 servings of fruits &amp; vegetables per day</li> <li>• low level of activity</li> <li>• overweight (BMI <math>\geq 25</math> kg/m<sup>2</sup>)</li> <li>• raised BP (SBP <math>\geq 140</math> and/or DBP <math>\geq 90</math> mmHg or currently on medication for raised BP)</li> </ul>			
	n=2,842	n=940	n=1,902
Percentage with none of the above risk factors	<b>1.0%</b> (0.6 – 1.4)	<b>0.3%</b> (0.0 – 0.7)	<b>1.6%</b> (1.0 – 2.3)
Percentage with three or more of the above risk factors, aged 25 to 44 years	<b>13.0%</b> (11.1 – 14.9)	<b>15.3%</b> (12.2 – 18.4)	<b>10.7%</b> (8.6 – 12.7)
Percentage with three or more of the above risk factors, aged 45 to 64 years	<b>23.7%</b> (20.6 – 26.9)	<b>22.6%</b> (17.6 – 27.5)	<b>24.7%</b> (20.6 – 28.9)
Percentage with three or more of the above risk factors, aged 25 to 64 years	<b>16.5%</b> (14.7 – 18.4)	<b>17.6%</b> (14.8 – 20.4)	<b>15.5%</b> (13.5 – 17.6)

CI= Confidence interval, BP= Blood Pressure, n= number of participants in the group

\*statistically significant,  $p < 0.05$ ; males vs females

### 6.3: Summary of the Malawi NCD STEPS Survey (2009) findings

Table 6.3 below shows the summary of the Malawi NCD STEPS Survey findings. The attached data book shows the detailed tabulations of NCD STEPs Survey findings.

**Table 6.3: Summary of Malawi NCD STEPS Survey (2009) findings**

	Total		Male			Female			Urban			Rural		
	n	%	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI
Raised BP or currently on medication	3,910	<b>32.9</b>	1,183	<b>37.2*</b>	34.3 – 41.6	2,727	<b>29.2</b>	26.8 – 30.9	408	<b>27.9</b>	67.9-76.3	3502	<b>32.0</b>	65.8-70.3
Raised fasting blood glucose	3,056	<b>5.6</b>	911	<b>6.5</b>	2.8 – 10.3	2,144	<b>4.7</b>	2.5 – 7.1	371	<b>7.4</b>	1.0-5.9	2685	<b>9.2</b>	2.4-8.4
Raised cholesterol	2,587	<b>8.7</b>	775	<b>6.3</b>	5.2 – 8.9	1,812	<b>11.0*</b>	9.7 – 12.9	-	-	-	-	-	-
Overweight (BM≥25kg/m <sup>2</sup> )	4,845	<b>21.9</b>	1,664	<b>16.1</b>	14.1 – 18.0	3,181	<b>28.1*</b>	25.9 – 30.2	603	<b>38.6*</b>	32.8-44.4	4242	<b>21.9</b>	20.3-23.6
Obesity BM≥30kg/m <sup>2</sup>	4,845	<b>4.6</b>	1,664	<b>2.0</b>	1.3 – 2.6	3,181	<b>7.3*</b>	6.3 – 8.4	603	<b>13.6*</b>	20.7-29.4	4242	<b>4.4</b>	3.7-5.1
Tobacco smokers	5,206	<b>14.1</b>	1,690	<b>25.9*</b>	23.3 – 28.5	3,526	<b>2.9</b>	2.1 – 3.8	655	<b>6.6</b>	4.4-8.7	4551	<b>10.9*</b>	9.7-12.1
Smokeless tobacco users	5,206	<b>3.5</b>	1,690	<b>1.9</b>	1.3-2.9	3,526	<b>5.0*</b>	(4.0-6.0)	-	-	-	-	-	-
Alcohol drinkers	5,206	<b>16.9</b>	1,690	<b>30.1*</b>	27.3 – 33.4	3,526	<b>4.2</b>	3.2 – 5.1	655	<b>13.4</b>	10.2=16.5	4551	<b>12.5</b>	10.9-14.1
Excessive alcohol drinkers	5206	<b>7.7</b>	1,690	<b>19.0*</b>	16.5-21.5	3,526	<b>2.3</b>	1.6-3.1	-	-	-	-	-	-
Physical inactivity	4,057	<b>9.5</b>	1,355	<b>6.3</b>	4.8 – 7.8	2,702	<b>12.6*</b>	10.6 – 14.7	519	<b>24.1*</b>	18.0-30.1	3538	<b>8.7</b>	7.0-10.3
Three or more risk factors	2,842	<b>16.5</b>	940	<b>17.6</b>	15.2 – 20.8	1,902	<b>15.4</b>	13.3 – 17.4	281	<b>22.6</b>	16.6-28.6	2561	<b>15.5</b>	13.8-17.3

CI= Confidence interval, BP= Blood Pressure, n= number of participants in the group, \*statistically significant, p<0.05; males vs females

## **7.0: Discussion**

### **7.1: Validity of the Malawi NCD STEPS Survey**

The total number of participants enrolled in this survey (5,206) was beyond the minimum calculated sample size of 4,608 adjusted for design effect and age-sex estimates. During the planning, it was thought finger prick blood collection for and or fasting would cause high refusal rate and hence non-response rate was set at 20%. This made the calculated sample size to be adjusted further to 5,760. However, the actual non-response rate was only 5%. There was an overwhelming demand even from people to know their body weight, blood pressure, blood sugar and cholesterol levels.

Of the 144 EAs selected nationally, only one was not visited because it was a high security area. There was no replacement because the survey was designed as such. We could not redraw the sample because it was probable that another high security area would still be one of the selected EAs. We therefore believe, despite missing one EA, the data was national representative data for Malawi.

More women (67.5%) than men were enrolled in this survey. This was not by design/plan. One eligible participant at household level was randomly selected using the Kish method as described above. This was also noted in a similar survey done in Zimbabwe in 2005 where 75% of participants selected by the same method were females (Zimbabwe NCDs Risk factors Surveillance Report 2005). The overall estimates (both sexes) therefore may have been skewed towards females. However, since the data was weighted for age-sex distribution, probability of EA selection, participant selection at household level and non-response skewing was less likely. But all the same this notable short fall of Kish method has been raised to WHO, the authors of NCD STEPS tools.

We therefore strongly believe that because of the adequate survey sites that were reached, sample size, low non-response rate and data weighting, our survey results were valid national estimates.

### **7.2: Magnitude of NCDs and their Risk factors**

In agreement with other surveys, this surveyed showed that NCDs and their risk factors are gender related. The overall estimates (both sexes) might suggest that NCDs and their risk factors are insignificant public health problem. However, the problem is more conspicuous by conducting gender analysis. Thus although the overall estimates of smokers and alcohol drinkers were about 15%, in males these were important risk factors where at least one in four were either a smoker or a drinker or both. Similarly, overweight, obesity and physical inactivity were more common in females than males. Likewise, high blood pressure was significantly more common in males than females while raised total cholesterol was more common in females than males. This emphasises the point that gender should be considered when designing interventions to address NCDs.

This survey was also in agreement that the notion that NCDs and their risk factors are problems of urban people is a misconception. The prevalence of raised blood pressure and diabetes in rural areas was just as high as urban areas. In fact the prevalence of raised blood

pressure, diabetes and smoking were apparently higher in rural than urban areas but the differences were not statistically significant. Overweight, obesity and physical inactivity were indeed significantly higher in urban compared to rural areas.

Vegetable intake was not a problem but fruit intake. However, fruits are seasonal, common in rain than dry season. This survey was done during dry season between July and September. The results of fruit intake were likely to have been different if the survey was done during the rain season.

Another important finding from this survey was that majority (94%) of the people with raised blood pressure did not know that they had the problem. Only 6% were on treatment or were once told by a health worker that they had a raised blood pressure. This may suggest that what we are seeing at health facilities is just 6% of the problem of hypertension.

It should also be mentioned here that false high blood readings due to nervousness were controlled by taking three readings 3-5 minutes apart. The final reading was the mean of the last two readings after the participants had settled down.

Comparing the findings of this survey to other similar population based survey, World Health Survey done 2005, the estimates and trends are similar. For example, the 2005 World Health Survey estimated that overall 12.3%, 22.2% and 7.7% of adults aged 18 years or more were smokers, alcohol drinkers and physically inactive respectively (World Health Survey 2005, Malawi Report). The trends by gender are similar even in physical activity. In the 2005 study, 9.8% of females compared to 5.5% of males were physically inactive. In this study, 12.6% of females compared to 6.3% of males were physically inactive. This may not be in agreement with the common knowledge where it is generally perceived that females do more physical household cores than men.

### **7.3: Conclusion**

NCDs and their risk factors are major public health problem in Malawi. Majority of the people with NCDs in general, raised blood pressure in particular do not know that they have a problem. There is urgent need to have health facility and community based programmes for treatment, prevention and control of NCDs and promotion of health life styles.

### **7.4 Recommendations**

1. There is need to establish NCD Control Programme within the Department of Clinical Services – MoH (just like there are programmes for malaria, TB, HIV/AIDS, neglected tropical diseases etc) for strong leadership and coordination of NCD interventions, strategies, policies and guidelines.
2. There is need to develop multi-sectoral comprehensive Plan of Action for NCDs and their risk factors

3. There is need to allocate resources for NCDs within and outside Sector Wide Approach (SWAp)
4. There is need to utilise the opportunity of people visiting health facilities to check their blood pressure, body mass index (BMI) and advise accordingly
5. There is need to support or strengthen the existing efforts such as:
  - Drinking and driving law
  - Opening and closing hours for selling alcoholic drinks
  - Age limit to buy or drink alcohol
  - Ban on public smoking and workplaces
  - Age limit for tobacco smoking
  - Ban on tobacco advertising, promotion and sponsorship
  - Taxation on alcohol, cigarettes and other tobacco products (though impact may be minimal or none at all since majority of people take traditional beer and hand- rolled cigarettes)
  - The development of Alcohol Policy

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## Appendix 1: List of 144 Selected EAs

EA ID No.	REGION	DISTRICT	TA	EA	HHs	HH Sampling interval (Total HHs/40)	urb_rural (Urb 1, Rural 2)	Population
1	Centre	Dedza	Dedza Town	708	358	9	1.00	1,554.00
2	Centre	Dedza	Kachindamoto	47	458	11	2.00	2,329.00
3	Centre	Dedza	Kachindamoto	49	248	6	2.00	1,232.00
4	Centre	Dedza	Kasumbu	9	411	10	2.00	1,707.00
5	Centre	Dedza	Pemba	75	329	8	2.00	1,371.00
6	Centre	Dedza	S/C Kaphuka	804	304	8	2.00	1,266.00
7	Centre	Dowa	Chiwere	62	342	9	2.00	1,727.00
8	Centre	Dowa	Dzoole	16	407	10	2.00	1,987.00
9	Centre	Dowa	Msakambewa	39	342	9	2.00	1,595.00
10	Centre	Dowa	S/C Chikhadza	48	585	15	2.00	2,676.00
11	Centre	Dowa	S/C Chikhadza	37	298	7	2.00	1,481.00
12	Centre	Dowa	S/C Chikhadza	18	286	7	2.00	1,225.00
13	Centre	Dowa	S/C Kayembe	25	315	8	2.00	1,529.00
14	Centre	Dowa	S/C Mponela	5	291	7	2.00	1,436.00
15	Centre	Kasungu	Kaluluma	37	203	5	2.00	941.00
16	Centre	Kasungu	Kapelula	24	428	11	2.00	2,161.00
17	Centre	Kasungu	Kasungu Town	728	349	9	1.00	1,774.00
18	Centre	Lilongwe	Chadza	44	190	5	2.00	909.00
19	Centre	Lilongwe	Chadza	22	85	2	2.00	353.00
20	Centre	Lilongwe	Chiseka	157	545	14	2.00	2,536.00
21	Centre	Lilongwe	Chiseka	32	318	8	2.00	1,284.00

<b>22</b>	Centre	Lilongwe	Chitukula	18	261	<b>7</b>	2.00	1,249.00
<b>23</b>	Centre	Lilongwe	Kabudula	21	324	<b>8</b>	2.00	1,493.00
<b>24</b>	Centre	Lilongwe	Kabudula	55	218	<b>5</b>	2.00	1,071.00
<b>25</b>	Centre	Lilongwe	Kalolo	801	309	<b>8</b>	2.00	1,329.00
<b>26</b>	Centre	Lilongwe	Kalumbu	59	339	<b>8</b>	2.00	1,460.00
<b>27</b>	Centre	Lilongwe	Khongoni	23	252	<b>6</b>	2.00	1,311.00
<b>28</b>	Centre	Lilongwe	Khongoni	39	205	<b>5</b>	2.00	1,054.00
<b>29</b>	Centre	Lilongwe	Malili	12	490	<b>12</b>	2.00	2,106.00
<b>30</b>	Centre	Lilongwe	Malili	84	199	<b>5</b>	2.00	873.00
<b>31</b>	Centre	Lilongwe	Mazengerera	12	148	<b>4</b>	2.00	627.00
<b>32</b>	Centre	Lilongwe	Njewa	32	255	<b>6</b>	2.00	1,200.00
<b>33</b>	Centre	Lilongwe	S/C Mtema	4	187	<b>5</b>	2.00	883.00
<b>34</b>	Centre	Lilongwe City	Area 18	8	410	<b>10</b>	1.00	3,325.00
<b>35</b>	Centre	Lilongwe City	Area 23	13	237	<b>6</b>	1.00	1,158.00
<b>36</b>	Centre	Lilongwe City	Area 35	1	1484	<b>37</b>	1.00	7,455.00
<b>37</b>	Centre	Lilongwe City	Area 50	3	608	<b>15</b>	1.00	2,417.00
<b>38</b>	Centre	Lilongwe City	Area 54	3	293	<b>7</b>	1.00	1,257.00
<b>39</b>	Centre	Lilongwe City	Area 56	15	458	<b>11</b>	1.00	1,931.00
<b>40</b>	Centre	Lilongwe City	Area 56	5	315	<b>8</b>	1.00	1,542.00
<b>41</b>	Centre	Lilongwe City	Area 57	38	416	<b>10</b>	1.00	1,874.00
<b>42</b>	Centre	Mchinji	S/C Nduwa	44	424	<b>11</b>	2.00	2,253.00
<b>43</b>	Centre	Mchinji	S/C Nduwa	16	204	<b>5</b>	2.00	966.00
<b>44</b>	Centre	Mchinji	Zulu	26	278	<b>7</b>	2.00	1,380.00
<b>45</b>	Centre	Nkhotakota	Kanyenda	49	194	<b>5</b>	2.00	983.00



<b>46</b>	Centre	Nkhotakota	Malengachanzi	3	397	<b>10</b>	2.00	1,903.00
<b>47</b>	Centre	Nkhotakota	Malengachanzi	13	259	<b>6</b>	2.00	1,208.00
<b>48</b>	Centre	Nkhotakota	Nkhotakota Boma	701	176	<b>4</b>	1.00	781.00
<b>49</b>	Centre	Nkhotakota	S/C Mphonde	6	341	<b>9</b>	2.00	1,660.00
<b>50</b>	Centre	Ntcheu	Masasa	26	157	<b>4</b>	2.00	711.00
<b>51</b>	Centre	Ntcheu	Mpando	46	216	<b>5</b>	2.00	1,021.00
<b>52</b>	Centre	Ntchisi	Kalumo	35	307	<b>8</b>	2.00	1,471.00
<b>53</b>	Centre	Ntchisi	Kalumo	62	219	<b>5</b>	2.00	975.00
<b>54</b>	Centre	Ntchisi	S/C Chilooko	17	328	<b>8</b>	2.00	1,675.00
<b>55</b>	Centre	Salima	Khombedza	42	155	<b>4</b>	2.00	769.00
<b>56</b>	Centre	Salima	Khombedza	8	128	<b>3</b>	2.00	643.00
<b>57</b>	Centre	Salima	Maganga	44	362	<b>9</b>	2.00	1,746.00
<b>58</b>	Centre	Salima	S/C Kambalame	4	120	<b>3</b>	2.00	492.00
<b>59</b>	Centre	Salima	S/C Kambwiri	5	213	<b>5</b>	2.00	926.00
<b>60</b>	North	Chitipa	Mwenewenye	3	243	<b>6</b>	2.00	1,174.00
<b>61</b>	North	Karonga	Kilupula	46	201	<b>5</b>	2.00	1,012.00
<b>62</b>	North	Karonga	Kilupula	4	207	<b>5</b>	2.00	891.00
<b>63</b>	North	Karonga	Wasambo	17	103	<b>3</b>	2.00	516.00
<b>64</b>	North	Mzimba	Chindi	151	55	<b>1</b>	2.00	270.00
<b>65</b>	North	Mzimba	Mabulabo	25	212	<b>5</b>	2.00	1,038.00
<b>66</b>	North	Mzimba	Mabulabo	33	115	<b>3</b>	2.00	746.00
<b>67</b>	North	Mzimba	Mabulabo	5	179	<b>4</b>	2.00	557.00
<b>68</b>	North	Mzimba	Mtwalo	23	267	<b>7</b>	2.00	1,425.00
<b>69</b>	North	Mzimba	Mtwalo	84	247	<b>6</b>	2.00	1,416.00

<b>70</b>	North	Mzimba	Mzikubola	56	317	<b>8</b>	2.00	1,580.00
<b>71</b>	North	Mzimba	Mzikubola	26	210	<b>5</b>	2.00	1,191.00
<b>72</b>	North	Mzimba	Pherembe	39	194	<b>5</b>	2.00	994.00
<b>73</b>	North	Mzimba	S/C Kampingo Sibande	22	106	<b>3</b>	2.00	596.00
<b>74</b>	North	Mzimba	S/C Khosolo Gwaza Jere	7	153	<b>4</b>	2.00	822.00
<b>75</b>	North	Mzuzu City	Chipula Ward	4	601	<b>15</b>	1.00	3,102.00
<b>76</b>	North	Mzuzu City	Chipula Ward	12	364	<b>9</b>	1.00	1,689.00
<b>77</b>	North	Mzuzu City	Lupaso Ward	7	565	<b>14</b>	1.00	2,854.00
<b>78</b>	North	Nkhataba y	S/C Mkimbira	1	277	<b>7</b>	2.00	1,799.00
<b>79</b>	North	Nkhataba y	S/C Nyaluwanga	802	116	<b>3</b>	2.00	613.00
<b>80</b>	North	Nkhataba y	Timbiri	12	287	<b>7</b>	2.00	1,505.00
<b>81</b>	North	Rumphi	Chikulamayembe	47	336	<b>8</b>	2.00	1,612.00
<b>82</b>	North	Rumphi	S/C Mwalweni	5	202	<b>5</b>	2.00	917.00
<b>83</b>	South	Balaka	Kalemebo	4	385	<b>10</b>	2.00	1,566.00
<b>84</b>	South	Balaka	Kalemebo	70	208	<b>5</b>	2.00	901.00
<b>85</b>	South	Balaka	Nsamala	109	209	<b>5</b>	2.00	934.00
<b>86</b>	South	Balaka	Nsamala	77	157	<b>4</b>	2.00	700.00
<b>87</b>	South	Blantyre City	Chilomoni Ward	12	998	<b>25</b>	1.00	4,046.00
<b>88</b>	South	Blantyre City	Michiru Ward	11	1083	<b>27</b>	1.00	4,686.00

<b>89</b>	South	Chikwawa	Katunga	4	465	<b>12</b>	2.00	1,963.00
<b>90</b>	South	Chikwawa	Lundu	12	441	<b>11</b>	2.00	1,842.00
<b>91</b>	South	Chikwawa	Lundu	1	304	<b>8</b>	2.00	1,405.00
<b>92</b>	South	Chikwawa	Mankhwira	1	352	<b>9</b>	2.00	1,517.00
<b>93</b>	South	Chikwawa	Ngabu Urban	808	195	<b>5</b>	1.00	1,046.00
<b>94</b>	South	Chiradzulu	Likoswe	47	282	<b>7</b>	2.00	1,643.00
<b>95</b>	South	Chiradzulu	Mpama	12	196	<b>5</b>	2.00	833.00
<b>96</b>	South	Chiradzulu	Mpama	40	190	<b>5</b>	2.00	723.00
<b>97</b>	South	Chiradzulu	Mpama	41	142	<b>4</b>	2.00	686.00
<b>98</b>	South	Chiradzulu	Nchema	37	355	<b>9</b>	2.00	1,321.00
<b>99</b>	South	Chiradzulu	Nkalo	26	298	<b>7</b>	2.00	1,132.00
<b>100</b>	South	Chiradzulu	Nkalo	38	276	<b>7</b>	2.00	1,116.00
<b>101</b>	South	Chiradzulu	Nkalo	14	186	<b>5</b>	2.00	735.00
<b>102</b>	South	Machinga	Kawinga	2	251	<b>6</b>	2.00	1,109.00
<b>103</b>	South	Machinga	S/C Chiwalo	18	201	<b>5</b>	2.00	958.00
<b>104</b>	South	Mangochi	Chimwala	27	241	<b>6</b>	2.00	1,030.00
<b>105</b>	South	Mangochi	Jalasi	38	542	<b>14</b>	2.00	2,214.00
<b>106</b>	South	Mangochi	Makanjira	25	384	<b>10</b>	2.00	1,627.00
<b>107</b>	South	Mangochi	Mponda	801	290	<b>7</b>	2.00	1,449.00
<b>108</b>	South	Mangochi	Nankumba	29	471	<b>12</b>	2.00	2,059.00
<b>109</b>	South	Mangochi	Nankumba	64	262	<b>7</b>	2.00	1,124.00

<b>110</b>	South	Mangochi	S/C Chowe	60	224	<b>6</b>	2.00	1,004.00
<b>111</b>	South	Mangochi	S/C Chowe	33	216	<b>5</b>	2.00	951.00
<b>112</b>	South	Mangochi	S/C Chowe	47	90	<b>2</b>	2.00	437.00
<b>113</b>	South	Mangochi	S/C M'bwana Nyambi	4	252	<b>6</b>	2.00	1,149.00
<b>114</b>	South	Mulanje	Mabuka	38	312	<b>8</b>	2.00	1,241.00
<b>115</b>	South	Mulanje	Mabuka	30	258	<b>6</b>	2.00	1,090.00
<b>116</b>	South	Mulanje	Mabuka	108	213	<b>5</b>	2.00	854.00
<b>117</b>	South	Mulanje	Mabuka	171	133	<b>3</b>	2.00	577.00
<b>118</b>	South	Mulanje	Nkanda	59	284	<b>7</b>	2.00	1,080.00
<b>119</b>	South	Mulanje	Nkanda	5	240	<b>6</b>	2.00	1,063.00
<b>120</b>	South	Neno	Mlauli	11	131	<b>3</b>	2.00	540.00
<b>121</b>	South	Neno	Symon	3	279	<b>7</b>	2.00	1,304.00
<b>122</b>	South	Nsanje	Chimombo	13	208	<b>5</b>	2.00	803.00
<b>123</b>	South	Nsanje	Mlolo	9	325	<b>8</b>	2.00	1,351.00
<b>124</b>	South	Nsanje	Ndamera	16	212	<b>5</b>	2.00	1,100.00
<b>125</b>	South	Phalombe	Mnkhumba	199	398	<b>10</b>	2.00	1,362.00
<b>126</b>	South	Phalombe	Mnkhumba	75	209	<b>5</b>	2.00	863.00
<b>127</b>	South	Phalombe	Mnkhumba	10	167	<b>4</b>	2.00	657.00
<b>128</b>	South	Phalombe	Nazombe	56	188	<b>5</b>	2.00	673.00
<b>129</b>	South	Phalombe	Phalombe Boma	701	430	<b>11</b>	1.00	2,029.00
<b>130</b>	South	Thyolo	Bvumbwe	77	289	<b>7</b>	2.00	1,276.00
<b>131</b>	South	Thyolo	Bvumbwe	21	126	<b>3</b>	2.00	466.00
<b>132</b>	South	Thyolo	Chimaliro	51	332	<b>8</b>	2.00	1,294.00

<b>133</b>	South	Thyolo	Chimaliro	14	282	<b>7</b>	2.00	1,140.00
<b>134</b>	South	Thyolo	Chimaliro	13	202	<b>5</b>	2.00	793.00
<b>135</b>	South	Thyolo	Nchilamwera	60	211	<b>5</b>	2.00	844.00
<b>136</b>	South	Thyolo	Nsabwe	19	132	<b>3</b>	2.00	405.00
<b>137</b>	South	Thyolo	S/C kwethemule	20	246	<b>6</b>	2.00	1,184.00
<b>138</b>	South	Thyolo	S/C Mphuka	35	281	<b>7</b>	2.00	1,341.00
<b>139</b>	South	Thyolo	Thomas	2	216	<b>5</b>	2.00	813.00
<b>140</b>	South	Zomba	Kuntumanji	13	437	<b>11</b>	2.00	1,820.00
<b>141</b>	South	Zomba	Kuntumanji	23	284	<b>7</b>	2.00	1,216.00
<b>142</b>	South	Zomba	Mlumbe	80	184	<b>5</b>	2.00	758.00
<b>143</b>	South	Zomba City	Chirunga East Ward	4	272	<b>7</b>	1.00	1,392.00
<b>144</b>	South	Zomba City	Likangala Ward	6	298	<b>7</b>	1.00	1,166.00
		<b>Populati on</b>	<b>%popultaion</b>	<b>Selec ted Eas</b>	<b>%sele cted Eas</b>			
Total		13,066,3 20	100	144	100			
South		5,876,78 4	45.0	62	43.1			
Centre		5,491,03 4	42.0	59	41.0			
North		1,698,50 2	13.0	23	16.0			

Appendix 2A: English Consent Form

## NATIONAL SURVEY ON THE MAGNITUDE OF CHRONIC NON-COMMUNICABLE DISEASES & THEIR RISK FACTORS IN MALAWI

**Dear Participant**

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**ID number**

---

**The aim of the Survey**

The aim of this survey is to assess the magnitude of the chronic non-communicable diseases such as hypertension, heart diseases, diabetes and factors associated with them. This information will help Ministry of Health to plan on how to address these health problems.

**Random selection**

You have been randomly selected to be part of this survey and this is why we would like to interview you. This survey is conducted by the Ministry of Health. The survey is currently taking place in several districts in the country.

**Confidentiality**

The information you provide is totally confidential and will not be disclosed to anyone. It will only be used for purposes of the survey. Your name, address, and other personal information will be removed from the questionnaire, and only a code will be used to connect your name and your answers without identifying you. You may be contacted by the survey team again only if it is necessary to complete the information on the survey.

**Voluntary participation**

Your participation is voluntary and you can withdraw from the survey after having agreed to participate. You are free to refuse to answer any question that is asked in the questionnaire. If you have any questions about this survey you may ask me or contact [The District Health Office] or [Dr George Chithope Mwale, phone: 01789 400].

**What is involved?**

This survey involves answering some questions related the above mentioned diseases and factors associated with them, then having your blood pressure, height, weight, hip and waist circumference measured and finally being tested for Diabetes and cardiovascular diseases. In order to test for Diabetes and cardiovascular diseases you will be asked to have a small amount of blood taken from the tip of your finger as it is usually done for malaria. This may cause some mild pain. You will be informed immediately the results of your blood tests. The small blood that will be taken will be used there and then and will NOT be used for any other test apart from Diabetes and cardiovascular diseases.

**Consent to participate**

Signing this consent indicates that you understand what will be expected of you and are willing to participate in this survey.

Read by Participant		Read by Interviewer	
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Agreed		Refused	
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**Signatures**

I hereby provide **INFORMED CONSENT** to take part in the survey.

Participant Name:		Sign:	
Witness:		Sign:	

Appendix 2B: Chichiwa Consent form  
KAFUFUKU WA ZA UMOYO OKHUDZA MATENDA  
OTHAMANGA MAGAZI, A NTIMA, A SHUGA NDI ENA  
OTERO

Chikalata cha chibvomerezo

**Okondeka**

---

**ID Number**

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**Cholinga cha kafukufuku**

Cholinga cha kafukufuku ameneyu ndi kufuna kudziwa kuchuluka kwa anthu amene ali ndi matenda othamanga magazi, a ntima, shuga ndi ena otero muno m' Malawi. Kuonjezela apo, a unduna wa zaumoyo akufanso kudziwa zifukwa zomwe zimayambitsa matendawa. Kafukufuku ameneyu athandiza unduna wa za umoyo kupeza njira zothandizira anthu amene ali ndi matendewa komanso njira zopewera matendewa.

**Kasankhidwe ka anthu olova nkafukufuku**

Si anthu onse dziko muno kapena kudera kwanu kuno amene alowe nkafukufukuyu ayi. Tachita maula kuti tisankhe anthu oti alowe. Inu ndi amodzi amene mwasankhidwa titachita maula amenwa. Ndi chifukwa chache takupezani . Kafukufukuyu akuchitikanso maboma ena mdziko muno.

**Chinsisi**

Mayankho amene mutapeleke ndi achinsinsi ndipo sadzapelekedwa kwa wina aliyense. Adzagwiritsidwa ntchito ya kafukufukuyu basi. Dzina lanu, malo okhala ndi zina zones zokhudza inu zidzafufutidwa pa chi pepala cha mafunso.

**Ufulu otengapo mbali pakafukufuku ameneyu**

Kafukufuku ameneyu ngosakakamiza. Muli ndi ufulu onse obvomela kapena kukana kulowa nkafukufukuyu. Mulinso ndi ufulu okana kuyankha funso lirilonse limene simukufuna kuyankha. Ngati muli ndi mafunso alionse mukhoza kufuna wa nkulu wa zaumoyo mboma lino.

**Zochitika mu kafukufukuyu**

Kafukufukuyu ali ndi mbali zitatu. Mbali yoyamba ndi yoyankha mafunso osiyanasiyan okhudza za umoyo. Mbali yachiwiri ndi yokuyesani matenda othamanga magazi, sikelo yanu, kutalika kwanu ndi zina zotero. Mbali yachitatu ndiponso zomaliza ndi yokuseyani matenda a shuga ndi ntima. Kutu tiyese matenda a shunga ndi ntima zifunika kuti tikutengeni magazi pang'ono pachala monga m'mene zimakhallira poyesa malungo. Kutenga magaziku monga mudziwa kumapweteka pang'ono. Mudzauzidwa za zotsatila za kuyesa magazi. Kuyesa magazi anu kudzachitika nthawi yomweyo ndipo sipakhala kutenga magazi kupita nawo kwina kapena kuyesa zina zimene sitinakuuzeni ndi kugwirizana ayi.

**Kuvomeleza kafukufuku**



Mukasaina kapena kudinda kalatayi ndiye kuti mwamvetsetsa ndondomeko yonse ya kafukufukuyu ndiponso mwabvomereza mwakufuna kwana, mosakakamizidwa kutenga nawo mbali.

Ndawerenga ndekha		Achita kundiwerengera	
Ndavamela		Ndakana	

**Kusayina kapena kudinda**

Ndabvomera mwakufuna kwana, mosakakamizidwa kutenga nawo mbali pa kafukufukuyu.

Dzina:		Siginecha:	
Mboni:		Siginecha:	

## NATIONAL SURVEY ON THE MAGNITUDE OF CHRONIC NON-COMMUNICABLE DISEASES IN MALAWI

Wakutemweka Badada / Bamama ,

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### Chakulata cha Kafukufuku

Kafukufuku uyu wanozgeka na ba Unduna wa Za Umoyo (Health) na chakulata chakuti wasange nthowa iyo yingavwira kuvumbula za masuzgo gha nthenda za shuga, mtima, Kuchimbira kwa ndopa (BP) na zinyake zinandi izo zikukoleranako mwantheura pathupi la muthu.

### Chisankho

Kafukufuku uyu wakuchitika charu chose cha Malawi mu maboma ghakusankhika pachoko waka. Unduna wa Za Umoyo ngwakukondwa kumumanyiskani imwe kuti ndimwe bamoza ba banthu bachoko waka abo basankhika kuti bachite nabo kafukufuku uyu pakuzgola mafumbo agha ghachokowaka. Muli banangwa kuchita nabo kafukufuku uyu panji kudapila ntheura mutiphalire chisankho chinu pambele tindalutlire. Fundo izo tiyowoyeskanengepo zose zigwirisikenge nchito yinyake yapadera pa kafukufuku uyu chara ndipo zisungikenge mwachisisi.

### Vyakwenera kuchita

Malinga na nthenda izo mwazunula pakwamba apo, mutizgolenge mafumbo ghachoko waka, mutiyezgekenge pachoko waka ndipo mutiphalilikenge panji mutimanyenge viyeszgo vinu vyose usange mwakhumba ntheura. Mutipulikenge kugwaza kwa zingano pachoko usange bakutolapo tundopa kuti bayezge shuga umo yilili muthupi linu.

### Kuzomerezgana za kuchita nawo kafukufuku uyu

Mutilembenge zina linu pa malo agho ghapelekeka musu umo kulongola kuti mazomelezga kuchita nawo kafukufuku uyu panji mwadapila pamaso pa kaboni wa Unduna wa Zaumoyo.

Ndabazga ndipo ndadapila		Ndamumanyiska muthu uyu, wapulikiska ndipo wadapila. " Kaboni wa Unduna wa Zaumoyo".	

Ndazomela kuchita nawo kafukufuku uyu.

Participant Name:		Sign:	
Witness:		Sign:	

Appendix 3A: English and Chichewa Questionnaire

# Malawi STEPS Survey Questionnaire for Chronic Non-Communicable Diseases



## Survey Information

Location and Date		Response	Code
1	District code	_ _ _ _ _	I1
2	TA/Township/Village name		I2
3	Centre/Village code	_ _ _ _ _	I3
4	Interviewer Identification	_ _ _ _ _	I4
5	Date of completion of the instrument	_ _ _    _ _ _    _ _ _ _ _ dd        mm        year	I5

		Participant Id Number	_ _ _ _ _
Consent, Interview Language and Name of respondent		Response	Code
6	Consent has been read out to participant	Yes 1 No 2 <b>If NO, read consent</b>	I6
7	Consent has been obtained (verbal or written)	Yes 1 No 2 <b>If NO, END</b>	I7
8	Interview Language [Insert Language]	English 1 Chichewa 2 Tumbuka 3 [Add others] 4	I8
9	Time of interview (24 hour clock)	_ _ _ : _ _ _ hrs        mins	I9
10	Surname		I10
11	First Name		I11
<b>Additional Information that may be helpful</b>			
12	Contact phone number where possible		I12
13	Specify whose phone	Work 1	I13
		Home 2	
		Neighbour 3	
		Other (specify) 4	
		Other    _ _ _ _ _ _	I13 other

Record and file identification information (I6 to I13) separately from the completed questionnaire.

## Step 1 Demographic Information

CORE: Demographic Information											
Questions	Response		Code								
14	Sex ( <i>Record Male / Female as observed</i> )	Male 1 Female 2	C1								
15	What is your date of birth? <i>Munabadwa chaka chanji/kasi mukababika pauli?</i> <i>Don't Know 77 77 7777</i>	<table style="width: 100%; border: none;"> <tr> <td style="border: none;"> _ _ </td> <td style="border: none;"> _ _ </td> <td style="border: none;"> _ _ _ _ </td> <td style="border: none;"><i>If known, go to C4</i></td> </tr> <tr> <td style="border: none; text-align: center;">dd</td> <td style="border: none; text-align: center;">mm</td> <td style="border: none; text-align: center;">year</td> <td></td> </tr> </table>	_ _	_ _	_ _ _ _	<i>If known, go to C4</i>	dd	mm	year		C2
_ _	_ _	_ _ _ _	<i>If known, go to C4</i>								
dd	mm	year									
16	How old are you? <i>Mulindizaka zingati/muli navyaka vilinga?</i>	Years  _ _	C3								
17	In total, how many years have you spent at school or in full-time study (excluding pre-school)? <i>Kodi sukulu munayimbapo? Eya/ Ai Zaka zingati?</i>	Years  _ _	C4								

EXPANDED: Demographic Information																							
Questions	Response		Code																				
18	What is your <i>ethnic group</i> background? <i>Kodi ndinu a mtundu wanji?</i>	<table style="width: 100%; border: none;"> <tr><td style="border: none;">Chewa</td><td style="border: none;">1</td></tr> <tr><td style="border: none;">Tumbuka</td><td style="border: none;">2</td></tr> <tr><td style="border: none;">Ngoni</td><td style="border: none;">3</td></tr> <tr><td style="border: none;">Yao</td><td style="border: none;">4</td></tr> <tr><td style="border: none;">Other (Specify)</td><td style="border: none;">5</td></tr> <tr><td style="border: none;">I don't know/Refused</td><td style="border: none;">88</td></tr> </table>	Chewa	1	Tumbuka	2	Ngoni	3	Yao	4	Other (Specify)	5	I don't know/Refused	88	C5								
Chewa	1																						
Tumbuka	2																						
Ngoni	3																						
Yao	4																						
Other (Specify)	5																						
I don't know/Refused	88																						
19	What is the highest level of education you have completed? <i>Kodi sukulu munasiyira kalasi iti?</i>	<table style="width: 100%; border: none;"> <tr><td style="border: none;">None</td><td style="border: none;">1</td></tr> <tr><td style="border: none;">Standard 1-5</td><td style="border: none;">2</td></tr> <tr><td style="border: none;">Standard 6-8</td><td style="border: none;">3</td></tr> <tr><td style="border: none;">Secondary and above</td><td style="border: none;">4</td></tr> </table>	None	1	Standard 1-5	2	Standard 6-8	3	Secondary and above	4	C6												
None	1																						
Standard 1-5	2																						
Standard 6-8	3																						
Secondary and above	4																						
20	Which of the following best describes your <u>main</u> work status over the last 12 months? <i>Kodi ntchito yanu yeniyeni ndi yotani</i>	<table style="width: 100%; border: none;"> <tr><td style="border: none;">Government employee</td><td style="border: none;">1</td></tr> <tr><td style="border: none;">Non-government employee</td><td style="border: none;">2</td></tr> <tr><td style="border: none;">Self-employed</td><td style="border: none;">3</td></tr> <tr><td style="border: none;">Non-paid</td><td style="border: none;">4</td></tr> <tr><td style="border: none;">Student</td><td style="border: none;">5</td></tr> <tr><td style="border: none;">Homemaker</td><td style="border: none;">6</td></tr> <tr><td style="border: none;">Retired</td><td style="border: none;">7</td></tr> <tr><td style="border: none;">Unemployed (able to work)</td><td style="border: none;">8</td></tr> <tr><td style="border: none;">Unemployed (unable to work)</td><td style="border: none;">9</td></tr> <tr><td style="border: none;">I don't know/Refused</td><td style="border: none;">88</td></tr> </table>	Government employee	1	Non-government employee	2	Self-employed	3	Non-paid	4	Student	5	Homemaker	6	Retired	7	Unemployed (able to work)	8	Unemployed (unable to work)	9	I don't know/Refused	88	C7
Government employee	1																						
Non-government employee	2																						
Self-employed	3																						
Non-paid	4																						
Student	5																						
Homemaker	6																						
Retired	7																						
Unemployed (able to work)	8																						
Unemployed (unable to work)	9																						
I don't know/Refused	88																						
21	How many people older than 18 years, including yourself, live in your household? <i>Kodi pakhomo pano pali anthu angati opyola zaka 18?</i>	Number of people  _ _	C8																				
22	Taking <b>the past year</b> , can you tell me what the average earnings of the household have been? <i>Kodi munapeza ndalama zochuluka bwanji pa mulungu kapena pa mwezi kapena pa chaka?</i>	<table style="width: 100%; border: none;"> <tr> <td style="border: none;">Per week</td> <td style="border: none;"> _ _ _ _ _ _ _ _ </td> <td style="border: none;"><i>Go to T1</i></td> </tr> <tr> <td style="border: none;">OR per month</td> <td style="border: none;"> _ _ _ _ _ _ _ _ </td> <td style="border: none;"><i>Go to T1</i></td> </tr> <tr> <td style="border: none;">OR per year</td> <td style="border: none;"> _ _ _ _ _ _ _ _ </td> <td style="border: none;"><i>Go to T1</i></td> </tr> </table>	Per week	_ _ _ _ _ _ _ _	<i>Go to T1</i>	OR per month	_ _ _ _ _ _ _ _	<i>Go to T1</i>	OR per year	_ _ _ _ _ _ _ _	<i>Go to T1</i>	C9a C9b C9c											
Per week	_ _ _ _ _ _ _ _	<i>Go to T1</i>																					
OR per month	_ _ _ _ _ _ _ _	<i>Go to T1</i>																					
OR per year	_ _ _ _ _ _ _ _	<i>Go to T1</i>																					

## Step 1 Behavioural Measurements

Now I am going to ask you some questions about various health behaviours. This includes issues like smoking, drinking alcohol, eating fruits and vegetables and physical activity. Let's start with tobacco.

### CORE: Tobacco Use

Questions		Response		Code
23	Have ever smoked any tobacco products in your life? Kodi munasutapo fodya?	Yes 1 No 2 <i>If no, go T6</i>		
24	Do you currently smoke any <b>tobacco products</b> ? Mukanasutabe fodya?	Yes 1 No 2 <i>If No, go to T6</i>		T1
25	<b>If Yes.</b> Do you currently smoke tobacco products <b>daily</b> ? Kodi mumasuta fodya tsiku lililonse?	Yes 1 No 2 <i>If No, go to T6</i>		T2
26	How old were you when you <b>first started</b> smoking daily? Munayamba kusuta fodya muli ndi zaka zingati?	Age (years) _____ Don't remember 77 <i>If Known, go to T5a</i>		T3
27	Do you remember how long ago it was? Papita nthawi yaitali bwanji mukusuta fodya?  (RECORD ONLY 1, NOT ALL 3)  Don't remember 77	In Years _____ <i>If Known, go to T5a</i>		T4a
		OR in Months _____ <i>If Known, go to T5a</i>		T4b
		OR in Weeks _____		T4c
28	On average, <b>how many</b> of the following do you smoke each day? Kodi mumasuta ndudu zingati za fodya patsiku?  (RECORD FOR EACH TYPE)  Don't remember 77	Manufactured cigarettes _____		T5a
		Hand-rolled cigarettes _____		T5b
		Pipes full of tobacco _____		T5c
		Cigars _____		T5d
		Other _____ <i>If other, go to T5 other</i>		T5e
		Other (please specify): _____		T5other

### EXPANDED: Tobacco Use

Questions		Response		Code
29	In the past, did you <b>ever</b> smoke <b>daily</b> ? Kasutidwe kanu kanali bwanji m'mbuyomu patsiku ?	Yes 1		T6
		No 2 <i>If No, go to T9</i>		
30	<b>If Yes.</b> How old were you when you <b>stopped</b> smoking <b>daily</b> ? Mudali ndi zaka zingati pamene munasiya kusuta mowirikiza?	Age (years) _____	<i>If Known, go to T9</i>	T7
		Don't know 77		
31	How <b>long ago</b> did you stop smoking daily? Munasiya liti kusuta fodya tsiku lililonse?  (RECORD ONLY 1, NOT ALL 3)  Don't know 77	Years ago _____ <i>If Known, go to T9</i>		T8a
		OR Months ago _____ <i>If Known, go to T9</i>		T8b
		OR Weeks ago _____ <i>If Known, go to T9</i>		T8c
32	Do you <b>currently use</b> any <b>smokeless tobacco</b> such as [snuff, chewing tobacco]? Kodi mumadya fodya opela?	Yes 1 No 2 <i>If No, go to T12</i>		T9
33	<b>If Yes.</b> Do you <b>currently use smokeless tobacco</b> products <b>daily</b> ? Mumadya fodya opela tsiku lililonse?	Yes 1 No 2 <i>If No, go to T12</i>		T10

EXPANDED: Tobacco Use, contd.				
Questions		Response		Code
34	On average, how many <b>times a day</b> do you use smokeless tobacco such as <i>snuff, chewing tobacco</i> <i>Kodi, patsiku mumadya fodya opela kangati?</i>	Snuff, by mouth	_ _ _	T11a
		Snuff, by nose	_ _ _	T11b
		Chewing tobacco	_ _ _	T11c
		Other	_ _ _ <i>If Other, go to T11 other</i>	T11e
		Other (specify)	_ _ _ _ _ _ _ _ _	T11other
35	In the past, did you <b>ever use</b> smokeless tobacco such as [ <i>snuff, chewing tobacco, or betel</i> ] <b>daily</b> ? <i>Zaka zapitazi mamadya fodya opela?</i>	Yes	1	T12
		No	2	

CORE: Alcohol Consumption				
The next questions ask about the consumption of alcohol. <i>Tsopano tikambiranepo za mowa</i>				
Questions		Response		Code
36	Have you consumed alcohol ( <i>kachasu, masese, chibuku, mowa wabotolo, kazibeki</i> ) within the <b>past 12 months</b> ? <i>Kodi, munamwapo mowa miyezi khumi ndi iwiri yapital ?</i>	Yes	1	A1
		No	2 <i>If No, go to D1</i>	
37	In the past 12 months, <b>how frequently</b> have you had at least one drink? <i>Kodi chaka chapitachi, mumwama mowa mowilikiza bwanji?</i>	Daily	1	A2
		5-6 days per week	2	
		1-4 days per week	3	
		1-3 days per month	4	
		Less than once a month	5	
38	When you drink alcohol, <b>on average</b> , how many drinks do you have in a day? <i>Kodi mumamwa mowa wochuluka bwanji pa tsiku (mabotolo, mapaketi, zipanda)?</i>	Number	_ _ _	A3
39	Have you consumed alcohol (such as beer, <i>kachasu, masese, chibuku</i> etc) within the <b>past month</b> ? <i>Kodi munamwapo mowa mwezi wapitawo?</i>	Yes	1	A4
		No	2 <i>If No, go to A 6</i>	
40	During each of the <b>past 7 days</b> , how many standard drinks of any alcoholic drink did you have each day? <i>Mulungu wapitawo, munamwapo mowa wochuluka bwanji?</i>	Monday	_ _ _	A5a
		Tuesday	_ _ _	A5b
		Wednesday	_ _ _	A5c
		Thursday	_ _ _	A5d
		Friday	_ _ _	A5e
		Saturday	_ _ _	A5f
		Sunday	_ _ _	A5g
Don't Know 77				

EXPANDED : Alcohol Consumption			
Questions		Response	Code
41	In the past 12 months, what was the <b>largest number</b> of drinks you had on a single occasion, counting all types of standard drinks together? <i>Kodi chaka chapitachi, tsiku lomwe mudamwa mowa kwambiri mudamwa mowa wochuluka bwanji? (mabotolo, mapaketi, zipanda...)</i>	Largest number <input type="text"/> Don't Know 77	A6
42	<b>For men only:</b> In the past 12 months, on how many days did you have <b>five or more</b> standard drinks in a single day? <i>Chaka chapitachi, kodi masiku angati omwe mudamwa mowa wochuluka mabotolo, mapaketi, zipanda.. zokwana zisanu kapena kupitilirapo?</i>	Number of days <input type="text"/> Don't Know 777	A7
43	<b>For women only:</b> In the past 12 months, on how many days did you have <b>four or more</b> standard drinks in a single day? <i>Chaka chapitachi, kodi masiku angati omwe mudamwa mowa wochuluka mabotolo, mapaketi, zipanda.. zokwana zinayi kapena kupitilirapo?</i>	Number of days <input type="text"/> Don't Know 777	A8

CORE: Diet			
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 last year.			
Questions		Response	Code
44	In a typical week, on how many days do you <b>eat fruit</b> ? <i>Ndimasiku angati pamulungu amene mumadya zipatso?</i>	Number of days <input type="text"/> If Zero days, go to D3 Don't Know 77	D1
45	How many <b>servings</b> of fruit do you eat on <b>one</b> of those days? <i>Pamasiku amenewa mumadya zipatso kangati?</i>	Number of servings <input type="text"/> Don't Know 77	D2
46	In a typical week, on how many days do you <b>eat vegetables</b> ? <i>Ndimasiku angati pamulungu amene mumadya ndiwo zamasamba?</i>	Number of days <input type="text"/> If Zero days, go to D5 Don't Know 77	D3
47	How many <b>servings</b> of vegetables do you eat on one of those days? <i>Pamasiku amenewa mumadya ndiwo zamasamba kangati?</i>	Number of servings <input type="text"/> Don't Know 77	D4
EXPANDED: Diet			
48	What type of <b>oil or fat is most often</b> used for meal preparation in your household? <i>Mumagwiritsa ntchito mafuta ophikila a antundu wanji?</i> <b>SELECT ONLY ON)</b>	Vegetable oil 1 Animal fat 2 Butter or ghee 3 Margarine 4 Other 5 <i>If Other, go to D5 other</i> None in particular 6 None used 7 Don't know 77	D5
		Other <input type="text"/>	D5other



**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. *Tsopano tikambirana za ntchito imene mumagwira.*

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.

Questions		Response	Code
<b>Activity at work</b>			
49	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>Kodi ntchito imene mumagwira ndi yokhetsa thukuta monga kulima, kunyamula katundu, kukonola, kukumba mayenje ndi zina zotero?</i>	Yes 1  No 2 <i>If No, go to P 4</i>	P1
50	In a typical week, on how many days do you do vigorous-intensity activities as part of your work? <i>Pamulungu, ndi masiku angati amene mumagwira ntchito yo khetsa thukuta?</i>	Number of days <input type="text"/>	P2
51	How much time do you spend doing vigorous-intensity activities at work on a typical day? <i>Pa tsiku, kodi mumagwira ntchito yo khetsa thukuta nthawi yochulukira bwanji?</i>	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P3 (a-b)
52	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>Kodi ntchito imene mumagwira ndi yo pepukirapo monga kunyamula katundu wo pepukirapo, kuyenda mwandawala zina zotero?</i>	Yes 1  No 2 <i>If No, go to P 7</i>	P4
53	In a typical week, on how many days do you do moderate-intensity activities as part of your work? <i>Pamulungu, ndi masiku angati amene mumagwira ntchito yo pepukirapo?</i>	Number of days <input type="text"/>	P5
54	How much time do you spend doing moderate-intensity activities at work on a typical day? <i>Pa tsiku, kodi mumagwira ntchito yo pepukirapo nthawi yochulukira bwanji?</i>	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P6 (a-b)
<b>Travel to and from places</b>			
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.			
55	Do you walk or use a bicycle ( <i>pedal cycle</i> ) for at least 10 minutes continuously to get to and from places? <i>Kodi mumayenda pansi kapena pa njira ya kapalasa popita monga kuntchito, kutchalitchi, kumsika ndi kwina kotero?</i>	Yes 1  No 2 <i>If No, go to P 10</i>	P7
56	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? <i>Pamulungu, kodi ndi masiku angati amene mumayenda pansi kapena pa njinga ya kapalasa?</i>	Number of days <input type="text"/>	P8
57	How much time do you spend walking or bicycling for travel on a typical day? <i>Pa tsiku, kodi ndi nthawi yotalika bwanji yimene mumayenda pansi kapena pa njinga ya kapalasa?</i>	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P9 (a-b)

Recreational activities		
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 activities (leisure) <i>Tsopano tikambirana za masewero olimbitsa thupi</i>		
Questions	Response	Code
58 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? <i>Kodi mumapanga masewera olimbitsa thupi kwa phindi khumi mwakathithi?</i>	Yes 1  No 2 <i>If No, go to P 13</i>	P10
59 In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational ( <i>leisure</i> ) activities? <i>Pa mulungu, kodi ndi masiku angati amene mumapanga masewera olimbitsa thupi kwa phindi khumi?</i>	Number of days <input type="text"/>	P11
60 How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day? <i>Pa tsiku, kodi ndi nthawi yo chuluka bwanji imene mumatenga kupanga masewera olimbitsa thupi?</i>	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P12 (a-b)

61 Do you do any moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities that causes a small increase in breathing or heart rate such as brisk walking, ( <i>cycling, swimming, volleyball</i> ) for at least 10 minutes continuously? <i>Kodi muchita masewela olimbitsa nthupi opepukilako monga kupalasa njinga, kusambila, kusewela volleyball pa nthawi yopitilila 10 minitsi osapuma?</i>	Yes 1  No 2 <i>If No, go to P16</i>	P13
62 In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities? <i>Pamulungu mumachita masewela olimbitsa nthupi opepukilako?</i>	Number of days <input type="text"/>	P14
63 How much time do you spend doing moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities on a typical day? <i>Pa tsiku, Kodi mumatenga nthawi yaitali bwanji mukuchita masewelawa?</i>	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P15 (a-b)

### Sedentary behaviour

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, travelling in car, bus, train, reading, playing cards or watching television], but do not include time spent sleeping.

64 How much time do you usually spend sitting or reclining on a typical day? <i>Patsiku ndi nthawi yaitali bwanji mumangokhala pansi osachita china chilichonse mutakhala pampando (kumawelenga, kuonela ma filimu, kusewela bawo)</i>	Hours : minutes <input type="text"/> : <input type="text"/> hrs min s	P16 (a-b)
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EXPANDED: History of Raised Blood Pressure			
Questions		Response	Code
65	When was your blood pressure last measured by a health professional? <i>Kodi ndi liti munayezetsa matenda othamanga magari (BP)?</i>	Within past 12 months 1	H1
		1-5 years ago 2	
		Not within past 5 years 3	
66	During the past 12 months have you been told by a doctor or other health worker that you have raised blood pressure or hypertension? <i>Kodi pa miyezi 12 yapita a dokotala anakupimaniko matenda othamanga magari (BP)?</i>	Yes 1	H2
		No 2	
67	Are you currently receiving any of the following treatments for raised blood pressure prescribed by a doctor or other health worker as well as any advice? <i>Kodi ndithandizo la mankhwala kapena langizo liti mukulilandila la matenda BP?</i>		
	Drugs (medication) that you have taken in the last 2 weeks	Yes 1	H3a
		No 2	
	Special prescribed diet	Yes 1	H3b
		No 2	
	Advice or treatment to lose weight	Yes 1	H3c
		No 2	
Advice or treatment to stop smoking	Yes 1	H3d	
	No 2		
Advice to start or do more exercise	Yes 1	H3e	
	No 2		
68	During the past 12 months have you seen a traditional healer for raised blood pressure or hypertension <i>Kodi munapita kwa a sing'anga mu miyezi 12 yapitai kukafuna mankhwala a BP</i>	Yes 1	H4
		No 2	
69	Are you currently taking any herbal or traditional remedy for your raised blood pressure? <i>Kodi mukumwa mankhwala alionse a BP azitsamba?</i>	Yes 1	H5
		No 2	

EXPANDED: History of Diabetes			
Questions		Response	Code
70	Have you had your blood sugar measured in the last 12 months? <i>Chaka chapitachi, Kodi munayezetsako matenda a shuga?</i>	Yes 1	H6
		No 2	
71	During the past 12 months, have you ever been told by a doctor or other health worker that you have diabetes? <i>Chaka chapitachi, a dotolo anakuuzanipo kuti muli ndi matenda a shuga?</i>	Yes 1	H7
		No 2	
72	Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker as well as any advice? <i>Kodi mukulilandila makhwala kapena malangizo a matenda a shuga monga:</i>		
	Insulin <i>obaya</i>	Yes 1	H8a
		No 2	
	Oral drug (medication) that you have taken in the last 2 weeks <i>akumwa</i>	Yes 1	H8b
		No 2	
	Special prescribed diet <i>Malangizo a zakudya</i>	Yes 1	H8c
		No 2	
Advice or treatment to lose weight <i>Malangizo kapena makhwala ochepetsa thupi</i>	Yes 1	H8d	
	No 2		
Advice or treatment to stop smoking <i>Malangizo kapena makhwala oletsa kusuta fodya</i>	Yes 1	H8e	
	No 2		
Advice to start or do more exercise <i>Malangizo oti muyambe masewera olimbitsa thupi</i>	Yes 1	H8f	
	No 2		
73	During the past 12 months have you seen a traditional healer for diabetes? <i>Chaka chapitachi, kodi munapitapo kwa a sing'anga kukapeza chithandizo cha matenda a shuga?</i>	Yes 1	H9
		No 2	

## Participant Identification Number

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74	Are you currently taking any herbal or traditional remedy for your diabetes? <i>Kodi pakali pano mukumwa makhwala a chikuda a matenda a shuga?</i>	Yes 1	H10
		No 2	

## Step 2 Physical Measurements

CORE: Height and Weight		Response	Code
75	Interviewer ID	_____	M1
76	Device IDs for height and weight	Height _____	M2a
		Weight _____	M2b
77	Height	in Centimetres (cm) _____	M3
78	Weight <i>If too large for scale, code 666.6</i>	in Kilograms (kg) _____	M4
79	<b>For women:</b> Are you pregnant? <i>Kodi Ndinu oyembekezera?</i>	Yes 1 <i>If Yes, go to M 8</i>	M5
		No 2	
CORE: Waist			
80	Device ID for waist	_____	M6
81	Waist circumference	in Centimetres (cm) _____	M7
CORE: Blood Pressure			
82	Interviewer ID	_____	M8
83	Device ID for blood pressure	_____	M9
84	Cuff size used	Small 1	M10
		Medium 2	
		Large 3	
85	Reading 1	Systolic ( mmHg) _____	M11a
		Diastolic (mmHg) _____	M11b
86	Reading 2 <i>(to be taken 5 minutes after taking Reading 1)</i>	Systolic ( mmHg) _____	M12a
		Diastolic (mmHg) _____	M12b
87	Reading 3 <i>(to be taken 5 minutes after taking Reading 2)</i>	Systolic ( mmHg) _____	M13a
		Diastolic (mmHg) _____	M13b
88	During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker? <i>Pa milungu iwiri yapitai mwalandilako mankhwala a BP kuchokela kwa dokotala?</i> <i>(verify in the health passport)</i>	Yes 1	M14
		No 2	

### EXPANDED: Hip Circumference and Heart Rate

89	Hip circumference	in Centimetres (cm) _____	M15
90	Heart Rate (Record if automatic blood pressure device is used)		
	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		Response	Code
91	During the last 12 hours have you had anything to eat or drink, other than water?	Yes 1 No 2	B1
92	Technician ID	_ _ _ _ _	B2
93	Device ID	_ _ _	B3
94	Time of day blood specimen taken (24 hour clock)	Hours : minutes    _ _ _ : _ _ _ hrs                mins	B4
95	Fasting blood glucose	mmol/l    _ _ _ . _ _ _	B5

CORE: Blood Lipids			
96	Device ID	_ _ _	B6
97	Total cholesterol	mmol/l    _ _ _ . _ _ _	B7

EXPANDED: Triglycerides and HDL Cholesterol			
98	Triglycerides	mmol/l    _ _ _ . _ _ _	B8
99	HDL Cholesterol	mmol/l    _ _ . _ _ _	B9



Ministry of Health



# Appendix 3B: English and Tumbuka Questionnaire

## Malawi STEPS Survey Questionnaire for Chronic Non-Communicable Diseases



## Survey Information

Location and Date		Response	Code
1	District code	_ _ _ _	I1
2	TA/Township/Village name		I2
3	Centre/Village code	_ _ _ _	I3
4	Interviewer Identification	_ _ _ _	I4
5	Date of completion of the instrument	_ _    _ _    _ _ _ _ dd      mm      year	I5

Consent, Interview Language and Name of respondent		Response	Code
		Participant Id Number	_ _ _ _ _
6	Consent has been read out to participant	Yes 1 No 2	I6
		<b>If no, read out consent</b>	
7	Consent has been obtained (verbal or written)	Yes 1 No 2 <b>If NO, END</b>	I7
8	Interview Language [Insert Language]	English 1 Chichewa 2 Tumbuka 3 [Add others] 4	I8
9	Time of interview (24 hour clock)	_ _ : _ _ hrs      mins	I9
10	Surname		I10
11	First Name		I11

Additional Information that may be helpful			
12	Mafoni ghinu agho tingayowoyeskeranapo		I12
13	Panikizgani ni foni yanjani?	Kuntchito 1	I13
		Kunyumba 2	
		Muzengigzani 3	
		Yinyakeso (panikizgani) 4	
		Other	_ _ _ _ _

Record and file identification information (I6 to I13) separately from the completed questionnaire.

## Step 1 Demographic Information

CORE: Demographic Information			
Questions	Response		Code
14	Sex (Record Male / Female as observed)	Male 1 Female 2	C1
15	What is your date of birth? Munabadwa chaka chanji /Kasi mukababika pauli? <i>Don't Know 77 77 7777</i>	_ _   _ _   _ _ _ _ _  <i>If known, go to C4</i> dd mm year	C2
16	How old are you? Mulindizaka zingati / Muli navyaka vilinga?	Years  _ _	C3
17	In total, how many years have you spent at school or in full-time study (excluding pre-school)?/ Kasi mwataya vyaka vilinga muli pa sukulu?	Years  _ _	C4
EXPANDED: Demographic Information			
Questions	Response		Code
18	What is your <i>ethnic group</i> background? / Kasi ndimwe wa mtundu uli?	Chewa 1 Tumbuka 2 Ngoni 3 Yao 4 Other (Specify) 5 Nkhumanya chara / Nakana 88	C5
19	What is the highest level of education you have completed? Kasi masambilo ghinu ghapachanya chomene agho mwafikapo ni nga?	None 1 Standard 1-5 2 Standard 6-8 3 Secondary and above 4	C6
20	Which of the following best describes your <u>main</u> work status over the last 12 months? Kasi ni ndondomeko uli mwa izi tazunula apa iyo yikulongosola makora za ntchito yeneko iyo mwachitanga mu myezi 12 iyo yajumpha?  [INSERT COUNTRY-SPECIFIC CATEGORIES] (USE SHOWCARD)	Government employee 1 Non-government employee 2 Self-employed 3 Non-paid 4 Student 5 Homemaker 6 Retired 7 Unemployed (able to work) 8 Unemployed (unable to work) 9 I don't know/Refused 88	C7
21	How many people older than 18 years, including yourself, live in your household? Kasi munyumba iyi mukukhalamo mwawanthu walinga imwe muli na vyaka vyakufikira 18 kuluta munthazi?	Number of people  _ _	C8



22	Taking <b>the past year</b> , can you tell me what the average earnings of the household have been? Malinga na chaka chamara ichi chajumphapo, kasi mungayezgelera kuti munthu yumoza wamunyumba yinu wakusanga ndalama zilinga pa chaka?  (RECORD ONLY ONE, NOT ALL 3)	Per week	_ _ _ _ _ _ _ _ _	Go to T1	C9a
		OR per month	_ _ _ _ _ _ _ _ _	Go to T1	C9b
		OR per year	_ _ _ _ _ _ _ _ _	Go to T1	C9c
		Refused	88		C9d

## Step 1 Behavioural Measurements

Now I am going to ask you some questions about various health behaviours. This includes issues like smoking, drinking alcohol, eating fruits and vegetables and physical activity. Let's start with tobacco.					
<b>CORE: Tobacco Use</b>					
Questions	Response				Code
23	Have ever smoked any tobacco products in your life?/ Kasi muli kuhwewapo hona mu nyengo zajumphazi izi?	Yes	1		
		No	2		
24	Do you currently smoke any <b>tobacco products</b> ? Kasi mukukhwewa hona pa nyengo ya sono?	Yes	1		T1
		No	2	If No, go to T6	
25	<b>If Yes.</b> / <i>Usange ni nthena,</i> Do you currently smoke tobacco products <b>daily</b> ? Kasi panyengo yasono, mukukhwewa zuwa lililose?	Yes	1		T2
		No	2	If No, go to T6	
26	How old were you when you <b>first started</b> smoking daily?/ Kasi mukawa na vyaka vilinga apomukayambira kukhwewa hona?	Age (years)	_ _	If Known, go to T5a	T3
		Don't remember	77		
27	Do you remember how long ago it was? Kasi mukukumbukira kuti vikawa vyaka vilinga ivyo vyajumphapo kufuma apo mukambira kukhwewa?  (RECORD ONLY 1, NOT ALL 3)  Don't remember 77	In Years	_ _	If Known, go to T5a	T4a
		OR in Months	_ _	If Known, go to T5a	T4b
		OR in Weeks	_ _		T4c
28	On average, <b>how many</b> of the following do you smoke each day? / Pakusachizga waka, kasi ni ndudu zilinga za hona uyo tazunula apa izo mukukhwewa pa zuwa limoza?  (RECORD FOR EACH TYPE)  Don't remember 77	Manufactured cigarettes	_ _		T5a
		Hand-rolled cigarettes	_ _		T5b
		Pipes full of tobacco	_ _		T5c
		Cigars	_ _		T5d
		Other	_ _ _ _	If other, go to T5 other	T5e
		Other (please specify):	_ _ _ _ _ _ _ _ _		T5other

EXPANDED: Tobacco Use					
Questions		Response		Code	
29	In the past, did you <b>ever</b> smoke <b>daily</b> ? Munyengo zajumphha izi, kasi mulikukhwewapo zuwa na zuwa?	Yes	1	T6	
		No	2 <i>If No, go to T9</i>		
30	<b>If Yes</b> , How old were you when you <b>stopped</b> smoking <b>daily</b> ?	Age (years)	<input type="text"/> <input type="text"/> <input type="text"/> <i>If Known, go to T9</i>	T7	
		Don't know	77		
31	How <b>long ago</b> did you stop smoking daily? Muli kuleka pauli kukhwewa zuwa na zuwa?  (RECORD ONLY 1, NOT ALL 3)  Don't know 77	Years ago	<input type="text"/> <input type="text"/> <input type="text"/> <i>If Known, go to T9</i>	T8a	
		OR	Months ago	<input type="text"/> <i>If Known, go to T9</i>	T8b
		OR	Weeks ago	<input type="text"/> <i>If Known, go to T9</i>	T8c
32	Do you <b>currently use</b> any <b>smokeless tobacco</b> such as [ <i>snuff, chewing tobacco</i> ]? / Kasi panyengo ya sono, mukukhwewa hona wambula josi (wmumphuno, wakusumba, wapasi pa lulime)?	Yes	1	T9	
No	2 <i>If No, go to T12</i>				
33	<b>If Yes</b> , Do you <b>currently use smokeless tobacco</b> products <b>daily</b> ? / Panyengo ya sono, Kasi mukukhwewa hona wambula josi?	Yes	1	T10	
		No	2 <i>If No, go to T12</i>		
EXPANDED: Tobacco Use, contd.					
Questions		Response		Code	
34	On average, how many <b>times a day</b> do you use smokeless tobacco such as <i>snuff, chewing tobacco</i> Mwakuyezgelera waka, kasi hona wambula josi mukumukhwewa kalinga pa zuwa?/  Don't Know 77	Snuff, by mouth	<input type="text"/> <input type="text"/> <input type="text"/>	T11a	
		Snuff, by nose	<input type="text"/> <input type="text"/> <input type="text"/>	T11b	
		Chewing tobacco	<input type="text"/> <input type="text"/> <input type="text"/>	T11c	
		Other	<input type="text"/> <input type="text"/> <input type="text"/> <i>If Other, go to T11 other</i>	T11e	
		Other (specify)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	T11other	
35	In the past, did you <b>ever use</b> smokeless tobacco such as [ <i>snuff, chewing tobacco, or betel</i> ] <b>daily</b> ? / Muvwyaka vyamumanyuma umu, kasi muli kukhwewapo hona wambula josi?	Yes	1	T12	
		No	2		

CORE: Alcohol Consumption			
The next questions ask about the consumption of alcohol.			
Questions	Response	Code	
36	Have you consumed alcohol (such as beer, kachasu, masese, chibuku etc) within the <b>past 12 months</b> ? / Kasimuli kumwapo mowa (wamasese, kachasu, chibuku, wamabotolo) mummiyezi 12 yajumphha iyo?	Yes 1 No 2 <i>If No, go to D1</i>	A1
37	In the past 12 months, <b>how frequently</b> have you had at least one drink? / Mu myezi 12 yajumphha iyo, Nkhalinga apo mwamwapobwanji, zuwa-----? ( <i>READ RESPONSES USE SHOWCARD</i> )	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
38	When you drink alcohol, <b>on average</b> , how many drinks do you have in a day? / Kasi mukumwa mabotolo ghalinga pa zuwa usange mwayamba kumwa mowa?	Number <input type="text"/> <input type="text"/> <input type="text"/> Don't know 77	A3
39	Have you consumed alcohol (such as beer, kachasu, masese, chibuku etc) within the <b>past month</b> ? / Kasi mui kumwapo mowa ngati wamabotolo, kachasu, masese, chibuku mu mwezi wamala uwu? ( <i>USE SHOWCARD OR SHOW EXAMPLES</i> )	Yes 1 No 2 <i>If No, go to A 6</i>	A4
40	During each of the <b>past 7 days</b> , how many standard drinks of any alcoholic drink did you have each day? / Mu mazuwa 7 ghajumphha agho, kasi mukumwapo mowa unandi uli pazuwa (pendani mabotolo panji nthembe za mowa pazuwa lililose)?  ( <i>RECORD FOR EACH DAY USE SHOWCARD</i> )	Monday <input type="text"/> <input type="text"/> <input type="text"/>	A5a
		Tuesday <input type="text"/> <input type="text"/> <input type="text"/>	A5b
		Wednesday <input type="text"/> <input type="text"/> <input type="text"/>	A5c
		Thursday <input type="text"/> <input type="text"/> <input type="text"/>	A5d
		Friday <input type="text"/> <input type="text"/> <input type="text"/>	A5e
		Saturday <input type="text"/> <input type="text"/> <input type="text"/>	A5f
		Don't Know 77	Sunday <input type="text"/> <input type="text"/> <input type="text"/>

EXPANDED : Alcohol Consumption			
Questions		Response	Code
41	In the past 12 months, what was the <b>largest number</b> of drinks you had on a single occasion, counting all types of standard drinks together?/ Pala mwakumbukila makora mu myezi 12 iyo yajumphapo, Kasi mwamapo mabotolo panji nthembe zilinga za mowa pazuwa limoza ilo mukamwa chomene?	Largest number  _ _  Don't Know 77	A6
42	<b>For men only:</b> In the past 12 months, on how many days did you have <b>five or more</b> standard drinks in a single day? Pa myezi 12 yajumpha iyo, kasi mwamwapo mabotolo ghalinga pa zuwa limoza ghakujumpha 5: mwakusachizga?	Number of days  _ _ _ _  Don't Know 777	A7
43	<b>For women only:</b> In the past 12 months, on how many days did you have <b>four or more</b> standard drinks in a single day? Pa myezi 12 yajumpha iyo, kasi mwamwapo mabotolo ghalinga pa zuwa limoza ghakujumpha 4: mwakusachizga?	Number of days  _ _ _ _  Don't Know 777	A8

CORE: Diet			
<i>Mafumbo gha kulya vipaso na mphangwe: nili na nutrition card apa, sono nilongolenge vipaso na mphangwe kuti musankhepo ivyo mukulya panyeno yimoza yakulyela.</i>			
Questions		Response	Code
44	In a typical week, on how many days do you <b>eat fruit</b> ? / Pasabata yimoza, nimazuwa ghalinga agho mukulya vipaso?	Number of days  _ _  Don't Know 77	<i>If Zero days, go to D3</i> D1
45	How many <b>servings</b> of fruit do you eat on <b>one</b> of those days? / Kasi mukupereka kalinga vipaso vyakuti mulye nyengo yimoza pala nyengo yakulyera yakwana?	Number of servings  _ _  Don't Know 77	D2
46	In a typical week, on how many days do you <b>eat vegetables</b> ?/ Kasi vyakulya vya mphangwe, mukulya mazuwa ghalinga pa sabata?	Number of days  _ _  Don't Know 77	<i>If Zero days, go to D5</i> D3
47	How many <b>servings</b> of vegetables do you eat on one of those days? / Kasi mukuwerezga kalinga kujigawira mphangwe yakulya nyengo yimoza ?	Number of servings  _ _  Don't Know 77	D4

EXPANDED: Diet			
48	What type of <b>oil or fat is most often</b> used for meal preparation in your household? / <b>Kasi ni mtundu uli wa mafuta uwo mukugwiriska ntchito kunyumba kwinu pakuphika vyakurya?</b>  <i>SELECT ONLY ON)</i>	Vegetable oil 1 Animal fat 2 Butter or ghee 3 Margarine 4 Other 5 <i>If Other, go to D5 other</i> None in particular 6 None used 7 Don't know 77	D5
		Other  _ _ _ _ _ _ _ _	D5other

<b>CORE: Physical Activity</b>			
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. <i>[Insert other examples if needed]</i> . 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.			
Questions	Response		Code
<b>Activity at work</b>			
49	Kasi pa ntcito yinu iyo mukugwira mazuwa ghanandi: yikuwapo ya kunyamula vinthu vizito, kujima, kupula, kuzenga zenga, kwambula kulekezga pa fupifupi 10 minutes kwambula kulekezga?	Yes 1  No 2 <i>If No, go to P 4</i>	P1
50	Pasabata yimoza, kasi mukuchita mazuwa ghalinga masewero ghakulimbiska thupi (exercises)?	Number of days <input type="text"/>	P2
51	Kasi mukutora nyengo yitali uli uko mukupanga masewero agha (#15)?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P3 (a-b)
52	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? Kasi ntchito yinu yikukhwaskana na kumovilani kupanga ma exercise ghapakatikati mwakuti mukuthutula muchanya? <i>[kulima, kunyamula katundu, kupula, kujimaa etc]</i>	Yes 1  No 2 <i>If No, go to P 7</i>	P4
53	In a typical week, on how many days do you do moderate-intensity activities as part of your work? Kasi ndi mazuwa ghalinga agho mukuchita ma exercise ghapakatikati pa sabata yiliyose?	Number of days <input type="text"/>	P5
54	How much time do you spend doing moderate-intensity activities at work on a typical day? Kasi nkhalanga kuntchito apo mukugwira ntchito yakulingana na exercise yapakatikati?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P6 (a-b)
<b>Travel to and from places</b>			
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. <i>[insert other examples if needed]</i>			
55	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 <i>If No, go to P 10</i>	P7
56	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="text"/>	P8
57	How much time do you spend walking or bicycling for travel on a typical day?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P9 (a-b)

## Participant Identification Number

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Recreational activities			
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 activities (leisure), [insert relevant terms].			
58	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? / Kasi mukuchita masewero agho ghakumovwirani kulimbiska thupi ngati: Kutchaya bola, kuchimbila?	Yes 1  No 2 <i>If No, go to P 13</i>	P10
59	In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational ( <i>leisure</i> ) activities? Pasabata yimoza, nimazuwa ghalinga agho mukupanga masewero gheneko ghakulimbiska thupi?	Number of days <input type="text"/>	P11
60	How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day? Mukutora nyengo yitali uli pa zuwa usange mwayamba kupanga ma exercises?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P12 (a-b)
61	Do you do any moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities that causes a small increase in breathing or heart rate such as brisk walking, ( <i>cycling, swimming, volleyball</i> ) for at least 10 minutes continuously? Kasi mukuchita ma exercises mwakulibikirako nga: volley ball, kuskamba, kwenda waka kwakuyana na 10 minutes?	Yes 1  No 2 <i>If No, go to P16</i>	P13
62	In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities? Mu sabata yimoza, ndimazuwa ghalinga agho mukuchita masewero ngati agho tazunula mu # 61?	Number of days <input type="text"/>	P14
63	How much time do you spend doing moderate-intensity sports, fitness or recreational ( <i>leisure</i> ) activities on a typical day? Mukutola nyengo yitali uli pa masewero nga gha mu # 62?	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	P15 (a-b)

## Sedentary behaviour

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, travelling in car, bus, train, reading, playing cards or watching television], but do not include time spent sleeping.

64	How much time do you usually spend sitting or reclining on a typical day? / Kasi ni nyengo yitali uli pazuwa iyo mukutola kukhala waka pani kuwonelela waka ma cinema?	Hours : minutes <input type="text"/> : <input type="text"/> hrs min s	P16 (a-b)
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EXPANDED: History of Raised Blood Pressure				
Questions		Response		Code
65	When was your blood pressure last measured by a health professional? / Kasi ndopa zinu umo zikuchimbirira (blood pressure) wakaziyezgapo pauli kaumaliro?	Within past 12 months	1	H1
		1-5 years ago	2	
		Not within past 5 years	3	
66	During the past 12 months have you been told by a doctor or other health worker that you have raised blood pressure or hypertension? / Kasi pa myezi 12 yajumpha iyi, wachipatala wamuphaliranipo kuti mukulwala nthenda ya blood pressure?	Yes	1	H2
		No	2	
67	Are you currently receiving any of the following treatments for raised blood pressure prescribed by a doctor or other health worker as well as any advice? / Kasi kufuma ku chipatala chilichose, ndi wowwiri uli wa nthenda ya blood pressure uwo mu ku pokera?			
	Drugs (medication) that you have taken in the last 2 weeks / Mankhwala gha BP ghakumwa agho mwapokerpo sabata ziwiri zajumpha izo?	Yes	1	H3a
		No	2	
	Special prescribed diet / chakurya chakupatulika	Yes	1	H3b
		No	2	
	Advice or treatment to lose weight / Kumupemphani kuti muwandeko?	Yes	1	H3c
No		2		
Advice or treatment to stop smoking / Kumupemphani kuti muleka kukhwewa?	Yes	1	H3d	
	No	2		
Advice to start or do more exercise / Kumupemphani kuti muchitenge masowelo ghakulimbiska thupi (exercise)?	Yes	1	H3e	
	No	2		
68	Kasi mwalutapo kwa ng'anga chifukwa cha nthenda ya blood pressure mu myezi 12 yajumpha iyo?	Yes	1	H4
		No	2	
69	Kasi mukumwapo maankhwala ghachikaya ghali ghose yakuti ghachizge nthenda ya blood pressure iyi?	Yes	1	H5
		No	2	

<b>EXPANDED: History of Diabetes</b>				
<b>Questions</b>		<b>Response</b>		<b>Code</b>
70	Mu myezi 12 yajumphha iyo, kasi wali kumuyezyanipo suga mu ndopa zinu?	Yes	1	H6
		No	2	
71	During the past 12 months, have you ever been told by a doctor or other health worker that you have diabetes? Mu myezi 12 yajumphha iyo, kasi wachipatala wali kumuphaliranipo kuti muli na nthenda ya shuga?	Yes	1	H7
		No	2	
72	Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker as well as any advice? / Kasi mukupokera ghamoza mwa mankhwala agha kufumila kuchipatala chilichose?			
	Insulin / munkhwala wamatenda gha shuga wakujigwaza.	Yes	1	H8a
		No	2	
	Oral drug (medication) that you have taken in the last 2 weeks / Mankhwala ghakumwa agho mwapokapo mu sabata ziwiri zajumphha izo.	Yes	1	H8b
		No	2	
	Special prescribed diet / muli pa chakurya cha kupatulika ich wachipatala wamulongozgani kuti mulyenge?	Yes	1	H8c
		No	2	
	Advice or treatment to lose weight / Kasi wachipatala wamulongozgani kuti muwandeko?	Yes	1	H8d
		No	2	
	Advice or treatment to stop smoking / Kasi wachipatala wamulongozgani kuti muleke kukhwewa?	Yes	1	H8e
		No	2	
	Advice to start or do more exercise / Kasi wachipatala wamulongozgani kuti muyambepo masewero ghakulibiska thupi (exercises)?	Yes	1	H8f
		No	2	
73	During the past 12 months have you seen a traditional healer for diabetes? Mu myezi 12 yajumphha iyo, kasi mwawonanapo na ng'anga chifukwa cha ulwali wa shuga?	Yes	1	H9
		No	2	
74	Are you currently taking any herbal or traditional remedy for your diabetes? / Kasi mukumwa mankhwala ghachikaya ghali ghose malinga na nthenda ya shuga?	Yes	1	H10
		No	2	



## Step 2 Physical Measurements

CORE: Height and Weight		Response	Code
75	Interviewer ID	_ _ _ _ _	M1
76	Device IDs for height and weight	Height    _ _ _	M2a
		Weight    _ _ _	M2b
77	Height	in Centimetres (cm)    _ _ _ _ . _	M3
78	Weight <i>If too large for scale, code 666.6</i>	in Kilograms (kg)    _ _ _ _ . _	M4
79	<b><u>For women:</u></b> Are you pregnant? / Kasi munapathupi?	Yes    1 <i>If Yes, go to M 8</i>	M5
		No    2	
CORE: Waist			
80	Device ID for waist	_ _ _	M6
81	Waist circumference	in Centimetres (cm)    _ _ _ _ . _	M7
CORE: Blood Pressure			
82	Interviewer ID	_ _ _ _ _	M8
83	Device ID for blood pressure	_ _ _	M9
84	Cuff size used	Small    1	M10
		Medium    2	
		Large    3	
85	Reading 1	Systolic ( mmHg)    _ _ _ _	M11a
		Diastolic (mmHg)    _ _ _ _	M11b
86	Reading 2 <i>(to be taken 5 minutes after taking Reading 1)</i>	Systolic ( mmHg)    _ _ _ _	M12a
		Diastolic (mmHg)    _ _ _ _	M12b
87	Reading 3 <i>(to be taken 5 minutes after taking Reading 2)</i>	Systolic ( mmHg)    _ _ _ _	M13a
		Diastolic (mmHg)    _ _ _ _	M13b
88	During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker? / Kasi mulikupokerapo wovvwili kufuma chipatala wakukhwaskana na matenda gha Blood pressure? <i>(verify in the health passport)</i>	Yes    1	M14
		No    2	

**EXPANDED: Hip Circumference and Heart Rate**

89	Hip circumference / Usani wa mu chiuno	in Centimetres (cm)	_ _ _ _ . _	M15
90	Heart Rate (Record if automatic blood pressure device is used) speed iyo mtima ukwendera			
	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		Response	Code
91	Mu ma ora 12 agho ghajumpa agho, kasi mwalyapo panji kumwapo chilichose kupatula maji?	Yes 1 No 2	B1
92	Technician ID	_ _ _ _	B2
93	Device ID	_ _ _	B3
94	Time of day blood specimen taken (24 hour clock)	Hours : minutes _ _ : _ _ hrs mins	B4
95	Fasting blood glucose	mmol/l _ _ . _ _	B5

**CORE: Blood Lipids**

96	Device ID	_ _ _	B6
97	Total cholesterol	mmol/l _ _ . _ _	B7

**EXPANDED: Triglycerides and HDL Cholesterol**

98	Triglycerides	mmol/l _ _ . _ _	B8
99	HDL Cholesterol	mmol/l _ . _ _	B9



**WHO STEPS**

**Chronic Disease  
Risk Factor Surveillance**

**DATA BOOK FOR  
MALAWI, 2009**

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## Demographic Information Results

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**Age group by sex** Description: Summary information by age group and sex of the respondents.  
Instrument question:

- Sex
- What is your date of birth?

Age group and sex of respondents						
Age Group (years)	Men		Women		Both Sexes	
	n	%	n	%	n	%
25-34	719	30.8	1616	69.2	2335	44.9
35-44	459	34.7	862	65.3	1321	25.4
45-54	296	32.8	604	67.1	902	17.3
55-64	216	33.2	434	66.8	650	12.5
<b>25-64</b>	<b>1690</b>	<b>32.5</b>	<b>3516</b>	<b>67.5</b>	<b>5206</b>	<b>100.0</b>

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**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
25-34	706	7.2	1576	5.4	2282	6.0
35-44	451	6.0	830	4.0	1281	4.7
45-54	286	5.7	572	2.9	858	3.9
55-64	209	4.7	401	2.3	610	3.1
<b>25-64</b>	<b>1652</b>	<b>6.3</b>	<b>3379</b>	<b>4.3</b>	<b>5031</b>	<b>4.9</b>

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**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	% None	% Standard 1-5	%Standard 6-8	% Secondary and above
25-34	719	9.7	28.5	30.3	31.4
35-44	459	16.3	34.6	32.0	17.0
45-54	295	14.6	36.3	38.6	10.5
55-64	216	22.7	40.3	27.8	9.3
<b>25-64</b>	<b>1689</b>	<b>14.0</b>	<b>33.0</b>	<b>31.9</b>	<b>21.0</b>

Highest level of education					
Age Group (years)	Women				
	n	% None	% Standard 1-5	%Standard 6-8	% Secondary and above
25-34	1615	19.3	34.6	29.2	17.0
35-44	862	30.4	37.9	24.2	7.4
45-54	604	43.0	34.4	19.7	2.8
55-64	433	49.7	36.0	12.2	2.1
<b>25-64</b>	<b>3514</b>	<b>29.8</b>	<b>35.5</b>	<b>24.2</b>	<b>10.4</b>

Highest level of education					
Age Group (years)	Both sexes				
	n	% None	% Standard 1-5	%Standard 6-8	% Secondary and above
25-34	2334	16.3	32.7	29.5	21.5
35-44	1321	25.5	36.8	26.9	10.7
45-54	899	33.7	35.0	25.9	5.3
55-64	649	40.7	37.4	17.4	4.5
<b>25-64</b>	<b>5203</b>	<b>24.7</b>	<b>34.7</b>	<b>26.7</b>	<b>13.8</b>

**Ethnicity** Description: Summary results for the ethnicity of the respondents.

Instrument Question:  
 • What is your ethnic background?

Ethnic group of respondents						
Age Group (years)	Both Sexes					
	n	% Chewa	% Tumbuka	% Ngoni	% Yao	% Other
25-34	2332	34.9	12.7	8.8	12.5	31.1
35-44	1319	35.6	12.4	9.1	13.0	29.8
45-54	898	36.2	11.4	8.4	11.4	32.7
55-64	649	36.8	10.6	6.6	13.3	32.7
<b>25-64</b>	<b>5198</b>	<b>35.6</b>	<b>12.1</b>	<b>8.5</b>	<b>12.5</b>	<b>31.3</b>

**Marital status** Description: Marital status of survey respondents.

Instrument question:

- What is your marital status?

Marital status							
Age Group (years)	Men						
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
25-34	716	10.1	85.2	3.1	1.4	0.3	0.0
35-44	459	3.1	90.8	3.9	1.1	0.9	0.2
45-54	296	0.7	87.5	4.4	4.7	2.7	0.0
55-64	216	1.4	86.6	5.1	2.8	3.7	0.5
<b>25-64</b>	<b>1687</b>	<b>5.4</b>	<b>87.3</b>	<b>3.8</b>	<b>2.1</b>	<b>1.3</b>	<b>0.1</b>

Marital status							
Age Group (years)	Women						
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
25-34	1613	3.4	74.1	9.8	9.0	3.5	0.2
35-44	860	1.0	68.0	8.0	10.1	12.3	0.5
45-54	604	0.7	59.1	8.1	12.3	19.9	0.0
55-64	434	0.5	46.1	5.8	11.1	36.6	0.0
<b>25-64</b>	<b>3511</b>	<b>2.0</b>	<b>66.6</b>	<b>8.6</b>	<b>10.1</b>	<b>12.6</b>	<b>0.2</b>

Marital status							
Age Group (years)	Both Sexes						
	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabiting
25-34	2329	5.5	77.5	7.7	6.7	2.5	0.1
35-44	1319	1.7	76.0	6.6	7.0	8.3	0.4
45-54	900	0.7	68.4	6.9	9.8	14.2	0.0
55-64	650	0.8	59.5	5.5	8.3	25.7	0.2
<b>25-64</b>	<b>5198</b>	<b>3.1</b>	<b>73.3</b>	<b>7.0</b>	<b>7.5</b>	<b>8.9</b>	<b>0.2</b>

**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?

Employment status					
Men					
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	719	3.2	9.0	54.1	33.7
35-44	459	5.7	6.1	54.9	33.3
45-54	296	5.4	5.4	45.6	43.6
55-64	216	2.8	5.1	47.2	44.9
<b>25-64</b>	<b>1690</b>	<b>4.2</b>	<b>7.1</b>	<b>52.0</b>	<b>36.7</b>

Employment status					
Women					
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	1611	1.1	1.2	35.8	61.8
35-44	860	3.4	0.7	35.7	60.2
45-54	604	1.0	1.0	33.6	64.4
55-64	433	0.7	0.5	33.5	65.4
<b>25-64</b>	<b>3508</b>	<b>1.6</b>	<b>1.0</b>	<b>35.1</b>	<b>62.3</b>

Employment status					
Both Sexes					
Age Group (years)	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
25-34	2330	1.8	3.6	41.5	53.1
35-44	1319	4.2	2.6	42.4	50.9
45-54	900	2.4	2.4	37.6	57.6
55-64	649	1.4	2.0	38.1	58.6
<b>25-64</b>	<b>5198</b>	<b>2.4</b>	<b>3.0</b>	<b>40.6</b>	<b>54.0</b>



**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						
	n	% Non-paid	% Student	% Home-maker	% Retired	Unemployed	
						% Able to work	% Not able to work
25-34	242	18.6	2.1	36.8	0.8	37.6	4.1
35-44	153	14.4	0.0	39.2	0.7	40.5	5.2
45-54	129	15.5	0.0	36.4	5.4	33.3	9.3
55-64	97	11.3	0.0	28.9	10.3	37.1	12.4
<b>25-64</b>	<b>621</b>	<b>15.8</b>	<b>0.8</b>	<b>36.1</b>	<b>3.2</b>	<b>37.4</b>	<b>6.8</b>

Unpaid work and unemployed							
Age Group (years)	Women						
	n	% Non-paid	% Student	% Home-maker	% Retired	Unemployed	
						% Able to work	% Not able to work
25-34	996	11.7	1.3	60.2	0.4	25.1	1.2
35-44	518	7.9	0.0	66.8	0.4	23.9	1.0
45-54	389	8.7	0.0	64.8	0.8	25.2	0.5
55-64	283	8.8	0.0	66.8	2.8	19.1	2.5
<b>25-64</b>	<b>2186</b>	<b>9.9</b>	<b>0.6</b>	<b>63.4</b>	<b>0.8</b>	<b>24.1</b>	<b>1.2</b>

Unpaid work and unemployed							
Age Group (years)	Both Sexes						
	n	% Non-paid	% Student	% Home-maker	% Retired	Unemployed	
						% Able to work	% Not able to work
25-34	1238	13.1	1.5	55.7	0.5	27.5	1.8
35-44	671	9.4	0.0	60.5	0.4	27.7	1.9
45-54	518	10.4	0.0	57.7	1.9	27.2	2.7
55-64	380	9.5	0.0	57.1	4.7	23.7	5.0
<b>25-64</b>	<b>2807</b>	<b>11.2</b>	<b>0.6</b>	<b>57.4</b>	<b>1.3</b>	<b>27.0</b>	<b>2.4</b>

**Per capita annual income** Description: Mean reported per capita annual income of respondents in local currency.

Instrument question:

- How many people older than 18 years, including yourself, live in your household?
- Taking the past year, can you tell me what the average earning of the household has been?

Mean annual per capita income	
n	Mean
<b>2818</b>	<b>48,379.33</b>

## Tobacco Use

---

**Current smoking** Description: Current smokers among all respondents.

Instrument questions:

- Have you ever smoked any tobacco products in your life?
- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?

Percentage of current smokers									
Age Group (years)	Men			Women			Both Sexes		
	n	% Current smoker	95% CI	n	% Current smoker	95% CI	n	% Current smoker	95% CI
25-34	719	21.7	17.9-25.5	1616	0.4	0.1-0.8	2335	11.2	9.2-13.2
35-44	459	28.2	24.0-32.5	862	2.3	1.2-3.4	1321	15.0	12.7-17.3
45-54	296	30.6	25.2-36.0	604	6.3	3.7-8.9	900	17.5	14.5-20.5
55-64	216	31.3	25.0-37.5	434	8.4	4.8-11.9	650	18.9	15.4-22.3
<b>25-64</b>	<b>1690</b>	<b>25.9</b>	<b>23.3-28.5</b>	<b>3516</b>	<b>2.9</b>	<b>2.1-3.8</b>	<b>5206</b>	<b>14.1</b>	<b>12.7-15.6</b>

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**Smoking Status** Description: Smoking status of all respondents.

Instrument questions:

- Have you ever smoked any tobacco products in your life?
- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?

Smoking status							
Men							
Age Group (years)	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	719	18.1	14.7-21.6	3.6	2.2-4.9	78.3	74.5-82.1
35-44	459	24.9	20.9-28.9	3.3	1.7-5.0	71.8	67.5-76.0
45-54	296	28.4	23.3-33.6	2.1	0.6-3.7	69.4	64.0-74.8
55-64	216	29.9	23.5-36.3	1.4	0.0-2.9	68.7	62.5-75.0
<b>25-64</b>	<b>1690</b>	<b>22.8</b>	<b>20.5-25.2</b>	<b>3.0</b>	<b>2.2-3.9</b>	<b>74.1</b>	<b>71.5-76.7</b>

Smoking status							
Women							
Age Group (years)	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	1616	0.1	0.0-0.3	0.3	0.0-0.5	99.6	99.2-99.9
35-44	862	1.8	0.9-2.8	0.4	0.0-0.9	97.7	96.6-98.8
45-54	604	5.2	2.9-7.5	1.1	0.2-2.1	93.7	91.1-96.3
55-64	434	7.7	4.5-10.9	0.7	0.0-1.5	91.6	88.1-95.2
<b>25-64</b>	<b>3516</b>	<b>2.4</b>	<b>1.7-3.2</b>	<b>0.5</b>	<b>0.3-0.8</b>	<b>97.1</b>	<b>96.2-97.9</b>

Smoking status							
Both Sexes							
Age Group (years)	n	Current smoker				% Does not smoke	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	2335	9.2	7.4-11.0	2.0	1.3-2.6	88.8	86.8-90.8
35-44	1321	13.1	10.9-15.3	1.8	1.0-2.7	85.0	82.7-87.3
45-54	900	15.9	13.0-18.7	1.6	0.7-2.5	82.5	79.5-85.5
55-64	650	17.9	14.4-21.3	1.0	0.2-1.8	81.1	77.7-84.6
<b>25-64</b>	<b>5206</b>	<b>12.4</b>	<b>11.0-13.7</b>	<b>1.8</b>	<b>1.3-2.2</b>	<b>85.9</b>	<b>84.4-87.3</b>

**Smoking Status** Description: Smoking status of all respondents.

Instrument questions:

- Have you ever smoked any tobacco products in your life?
- Do you currently smoke any tobacco products, such as cigarettes, cigars, or pipes?
- Do you currently smoke tobacco products daily?

Smoking status							
Men							
Age Group (years)	n	Ever Smoked				% Never smoked	95% CI
		% Current smoker (daily + non daily)	95% CI	% Past smoker	95% CI		
25-34	719	21.7	17.9-25.5	9.4	7.4-11.4	68.9	65.0-72.7
35-44	459	28.2	24.0-32.5	9.3	6.2-12.4	62.5	57.7-67.2
45-54	296	30.6	25.2-36.0	14.7	11.0-18.4	54.8	48.8-60.7
55-64	216	31.3	25.0-37.5	21.1	15.7-26.5	47.7	40.5-54.9
<b>25-64</b>	<b>1690</b>	<b>25.9</b>	<b>23.3-28.5</b>	<b>11.5</b>	<b>10.0-13.1</b>	<b>62.6</b>	<b>59.7-65.5</b>

Smoking status							
Women							
Age Group (years)	n	Ever Smoked				% Never smoked	95% CI
		% Current smoker (daily + non daily)	95% CI	% Past smoker	95% CI		
25-34	1616	0.4	0.1-0.8	1.0	0.4-1.6	98.6	97.9-99.2
35-44	862	2.3	1.2-3.4	3.1	1.9-4.3	94.6	92.9-96.3
45-54	604	6.3	3.7-8.9	7.8	5.5-10.2	85.9	82.5-89.3
55-64	434	8.4	4.8-11.9	14.7	10.9-18.5	76.9	72.2-81.6
<b>25-64</b>	<b>3516</b>	<b>2.9</b>	<b>2.1-3.8</b>	<b>4.5</b>	<b>3.6-5.4</b>	<b>92.6</b>	<b>91.3-93.9</b>

Smoking status							
Both Sexes							
Age Group (years)	n	Ever Smoked				% Never smoked	95% CI
		% Current smoker (daily + non daily)	95% CI	% Past smoker	95% CI		
25-34	2335	11.2	9.2-13.2	5.3	4.1-6.4	83.6	81.4-85.7
35-44	1321	15.0	12.7-17.3	6.1	4.5-7.8	78.9	76.2-81.6
45-54	900	17.5	14.5-20.5	11.0	8.8-13.2	71.5	68.1-75.0
55-64	650	18.9	15.4-22.3	17.6	14.2-21.1	63.5	58.9-68.1
<b>25-64</b>	<b>5206</b>	<b>14.1</b>	<b>12.7-15.6</b>	<b>7.9</b>	<b>7.0-8.9</b>	<b>77.9</b>	<b>76.2-79.7</b>

**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
25-34	155	83.5	77.9-89.1	7	31.7	0.6-62.9	162	82.5	77.0-88.0
35-44	131	88.2	82.7-93.7	18	81.7	63.2-100.0	149	87.7	82.4-92.9
45-54	91	93.0	88.0-98.0	38	82.2	68.6-95.8	129	90.9	86.1-95.7
55-64	68	95.6	90.7-100.0	37	91.8	83.4-100.0	105	94.7	90.4-99.0
<b>25-64</b>	<b>445</b>	<b>88.2</b>	<b>85.2-91.2</b>	<b>100</b>	<b>82.3</b>	<b>74.5-90.1</b>	<b>545</b>	<b>87.6</b>	<b>84.7-90.5</b>

**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			Women			Both Sexes		
	n	Mean age	95% CI	n	Mean age	95% CI	n	Mean age	95% CI
25-34	120	20.0	19.0-21.0	0	--	--	120	20.0	19.0-21.0
35-44	104	22.2	20.9-23.5	13	24.6	19.8-29.4	117	22.4	21.1-23.6
45-54	74	24.1	22.0-26.1	23	26.5	20.5-32.4	97	24.4	22.6-26.3
55-64	50	23.8	20.6-27.0	24	22.6	18.2-27.1	74	23.6	20.9-26.2
<b>25-64</b>	<b>348</b>	<b>21.9</b>	<b>21.2-22.7</b>	<b>60</b>	<b>24.6</b>	<b>21.5-27.7</b>	<b>408</b>	<b>22.1</b>	<b>21.4-22.9</b>

Mean duration of smoking									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean duration	95% CI	n	Mean duration	95% CI	n	Mean duration	95% CI
25-34	120	9.0	8.0-10.0	0	--	--	120	9.0	8.0-10.0
35-44	104	16.7	15.4-18.1	13	16.9	12.0-21.8	117	16.7	15.4-18.0
45-54	74	24.9	22.8-26.9	23	23.8	17.8-29.7	97	24.7	22.9-26.5
55-64	50	35.7	32.8-38.7	24	37.2	32.5-42.0	74	36.1	33.5-38.6
<b>25-64</b>	<b>348</b>	<b>17.7</b>	<b>16.5-19.0</b>	<b>60</b>	<b>27.4</b>	<b>23.5-31.2</b>	<b>408</b>	<b>18.5</b>	<b>17.3-19.8</b>

**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?

<b>Manufactured cigarette smokers among daily smokers</b>									
Age Group (years)	<b>Men</b>			<b>Women</b>			<b>Both Sexes</b>		
	n	% Manu- factured cigarette smoker	95% CI	n	% Manu- factured cigarette smoker	95% CI	n	% Manu- factured cigarette smoker	95% CI
25-34	129	65.5	56.1-74.8	2	100.0	100.0-100.0	131	65.7	56.4-75.0
35-44	116	48.4	38.3-58.6	15	7.0	0.0-20.6	131	45.5	35.7-55.2
45-54	84	34.1	23.6-44.6	31	16.4	4.5-28.2	115	31.0	22.1-39.8
55-64	65	34.2	23.2-45.2	34	11.3	1.4-21.1	99	28.8	20.2-37.4
<b>25-64</b>	<b>394</b>	<b>49.9</b>	<b>43.3-56.4</b>	<b>82</b>	<b>14.6</b>	<b>7.8-21.4</b>	<b>476</b>	<b>46.4</b>	<b>40.3-52.4</b>

**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												
Men												
Age Group (years)	n	Mean # of manufactured 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
25-34	119	2.9	2.4-3.5	119	3.8	2.5-5.0	115	0.5	0.0-1.3	115	1.4	0.0-3.2
35-44	103	3.0	2.1-3.8	109	6.1	4.7-7.6	102	0.1	0.0-0.2	103	0.2	0.0-0.4
45-54	69	2.8	1.3-4.4	69	6.5	4.3-8.8	69	0.1	0.0-0.3	71	1.1	0.0-2.6
55-64	54	3.4	1.0-5.8	57	5.5	3.9-7.1	53	1.3	0.0-3.6	56	2.6	0.0-6.8
<b>25-64</b>	<b>345</b>	<b>3.0</b>	<b>2.5-3.5</b>	<b>354</b>	<b>5.2</b>	<b>4.3-6.1</b>	<b>339</b>	<b>0.4</b>	<b>0.0-0.8</b>	<b>345</b>	<b>1.2</b>	<b>0.2-2.1</b>

Mean amount of tobacco used by daily smokers by type												
Women												
Age Group (years)	n	Mean # of manufactured 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
25-34	2	2.5	1.8-3.2	2	0.0	--	2	0.0	--	2	0.0	--
35-44	14	1.5	0.0-4.4	15	2.8	0.9-4.6	14	0.0	--	14	1.7	0.0-3.7
45-54	24	0.9	0.0-1.8	26	4.6	0.9-8.3	23	0.0	0.0-0.1	26	3.4	0.0-8.1
55-64	27	2.1	0.0-5.4	28	2.5	1.6-3.5	28	1.7	0.0-4.9	28	3.7	0.0-7.7
<b>25-64</b>	<b>67</b>	<b>1.5</b>	<b>0.1-3.0</b>	<b>71</b>	<b>3.3</b>	<b>1.7-5.0</b>	<b>67</b>	<b>0.7</b>	<b>0.0-2.0</b>	<b>70</b>	<b>3.0</b>	<b>0.0-6.3</b>

Mean amount of tobacco used by daily smokers by type												
Both Sexes												
Age Group (years)	n	Mean # of manufactured 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
25-34	121	2.9	2.4-3.4	121	3.7	2.5-5.0	117	0.5	0.0-1.3	117	1.4	0.0-3.1
35-44	117	2.9	2.0-3.7	124	5.9	4.5-7.3	116	0.1	0.0-0.2	117	0.3	0.1-0.5
45-54	93	2.5	1.2-3.8	95	6.2	4.2-8.1	92	0.1	0.0-0.3	97	1.5	0.0-3.0
55-64	81	3.1	1.1-5.1	85	4.8	3.5-6.1	81	1.4	0.0-3.3	84	2.8	0.0-6.2
<b>25-64</b>	<b>412</b>	<b>2.8</b>	<b>2.4-3.3</b>	<b>425</b>	<b>5.0</b>	<b>4.2-5.8</b>	<b>406</b>	<b>0.4</b>	<b>0.0-0.9</b>	<b>415</b>	<b>1.3</b>	<b>0.4-2.3</b>

**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 question:

- 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
25-34	719	4.9	3.2-6.6	1616	0.5	0.1-0.8	2335	2.7	1.8-3.6
35-44	459	6.7	4.6-8.9	862	0.9	0.3-1.5	1321	3.8	2.6-4.9
45-54	296	11.1	7.5-14.6	604	3.4	1.8-4.9	900	6.9	5.0-8.8
55-64	216	13.6	9.3-17.9	434	5.9	3.5-8.3	650	9.4	7.0-11.8
<b>25-64</b>	<b>1690</b>	<b>7.3</b>	<b>6.1-8.5</b>	<b>3516</b>	<b>1.8</b>	<b>1.3-2.3</b>	<b>5206</b>	<b>4.5</b>	<b>3.8-5.2</b>

Mean years since cessation									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean years	95% CI	n	Mean years	95% CI	n	Mean years	95% CI
25-34	36	4.6	3.4-5.7	7	10.9	6.0-15.9	43	5.1	4.0-6.2
35-44	30	8.6	5.9-11.3	8	8.0	0.8-15.1	38	8.5	6.1-10.9
45-54	32	10.9	8.1-13.6	19	6.2	1.5-10.9	51	9.7	7.4-12.0
55-64	30	15.5	10.3-20.6	21	14.8	8.6-21.0	51	15.3	11.1-19.5
<b>25-64</b>	<b>128</b>	<b>9.3</b>	<b>7.6-11.0</b>	<b>55</b>	<b>10.3</b>	<b>7.2-13.4</b>	<b>183</b>	<b>9.5</b>	<b>8.0-11.0</b>



**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 or chewing tobacco?

Current users of smokeless tobacco									
Age Group (years)	Men			Women			Both Sexes		
	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
25-34	719	0.4	0.0-0.8	1616	0.8	0.3-1.3	2335	0.6	0.2-0.9
35-44	459	1.1	0.1-2.0	862	3.7	2.2-5.2	1321	2.4	1.5-3.3
45-54	296	4.5	2.4-6.7	604	9.9	7.1-12.7	900	7.4	5.4-9.5
55-64	216	6.7	3.2-10.1	434	15.4	12.0-18.8	650	11.4	8.8-14.0
<b>25-64</b>	<b>1690</b>	<b>1.9</b>	<b>1.2-2.7</b>	<b>3516</b>	<b>5.0</b>	<b>4.0-6.0</b>	<b>5206</b>	<b>3.5</b>	<b>2.8-4.2</b>

**Smokeless tobacco use** Description: Status of using smokeless tobacco among all respondents.

Instrument questions:

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

Smokeless tobacco use							
Men							
Age Group (years)	n	Current user				% Does not use smokeless tobacco	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	719	0.0	0.0-0.0	0.4	0.0-0.8	99.6	99.2-100.0
35-44	459	0.4	0.0-1.0	0.7	0.0-1.4	98.9	98.0-99.9
45-54	296	3.2	1.3-5.1	1.3	0.0-2.6	95.5	93.3-97.6
55-64	216	6.2	2.9-9.5	0.5	0.0-1.4	93.3	89.9-96.8
<b>25-64</b>	<b>1690</b>	<b>1.3</b>	<b>0.8-1.8</b>	<b>0.6</b>	<b>0.2-1.0</b>	<b>98.1</b>	<b>97.3-98.8</b>

Smokeless tobacco use							
Women							
Age Group (years)	n	Current user				% Does not use smokeless tobacco	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	1616	0.6	0.2-1.0	0.2	0.0-0.4	99.2	98.7-99.8
35-44	862	2.6	1.3-3.8	1.1	0.4-1.8	96.3	94.8-97.8
45-54	604	8.4	5.9-10.9	1.5	0.5-2.5	90.1	87.3-92.9
55-64	434	14.7	11.3-18.0	0.7	0.0-1.6	84.6	81.2-88.0
<b>25-64</b>	<b>3516</b>	<b>4.3</b>	<b>3.3-5.2</b>	<b>0.7</b>	<b>0.4-1.0</b>	<b>95.0</b>	<b>94.0-96.0</b>

Smokeless tobacco use							
Both Sexes							
Age Group (years)	n	Current user				% Does not use smokeless tobacco	95% CI
		% Daily	95% CI	% Non-daily	95% CI		
25-34	2335	0.3	0.1-0.5	0.3	0.0-0.6	99.4	99.1-99.8
35-44	1321	1.5	0.8-2.2	0.9	0.4-1.4	97.6	96.7-98.5
45-54	900	6.0	4.2-7.8	1.4	0.6-2.3	92.6	90.5-94.6
55-64	650	10.8	8.3-13.3	0.6	0.0-1.2	88.6	86.0-91.2
<b>25-64</b>	<b>5206</b>	<b>2.8</b>	<b>2.2-3.4</b>	<b>0.7</b>	<b>0.4-0.9</b>	<b>96.5</b>	<b>95.8-97.2</b>

**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 or chewing tobacco?

Ex-daily smokeless tobacco users									
Age Group (years)	Men			Women			Both Sexes		
	n	% Ex daily users	95% CI	n	% Ex daily users	95% CI	n	% Ex daily users	95% CI
25-34	719	1.7	0.7-2.8	1616	0.4	0.0-0.7	2335	1.1	0.5-1.7
35-44	459	1.0	0.0-1.9	862	1.2	0.4-2.1	1321	1.1	0.5-1.8
45-54	296	2.5	0.6-4.3	604	2.5	1.3-3.8	900	2.5	1.4-3.6
55-64	216	2.3	0.3-4.3	434	3.3	1.6-4.9	650	2.8	1.6-4.1
<b>25-64</b>	<b>1690</b>	<b>1.7</b>	<b>1.0-2.5</b>	<b>3516</b>	<b>1.3</b>	<b>0.9-1.8</b>	<b>5206</b>	<b>1.5</b>	<b>1.1-2.0</b>

**Frequency of smokeless tobacco use among users by type** Description: Mean times per day smokeless tobacco used by smokeless tobacco users per day, by type.

Instrument question:

- On average, how many times a day do you use...?

<b>Mean times per day smokeless tobacco used by daily smokeless tobacco users by type</b>									
Age Group (years)	<b>Men</b>								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
25-34	0	--	--	0	--	--	0	--	--
35-44	2	3.0	--	2	1.5	--	2	0.0	--
45-54	10	0.7	--	8	4.5	--	10	0.0	--
55-64	13	0.3	--	13	5.1	--	13	0.0	--
<b>25-64</b>	<b>25</b>	<b>0.7</b>	<b>--</b>	<b>23</b>	<b>4.6</b>	<b>--</b>	<b>25</b>	<b>0.0</b>	<b>--</b>

<b>Mean times per day smokeless tobacco used by daily smokeless tobacco users by type</b>									
Age Group (years)	<b>Women</b>								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
25-34	10	1.3	0.2-2.5	10	1.0	0.0-2.0	10	0.5	0.0-1.5
35-44	18	2.8	1.3-4.3	16	0.8	0.0-1.9	20	1.6	0.4-2.9
45-54	45	1.9	1.1-2.8	43	2.8	0.0-5.9	40	1.7	0.5-3.0
55-64	56	3.4	1.0-5.7	54	4.1	1.9-6.3	56	1.5	0.0-3.3
<b>25-64</b>	<b>129</b>	<b>2.6</b>	<b>1.6-3.7</b>	<b>123</b>	<b>3.0</b>	<b>1.0-5.0</b>	<b>126</b>	<b>1.5</b>	<b>0.6-2.5</b>

<b>Mean times per day smokeless tobacco used by daily smokeless tobacco users by type</b>									
Age Group (years)	<b>Both Sexes</b>								
	n	Snuff by mouth	95% CI	n	Snuff by nose	95% CI	n	Chewing tobacco	95% CI
25-34	10	1.3	0.2-2.4	10	1.0	0.0-2.0	10	0.5	0.0-1.5
35-44	20	2.8	1.4-4.2	18	0.9	0.0-1.9	22	1.4	0.3-2.5
45-54	55	1.6	0.8-2.3	51	3.2	0.9-5.6	50	1.2	0.3-2.2
55-64	69	2.5	0.8-4.3	67	4.4	2.7-6.1	69	1.1	0.0-2.4
<b>25-64</b>	<b>154</b>	<b>2.1</b>	<b>1.3-3.0</b>	<b>146</b>	<b>3.3</b>	<b>1.8-4.9</b>	<b>151</b>	<b>1.2</b>	<b>0.5-1.9</b>

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

Instrument questions:

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

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
25-34	719	18.1	14.7-21.6	1616	0.7	0.3-1.2	2335	9.5	7.7-11.4
35-44	459	25.1	21.1-29.2	862	3.9	2.2-5.6	1321	14.3	12.0-16.5
45-54	296	30.7	25.4-36.1	604	11.4	8.1-14.6	900	20.3	17.1-23.5
55-64	216	34.7	28.5-41.0	434	18.9	14.9-22.9	650	26.2	22.5-29.8
<b>25-64</b>	<b>1690</b>	<b>23.8</b>	<b>21.4-26.2</b>	<b>3516</b>	<b>5.7</b>	<b>4.5-6.9</b>	<b>5206</b>	<b>14.5</b>	<b>13.1-16.0</b>

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
25-34	719	22.0	18.2-25.8	1616	1.2	0.6-1.8	2335	11.7	9.6-13.8
35-44	459	28.7	24.3-33.0	862	5.2	3.2-7.1	1321	16.7	14.3-19.1
45-54	296	33.2	27.7-38.8	604	13.8	10.3-17.3	900	22.8	19.4-26.2
55-64	216	36.6	30.4-42.8	434	19.8	15.8-23.8	650	27.5	23.8-31.2
<b>25-64</b>	<b>1690</b>	<b>27.1</b>	<b>24.4-29.8</b>	<b>3516</b>	<b>6.8</b>	<b>5.5-8.1</b>	<b>5206</b>	<b>16.7</b>	<b>15.1-18.3</b>

- Exposure to ETS in home in past 7 days** Description: Percentage of respondents exposed to environmental tobacco smoke in the home on one or more days in the past 7 days.
- Instrument question:
- In the past 7 days, how many days did someone in the house smoke when you were present?

Exposed to ETS in home on 1 or more of the past 7 days									
Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
25-34	598	20.2	16.7-23.7	1393	19.5	16.6-22.5	1991	19.9	17.3-22.5
35-44	399	24.7	20.2-29.2	755	23.1	19.4-26.7	1154	23.9	20.7-27.0
45-54	246	24.3	18.6-30.0	511	24.0	19.7-28.3	757	24.1	20.3-27.9
55-64	189	28.2	21.4-35.0	388	21.3	16.8-25.9	577	24.4	20.0-28.9
<b>25-64</b>	<b>1432</b>	<b>23.0</b>	<b>20.1-25.9</b>	<b>3047</b>	<b>21.4</b>	<b>19.0-23.8</b>	<b>4479</b>	<b>22.2</b>	<b>19.9-24.4</b>

- Exposure to ETS in the workplace in past 7 days** Description: Percentage of respondents exposed to environmental tobacco smoke in the workplace on one or more days in the past 7 days.
- Instrument question:
- In the past 7 days, how many days did someone smoke in closed areas in your workplace (in the building, in a work area or a specific office) when you were present?

Exposed to ETS in the workplace on 1 or more of the past 7 days									
Age Group (years)	Men			Women			Both Sexes		
	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
25-34	509	32.0	27.1-36.9	1154	15.4	12.2-18.7	1663	23.7	20.3-27.2
35-44	338	37.9	31.8-44.1	600	17.4	13.8-21.1	938	27.8	23.6-31.9
45-54	205	34.3	26.7-41.8	396	18.7	13.9-23.6	601	26.1	21.1-31.1
55-64	146	33.4	25.2-41.6	301	19.2	14.5-23.9	447	25.6	20.4-30.7
<b>25-64</b>	<b>1198</b>	<b>34.1</b>	<b>30.0-38.1</b>	<b>2451</b>	<b>17.0</b>	<b>14.3-19.7</b>	<b>3649</b>	<b>25.4</b>	<b>22.4-28.3</b>

## Alcohol Consumption

### Alcohol consumption status

Description: Alcohol consumption status of all respondents.

Instrument questions:

- Have you ever consumed an alcoholic drink such as ...?
- Have you consumed an alcoholic drink in the past 12 months?
- Have you consumed an alcoholic drink in the past 30 days?

Alcohol consumption status									
Men									
Age Group (years)	n	% 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
25-34	719	27.4	23.8-30.9	8.8	6.5-11.0	15.1	12.1-18.2	48.7	44.6-52.9
35-44	459	34.5	29.0-40.0	5.8	3.7-7.8	12.3	9.5-15.2	47.4	41.7-53.1
45-54	296	33.7	28.0-39.4	5.5	2.8-8.2	16.9	12.5-21.3	43.9	37.3-50.6
55-64	216	27.0	20.7-33.3	6.4	3.1-9.7	19.8	14.5-25.2	46.8	39.8-53.7
<b>25-64</b>	<b>1690</b>	<b>30.1</b>	<b>27.2-33.1</b>	<b>7.2</b>	<b>5.8-8.6</b>	<b>15.2</b>	<b>13.1-17.3</b>	<b>47.4</b>	<b>43.9-50.9</b>

Alcohol consumption status									
Women									
Age Group (years)	n	% 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
25-34	1616	2.2	1.4-3.1	1.8	1.1-2.4	4.4	3.3-5.6	91.6	90.1-93.0
35-44	862	4.4	2.7-6.0	1.9	1.0-2.8	4.6	3.2-6.1	89.1	86.7-91.5
45-54	604	6.4	4.3-8.6	1.8	0.7-2.8	8.1	5.8-10.3	83.7	80.3-87.2
55-64	434	7.6	5.0-10.1	3.3	1.7-4.9	11.1	7.4-14.8	78.0	73.0-83.1
<b>25-64</b>	<b>3516</b>	<b>4.2</b>	<b>3.2-5.2</b>	<b>2.0</b>	<b>1.5-2.5</b>	<b>6.0</b>	<b>5.0-7.0</b>	<b>87.8</b>	<b>86.1-89.6</b>

Alcohol consumption status									
Both Sexes									
Age Group (years)	n	% 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
25-34	2335	14.9	13.0-16.8	5.3	4.1-6.5	9.9	8.1-11.6	69.9	67.5-72.3
35-44	1321	19.1	15.8-22.5	3.8	2.6-5.0	8.4	6.8-10.0	68.7	65.0-72.3
45-54	900	19.0	15.7-22.3	3.5	2.1-4.9	12.1	9.7-14.6	65.4	61.2-69.6
55-64	650	16.5	13.2-19.8	4.7	3.0-6.5	15.1	11.7-18.5	63.7	59.2-68.2
<b>25-64</b>	<b>5206</b>	<b>16.9</b>	<b>15.1-18.7</b>	<b>4.5</b>	<b>3.8-5.3</b>	<b>10.5</b>	<b>9.3-11.7</b>	<b>68.1</b>	<b>65.8-70.4</b>

**Frequency of alcohol consumption**

Description: Frequency of alcohol consumption in the past 12 months among those respondents who have drunk in the last 12 months.

Instrument question:

- During the past 12 months, how frequently have you had at least one alcoholic drink?

Frequency of alcohol consumption in the past 12 months											
Age Group (years)	Men										
	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	256	3.8	1.5-6.0	5.7	2.6-8.7	30.8	25.1-36.6	34.6	28.2-41.0	25.1	19.1-31.1
35-44	186	15.1	9.8-20.3	5.0	1.4-8.5	45.2	37.5-53.0	22.5	16.0-29.0	12.2	7.8-16.7
45-54	114	12.9	6.5-19.2	1.8	0.0-4.3	35.7	27.6-43.9	27.3	19.4-35.3	22.3	14.8-29.7
55-64	72	14.9	5.9-23.8	7.8	1.6-14.1	34.0	21.1-46.9	17.7	6.9-28.4	25.6	13.7-37.6
<b>25-64</b>	<b>628</b>	<b>9.5</b>	<b>6.9-12.2</b>	<b>5.0</b>	<b>3.0-7.0</b>	<b>35.9</b>	<b>32.0-39.9</b>	<b>28.4</b>	<b>24.2-32.5</b>	<b>21.2</b>	<b>17.6-24.7</b>

Frequency of alcohol consumption in the past 12 months											
Age Group (years)	Women										
	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	65	5.0	0.0-10.2	3.1	0.0-7.1	23.3	11.6-35.1	25.8	12.3-39.4	42.8	29.1-56.5
35-44	52	10.0	0.6-19.4	6.1	0.0-12.8	23.2	11.7-34.6	30.9	19.1-42.7	29.9	16.0-43.7
45-54	48	17.8	4.5-31.1	0.0	0.0-0.0	24.8	10.4-39.3	30.7	15.1-46.3	26.7	12.8-40.6
55-64	47	6.6	0.0-15.6	6.1	0.0-12.8	23.9	11.5-36.3	31.3	17.1-45.4	32.2	19.3-45.0
<b>25-64</b>	<b>212</b>	<b>9.7</b>	<b>3.2-16.1</b>	<b>3.8</b>	<b>1.1-6.4</b>	<b>23.8</b>	<b>16.6-30.9</b>	<b>29.5</b>	<b>22.9-36.1</b>	<b>33.3</b>	<b>26.1-40.5</b>

Frequency of alcohol consumption in the past 12 months											
Age Group (years)	Both Sexes										
	n	% Daily	95% CI	% 5-6 days p. week	95% CI	% 1-4 days p. week	95% CI	% 1-3 days p. month	95% CI	% < once a month	95% CI
25-34	321	3.9	1.8-6.0	5.4	2.6-8.2	30.1	24.9-35.3	33.8	27.8-39.7	26.8	21.2-32.4
35-44	238	14.4	9.4-19.3	5.1	1.9-8.3	42.2	35.5-48.9	23.7	17.6-29.7	14.7	10.2-19.1
45-54	162	13.8	7.5-20.2	1.5	0.0-3.5	33.6	26.5-40.8	28.0	20.9-35.0	23.1	16.4-29.8
55-64	119	12.6	5.1-20.0	7.3	2.1-12.5	31.2	21.5-40.9	21.5	12.9-30.0	27.5	18.4-36.5
<b>25-64</b>	<b>840</b>	<b>9.6</b>	<b>6.7-12.4</b>	<b>4.8</b>	<b>3.1-6.6</b>	<b>34.1</b>	<b>30.6-37.6</b>	<b>28.5</b>	<b>24.7-32.4</b>	<b>22.9</b>	<b>19.7-26.2</b>



- Drinking occasions in the past 30 days** Description: Mean number of occasions with at least one drink in the past 30 days among current (past 30 days) drinkers.
- Instrument question:
- During the past 30 days, on how many occasions did you have at least one alcoholic drink?

Mean number of drinking occasions in the past 30 days among current (past 30 days) drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	171	3.8	3.1-4.5	32	4.0	0.8-7.3	203	3.8	3.1-4.5
35-44	139	7.6	6.0-9.3	33	4.0	2.8-5.2	172	7.2	5.7-8.7
45-54	80	7.2	4.0-10.4	31	5.1	2.0-8.2	111	6.8	4.1-9.5
55-64	47	9.0	5.9-12.2	28	4.1	1.4-6.8	75	7.7	5.0-10.5
<b>25-64</b>	<b>437</b>	<b>6.0</b>	<b>5.1-6.9</b>	<b>124</b>	<b>4.3</b>	<b>3.0-5.6</b>	<b>561</b>	<b>5.8</b>	<b>4.9-6.6</b>

- Standard drinks per drinking day** Description: Mean number of standard drinks consumed on a drinking occasion among current (past 30 days) drinker.
- Instrument question:
- During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

Mean number of standard drinks per drinking occasion among current (past 30 days) drinkers									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	157	4.5	3.6-5.3	32	3.0	0.3-5.8	189	4.3	3.5-5.2
35-44	129	5.4	4.0-6.7	31	2.8	1.9-3.6	160	5.1	3.8-6.3
45-54	74	4.9	3.4-6.4	33	2.2	1.4-2.9	107	4.3	3.1-5.5
55-64	48	3.5	2.2-4.7	26	2.5	1.6-3.3	74	3.2	2.3-4.2
<b>25-64</b>	<b>408</b>	<b>4.7</b>	<b>4.1-5.3</b>	<b>122</b>	<b>2.6</b>	<b>1.8-3.4</b>	<b>530</b>	<b>4.4</b>	<b>3.9-5.0</b>

**Average volume drinking categories among all respondents**

Description: Percentage of respondents engaging in category II and category III drinking.

Category III is defined as drinking  $\geq 60$ g of pure alcohol on average per day for men and  $\geq 40$  g for women.

Category II is defined as drinking 40-59.9g of pure alcohol on average per day for men and 20-39.9g for women.

A standard drink contains approximately 10g of pure alcohol.

Instrument questions:

- During the past 30 days, on how many occasions did you have at least one alcoholic drink?
- During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

<b>Category III drinking among all respondents</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	% Category III	95% CI	n	% Category III	95% CI	n	% Category III	95% CI
25-34	676	0.6	0.0-1.2	1612	0.1	0.0-0.2	2288	0.3	0.0-0.6
35-44	422	1.4	0.1-2.7	856	0.0	0.0-0.0	1278	0.7	0.1-1.3
45-54	268	1.2	0.0-2.6	596	0.1	0.0-0.4	864	0.6	0.0-1.3
55-64	202	1.4	0.0-2.9	426	0.2	0.0-0.5	628	0.7	0.0-1.5
<b>25-64</b>	<b>1568</b>	<b>1.0</b>	<b>0.4-1.5</b>	<b>3490</b>	<b>0.1</b>	<b>0.0-0.2</b>	<b>5058</b>	<b>0.5</b>	<b>0.2-0.8</b>

<b>Category II drinking among all respondents</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	% Category II	95% CI	n	% Category II	95% CI	n	% Category II	95% CI
25-34	676	0.3	0.0-0.8	1612	0.0	0.0-0.0	2288	0.2	0.0-0.4
35-44	422	1.2	0.1-2.2	856	0.2	0.0-0.5	1278	0.6	0.1-1.2
45-54	268	0.8	0.0-2.0	596	0.3	0.0-0.8	864	0.5	0.0-1.1
55-64	202	1.1	0.0-2.6	426	0.0	0.0-0.0	628	0.5	0.0-1.2
<b>25-64</b>	<b>1568</b>	<b>0.7</b>	<b>0.3-1.1</b>	<b>3490</b>	<b>0.1</b>	<b>0.0-0.2</b>	<b>5058</b>	<b>0.4</b>	<b>0.2-0.6</b>

**Average volume drinking categories among current (past 30 days) drinkers**

Description: Percentage of current (last 30 days) drinker engaging in category I, category II and category III drinking.

Category III is defined as drinking  $\geq 60$ g of pure alcohol on average per day for men and  $\geq 40$  g for women.

Category II is defined as drinking 40-59.9g of pure alcohol on average per day for men and 20-39.9g for women.

Category I is defined as drinking  $< 40$ g of pure alcohol on average per day for men and  $< 20$  for women.

A standard drink contains approximately 10g of pure alcohol.

Instrument questions:

- During the past 30 days, on how many occasions did you have at least one alcoholic drink?
- During the past 30 days, when you drank alcohol, on average, how many standard alcoholic drinks did you have during one occasion?

Category I, II and III drinking among current (past 30 days) drinkers							
Age Group (years)	Men						
	n	% Category III	95% CI	% Category II	95% CI	% Category I	95% CI
25-34	153	2.7	0.0-5.3	1.5	0.0-3.6	95.8	92.6-99.1
35-44	123	4.9	0.8-9.0	4.0	0.6-7.4	91.1	85.2-97.0
45-54	70	4.6	0.0-9.8	3.1	0.0-7.5	92.3	85.7-98.9
55-64	44	6.2	0.0-13.3	5.0	0.0-11.9	88.8	79.1-98.5
<b>25-64</b>	<b>390</b>	<b>4.0</b>	<b>1.9-6.1</b>	<b>2.9</b>	<b>1.2-4.5</b>	<b>93.2</b>	<b>90.5-95.8</b>

Category I, II and III drinking among current (past 30 days) drinkers							
Age Group (years)	Women						
	n	% Category III	95% CI	% Category II	95% CI	% Category I	95% CI
25-34	32	3.3	0.0-10.1	0.0	0.0-0.0	96.7	89.9-100.0
35-44	31	0.0	0.0-0.0	5.2	0.0-12.6	94.8	87.4-100.0
45-54	30	2.8	0.0-8.3	6.2	0.0-14.3	91.0	78.7-100.0
55-64	25	3.1	0.0-9.3	0.0	0.0-0.0	96.9	90.7-100.0
<b>25-64</b>	<b>118</b>	<b>2.3</b>	<b>0.0-4.9</b>	<b>3.0</b>	<b>0.2-5.9</b>	<b>94.7</b>	<b>90.4-99.0</b>

Category I, II and III drinking among current (past 30 days) drinkers							
Age Group (years)	Both Sexes						
	n	% Category III	95% CI	% Category II	95% CI	% Category I	95% CI
25-34	185	2.7	0.3-5.1	1.4	0.0-3.3	95.9	92.9-98.9
35-44	154	4.3	0.6-7.9	4.2	0.8-7.5	91.6	85.9-97.2
45-54	100	4.3	0.0-8.5	3.7	0.0-7.5	92.0	85.9-98.2
55-64	69	5.4	0.0-11.6	3.7	0.0-8.9	90.8	83.0-98.7
<b>25-64</b>	<b>508</b>	<b>3.8</b>	<b>1.9-5.6</b>	<b>2.9</b>	<b>1.4-4.4</b>	<b>93.4</b>	<b>90.9-95.8</b>

**Largest number of drinks in the past 30 days**

Description: Largest number of drinks consumed during a single occasion in the past 30 days among current (past 30 days) drinker).

Instrument question:

- During the past 30 days what was the largest number of standard alcoholic drinks you had on a single occasion, counting all types of alcoholic drinks together?

Mean maximum number of drinks consumed on one occasion in the past 30 days									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean maximum number	95% CI	n	Mean maximum number	95% CI	n	Mean maximum number	95% CI
25-34	156	5.3	4.5-6.1	32	3.4	0.6-6.2	188	5.1	4.4-5.9
35-44	132	5.8	4.5-7.1	30	2.8	1.9-3.7	162	5.4	4.3-6.6
45-54	72	6.8	4.9-8.6	33	2.2	1.6-2.8	105	5.8	4.4-7.2
55-64	47	3.7	3.0-4.4	25	3.1	2.0-4.3	72	3.5	2.9-4.1
<b>25-64</b>	<b>407</b>	<b>5.5</b>	<b>4.9-6.2</b>	<b>120</b>	<b>2.8</b>	<b>2.0-3.7</b>	<b>527</b>	<b>5.2</b>	<b>4.6-5.7</b>

**Five/four or more drinks on a single occasion** Description: Percentage of men who had five or more/women who had four or more drinks on any day in the past 30 days during a single occasion among the total population.

Instrument question:

- During the past 30 days, how many times did you have  
for men: **five or more**  
for women: **four or more**  
standard alcoholic drinks in a single drinking occasion?

Five/four or more drinks on a single occasion at least once during the past 30 days among total population						
Age Group (years)	Men			Women		
	n	% ≥ 5 drinks	95% CI	n	% ≥ 4 drinks	95% CI
25-34	719	16.7	13.7-19.8	1616	1.1	0.6-1.6
35-44	459	22.0	17.7-26.3	862	2.5	1.2-3.8
45-54	296	21.6	16.3-27.0	604	3.7	2.1-5.3
55-64	216	18.1	12.2-24.0	434	4.6	2.4-6.8
<b>25-64</b>	<b>1690</b>	<b>19.0</b>	<b>16.5-21.5</b>	<b>3516</b>	<b>2.3</b>	<b>1.6-3.1</b>

**Five/four or more drinks on a single occasion** Description: Mean number of times in the past 30 days on which current (past 30 days) drinker drank five (for men)/four (for women) or more drinks during a single occasion among current (past 30 days) drinkers.

Instrument question:

- During the past 30 days, how many times did you have  
for men: **five or more**  
for women: **four or more**  
standard alcoholic drinks in a single drinking occasion?

Mean number of times with five/four or more drinks during a single occasion in the past 30 days among current drinkers						
Age Group (years)	Men			Women		
	n	Mean number of times	95% CI	n	Mean number of times	95% CI
25-34	162	2.5	2.0-3.0	33	1.0	0.6-1.5
35-44	141	3.6	2.8-4.5	32	1.6	1.0-2.3
45-54	81	3.1	2.2-3.9	36	2.2	0.9-3.5
55-64	48	4.4	2.4-6.5	28	1.8	0.9-2.6
<b>25-64</b>	<b>432</b>	<b>3.1</b>	<b>2.7-3.6</b>	<b>129</b>	<b>1.7</b>	<b>1.1-2.3</b>

**Drinking with meals** Description: Percentage of current (past 30 days) drinkers who usually, sometimes, rarely or never drink with meals.

Instrument questions:

- During the past 30 days, when you consumed an alcoholic drink, how often was it with meals? Please do not count snacks.

Drinking with meals among current drinker									
Men									
Age Group (years)	n	% Usually with meals	95% CI	% Sometimes with meals	95% CI	% Rarely with meals	95% CI	% Never with meals	95% CI
25-34	196	62.0	55.2-68.7	21.5	15.8-27.2	5.4	1.7-9.2	11.1	6.1-16.0
35-44	160	60.7	53.3-68.0	24.2	18.5-29.9	8.4	4.2-12.7	6.7	2.4-11.0
45-54	98	56.0	45.0-67.0	23.6	14.6-32.6	8.6	3.0-14.1	11.9	5.6-18.2
55-64	58	62.4	50.7-74.2	25.3	14.9-35.8	3.5	0.0-8.3	8.7	1.2-16.2
<b>25-64</b>	<b>512</b>	<b>60.5</b>	<b>56.1-65.0</b>	<b>23.0</b>	<b>19.5-26.6</b>	<b>6.7</b>	<b>4.3-9.1</b>	<b>9.7</b>	<b>6.8-12.7</b>

Drinking with meals among current drinker									
Men									
Age Group (years)	n	% Usually with meals	95% CI	% Sometimes with meals	95% CI	% Rarely with meals	95% CI	% Never with meals	95% CI
25-34	36	68.4	53.4-83.4	22.8	8.7-36.9	3.2	0.0-9.3	5.7	0.0-13.5
35-44	37	61.5	43.9-79.1	24.0	9.8-38.1	0.0	0.0-0.0	14.5	0.3-28.8
45-54	38	62.3	45.9-78.8	22.7	9.8-35.6	8.9	0.0-18.6	6.1	0.0-14.1
55-64	33	53.0	34.5-71.6	18.0	4.6-31.4	8.8	0.0-18.7	20.3	5.3-35.2
<b>25-64</b>	<b>144</b>	<b>61.5</b>	<b>51.6-71.4</b>	<b>22.0</b>	<b>14.9-29.0</b>	<b>5.2</b>	<b>1.4-8.9</b>	<b>11.4</b>	<b>4.6-18.2</b>

Drinking with meals among current drinker									
Men									
Age Group (years)	n	% Usually with meals	95% CI	% Sometimes with meals	95% CI	% Rarely with meals	95% CI	% Never with meals	95% CI
25-34	232	62.4	56.0-68.9	21.6	16.1-27.2	5.3	1.8-8.8	10.7	5.9-15.4
35-44	197	60.8	53.9-67.7	24.1	19.0-29.3	7.5	3.7-11.2	7.6	3.2-12.1
45-54	136	57.1	47.8-66.5	23.4	15.7-31.1	8.6	4.0-13.3	10.8	5.4-16.3
55-64	91	60.1	49.6-70.6	23.5	14.9-32.1	4.8	0.4-9.2	11.6	4.6-18.6
<b>25-64</b>	<b>656</b>	<b>60.7</b>	<b>56.3-65.0</b>	<b>22.9</b>	<b>19.6-26.2</b>	<b>6.5</b>	<b>4.3-8.7</b>	<b>9.9</b>	<b>6.9-12.9</b>

**Past 7 days drinking** Description: Frequency and quantity of drinks consumed in the past 7 days by current (past 30 days) drinkers, grouped into three categories.

Instrument question:

- During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?

Frequency and quantity of drinks consumed in the past 7 days							
Men							
Age Group (years)	n	% Drank on 4+ days	95% CI	% 5+ drinks on any day	95% CI	% 20+ drinks in 7 days	95% CI
25-34	187	16.9	11.1-22.6	24.0	16.6-31.3	7.6	3.5-11.7
35-44	151	31.1	22.5-39.8	27.7	20.6-34.8	12.3	6.9-17.6
45-54	88	15.2	8.0-22.4	19.0	10.8-27.2	3.7	0.0-7.8
55-64	54	33.9	21.3-46.5	25.4	13.5-37.4	11.8	3.0-20.6
<b>25-64</b>	<b>480</b>	<b>22.4</b>	<b>18.0-26.8</b>	<b>24.3</b>	<b>19.5-29.2</b>	<b>8.7</b>	<b>5.9-11.5</b>

Frequency and quantity of drinks consumed in the past 7 days							
Women							
Age Group (years)	n	% Drank on 4+ days	95% CI	% 4+ drinks on any day	95% CI	% 15+ drinks in 7 days	95% CI
25-34	35	11.7	1.8-21.7	11.1	0.9-21.2	2.7	0.0-8.0
35-44	34	19.5	6.3-32.7	16.6	3.9-29.3	5.6	0.0-13.6
45-54	36	15.8	0.5-31.1	8.0	0.0-16.7	7.6	0.0-18.0
55-64	32	12.8	0.0-27.5	9.3	0.0-19.1	6.5	0.0-18.9
<b>25-64</b>	<b>137</b>	<b>15.1</b>	<b>5.4-24.7</b>	<b>11.2</b>	<b>5.4-17.1</b>	<b>5.6</b>	<b>0.1-11.2</b>

Frequency and quantity of drinks consumed in the past 7 days			
Both Sexes			
Age Group (years)	n	% Drank on 4+ days	95% CI
25-34	222	16.5	11.0-21.9
35-44	185	29.8	21.5-38.1
45-54	124	15.3	8.4-22.1
55-64	86	28.5	18.3-38.7
<b>25-64</b>	<b>617</b>	<b>21.5</b>	<b>17.0-25.9</b>

## Fruit and Vegetable Consumption

**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?

Mean number of days fruit consumed in a typical week									
Age Group (years)	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
25-34	631	2.2	2.0-2.4	1449	2.2	2.0-2.3	2080	2.2	2.0-2.3
35-44	403	1.8	1.6-2.1	766	2.0	1.8-2.2	1169	1.9	1.7-2.1
45-54	256	1.9	1.6-2.1	538	1.8	1.5-2.0	794	1.8	1.6-2.0
55-64	196	1.6	1.3-1.9	368	1.9	1.6-2.2	564	1.8	1.5-2.0
<b>25-64</b>	<b>1486</b>	<b>2.0</b>	<b>1.8-2.1</b>	<b>3121</b>	<b>2.0</b>	<b>1.8-2.2</b>	<b>4607</b>	<b>2.0</b>	<b>1.8-2.1</b>

Mean number of days vegetables consumed in a typical week									
Age Group (years)	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
25-34	712	5.3	5.1-5.5	1608	5.7	5.5-5.8	2320	5.5	5.4-5.7
35-44	454	5.5	5.3-5.7	858	5.7	5.5-5.9	1312	5.6	5.4-5.8
45-54	294	5.6	5.3-5.8	602	5.9	5.7-6.1	896	5.8	5.6-5.9
55-64	216	5.9	5.6-6.2	430	5.7	5.5-6.0	646	5.8	5.6-6.0
<b>25-64</b>	<b>1676</b>	<b>5.5</b>	<b>5.3-5.6</b>	<b>3498</b>	<b>5.7</b>	<b>5.6-5.9</b>	<b>5174</b>	<b>5.6</b>	<b>5.5-5.7</b>



**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?

Mean number of servings of fruit on average per day									
Age Group (years)	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
25-34	614	0.6	0.5-0.6	1399	0.5	0.5-0.6	2013	0.5	0.5-0.6
35-44	394	0.4	0.3-0.5	746	0.5	0.4-0.6	1140	0.4	0.4-0.5
45-54	245	0.5	0.4-0.6	510	0.4	0.3-0.6	755	0.5	0.4-0.6
55-64	187	0.4	0.3-0.5	351	0.5	0.4-0.7	538	0.4	0.3-0.5
<b>25-64</b>	<b>1440</b>	<b>0.5</b>	<b>0.4-0.5</b>	<b>3006</b>	<b>0.5</b>	<b>0.4-0.6</b>	<b>4446</b>	<b>0.5</b>	<b>0.4-0.5</b>

Mean number of servings of vegetables on average per day									
Age Group (years)	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
25-34	711	1.5	1.5-1.6	1607	1.6	1.6-1.7	2318	1.6	1.5-1.6
35-44	453	1.6	1.5-1.7	857	1.7	1.6-1.8	1310	1.6	1.6-1.7
45-54	293	1.6	1.5-1.7	599	1.7	1.6-1.8	892	1.7	1.6-1.8
55-64	216	1.7	1.6-1.8	429	1.8	1.6-2.0	645	1.7	1.6-1.9
<b>25-64</b>	<b>1673</b>	<b>1.6</b>	<b>1.5-1.6</b>	<b>3492</b>	<b>1.7</b>	<b>1.6-1.8</b>	<b>5165</b>	<b>1.6</b>	<b>1.6-1.7</b>

Mean number of servings of fruit and/or vegetables on average per day									
Age Group (years)	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
25-34	713	2.0	1.9-2.1	1611	2.1	2.0-2.2	2324	2.0	2.0-2.1
35-44	456	1.9	1.8-2.0	857	2.1	2.0-2.2	1313	2.0	1.9-2.1
45-54	294	2.0	1.9-2.2	599	2.1	2.0-2.3	893	2.1	1.9-2.2
55-64	216	2.0	1.8-2.2	431	2.2	1.9-2.5	647	2.1	1.9-2.3
<b>25-64</b>	<b>1679</b>	<b>2.0</b>	<b>1.9-2.1</b>	<b>3498</b>	<b>2.1</b>	<b>2.0-2.2</b>	<b>5177</b>	<b>2.0</b>	<b>2.0-2.1</b>

**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									
Men									
Age Group (years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
25-34	713	13.9	11.1-16.8	74.6	70.9-78.3	9.1	6.7-11.5	2.4	1.2-3.5
35-44	456	17.5	13.4-21.6	73.4	69.0-77.9	8.1	5.6-10.6	1.0	0.0-1.9
45-54	294	16.0	11.5-20.4	74.7	69.6-79.7	6.5	3.4-9.7	2.8	0.8-4.8
55-64	216	11.9	6.7-17.1	79.0	73.5-84.6	7.1	3.9-10.3	2.0	0.0-4.1
<b>25-64</b>	<b>1679</b>	<b>14.9</b>	<b>12.5-17.4</b>	<b>74.8</b>	<b>72.1-77.5</b>	<b>8.2</b>	<b>6.6-9.8</b>	<b>2.0</b>	<b>1.3-2.8</b>

Number of servings of fruit and/or vegetables on average per day									
Women									
Age Group (years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
25-34	1611	12.0	9.8-14.2	75.9	73.3-78.4	9.7	8.1-11.3	2.4	1.6-3.3
35-44	857	12.8	10.0-15.6	74.3	71.0-77.7	9.9	7.5-12.3	3.0	1.7-4.3
45-54	599	11.6	8.7-14.5	78.4	75.0-81.7	7.0	4.9-9.1	3.1	1.6-4.6
55-64	431	15.5	11.2-19.8	72.6	67.7-77.5	8.0	5.3-10.7	4.0	1.9-6.1
<b>25-64</b>	<b>3498</b>	<b>12.5</b>	<b>10.7-14.4</b>	<b>75.5</b>	<b>73.5-77.5</b>	<b>9.0</b>	<b>7.7-10.4</b>	<b>2.9</b>	<b>2.0-3.8</b>

Number of servings of fruit and/or vegetables on average per day									
Both Sexes									
Age Group (years)	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
25-34	2324	13.0	11.0-14.9	75.2	72.8-77.7	9.4	7.8-11.0	2.4	1.6-3.2
35-44	1313	15.1	12.2-18.0	73.9	70.8-77.0	9.0	7.2-10.8	2.0	1.0-3.0
45-54	893	13.6	10.8-16.4	76.7	73.6-79.7	6.8	4.9-8.7	3.0	1.6-4.3
55-64	647	13.8	10.1-17.6	75.6	71.7-79.4	7.6	5.3-9.8	3.0	1.5-4.6
<b>25-64</b>	<b>5177</b>	<b>13.7</b>	<b>11.8-15.6</b>	<b>75.2</b>	<b>73.3-77.1</b>	<b>8.6</b>	<b>7.4-9.8</b>	<b>2.5</b>	<b>1.8-3.2</b>

**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?

<b>Less than five servings of fruit and/or vegetables on average per day</b>									
Age Group (years)	<b>Men</b>			<b>Women</b>			<b>Both Sexes</b>		
	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI
25-34	713	97.6	96.5-98.8	1611	97.6	96.7-98.4	2324	97.6	96.8-98.4
35-44	456	99.0	98.1-100.0	857	97.0	95.7-98.3	1313	98.0	97.0-99.0
45-54	294	97.2	95.2-99.2	599	96.9	95.4-98.4	893	97.0	95.7-98.4
55-64	216	98.0	95.9-100.0	431	96.0	93.9-98.1	647	97.0	95.4-98.5
<b>25-64</b>	<b>1679</b>	<b>98.0</b>	<b>97.2-98.7</b>	<b>3498</b>	<b>97.1</b>	<b>96.2-98.0</b>	<b>5177</b>	<b>97.5</b>	<b>96.8-98.2</b>

**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 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	% Animal Fat	95% CI	% Butter	95% CI	% Margarine	95% CI
<b>5180</b>	<b>79.4</b>	<b>77.2-81.5</b>	<b>0.8</b>	<b>0.5-1.1</b>	<b>1.9</b>	<b>1.1-2.8</b>	<b>0.0</b>	<b>0.0-0.1</b>

Type of oil or fat most often used for meal preparation in household							
n (households)	% none in particular	95% CI	% None used	95% CI	% Other	95% CI	
<b>5180</b>	<b>4.1</b>	<b>2.7-5.4</b>	<b>13.0</b>	<b>11.2-14.9</b>	<b>0.8</b>	<b>0.1-1.4</b>	

**Eating outside home**

Description: Mean number of meals per week eaten outside a home.

Instrument question:

- On average, how many meals per week do you eat that were not prepared at a home? By meal, I mean breakfast, lunch and dinner.

Age Group (years)	Mean number of meals eaten outside a home								
	Men			Women			Both Sexes		
	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
25-34	663	1.1	0.8-1.4	1497	0.7	0.5-0.9	2160	0.9	0.7-1.1
35-44	424	1.0	0.7-1.2	781	0.5	0.4-0.6	1205	0.7	0.6-0.9
45-54	265	0.8	0.5-1.2	540	0.8	0.4-1.1	805	0.8	0.5-1.1
55-64	198	1.1	0.6-1.7	405	0.7	0.4-1.1	603	0.9	0.6-1.2
<b>25-64</b>	<b>1550</b>	<b>1.0</b>	<b>0.8-1.3</b>	<b>3223</b>	<b>0.7</b>	<b>0.5-0.8</b>	<b>4773</b>	<b>0.8</b>	<b>0.7-1.0</b>

## Physical Activity

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**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, and  
(2) to classify a certain percentage of a population as 'inactive' by setting up a cut-point for a specific amount of physical activity.

When analyzing GPAQ data, both continuous as well as categorical indicators are used.

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**Metabolic Equivalent (MET)** METs (Metabolic Equivalents) 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>

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**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 1,500 MET-minutes/week OR  
- 7 or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 3,000 MET-minutes per week.

- **Moderate**

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.

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**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
25-34	579	5.6	3.4-7.8	4.8	2.8-6.9	89.5	86.6-92.4
35-44	361	5.4	3.2-7.7	7.6	4.6-10.5	87.0	83.2-90.8
45-54	243	8.8	5.1-12.4	6.4	2.5-10.3	84.9	80.1-89.6
55-64	172	7.6	3.3-11.9	4.0	1.2-6.8	88.4	83.5-93.3
<b>25-64</b>	<b>1355</b>	<b>6.3</b>	<b>4.8-7.8</b>	<b>5.7</b>	<b>4.3-7.1</b>	<b>88.0</b>	<b>85.8-90.2</b>

Level of total physical activity							
Age Group (years)	Women						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	1247	12.7	10.2-15.2	9.7	7.5-11.9	77.6	74.3-81.0
35-44	660	11.6	8.3-14.9	6.5	4.5-8.4	81.9	77.8-86.1
45-54	471	11.8	8.7-14.9	6.0	3.6-8.3	82.2	78.5-86.0
55-64	324	15.8	11.3-20.2	7.7	4.9-10.5	76.5	71.2-81.8
<b>25-64</b>	<b>2702</b>	<b>12.6</b>	<b>10.6-14.7</b>	<b>8.0</b>	<b>6.5-9.4</b>	<b>79.4</b>	<b>76.6-82.2</b>

Level of total physical activity							
Age Group (years)	Both Sexes						
	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
25-34	1826	9.1	7.2-10.9	7.2	5.6-8.8	83.8	81.3-86.2
35-44	1021	8.5	6.3-10.7	7.0	5.2-8.8	84.4	81.4-87.5
45-54	714	10.4	7.9-12.8	6.2	3.9-8.5	83.5	80.2-86.8
55-64	496	11.9	8.4-15.4	5.9	3.9-8.0	82.2	78.2-86.2
<b>25-64</b>	<b>4057</b>	<b>9.5</b>	<b>8.0-10.9</b>	<b>6.8</b>	<b>5.7-8.0</b>	<b>83.7</b>	<b>81.5-85.9</b>

**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
25-34	579	333.0	313.8-352.2	1247	238.0	224.4-251.7	1826	286.9	273.6-300.2
35-44	361	330.6	305.8-355.4	660	255.1	238.6-271.6	1021	292.6	275.9-309.4
45-54	243	311.4	284.0-338.9	471	261.3	243.0-279.6	714	285.1	267.7-302.4
55-64	172	301.9	273.2-330.5	324	228.3	207.8-248.9	496	263.3	244.4-282.1
<b>25-64</b>	<b>1355</b>	<b>325.4</b>	<b>310.9-339.9</b>	<b>2702</b>	<b>245.4</b>	<b>234.4-256.4</b>	<b>4057</b>	<b>285.2</b>	<b>274.3-296.2</b>

**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	Inter-quartile range (P25-P75)	n	Median minutes	Inter-quartile range (P25-P75)	n	Median minutes	Inter-quartile range (P25-P75)
25-34	579	302.1	199.3-426.4	1247	218.6	108.6-325.7	1826	257.1	150.0-385.7
35-44	361	308.6	175.7-454.3	660	244.3	128.6-360.0	1021	274.3	150.0-400.0
45-54	243	282.9	157.1-436.9	471	248.6	145.7-357.1	714	265.7	154.3-381.4
55-64	172	295.7	180.0-368.6	324	214.3	90.0-334.3	496	257.1	138.6-355.7
<b>25-64</b>	<b>1355</b>	<b>300.0</b>	<b>188.6-428.6</b>	<b>2702</b>	<b>231.4</b>	<b>120.0-342.9</b>	<b>4057</b>	<b>261.4</b>	<b>150.0-385.7</b>



**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
25-34	579	238.7	225.1-252.3	1247	187.8	176.8-198.7	1826	214.0	204.5-223.4
35-44	361	255.7	234.8-276.6	660	208.3	193.6-223.0	1021	231.8	218.0-245.6
45-54	243	250.3	228.0-272.7	471	217.6	202.1-233.1	714	233.1	219.2-247.1
55-64	172	233.4	207.1-259.7	324	188.4	171.0-205.9	496	209.8	193.1-226.5
<b>25-64</b>	<b>1355</b>	<b>244.3</b>	<b>233.2-255.3</b>	<b>2702</b>	<b>198.5</b>	<b>189.5-207.4</b>	<b>4057</b>	<b>221.3</b>	<b>213.0-229.6</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
25-34	579	63.6	54.8-72.4	1247	38.4	34.4-42.5	1826	51.4	46.2-56.6
35-44	361	54.0	45.9-62.0	660	37.5	33.3-41.8	1021	45.7	40.9-50.5
45-54	243	47.4	37.7-57.1	471	37.4	31.9-42.8	714	42.1	36.5-47.8
55-64	172	52.8	43.6-62.0	324	32.4	27.5-37.4	496	42.1	36.9-47.3
<b>25-64</b>	<b>1355</b>	<b>57.3</b>	<b>51.6-63.0</b>	<b>2702</b>	<b>37.3</b>	<b>34.3-40.2</b>	<b>4057</b>	<b>47.3</b>	<b>43.7-50.8</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
25-34	579	30.7	23.9-37.6	1247	11.8	8.4-15.2	1826	21.5	17.4-25.7
35-44	361	21.0	16.3-25.7	660	9.3	6.4-12.1	1021	15.1	12.1-18.1
45-54	243	13.7	8.2-19.2	471	6.3	3.0-9.6	714	9.8	6.3-13.4
55-64	172	15.7	8.3-23.1	324	7.5	3.7-11.2	496	11.4	7.3-15.5
<b>25-64</b>	<b>1355</b>	<b>23.8</b>	<b>19.4-28.2</b>	<b>2702</b>	<b>9.6</b>	<b>7.3-12.0</b>	<b>4057</b>	<b>16.7</b>	<b>13.7-19.7</b>

**Domain-specific physical activity - median**

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

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

Median minutes of work-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)
25-34	579	214.3	128.6-325.7	1247	171.4	68.6-267.1	1826	205.7	94.3-308.6
35-44	361	240.0	128.6-360.0	660	197.1	90.0-308.6	1021	214.3	102.9-325.7
45-54	243	240.0	128.6-360.0	471	205.7	111.4-300.0	714	222.9	120.0-317.1
55-64	172	214.3	128.6-308.6	324	180.0	61.4-300.0	496	201.4	94.3-308.6
<b>25-64</b>	<b>1355</b>	<b>222.9</b>	<b>128.6-334.3</b>	<b>2702</b>	<b>184.3</b>	<b>81.4-291.4</b>	<b>4057</b>	<b>205.7</b>	<b>102.9-308.6</b>

Median minutes of transport-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)
25-34	579	34.3	12.9-85.7	1247	20.0	8.6-51.4	1826	25.7	8.6-60.0
35-44	361	30.0	14.3-68.6	660	25.7	4.3-51.4	1021	25.7	8.6-51.4
45-54	243	25.7	8.6-60.0	471	20.0	4.3-51.4	714	25.7	6.4-51.4
55-64	172	26.6	12.9-64.3	324	17.1	0.0-42.9	496	25.0	8.6-51.4
<b>25-64</b>	<b>1355</b>	<b>30.0</b>	<b>12.9-75.0</b>	<b>2702</b>	<b>20.0</b>	<b>5.1-51.4</b>	<b>4057</b>	<b>25.7</b>	<b>8.6-60.0</b>

Median minutes of recreation-related physical activity on average per day									
Age Group (years)	Men			Women			Both Sexes		
	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)	n	Median minutes	Interquartile range (P25-P75)
25-34	579	0.0	0.0-38.6	1247	0.0	0.0-7.1	1826	0.0	0.0-25.7
35-44	361	0.0	0.0-25.7	660	0.0	0.0-0.0	1021	0.0	0.0-12.9
45-54	243	0.0	0.0-1.4	471	0.0	0.0-0.0	714	0.0	0.0-0.0
55-64	172	0.0	0.0-0.0	324	0.0	0.0-0.0	496	0.0	0.0-0.0
<b>25-64</b>	<b>1355</b>	<b>0.0</b>	<b>0.0-25.7</b>	<b>2702</b>	<b>0.0</b>	<b>0.0-0.0</b>	<b>4057</b>	<b>0.0</b>	<b>0.0-12.9</b>

**No physical activity by domain**

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

Instrument questions:

- activity at work
- travel to and from places
- recreational activities

No work-related physical activity									
Age Group (years)	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
25-34	579	8.0	5.1-11.0	1247	10.1	8.1-12.1	1826	9.1	7.1-11.0
35-44	361	8.2	5.0-11.4	660	10.0	7.1-12.9	1021	9.1	6.8-11.4
45-54	243	8.9	5.2-12.5	471	7.9	5.1-10.6	714	8.3	5.9-10.8
55-64	172	11.6	6.6-16.6	324	13.7	9.6-17.8	496	12.7	9.2-16.2
<b>25-64</b>	<b>1355</b>	<b>8.6</b>	<b>6.5-10.8</b>	<b>2702</b>	<b>10.1</b>	<b>8.3-12.0</b>	<b>4057</b>	<b>9.4</b>	<b>7.7-11.0</b>

No transport-related physical activity									
Age Group (years)	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
25-34	579	11.2	8.4-14.1	1247	17.6	15.0-20.2	1826	14.3	12.2-16.5
35-44	361	13.0	9.0-17.0	660	21.2	17.6-24.7	1021	17.1	14.3-20.0
45-54	243	13.7	9.2-18.1	471	22.1	17.4-26.8	714	18.1	14.8-21.4
55-64	172	5.3	2.2-8.5	324	26.2	20.6-31.8	496	16.3	13.0-19.6
<b>25-64</b>	<b>1355</b>	<b>11.4</b>	<b>9.4-13.5</b>	<b>2702</b>	<b>20.4</b>	<b>18.1-22.7</b>	<b>4057</b>	<b>15.9</b>	<b>14.1-17.7</b>

No recreation-related physical activity									
Age Group (years)	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
25-34	579	50.3	45.4-55.3	1247	71.0	67.3-74.8	1826	60.4	56.7-64.1
35-44	361	58.9	53.4-64.4	660	77.9	73.5-82.2	1021	68.4	64.4-72.5
45-54	243	74.9	69.2-80.5	471	84.2	79.9-88.5	714	79.8	76.0-83.6
55-64	172	78.0	71.6-84.4	324	82.7	77.9-87.6	496	80.5	76.3-84.7
<b>25-64</b>	<b>1355</b>	<b>59.6</b>	<b>56.0-63.2</b>	<b>2702</b>	<b>76.6</b>	<b>73.3-79.8</b>	<b>4057</b>	<b>68.1</b>	<b>65.1-71.2</b>

**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							
Men							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	569	68.6	65.8-71.4	21.5	19.4-23.6	9.9	8.2-11.6
35-44	358	72.2	69.1-75.4	20.8	18.0-23.6	6.9	5.2-8.7
45-54	235	77.3	73.8-80.8	19.0	15.6-22.4	3.7	2.4-5.0
55-64	171	70.3	65.1-75.5	24.5	19.8-29.3	5.2	3.2-7.3
<b>25-64</b>	<b>1333</b>	<b>71.1</b>	<b>69.1-73.2</b>	<b>21.2</b>	<b>19.6-22.9</b>	<b>7.6</b>	<b>6.5-8.8</b>

Composition of total physical activity							
Women							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	1196	74.2	72.4-76.1	20.3	18.6-22.0	5.5	4.3-6.7
35-44	632	76.7	74.3-79.1	19.6	17.3-21.9	3.7	2.7-4.7
45-54	453	80.5	78.1-82.9	17.0	14.8-19.2	2.6	1.4-3.7
55-64	301	77.1	73.5-80.7	19.5	16.1-22.9	3.4	1.9-4.9
<b>25-64</b>	<b>2582</b>	<b>76.3</b>	<b>74.7-77.9</b>	<b>19.4</b>	<b>17.9-20.9</b>	<b>4.3</b>	<b>3.4-5.1</b>

Composition of total physical activity							
Both Sexes							
Age Group (years)	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
25-34	1765	71.3	69.4-73.2	20.9	19.4-22.4	7.8	6.7-8.9
35-44	990	74.4	72.3-76.6	20.2	18.2-22.2	5.3	4.3-6.4
45-54	688	79.0	76.7-81.2	17.9	15.8-20.1	3.1	2.1-4.1
55-64	472	73.7	70.5-77.0	22.0	19.0-24.9	4.3	3.0-5.6
<b>25-64</b>	<b>3915</b>	<b>73.7</b>	<b>72.2-75.2</b>	<b>20.3</b>	<b>19.0-21.6</b>	<b>6.0</b>	<b>5.1-6.8</b>

**No  
vigorous  
physical  
activity**

Description: Percentage of respondents not engaging in vigorous physical activity.

Instrument questions:

- activity at work
- recreational activities

<b>No vigorous physical activity</b>									
Age Group (years)	<b>Men</b>			<b>Women</b>			<b>Both Sexes</b>		
	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI
25-34	579	11.2	8.5-13.8	1247	25.4	21.6-29.2	1826	18.1	15.4-20.7
35-44	361	14.0	9.9-18.0	660	20.0	16.1-24.0	1021	17.0	14.0-20.1
45-54	243	15.4	10.3-20.5	471	16.5	12.8-20.2	714	16.0	12.6-19.4
55-64	172	16.9	11.0-22.9	324	24.4	18.7-30.1	496	20.9	16.3-25.4
<b>25-64</b>	<b>1355</b>	<b>13.2</b>	<b>10.9-15.5</b>	<b>2702</b>	<b>22.3</b>	<b>19.3-25.3</b>	<b>4057</b>	<b>17.8</b>	<b>15.5-20.1</b>

**Sedentary** Description: Minutes spent in sedentary activities on a typical day.

Instrument question:

- sedentary behaviour

Minutes spent in sedentary activities on average per day					
Men					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	719	164.7	150.4-179.0	120.0	60.0-240.0
35-44	459	166.8	150.8-182.7	120.0	60.0-240.0
45-54	296	169.3	152.0-186.6	120.0	60.0-240.0
55-64	216	170.8	151.8-189.8	120.0	60.0-240.0
<b>25-64</b>	<b>1690</b>	<b>166.6</b>	<b>156.6-176.7</b>	<b>120.0</b>	<b>60.0-240.0</b>

Minutes spent in sedentary activities on average per day					
Women					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	1614	147.5	136.6-158.4	120.0	30.0-240.0
35-44	862	143.6	132.6-154.6	120.0	30.0-180.0
45-54	604	141.1	128.6-153.6	120.0	30.0-210.0
55-64	434	159.6	139.8-179.4	120.0	0.0-240.0
<b>25-64</b>	<b>3514</b>	<b>146.9</b>	<b>138.0-155.8</b>	<b>120.0</b>	<b>30.0-240.0</b>

Minutes spent in sedentary activities on average per day					
Both Sexes					
Age Group (years)	n	Mean minutes	95% CI	Median minutes	Interquartile range (P25-P75)
25-34	2333	156.2	145.8-166.6	120.0	60.0-240.0
35-44	1321	154.9	143.9-166.0	120.0	60.0-240.0
45-54	900	154.1	143.3-164.9	120.0	45.0-240.0
55-64	650	164.7	149.9-179.5	120.0	30.0-240.0
<b>25-64</b>	<b>5204</b>	<b>156.5</b>	<b>148.2-164.9</b>	<b>120.0</b>	<b>60.0-240.0</b>

## Blood Pressure and Diabetes History

### 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									
Men									
Age Group (years)	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
25-34	719	93.7	92.0-95.4	5.1	3.6-6.6	1.1	0.3-1.8	0.1	0.0-0.4
35-44	459	87.4	84.1-90.8	9.9	6.9-12.9	1.5	0.2-2.8	1.2	0.1-2.2
45-54	296	87.7	83.8-91.7	6.3	3.4-9.2	3.1	1.2-5.0	2.9	1.0-4.7
55-64	216	85.6	81.2-90.1	8.7	4.9-12.5	2.3	0.3-4.3	3.5	1.1-5.8
<b>25-64</b>	<b>1690</b>	<b>90.3</b>	<b>88.8-91.8</b>	<b>6.9</b>	<b>5.6-8.2</b>	<b>1.7</b>	<b>1.1-2.3</b>	<b>1.2</b>	<b>0.7-1.7</b>

Blood pressure measurement and diagnosis									
Women									
Age Group (years)	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
25-34	1614	55.4	52.0-58.8	38.2	35.1-41.4	4.1	3.1-5.1	2.3	1.5-3.1
35-44	862	61.2	57.7-64.7	30.4	27.1-33.6	5.7	4.0-7.3	2.8	1.6-3.9
45-54	604	64.8	60.4-69.3	21.3	17.6-25.0	6.9	4.5-9.2	7.0	4.8-9.2
55-64	434	65.8	60.9-70.6	19.2	15.3-23.2	7.6	4.7-10.4	7.4	4.7-10.1
<b>25-64</b>	<b>3514</b>	<b>59.9</b>	<b>57.3-62.4</b>	<b>30.8</b>	<b>28.6-33.0</b>	<b>5.4</b>	<b>4.5-6.3</b>	<b>3.9</b>	<b>3.1-4.7</b>

Blood pressure measurement and diagnosis									
Both sexes									
Age Group (years)	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
25-34	2333	74.8	72.7-76.8	21.5	19.6-23.3	2.6	1.9-3.2	1.2	0.8-1.6
35-44	1321	74.0	71.5-76.6	20.3	18.0-22.7	3.6	2.6-4.6	2.0	1.1-2.8
45-54	900	75.4	72.3-78.5	14.4	11.9-16.8	5.1	3.6-6.7	5.1	3.6-6.6
55-64	650	74.9	71.2-78.5	14.4	11.5-17.3	5.1	3.3-7.0	5.6	3.7-7.5
<b>25-64</b>	<b>5204</b>	<b>74.7</b>	<b>73.0-76.4</b>	<b>19.1</b>	<b>17.7-20.5</b>	<b>3.6</b>	<b>3.0-4.2</b>	<b>2.6</b>	<b>2.1-3.1</b>

- Blood pressure treatment among those diagnosed** Description: raised blood pressure treatment 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 of the following treatments/advice for high blood pressure prescribed by a doctor or other health worker?
  - Drugs (medication) that you have taken in the last 2 weeks?

<b>Currently taking blood pressure drugs prescribed by doctor or health worker among those diagnosed</b>									
Age Group (years)	<b>Men</b>			<b>Women</b>			<b>Both Sexes</b>		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
25-34	9	23.5	0.0-53.0	104	12.7	6.1-19.2	113	14.5	7.2-21.7
35-44	12	32.2	3.3-61.0	73	21.3	12.2-30.4	85	23.8	13.8-33.9
45-54	18	21.6	4.2-39.0	83	27.3	15.3-39.4	101	25.8	15.8-35.8
55-64	13	23.7	0.0-48.9	64	39.6	27.1-52.0	77	35.7	24.5-46.9
<b>25-64</b>	<b>52</b>	<b>25.0</b>	<b>13.0-36.9</b>	<b>324</b>	<b>24.0</b>	<b>18.4-29.6</b>	<b>376</b>	<b>24.2</b>	<b>19.3-29.1</b>



**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 of the following treatments/advice for high blood pressure prescribed by a doctor or other health worker?

<b>Advised by doctor or health worker to reduce salt intake among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	9	24.2	0.0-54.4	104	43.1	33.7-52.5	113	40.0	30.5-49.5
35-44	12	49.8	17.4-82.2	73	59.2	47.7-70.6	85	57.0	45.4-68.5
45-54	18	55.4	32.7-78.0	83	47.4	35.7-59.2	101	49.6	39.3-59.8
55-64	13	46.2	18.1-74.2	64	53.7	41.6-65.8	77	51.8	40.6-63.1
<b>25-64</b>	<b>52</b>	<b>45.7</b>	<b>31.9-59.5</b>	<b>324</b>	<b>50.0</b>	<b>43.9-56.2</b>	<b>376</b>	<b>49.0</b>	<b>43.3-54.8</b>

<b>Advised by doctor or health worker to lose weight among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	9	0.0	0.0-0.0	104	15.5	9.0-22.0	113	12.9	7.5-18.4
35-44	12	33.2	3.9-62.5	73	32.3	21.0-43.6	85	32.5	21.2-43.8
45-54	18	33.2	11.3-55.1	83	23.3	14.3-32.3	101	26.0	17.2-34.8
55-64	13	15.5	0.0-36.8	64	26.4	16.4-36.4	77	23.8	14.1-33.4
<b>25-64</b>	<b>52</b>	<b>22.5</b>	<b>11.3-33.7</b>	<b>324</b>	<b>23.6</b>	<b>19.2-28.0</b>	<b>376</b>	<b>23.4</b>	<b>19.0-27.7</b>

<b>Advised by doctor or health worker to stop smoking among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	9	10.7	0.0-31.6	104	10.0	3.9-16.1	113	10.1	4.3-16.0
35-44	12	23.1	0.0-48.2	73	18.5	9.2-27.8	85	19.6	10.6-28.5
45-54	18	54.4	29.0-79.8	83	22.0	12.2-31.8	101	30.7	20.6-40.8
55-64	13	14.4	0.0-34.4	64	28.6	16.8-40.5	77	25.2	14.4-35.9
<b>25-64</b>	<b>52</b>	<b>29.2</b>	<b>15.9-42.6</b>	<b>324</b>	<b>18.9</b>	<b>14.1-23.7</b>	<b>376</b>	<b>21.2</b>	<b>16.6-25.9</b>

<b>Advised by doctor or health worker to start or do more exercise among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	9	20.8	0.0-48.0	104	23.5	14.7-32.3	113	23.1	14.5-31.6
35-44	12	22.8	0.0-47.8	73	34.0	22.8-45.2	85	31.4	21.3-41.5
45-54	18	26.8	6.5-47.1	83	27.1	17.0-37.2	101	27.0	18.0-36.0
55-64	13	8.0	0.0-23.5	64	23.7	14.7-32.8	77	19.9	11.2-28.6
<b>25-64</b>	<b>52</b>	<b>20.5</b>	<b>9.8-31.2</b>	<b>324</b>	<b>26.9</b>	<b>22.3-31.5</b>	<b>376</b>	<b>25.5</b>	<b>21.2-29.7</b>

**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?

<b>Seen a traditional healer among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	9	0.0	0.0-0.0	104	5.7	1.3-10.2	113	4.8	1.0-8.6
35-44	12	0.0	0.0-0.0	73	10.0	3.0-17.1	85	7.7	2.2-13.2
45-54	18	5.6	0.0-16.7	83	18.2	9.2-27.2	101	14.8	7.5-22.2
55-64	13	7.6	0.0-22.3	64	15.9	6.2-25.6	77	13.9	5.7-22.1
<b>25-64</b>	<b>52</b>	<b>3.6</b>	<b>0.0-8.6</b>	<b>324</b>	<b>12.1</b>	<b>8.5-15.8</b>	<b>376</b>	<b>10.2</b>	<b>7.3-13.1</b>

<b>Currently taking herbal or traditional remedy for high blood pressure among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	9	10.7	0.0-31.6	104	2.2	0.0-5.2	113	3.6	0.0-7.8
35-44	12	0.0	0.0-0.0	73	4.6	0.0-9.6	85	3.5	0.0-7.3
45-54	18	10.8	0.0-24.8	83	1.4	0.0-4.3	101	3.9	0.0-8.4
55-64	13	7.6	0.0-22.3	64	6.5	0.5-12.5	77	6.8	1.0-12.5
<b>25-64</b>	<b>52</b>	<b>7.5</b>	<b>0.0-16.6</b>	<b>324</b>	<b>3.4</b>	<b>1.2-5.6</b>	<b>376</b>	<b>4.3</b>	<b>1.7-6.9</b>

**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									
Men									
Age Group (years)	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
25-34	719	99.3	98.8-99.9	0.5	0.0-1.1	0.1	0.0-0.3	0.0	0.0-0.0
35-44	459	97.9	96.7-99.2	1.7	0.6-2.8	0.2	0.0-0.5	0.2	0.0-0.6
45-54	296	97.0	95.2-98.9	1.9	0.4-3.5	0.7	0.0-1.7	0.3	0.0-0.9
55-64	216	99.6	98.9-100.0	0.0	0.0-0.0	0.4	0.0-1.1	0.0	0.0-0.0
<b>25-64</b>	<b>1690</b>	<b>98.6</b>	<b>98.1-99.2</b>	<b>1.0</b>	<b>0.5-1.5</b>	<b>0.3</b>	<b>0.0-0.5</b>	<b>0.1</b>	<b>0.0-0.2</b>

Blood sugar measurement and diagnosis									
Women									
Age Group (years)	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
25-34	1614	97.2	96.3-98.0	2.7	1.9-3.6	0.1	0.0-0.2	0.1	0.0-0.2
35-44	862	98.5	97.7-99.3	1.4	0.6-2.2	0.1	0.0-0.4	0.0	0.0-0.0
45-54	604	98.6	97.6-99.5	1.3	0.4-2.1	0.0	0.0-0.0	0.2	0.0-0.5
55-64	434	96.3	94.2-98.4	2.0	0.8-3.3	0.5	0.0-1.2	1.2	0.1-2.2
<b>25-64</b>	<b>3514</b>	<b>97.6</b>	<b>97.1-98.2</b>	<b>2.0</b>	<b>1.5-2.6</b>	<b>0.1</b>	<b>0.0-0.2</b>	<b>0.2</b>	<b>0.1-0.4</b>

Blood sugar measurement and diagnosis									
Both sexes									
Age Group (years)	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
25-34	2333	98.3	97.7-98.8	1.6	1.1-2.2	0.1	0.0-0.2	0.0	0.0-0.1
35-44	1321	98.2	97.5-98.9	1.6	0.9-2.2	0.2	0.0-0.4	0.1	0.0-0.3
45-54	900	97.9	96.9-98.9	1.6	0.7-2.4	0.3	0.0-0.8	0.2	0.0-0.6
55-64	650	97.8	96.6-99.0	1.1	0.4-1.8	0.4	0.0-1.0	0.6	0.1-1.2
<b>25-64</b>	<b>5204</b>	<b>98.1</b>	<b>97.7-98.6</b>	<b>1.5</b>	<b>1.1-1.9</b>	<b>0.2</b>	<b>0.0-0.3</b>	<b>0.2</b>	<b>0.0-0.3</b>

**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
25-34	1	0.0	--	2	0.0	0.0-0.0	3	0.0	0.0-0.0
35-44	2	0.0	--	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	0.0	--	1	0.0	0.0-0.0	4	0.0	0.0-0.0
55-64	1	0.0	--	7	30.1	0.0-85.3	8	25.4	0.0-68.6
<b>25-64</b>	<b>7</b>	<b>0.0</b>	<b>--</b>	<b>11</b>	<b>19.2</b>	<b>0.0-53.7</b>	<b>18</b>	<b>9.5</b>	<b>0.0-23.7</b>

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
25-34	1	0.0	0.0-0.0	2	52.6	0.0-100.0	3	27.3	0.0-82.9
35-44	2	0.0	0.0-0.0	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	28.9	0.0-91.6	1	100.0	100.0-100.0	4	41.4	0.0-95.2
55-64	1	0.0	0.0-0.0	7	29.9	0.0-68.8	8	25.3	0.0-57.6
<b>25-64</b>	<b>7</b>	<b>13.5</b>	<b>0.0-48.4</b>	<b>11</b>	<b>38.0</b>	<b>4.4-71.6</b>	<b>18</b>	<b>25.6</b>	<b>1.1-50.1</b>

**Diabetes lifestyle advice**

Description: Percentage of respondents who received diabetes lifestyle advice from a doctor or health worker among those previously diagnosed with 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?

<b>Advised by doctor or health worker to have special prescribed diet among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	1	0.0	0.0-0.0	2	47.4	0.0-100.0	3	24.6	0.0-76.3
35-44	2	0.0	0.0-0.0	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	62.3	24.0-100.0	1	0.0	0.0-0.0	4	51.3	0.0-100.0
55-64	1	100.0	100.0-100.0	7	57.1	24.2-89.9	8	63.7	37.3-90.2
<b>25-64</b>	<b>7</b>	<b>40.7</b>	<b>0.0-88.2</b>	<b>11</b>	<b>44.2</b>	<b>11.0-77.4</b>	<b>18</b>	<b>42.4</b>	<b>16.1-68.7</b>

<b>Advised by doctor or health worker to lose weight among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	1	0.0	0.0-0.0	2	0.0	0.0-0.0	3	0.0	0.0-0.0
35-44	2	0.0	0.0-0.0	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	28.9	0.0-91.6	1	0.0	0.0-0.0	4	23.8	0.0-70.8
55-64	1	0.0	0.0-0.0	7	27.7	0.0-64.9	8	23.4	0.0-54.2
<b>25-64</b>	<b>7</b>	<b>13.5</b>	<b>0.0-48.4</b>	<b>11</b>	<b>17.7</b>	<b>0.0-43.9</b>	<b>18</b>	<b>15.6</b>	<b>0.0-34.9</b>

<b>Advised by doctor or health worker to stop smoking among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	1	0.0	0.0-0.0	2	0.0	0.0-0.0	3	0.0	0.0-0.0
35-44	2	0.0	0.0-0.0	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	62.3	24.0-100.0	1	100.0	100.0-100.0	4	69.0	16.4-100.0
55-64	1	100.0	100.0-100.0	7	12.1	0.0-39.2	8	25.8	0.0-59.2
<b>25-64</b>	<b>7</b>	<b>40.7</b>	<b>0.0-88.2</b>	<b>11</b>	<b>18.0</b>	<b>0.0-45.6</b>	<b>18</b>	<b>29.4</b>	<b>6.9-52.0</b>

<b>Advised by doctor or health worker to start or do more exercise among those previously diagnosed</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	1	0.0	0.0-0.0	2	0.0	0.0-0.0	3	0.0	0.0-0.0
35-44	2	0.0	0.0-0.0	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	28.9	0.0-91.6	1	100.0	100.0-100.0	4	41.4	0.0-95.2
55-64	1	0.0	0.0-0.0	7	42.0	2.9-81.1	8	35.5	1.2-69.8
<b>25-64</b>	<b>7</b>	<b>13.5</b>	<b>0.0-48.4</b>	<b>11</b>	<b>37.1</b>	<b>3.7-70.4</b>	<b>18</b>	<b>25.2</b>	<b>2.3-48.0</b>

**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
25-34	1	0.0	0.0-0.0	2	0.0	0.0-0.0	3	0.0	0.0-0.0
35-44	2	100.0	100.0-100.0	1	0.0	0.0-0.0	3	74.3	21.8-100.0
45-54	3	0.0	0.0-0.0	1	0.0	0.0-0.0	4	0.0	0.0-0.0
55-64	1	0.0	0.0-0.0	7	0.0	0.0-0.0	8	0.0	0.0-0.0
<b>25-64</b>	<b>7</b>	<b>26.8</b>	<b>0.0-71.0</b>	<b>11</b>	<b>0.0</b>	<b>0.0-0.0</b>	<b>18</b>	<b>13.6</b>	<b>0.0-32.2</b>

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
25-34	1	0.0	0.0-0.0	2	0.0	0.0-0.0	3	0.0	0.0-0.0
35-44	2	0.0	0.0-0.0	1	0.0	0.0-0.0	3	0.0	0.0-0.0
45-54	3	0.0	0.0-0.0	1	0.0	0.0-0.0	4	0.0	0.0-0.0
55-64	1	0.0	0.0-0.0	7	0.0	0.0-0.0	8	0.0	0.0-0.0
<b>25-64</b>	<b>7</b>	<b>0.0</b>	<b>0.0-0.0</b>	<b>11</b>	<b>0.0</b>	<b>0.0-0.0</b>	<b>18</b>	<b>0.0</b>	<b>0.0-0.0</b>

## Physical Measurements

**Height, weight and BMI** Description: Mean height, weight, and body mass index among all respondents (excluding pregnant women for weight and BMI).

Instrument questions:

- Height
- Weight

Mean height (cm)							
Age Group (years)	Men			Women			
	n	Mean	95% CI	n	Mean	95% CI	
25-34	713	164.2	163.5-164.8	1584	155.4	154.9-155.9	
35-44	453	164.3	163.5-165.2	853	155.9	155.4-156.5	
45-54	291	164.7	163.8-165.6	596	155.5	154.9-156.1	
55-64	212	163.9	162.9-164.9	421	154.3	153.5-155.1	
<b>25-64</b>	<b>1669</b>	<b>164.3</b>	<b>163.8-164.8</b>	<b>3454</b>	<b>155.4</b>	<b>155.1-155.7</b>	

Mean weight (kg)							
Age Group (years)	Men			Women			
	n	Mean	95% CI	n	Mean	95% CI	
25-34	714	60.5	59.9-61.1	1387	56.5	55.9-57.2	
35-44	453	61.3	60.3-62.2	796	57.9	57.1-58.8	
45-54	291	61.4	58.8-64.0	591	56.9	55.9-57.9	
55-64	215	59.0	57.9-60.1	423	55.3	54.0-56.6	
<b>25-64</b>	<b>1673</b>	<b>60.7</b>	<b>60.0-61.3</b>	<b>3197</b>	<b>56.8</b>	<b>56.2-57.4</b>	

Mean BMI (kg/m <sup>2</sup> )									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	713	22.5	22.3-22.7	1381	23.4	23.2-23.6	2094	22.9	22.8-23.1
35-44	450	22.6	22.3-22.9	794	23.9	23.5-24.3	1244	23.2	23.0-23.5
45-54	289	22.3	21.8-22.7	590	23.5	23.1-23.9	879	22.9	22.6-23.2
55-64	212	22.0	21.6-22.3	416	23.2	22.7-23.7	628	22.7	22.3-23.0
<b>25-64</b>	<b>1664</b>	<b>22.4</b>	<b>22.3-22.6</b>	<b>3181</b>	<b>23.5</b>	<b>23.3-23.7</b>	<b>4845</b>	<b>23.0</b>	<b>22.8-23.1</b>

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

Instrument questions:

- Height
- Weight

<b>BMI classifications</b>									
Age Group (years)	<b>Men</b>								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	713	5.6	3.8-7.4	78.8	75.9-81.7	14.1	11.5-16.6	1.5	0.7-2.4
35-44	450	5.2	3.0-7.4	77.3	73.3-81.2	14.7	11.5-18.0	2.8	1.4-4.2
45-54	289	8.5	5.0-12.0	75.7	70.7-80.6	13.5	9.7-17.2	2.4	0.4-4.4
55-64	212	7.6	3.7-11.5	77.4	70.7-84.1	13.7	9.1-18.4	1.3	0.0-2.8
<b>25-64</b>	<b>1664</b>	<b>6.2</b>	<b>4.9-7.5</b>	<b>77.8</b>	<b>75.6-79.9</b>	<b>14.1</b>	<b>12.3-15.9</b>	<b>2.0</b>	<b>1.3-2.6</b>

<b>BMI classifications</b>									
Age Group (years)	<b>Women</b>								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	1381	5.4	4.2-6.6	69.0	66.6-71.3	19.8	17.8-21.8	5.8	4.5-7.1
35-44	794	5.1	3.6-6.5	63.6	59.8-67.4	23.4	19.9-26.8	8.0	6.0-10.0
45-54	590	8.0	5.7-10.2	63.4	59.1-67.8	20.3	16.9-23.8	8.3	6.1-10.5
55-64	416	13.4	9.8-17.0	57.9	52.8-63.1	18.8	14.7-22.9	9.9	7.1-12.6
<b>25-64</b>	<b>3181</b>	<b>6.9</b>	<b>6.0-7.8</b>	<b>65.1</b>	<b>63.0-67.1</b>	<b>20.7</b>	<b>19.0-22.4</b>	<b>7.4</b>	<b>6.3-8.4</b>

<b>BMI classifications</b>									
Age Group (years)	<b>Both Sexes</b>								
	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
25-34	2094	5.5	4.4-6.6	74.3	72.4-76.2	16.7	15.0-18.4	3.5	2.7-4.3
35-44	1244	5.1	3.8-6.5	70.5	67.8-73.2	19.0	16.6-21.4	5.4	4.1-6.6
45-54	879	8.2	6.3-10.1	69.1	65.7-72.5	17.2	14.4-19.9	5.6	4.1-7.1
55-64	628	10.7	8.0-13.4	67.0	62.5-71.4	16.4	13.1-19.8	5.9	4.3-7.5
<b>25-64</b>	<b>4845</b>	<b>6.5</b>	<b>5.7-7.3</b>	<b>71.5</b>	<b>70.0-73.1</b>	<b>17.3</b>	<b>16.0-18.6</b>	<b>4.6</b>	<b>4.0-5.3</b>



**BMI ≥25** Description: Percentage of respondents being classified as overweight (BMI≥25)

Instrument questions:

- Height
- Weight

<b>BMI≥25</b>									
Age Group (years)	<b>Men</b>			<b>Women</b>			<b>Both Sexes</b>		
	n	% BMI≥25	95% CI	n	% BMI≥25	95% CI	n	% BMI≥25	95% CI
25-34	713	15.6	13.0-18.2	1381	25.6	23.4-27.8	2094	20.2	18.5-21.9
35-44	450	17.5	14.1-20.9	794	31.3	27.4-35.3	1244	24.4	21.6-27.1
45-54	289	15.8	11.7-20.0	590	28.6	24.5-32.8	879	22.7	19.6-25.8
55-64	212	15.0	10.0-19.9	416	28.6	23.6-33.7	628	22.3	18.5-26.1
<b>25-64</b>	<b>1664</b>	<b>16.1</b>	<b>14.1-18.0</b>	<b>3181</b>	<b>28.1</b>	<b>25.9-30.2</b>	<b>4845</b>	<b>21.9</b>	<b>20.4-23.5</b>

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

Instrument question:

- Waist circumference measurement

Waist circumference (cm)						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	704	76.1	75.2-76.9	1346	77.5	76.7-78.3
35-44	442	77.7	76.9-78.6	773	78.6	77.5-79.6
45-54	289	79.4	77.4-81.4	578	80.8	79.5-82.1
55-64	210	78.3	76.9-79.8	412	78.9	77.2-80.5
<b>25-64</b>	<b>1645</b>	<b>77.3</b>	<b>76.6-78.0</b>	<b>3109</b>	<b>78.6</b>	<b>77.8-79.4</b>

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

Instrument question:

- Hip circumference measurement

Hip circumference (cm)						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	703	89.4	88.5-90.3	1346	91.5	90.5-92.5
35-44	442	90.3	89.3-91.4	773	92.4	91.0-93.8
45-54	289	91.5	88.9-94.1	578	93.9	92.4-95.3
55-64	210	89.4	87.5-91.2	412	91.7	89.7-93.7
<b>25-64</b>	<b>1644</b>	<b>90.0</b>	<b>89.2-90.7</b>	<b>3109</b>	<b>92.2</b>	<b>91.2-93.2</b>

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

Instrument question:

- Waist and hip circumference measurement

Mean waist / hip ratio						
Age Group (years)	Men			Women		
	n	Mean	95% CI	n	Mean	95% CI
25-34	703	0.9	0.8-0.9	1346	0.8	0.8-0.9
35-44	442	0.9	0.9-0.9	773	0.9	0.8-0.9
45-54	289	0.9	0.9-0.9	578	0.9	0.9-0.9
55-64	210	0.9	0.9-0.9	412	0.9	0.9-0.9
<b>25-64</b>	<b>1644</b>	<b>0.9</b>	<b>0.9-0.9</b>	<b>3109</b>	<b>0.9</b>	<b>0.9-0.9</b>

**Blood pressure**

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

Instrument question:

- Reading 1-3 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
25-34	460	132.7	131.1-134.4	1172	121.4	120.3-122.5	1632	126.7	125.6-127.9
35-44	326	134.3	132.2-136.3	686	128.8	127.1-130.5	1012	131.3	130.0-132.7
45-54	221	138.7	135.5-141.8	499	138.3	135.7-141.0	720	138.5	136.3-140.7
55-64	176	145.3	141.2-149.3	370	148.8	145.8-151.7	546	147.2	144.6-149.8
<b>25-64</b>	<b>1183</b>	<b>135.8</b>	<b>134.4-137.2</b>	<b>2727</b>	<b>130.3</b>	<b>129.2-131.4</b>	<b>3910</b>	<b>132.8</b>	<b>131.8-133.8</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
25-34	460	77.0	75.9-78.2	1172	75.6	74.8-76.3	1632	76.3	75.5-77.0
35-44	326	80.3	79.0-81.7	686	79.4	78.4-80.4	1012	79.8	78.9-80.7
45-54	221	80.5	79.0-82.1	499	82.4	81.1-83.7	720	81.6	80.5-82.7
55-64	176	81.7	79.8-83.7	370	84.9	83.4-86.5	546	83.5	82.2-84.8
<b>25-64</b>	<b>1183</b>	<b>79.1</b>	<b>78.3-80.0</b>	<b>2727</b>	<b>79.1</b>	<b>78.4-79.8</b>	<b>3910</b>	<b>79.1</b>	<b>78.5-79.8</b>

**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?
- Reading 1-3 systolic and diastolic blood pressure

<b>SBP <math>\geq</math>140 and/or DBP <math>\geq</math> 90 mmHg, excluding those on medication for raised blood pressure</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	456	29.9	24.8-35.0	1160	11.9	10.0-13.9	1616	20.4	17.5-23.4
35-44	319	33.8	28.0-39.5	674	26.8	23.2-30.5	993	30.0	26.6-33.4
45-54	216	41.9	34.6-49.1	487	41.4	36.5-46.2	703	41.6	37.2-46.0
55-64	175	55.9	46.8-65.0	352	60.0	54.4-65.6	527	58.1	52.7-63.6
<b>25-64</b>	<b>1166</b>	<b>36.4</b>	<b>32.7-40.0</b>	<b>2673</b>	<b>27.8</b>	<b>25.7-29.8</b>	<b>3839</b>	<b>31.7</b>	<b>29.5-34.0</b>

<b>SBP <math>\geq</math>140 and/or DBP <math>\geq</math> 90 mmHg or currently on medication for raised blood pressure</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	460	30.4	25.3-35.5	1172	12.8	10.8-14.7	1632	21.1	18.1-24.1
35-44	326	35.2	29.7-40.7	686	28.2	24.5-31.9	1012	31.4	28.1-34.7
45-54	221	43.2	36.1-50.3	499	42.7	37.9-47.6	720	42.9	38.6-47.3
55-64	176	56.2	47.0-65.3	370	61.9	56.4-67.5	546	59.3	53.9-64.8
<b>25-64</b>	<b>1183</b>	<b>37.2</b>	<b>33.6-40.8</b>	<b>2727</b>	<b>29.2</b>	<b>27.1-31.3</b>	<b>3910</b>	<b>32.9</b>	<b>30.6-35.2</b>

<b>SBP <math>\geq</math>160 and/or DBP <math>\geq</math> 100 mmHg, excluding those on medication for raised blood pressure</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	456	5.6	3.4-7.8	1160	1.8	1.1-2.6	1616	3.6	2.5-4.7
35-44	319	8.6	5.5-11.6	674	6.9	4.7-9.1	993	7.7	5.8-9.6
45-54	216	15.4	10.1-20.8	487	16.5	12.9-20.1	703	16.0	12.9-19.2
55-64	175	24.7	17.6-31.7	352	27.7	23.2-32.2	527	26.3	22.2-30.4
<b>25-64</b>	<b>1166</b>	<b>10.6</b>	<b>8.7-12.5</b>	<b>2673</b>	<b>9.4</b>	<b>8.1-10.7</b>	<b>3839</b>	<b>9.9</b>	<b>8.8-11.0</b>

<b>SBP <math>\geq</math>160 and/or DBP <math>\geq</math> 100 mmHg or currently on medication for raised blood pressure</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	460	6.3	4.0-8.7	1172	2.8	1.9-3.6	1632	4.4	3.2-5.7
35-44	326	10.5	7.4-13.6	686	8.6	6.2-11.0	1012	9.5	7.5-11.5
45-54	221	17.3	11.8-22.9	499	18.4	14.7-22.2	720	17.9	14.6-21.3
55-64	176	25.1	18.0-32.2	370	31.2	26.4-35.9	546	28.5	24.1-32.8
<b>25-64</b>	<b>1183</b>	<b>11.8</b>	<b>9.9-13.7</b>	<b>2727</b>	<b>11.2</b>	<b>9.7-12.6</b>	<b>3910</b>	<b>11.4</b>	<b>10.2-12.6</b>

**Treatment and control of raised blood pressure**

Description: Percentage of respondents with treated and/or controlled of raised blood pressure among those with raised blood pressure (SBP  $\geq$ 140 and/or DBP  $\geq$  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?
- Reading 1-3 systolic and diastolic blood pressure

Respondents with treated and/or controlled raised blood pressure							
Men							
Age Group (years)	n	% On medication and SBP<140 and DBP<90	95% CI	% On medication and SBP $\geq$ 140 and/orDBP $\geq$ 90	95% CI	% Not on medication and SBP $\geq$ 140 and/orDBP $\geq$ 90	95% CI
25-34	140	1.2	0.0-2.8	1.3	0.0-3.2	97.5	95.1-100.0
35-44	115	1.6	0.0-4.0	4.4	0.6-8.3	93.9	89.5-98.4
45-54	96	0.0	0.0-0.0	5.1	0.6-9.6	94.9	90.4-99.4
55-64	100	0.0	0.0-0.0	1.1	0.0-3.1	98.9	96.9-100.0
<b>25-64</b>	<b>451</b>	<b>0.8</b>	<b>0.0-1.6</b>	<b>2.8</b>	<b>1.2-4.4</b>	<b>96.4</b>	<b>94.7-98.1</b>

Respondents with treated and/or controlled raised blood pressure							
Women							
Age Group (years)	n	% On medication and SBP<140 and DBP<90	95% CI	% On medication and SBP $\geq$ 140 and/orDBP $\geq$ 90	95% CI	% Not on medication and SBP $\geq$ 140 and/orDBP $\geq$ 90	95% CI
25-34	148	5.1	1.6-8.6	2.2	0.0-4.4	92.6	88.5-96.8
35-44	191	3.1	0.6-5.7	3.3	0.7-5.9	93.5	90.0-97.1
45-54	213	1.0	0.0-2.3	4.5	1.6-7.4	94.5	91.4-97.7
55-64	229	0.9	0.0-2.2	6.8	3.0-10.7	92.3	88.3-96.2
<b>25-64</b>	<b>781</b>	<b>2.2</b>	<b>1.2-3.2</b>	<b>4.5</b>	<b>2.6-6.4</b>	<b>93.3</b>	<b>91.1-95.5</b>

Respondents with treated and/or controlled raised blood pressure							
Both Sexes							
Age Group (years)	n	% On medication and SBP<140 and DBP<90	95% CI	% On medication and SBP $\geq$ 140 and/orDBP $\geq$ 90	95% CI	% Not on medication and SBP $\geq$ 140 and/orDBP $\geq$ 90	95% CI
25-34	288	2.4	0.9-4.0	1.6	0.2-3.0	96.0	93.9-98.0
35-44	306	2.4	0.7-4.1	3.9	1.6-6.2	93.8	91.0-96.5
45-54	309	0.5	0.0-1.3	4.8	2.0-7.5	94.7	91.7-97.7
55-64	329	0.5	0.0-1.2	4.4	2.1-6.7	95.1	92.7-97.5
<b>25-64</b>	<b>1232</b>	<b>1.5</b>	<b>0.9-2.1</b>	<b>3.6</b>	<b>2.3-4.9</b>	<b>94.9</b>	<b>93.5-96.3</b>

**Mean heart rate**

Description: Mean heart rate (beats per minute).

Instrument question:

- Reading 1-3 heart rate

Mean heart rate (beats per minute)									
Age Group (years)	Men			Women			Both Sexes		
	n	mean	95% CI	n	mean	95% CI	n	mean	95% CI
25-34	460	69.6	68.1-71.0	1172	82.9	81.8-84.1	1632	76.6	75.4-77.8
35-44	326	72.1	70.5-73.7	686	81.8	80.4-83.2	1012	77.3	76.2-78.5
45-54	221	72.5	70.5-74.6	499	79.9	78.7-81.0	720	76.7	75.5-77.8
55-64	176	71.7	69.5-73.8	370	79.7	78.2-81.2	546	76.1	74.6-77.6
<b>25-64</b>	<b>1183</b>	<b>71.0</b>	<b>69.9-72.1</b>	<b>2727</b>	<b>81.6</b>	<b>80.7-82.5</b>	<b>3910</b>	<b>76.7</b>	<b>75.8-77.6</b>

## Biochemical Measurements

### Mean fasting blood glucose

Description: mean fasting blood glucose results including those currently on medication for diabetes (non-fasting recipients excluded).

Instrument questions:

- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement

Mean fasting blood glucose (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	349	4.3	4.1-4.5	897	4.2	4.1-4.3	1246	4.2	4.1-4.4
35-44	257	4.4	4.2-4.7	544	4.2	4.0-4.4	801	4.3	4.1-4.5
45-54	169	4.1	3.9-4.3	400	4.3	4.1-4.4	569	4.2	4.0-4.4
55-64	134	4.6	4.1-5.0	303	4.4	4.2-4.5	437	4.4	4.2-4.7
<b>25-64</b>	<b>909</b>	<b>4.3</b>	<b>4.2-4.5</b>	<b>2144</b>	<b>4.2</b>	<b>4.1-4.3</b>	<b>3053</b>	<b>4.3</b>	<b>4.1-4.4</b>

Mean fasting blood glucose (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	349	77.4	74.1-80.7	897	75.1	73.2-77.1	1246	76.3	73.9-78.7
35-44	257	79.6	75.3-83.9	544	75.8	72.7-78.9	801	77.7	74.6-80.7
45-54	169	73.7	69.7-77.8	400	76.8	73.7-79.8	569	75.4	72.3-78.4
55-64	134	82.0	74.3-89.8	303	78.4	75.6-81.2	437	80.0	76.0-84.1
<b>25-64</b>	<b>909</b>	<b>77.9</b>	<b>75.0-80.7</b>	<b>2144</b>	<b>76.0</b>	<b>74.0-78.0</b>	<b>3053</b>	<b>76.9</b>	<b>74.6-79.2</b>

**Raised blood glucose**

Description: Categorization of respondents into blood glucose level categories and percentage of respondents currently on medication for raised blood glucose (non-fasting recipients excluded).

Instrument questions:

- Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker? Insulin? Oral drugs (medication) that you have taken in the last 2 weeks?
- During the last 12 hours have you had anything to eat or drink, other than water?
- Blood glucose measurement
- Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor or other health worker?

Impaired Fasting Glycaemia*									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	351	5.4	2.8-8.0	898	2.0	0.9-3.0	1249	3.7	2.1-5.3
35-44	257	6.1	3.2-8.9	544	1.8	0.4-3.3	801	3.9	2.3-5.5
45-54	169	5.3	2.0-8.7	400	4.1	1.9-6.3	569	4.7	2.7-6.6
55-64	134	6.7	2.4-11.0	303	5.4	2.6-8.2	437	6.0	3.2-8.7
<b>25-64</b>	<b>911</b>	<b>5.7</b>	<b>3.9-7.5</b>	<b>2145</b>	<b>2.7</b>	<b>1.6-3.8</b>	<b>3056</b>	<b>4.2</b>	<b>3.0-5.4</b>

Raised blood glucose or currently on medication for diabetes **									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	351	6.2	1.5-10.9	898	3.6	1.8-5.4	1249	4.9	1.8-8.0
35-44	257	7.8	2.8-12.7	544	4.7	1.6-7.8	801	6.2	2.4-10.0
45-54	169	4.7	0.9-8.4	400	6.4	2.2-10.6	569	5.6	2.0-9.2
55-64	134	7.6	2.7-12.5	303	6.1	3.3-8.9	437	6.8	3.8-9.8
<b>25-64</b>	<b>911</b>	<b>6.5</b>	<b>2.6-10.3</b>	<b>2145</b>	<b>4.7</b>	<b>2.4-7.0</b>	<b>3056</b>	<b>5.6</b>	<b>2.6-8.5</b>

Currently on medication for diabetes									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	719	0.3	0.0-0.8	1616	0.1	0.0-0.3	2335	0.2	0.0-0.5
35-44	459	0.0	0.0-0.0	862	0.1	0.0-0.3	1321	0.1	0.0-0.1
45-54	296	0.6	0.0-1.4	606	0.4	0.0-1.0	902	0.5	0.0-1.0
55-64	216	0.0	0.0-0.0	434	1.2	0.2-2.3	650	0.6	0.1-1.2
<b>25-64</b>	<b>1690</b>	<b>0.3</b>	<b>0.0-0.5</b>	<b>3518</b>	<b>0.3</b>	<b>0.1-0.5</b>	<b>5208</b>	<b>0.3</b>	<b>0.1-0.4</b>

\* Impaired fasting glycaemia is defined as either

- plasma venous value:  $\geq 6.1$  mmol/L (110mg/dl) and  $< 7.0$  mmol/L (126mg/dl)
- capillary whole blood value:  $\geq 5.6$  mmol/L (100mg/dl) and  $< 6.1$  mmol/L (110mg/dl)

\*\* Raised blood glucose is defined as either

- plasma venous value:  $\geq 7.0$  mmol/L (126 mg/dl)
- capillary whole blood value:  $\geq 6.1$  mmol/L (110 mg/dl)



**Total cholesterol**

Description: Mean total cholesterol among all respondents including those currently on medication for raised cholesterol.

Instrument questions:

- Total cholesterol measurement

Mean total cholesterol (mmol/L)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	297	4.3	4.2-4.3	727	4.3	4.3-4.4	1024	4.3	4.2-4.3
35-44	224	4.4	4.3-4.4	458	4.4	4.3-4.5	682	4.4	4.3-4.4
45-54	150	4.3	4.3-4.4	354	4.4	4.3-4.5	504	4.4	4.3-4.4
55-64	104	4.4	4.3-4.6	273	4.6	4.5-4.7	377	4.5	4.5-4.6
<b>25-64</b>	<b>775</b>	<b>4.3</b>	<b>4.3-4.4</b>	<b>1812</b>	<b>4.4</b>	<b>4.4-4.4</b>	<b>2587</b>	<b>4.4</b>	<b>4.3-4.4</b>

Mean total cholesterol (mg/dl)									
Age Group (years)	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
25-34	297	164.5	161.8-167.1	727	167.9	165.9-169.9	1024	166.1	164.1-168.2
35-44	224	168.7	165.8-171.7	458	170.4	167.9-172.9	682	169.6	167.4-171.7
45-54	150	167.8	164.7-170.8	354	170.5	168.2-172.9	504	169.3	167.2-171.3
55-64	104	171.9	167.8-176.0	273	177.3	173.8-180.8	377	175.0	172.3-177.7
<b>25-64</b>	<b>775</b>	<b>166.9</b>	<b>164.9-168.9</b>	<b>1812</b>	<b>170.3</b>	<b>168.7-171.9</b>	<b>2587</b>	<b>168.6</b>	<b>167.0-170.3</b>

**Raised total cholesterol**

Description: Percentage of respondents with raised total cholesterol and percentage of respondents currently on medication for raised cholesterol.

Instrument questions:

- Total cholesterol measurement
- During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor or other health worker?

<b>Total cholesterol <math>\geq</math> 5.0 mmol/L or <math>\geq</math> 190 mg/dl or currently on medication for raised cholesterol</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	297	2.9	0.9-4.9	727	8.2	6.2-10.2	1024	5.5	4.0-6.9
35-44	224	8.1	4.8-11.5	458	9.8	6.7-13.0	682	9.0	6.5-11.5
45-54	150	8.1	3.7-12.5	354	11.0	7.4-14.6	504	9.7	6.8-12.6
55-64	104	14.5	7.9-21.1	273	22.2	17.1-27.3	377	18.9	14.9-23.0
<b>25-64</b>	<b>775</b>	<b>6.3</b>	<b>4.6-8.1</b>	<b>1812</b>	<b>11.0</b>	<b>9.4-12.6</b>	<b>2587</b>	<b>8.7</b>	<b>7.4-10.0</b>

<b>Total cholesterol <math>\geq</math> 6.2 mmol/L or <math>\geq</math> 240 mg/dl or currently on medication for raised cholesterol</b>									
Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
25-34	297	0.3	0.0-1.0	727	0.5	0.0-1.1	1024	0.4	0.0-1.0
35-44	224	0.9	0.0-2.0	458	1.1	0.1-2.1	682	1.0	0.2-1.7
45-54	150	0.0	0.0-0.0	354	0.5	0.0-1.3	504	0.3	0.0-0.7
55-64	104	1.0	0.0-2.9	273	4.8	2.4-7.1	377	3.2	1.6-4.8
<b>25-64</b>	<b>775</b>	<b>0.5</b>	<b>0.0-1.1</b>	<b>1812</b>	<b>1.2</b>	<b>0.7-1.8</b>	<b>2587</b>	<b>0.9</b>	<b>0.4-1.3</b>

## Summary of Combined Risk Factors

### 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 & vegetables per day
- low level of activity (<600 MET -minutes)
- overweight or obese (BMI  $\geq 25$  kg/m<sup>2</sup>)
- raised BP (SBP  $\geq 140$  and/or DBP  $\geq 90$  mmHg or currently on medication for raised BP).

Instrument questions: combined from Step 1 and Step 2

Summary of Combined Risk Factors							
Men							
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	617	0.3	0.0-0.7	84.4	81.3-87.5	15.3	12.2-18.4
45-64	323	0.3	0.0-0.9	77.1	72.2-82.1	22.6	17.6-27.5
<b>25-64</b>	<b>940</b>	<b>0.3</b>	<b>0.0-0.7</b>	<b>82.1</b>	<b>79.3-84.9</b>	<b>17.6</b>	<b>14.8-20.4</b>

Summary of Combined Risk Factors							
Women							
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	1264	1.7	1.0-2.5	87.6	85.5-89.7	10.7	8.6-12.7
45-64	638	1.5	0.5-2.5	73.8	69.6-77.9	24.7	20.6-28.9
<b>25-64</b>	<b>1902</b>	<b>1.6</b>	<b>1.0-2.3</b>	<b>82.8</b>	<b>80.6-85.0</b>	<b>15.5</b>	<b>13.5-17.6</b>

Summary of Combined Risk Factors							
Both Sexes							
Age Group (years)	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
25-44	1881	1.0	0.6-1.5	86.0	84.1-87.9	13.0	11.1-14.9
45-64	961	0.9	0.3-1.5	75.3	72.2-78.5	23.7	20.6-26.9
<b>25-64</b>	<b>2842</b>	<b>1.0</b>	<b>0.6-1.4</b>	<b>82.5</b>	<b>80.6-84.3</b>	<b>16.5</b>	<b>14.7-18.4</b>