

## APPENDICES

### Appendix 1. Papua New Guinea NCD STEPS Survey Questionnaire

## STEPS Instrument for Papua New Guinea Non-Communicable Diseases Risk Factor Survey Version 2.0



WHO STEPwise approach to Surveillance of  
noncommunicable diseases (STEPS)



## Step 1 Behavioural Measurements

### Tobacco Use

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

Questions	Response	Code
26 Do you currently smoke any tobacco products, such as cigarettes, cigars or pipes?	Yes 1 No 2 <i>If No, go to T6</i>	T1
27 <b>If Yes,</b> Do you currently smoke tobacco products daily?	Yes 1 No 2 <i>If No, go to T6</i>	T2
28 How old were you when you first started smoking daily?	Age (years) <input type="text"/> Don't remember 77 <input type="text"/> <i>If Known, go to T5a</i>	T3
29 Do you remember how long ago it was?  (RECORD ONLY 1, NOT ALL 3)  Don't remember 77	In Years <input type="text"/> <i>If Known, go to T5a</i>	T4a
	OR in Months <input type="text"/> <i>If Known, go to T5a</i>	T4b
	OR in Weeks <input type="text"/>	T4c
30 On average, how many of the following do you smoke each day?  (RECORD FOR EACH TYPE)	Manufactured cigarettes <input type="text"/>	T5a
	Hand-rolled cigarettes <input type="text"/>	T5b
	Pipes full of tobacco <input type="text"/>	T5c
31 In the past, did you ever smoke daily?	Yes 1 No 2 <i>If No, go to T9</i>	T6
32 <b>If Yes,</b> How old were you when you stopped smoking daily?	Age (years) <input type="text"/> Don't remember 77 <input type="text"/> <i>If Known, go to T9</i>	T7
33 How long ago did you stop smoking daily?  (RECORD ONLY 1, NOT ALL 3)  Don't remember 77	Years ago <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"/>	T8c
34 Do you currently use any betel nut?	Yes 1 No 2 <i>If No, go to T12</i>	T9
35 <b>If yes</b> Do you use betel nut daily?	Yes 1 No 2	T10
36 On average, how many times do you use betel nut daily?	Number of nuts per day <input type="text"/>	T11d
37 In the past, did you ever use betel nut daily? (Only ask if does not use betel nut now – i.e. answer to T9 was No)	Yes 1 Go to A1	T12
	No 2 Go to A1	
38 When you use betel nut, do you also use mustard and lime?	Always 1	X5
	Sometimes 2	
	Rarely 3	
	Never 4	

### Alcohol Consumption

The next questions ask about the consumption of alcohol.

Questions	Response	Code
39 Have you consumed alcohol (such as beer, wine, spirits, home brew) within the past 12 months? (USE SHOWCARD OR SHOW EXAMPLES)	Yes 1	A1
	No 2 <i>If No, go to D1</i>	
40 In the past 12 months, how frequently have you had at least one drink? (READ RESPONSES USE SHOWCARD)	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	
41 When you drink alcohol, on average, how many drinks do you have during one day? One drink = one beer or beer equivalent	Number <input type="text"/>	X6
	Don't know 77	
42 Have you consumed alcohol (such as beer, wine, spirits, home brew) within the past 30 days? (USE SHOWCARD)	Yes 1	A4
	No 2 <i>If No, go to X8</i>	
43 During each of the past 7 days, how many standard drinks of any alcoholic drink did you have each day?  (RECORD FOR EACH DAY USE SHOWCARD)  Don't Know 77	Monday <input type="text"/>	X7a
	Tuesday <input type="text"/>	X7b
	Wednesday <input type="text"/>	X7c
	Thursday <input type="text"/>	X7d
	Friday <input type="text"/>	X7e
	Saturday <input type="text"/>	X7f
	Sunday <input type="text"/>	X7g
44 In the past 12 months, what was the largest number of drinks you had on a single occasion, counting all types of standard drinks together?	Largest number <input type="text"/>	X8
45 <b>For men only:</b> In the past 12 months, on how many days did you have five or more standard drinks in a single day?	Number of days <input type="text"/>	X9
<b>For women only:</b> In the past 12 months, on how many days did you have four or more standard drinks in a single day?	Number of days <input type="text"/>	X10
46 Where do you get most of your alcoholic drinks from? (choose one only)	I buy from store 1	X11
	Friends and relatives give to me 2	
	Home-brew 3	

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
47 In a typical week, on how many days do you eat fruit? (USE SHOWCARD)	Number of days Don't Know 8 <input type="checkbox"/> If Zero days, go to D3	D1
48 How many servings of fruit do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 88 <input type="checkbox"/>	D2
49 In a typical week, on how many days do you eat vegetables? (USE SHOWCARD)	Number of days Don't Know 8 <input type="checkbox"/> If Zero days, go to P1	D3
50 How many servings of vegetables do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 88 <input type="checkbox"/>	D4

Physical Activity		
Next I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.		
Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, planting, tending and harvesting food/crops, fishing or hunting for food, marketing, seeking employment. 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>		
51 Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like carrying or lifting heavy loads, digging or construction work for at least 10 minutes continuously? (USE SHOWCARD)	Yes 1 No 2 If No, go to P 4	P1
52 In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days <input type="checkbox"/>	P2
53 How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours : minutes <input type="checkbox"/> : <input type="checkbox"/> hrs mins	P3 (a-b)
54 Does your work involve moderate-intensity activity, that causes small increases in breathing or heart rate such as brisk walking [or carrying light loads] for at least 10 minutes continuously? [INSERT EXAMPLES] (USE SHOWCARD)	Yes 1 No 2 If No, go to P 7	P4
55 In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days <input type="checkbox"/>	P5
56 How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours : minutes <input type="checkbox"/> : <input type="checkbox"/> 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 school, or to church		
57 Do you walk or use a bicycle for at least 10 minutes continuously to get to and from places?	Yes 1 No 2 If No, go to P 10	P7
58 In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?	Number of days <input type="checkbox"/>	P8
59 How much time do you spend walking or bicycling for travel on a typical day?	Hours : minutes <input type="checkbox"/> : <input type="checkbox"/> hrs mins	P9 (a-b)
<b>Recreational activities</b>		
The next questions exclude the work and transport activities that you have already mentioned. Now I would like to ask you about sports, fitness and recreational activities		
60 Do you do any vigorous-intensity sports, fitness or recreational activities that cause large increases in breathing or heart rate - like running or football or basketball - for at least 10 minutes continuously? (USE SHOWCARD)	Yes 1 No 2 If No, go to P 13	P10
61 In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational activities?	Number of days <input type="checkbox"/>	P11
62 How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours : minutes <input type="checkbox"/> : <input type="checkbox"/> hrs mins	P12 (a-b)

## Physical Activity (recreational activities) contd.

Questions	Response	Code
63 Do you do any moderate-intensity sports, fitness or recreational activities that causes a small increase in breathing or heart rate such as brisk walking, cycling, swimming, volleyball) for at least 10 minutes continuously? (USE SHOWCARD)	Yes 1 No 2 If No, go to H1	P13
64 In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational activities?	Number of days _ _	P14
65 How much time do you spend doing moderate-intensity sports, fitness or recreational activities on a typical day?	Hours : minutes _ _ : _ _ hrs mins	P15 (a-b)

## History of Raised Blood Pressure

Questions	Response	Code
66 When was your blood pressure last measured by a health professional?	Within past 12 months 1 1-5 years ago 2 Not within past 5 years 3	H1
67 During the past 12 months have you been told by a doctor or other health worker that you have raised blood pressure or hypertension?	Yes 1 No 2	H2
68 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?		
Drugs (medication) that you have taken in the last 2 weeks	Yes 1 No 2	H3a
Special prescribed diet	Yes 1 No 2	H3b
Advice or treatment to lose weight	Yes 1 No 2	H3c
Advice or treatment to stop smoking	Yes 1 No 2	H3d
Advice to start or do more exercise	Yes 1 No 2	H3e
69 During the past 12 months have you seen a traditional healer for raised blood pressure or hypertension?	Yes 1 No 2	H4
70 Are you currently taking any herbal or traditional remedy for your raised blood pressure?	Yes 1 No 2	H5

## History of Diabetes

Questions	Response	Code
71 Have you had your blood sugar measured in the last 12 months?	Yes 1 No 2	H6
72 During the past 12 months, have you ever been told by a doctor or other health worker that you have diabetes?	Yes 1 No 2	H7
73 Are you currently receiving any of the following treatments for diabetes prescribed by a doctor or other health worker as well as any advice?		
Insulin	Yes 1 No 2	H8a
Oral drug (medication) that you have taken in the last 2 weeks	Yes 1 No 2	H8b
Special prescribed diet	Yes 1 No 2	H8c
Advice or treatment to lose weight	Yes 1 No 2	H8d
Advice or treatment to stop smoking	Yes 1 No 2	H8e
Advice to start or do more exercise	Yes 1 No 2	H8f
74 During the past 12 months have you seen a traditional healer for diabetes?	Yes 1 No 2	H9
75 Are you currently taking any herbal or traditional remedy for your diabetes?	Yes 1 No 2	H10

## Oral Health

76 How many natural teeth do you have?	All of them	1	X12
	Some of them, but have lost some	2	
	None of them	3	
77 Do you have any removable dentures?	Yes	1	O3
	No	2	
78 Which of the following removable dentures do you have? (can have more than one)	A partial denture	1	O4
	A full upper denture	2	
	A full lower denture	3	
79 How would you describe the state of your teeth	Excellent	1	O5
	Very good	2	
	Good	3	
	Average	4	
	Poor	5	
	Very poor	6	
	Don't know	7	
80 How often do you clean your teeth?	Never	1	O7
	Once a month	2	
	2 to 3 times a month	3	
	Once a week	4	
	2 to 3 times a week	5	
	Once a day	6	
	Twice a day	7	
81 Which of the following do you use to clean your teeth (circle one only - main method)	Toothbrush alone	1	O8
	Toothbrush with toothpaste	2	
	Wooden toothpicks	3	
	Thread (dental floss)	4	

		Ash	5	
		Betel nut skin or other abrasive leaf	6	
		Sand	7	
		Steel wool	8	
		Other	9	
82	Do you use toothpaste?	Yes	1	O9
		No	2	
83	How long is it since you last saw a dentist?	Less than 6 months	1	O10
		6-12 months	2	
		More than 1 year but less than 2 years	3	
		More than 2 years but less than 5 years	4	
		More than 5 years	5	
		Never received dental care	6	
84	Have you experienced any of the following problems, during the last 12 months, because of the state of your teeth? (may have more than one)	Difficulty in chewing/biting foods	1	O12
		Difficulty in speech / trouble pronouncing words	2	
		Persistent pain	3	
		Embarrassment with others	4	
		None	5	

## Step 2 Physical Measurements

Height and Weight		Response		Code
85	Interviewer ID		□ □ □ □	M1
86	Device IDs for height and weight	Height	□	M2a
		Weight	□	M2b
87	Height	in Centimetres (cm)	□ □ □ □ □	M3
88	Weight <i>If too large for scale, code 666.6</i>	in Kilograms (kg)	□ □ □ □ □	M4
89	<i>(For women)</i> Are you pregnant?	Yes	1 <i>If Yes, go to M 8</i>	M5
		No	2	
Waist and Hip				
90	Device ID for waist and hip		□	M6
91	Waist circumference	in Centimetres (cm)	□ □ □ □ □	M7
92	Hip circumference	in Centimetres (cm)	□ □ □ □ □	M15
Blood Pressure				
93	Interviewer ID		□ □ □ □	M8
94	Device ID for blood pressure		□	M9
95	Cuff size used	Medium	2	M10
		Large	3	
96	Reading 1 (If automatic machine used, record heart rate below as well)	Systolic (mmHg)	□ □ □ □	M11a
		Diastolic (mmHg)	□ □ □ □	M11b
98	Reading 2 (If automatic machine used, record heart rate below as well)	Systolic (mmHg)	□ □ □ □	M12a
		Diastolic (mmHg)	□ □ □ □	M12b
99	Reading 3 (If automatic machine used, record heart rate below as well)	Systolic (mmHg)	□ □ □ □	M13a
		Diastolic (mmHg)	□ □ □ □	M13b
100	During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor or other health worker?	Yes	1	M14
		No	2	
Heart Rate and Body Composition				
101	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
102	Bioelectric impedance body composition measurement <i>If error E4 put 99.9</i>	% fat	□ □ □ □	X13

**Step 3 Biochemical Measurements**

Blood Glucose		Response	Code
103	During the last 12 hours have you had anything to eat or drink, other than water?	Yes 1 No 2	B1
104	Technician ID	<input type="text"/>	B2
105	Device ID	<input type="text"/>	B3
106	Time of day blood specimen taken (24 hour clock)	Hours : minutes <input type="text"/> : <input type="text"/> hrs mins	B4
107	Fasting blood glucose	mmol/l <input type="text"/> <input type="text"/>	B5
	(only fill in if machine cannot give numerical reading)	Low 1 High 2 Unable to assess 3	B5a
108	Time Glucose Load given (24 hour clock). ONLY DO ON EVEN NUMBER SUBJECTS	<input type="text"/> : <input type="text"/>	X14
109	Time of day 2 hour blood specimen taken (24 hour clock)	<input type="text"/> : <input type="text"/>	X15
110	2 Hour Blood glucose	mmol/l <input type="text"/> <input type="text"/>	X16
	(only fill in if machine cannot give numerical reading)	Low 1 High 2 Unable to assess 3	X17

**Appendix 2. The Data Book of the Papua New Guinea STEPS Survey**



**WHO STEPS**

**Chronic Disease  
Risk Factor Surveillance**

**DATA BOOK FOR  
PAPUA NEW GUINEA**