

WHO STEPS for surveillance of major NCD risk factors



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The NCD pathway

Metabolic risk factors

Behavioural risk factors

Risk Factors Common to Major NCD Conditions

Risk Factor	Condition			
	Cardiovascular diseases	Diabetes	Cancer	Respiratory Conditions
Tobacco use	✓	✓	✓	✓
Harmful use of alcohol	✓	✓	✓	
Low fruit & vegetable	✓	✓	✓	
Physical inactivity	✓	✓	✓	✓
Obesity	✓	✓	✓	
Raised blood pressure	✓	✓		
Raised blood glucose	✓	✓	✓	
Abnormal blood lipids	✓	✓	✓	

Why measure these risk factors?

- Greatest impact on NCD morbidity and mortality
- Modification is possible through effective prevention
- Measurement of risk factors proven to be valid
- Measurements can be obtained using appropriate ethical standards
- Information can be used to set up NCD policy interventions and programmes

What is STEPS?

- System for surveillance of these NCD risk factors
- Designed for implementation in low- and middle income countries
- Most countries in the Pacific have conducted at least one STEPS survey

Objectives of STEPS

- Gather information on NCD risk factors to help plan programmes and interventions
- Collect standardized risk factor data to enable comparisons, but allow flexibility
- Provide an entry point for low- and middle income countries to get started on chronic disease surveillance
- Build capacity in countries
- Integrated approach at relative low cost

STEPS methods – The risk factors

- **Behavioural Risk Factors**
 - Tobacco use
 - Harmful alcohol consumption
 - Unhealthy diet (low fruit and vegetable consumption)
 - Physical inactivity
- **Biological Risk Factors**
 - Overweight and obesity
 - Raised blood pressure
 - Raised blood glucose
 - Abnormal blood lipids

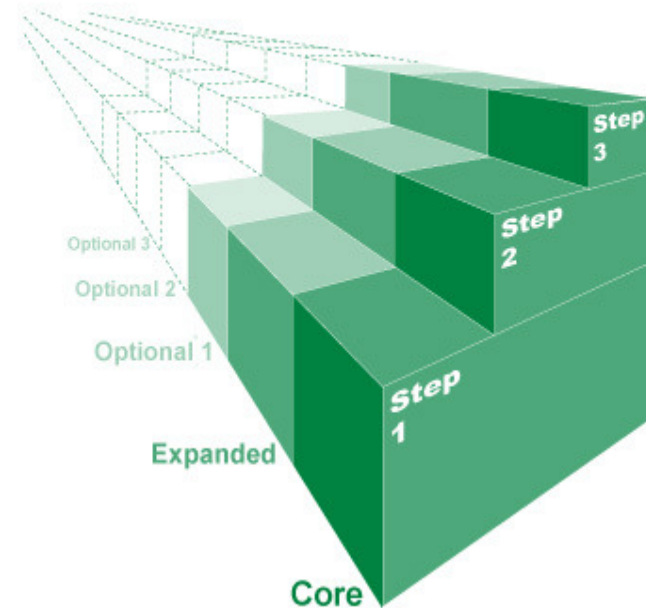
STEPS methods – The framework

Different levels of risk factor assessment:

- STEP 1 – questionnaire
- STEP 2 – physical measurements
- STEP 3 – blood and urine samples

Three modules:

- Core
- Expanded
- Optional



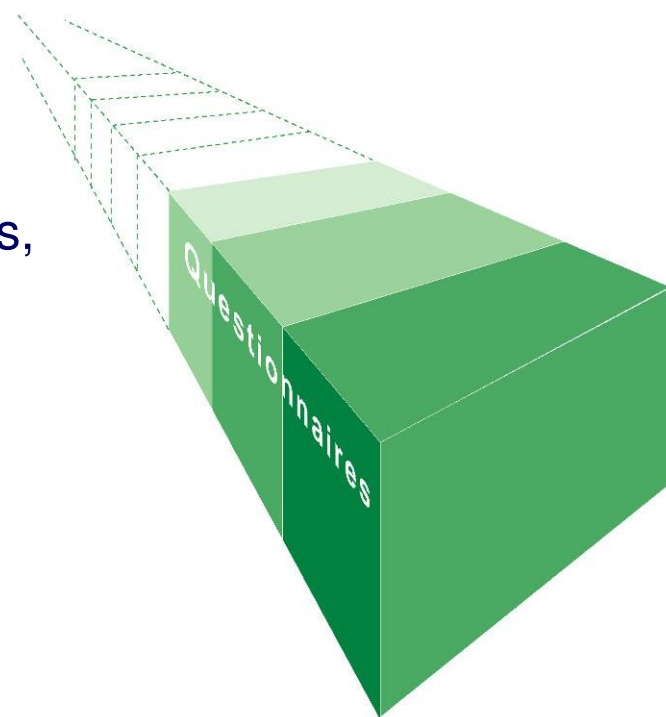
Step 1: Questionnaire

- **Core:**

- Socio-demographic info
- Tobacco use, quit attempts, past use
- Alcohol consumption
- Fruit & vegetable consumption
- Salt intake
- Physical inactivity
- History & treatment of raised BP, diabetes, raised cholesterol, CVD
- Lifestyle advice
- Cervical cancer screening
- Salt intake

- **Expanded:**

- Cessation, smokeless tobacco use, ETS
- Alcohol use disorders
- Oil consumption, meals outside a home
- Sedentary behaviour



Fruits and vegetables intake

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.			
Question	Response		Code
50 In a typical week, on how many days do you eat fruit? (USE SHOWCARD)	Number of days Don't Know 77	<input type="text"/> <input type="text"/> <input type="text"/> If Zero days, go to D3	D1
51 How many servings of fruit do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't Know 77	<input type="text"/> <input type="text"/> <input type="text"/>	D2
52 In a typical week, on how many days do you eat vegetables? (USE SHOWCARD)	Number of days Don't Know 77	<input type="text"/> <input type="text"/> <input type="text"/> If Zero days, go to D5	D3
53 How many servings of vegetables do you eat on one of those days? (USE SHOWCARD)	Number of servings Don't know 77	<input type="text"/> <input type="text"/> <input type="text"/>	D4

EXPANDED: Diet			
54	What type of oil or fat is most often used for meal preparation in your household? (USE SHOWCARD) (SELECT ONLY ONE)	Vegetable oil 1 Lard or suet 2 Butter or ghee 3 Margarine 4 Other 5 If Other, go to D5 other None in particular 6 None used 7 Don't know 77 Other <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"/>	D5
			D5other
55	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.	Number Don't know 77	D6

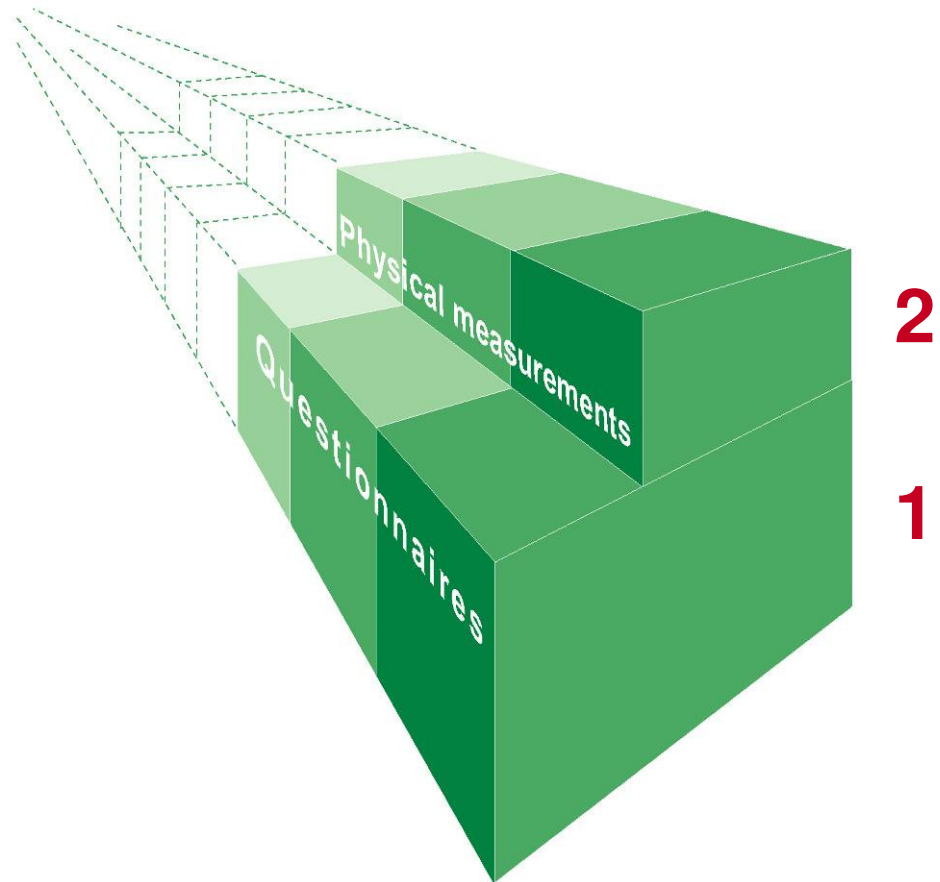
Step 2: Physical measurements

- **Core:**

- Blood pressure
- Height
- Weight
- Waist circumference

- **Expanded:**

- Hip circumference
- Heart rate



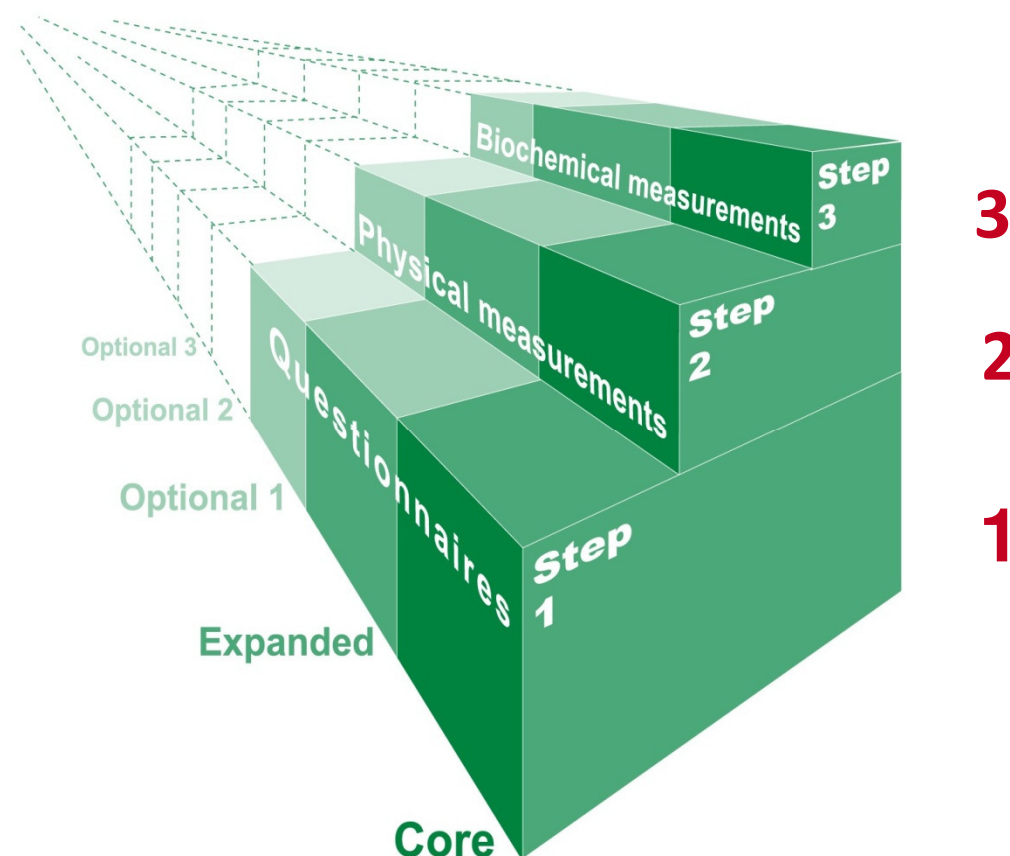
Step 3: Biochemical measurements

- **Core:**

- Urinary sodium and creatinine
- Fasting blood sugar
- Fasting total cholesterol

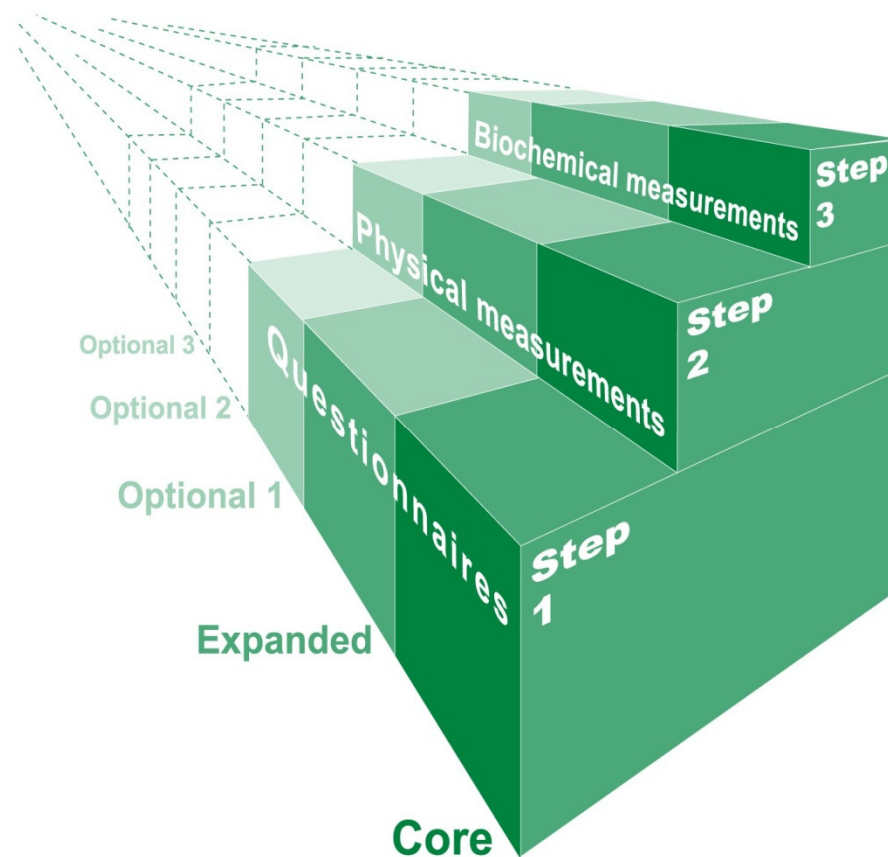
- **Expanded:**

- Triglycerides
- HDL cholesterol



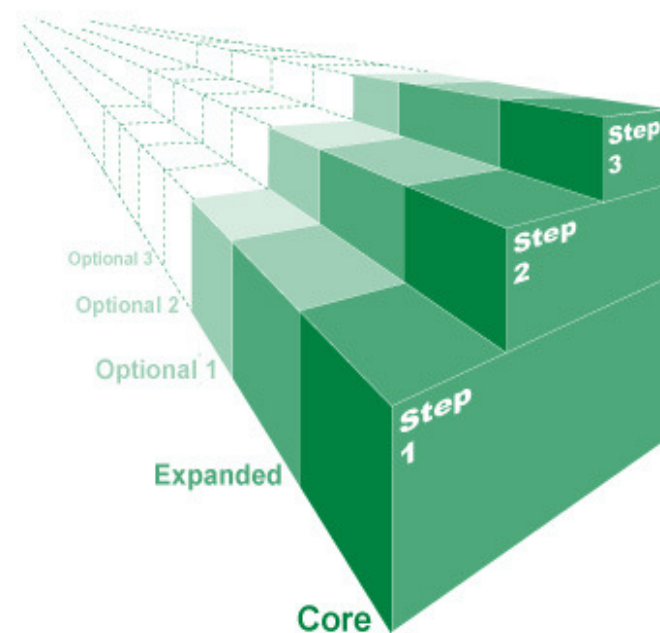
Optional modules

- Mental health / suicide
- Oral health
- Sexual health
- Tobacco policy
- Violence and injury



Why a STEPwise framework to surveillance?

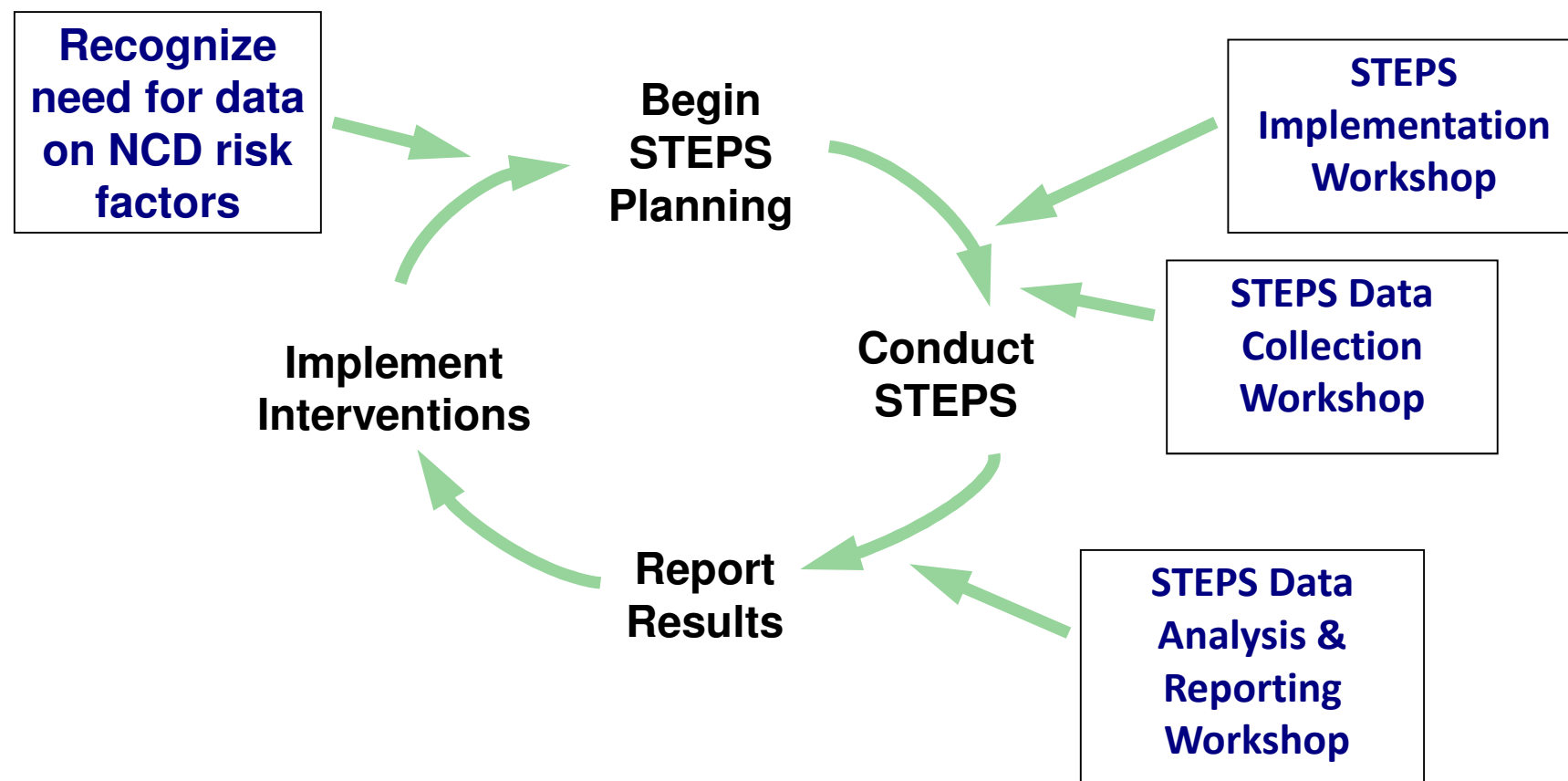
- Standard methods and tools, but also
- Flexible for adaptation to cultural and local needs
- Simple
- Hierarchical
- Can add on to existing systems



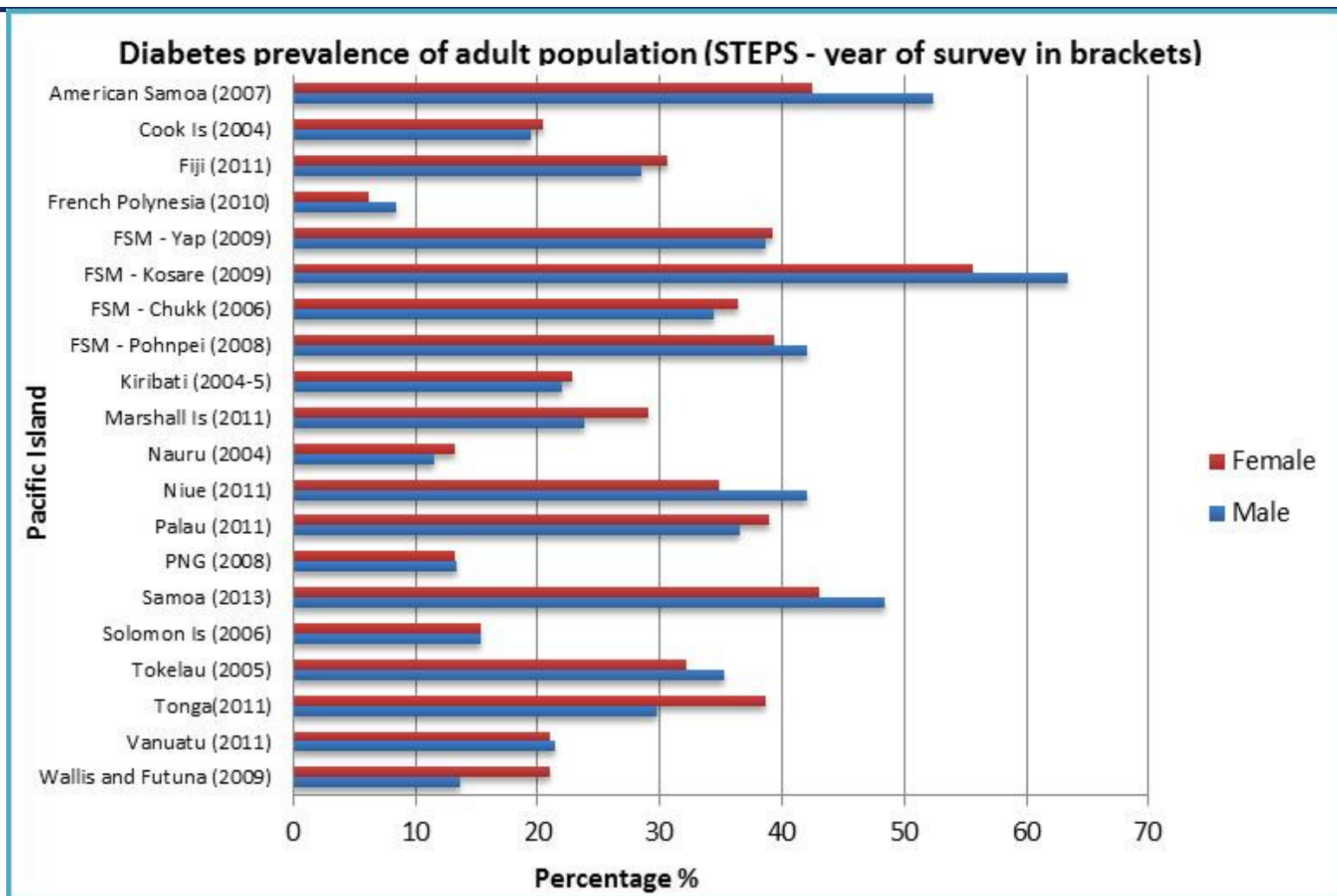
STEPS methods – recommendations

- Targets a scientific sample of adults aged 18 – 69
- Household surveys conducted using trained interviewers for STEP 1 (questionnaire) and STEP 2 (physical measures)
- Clinic based for STEP 3 (biochemical measures)
- Countries should at least do core questions STEP 1 and 2
- Repeat surveys every 5 years

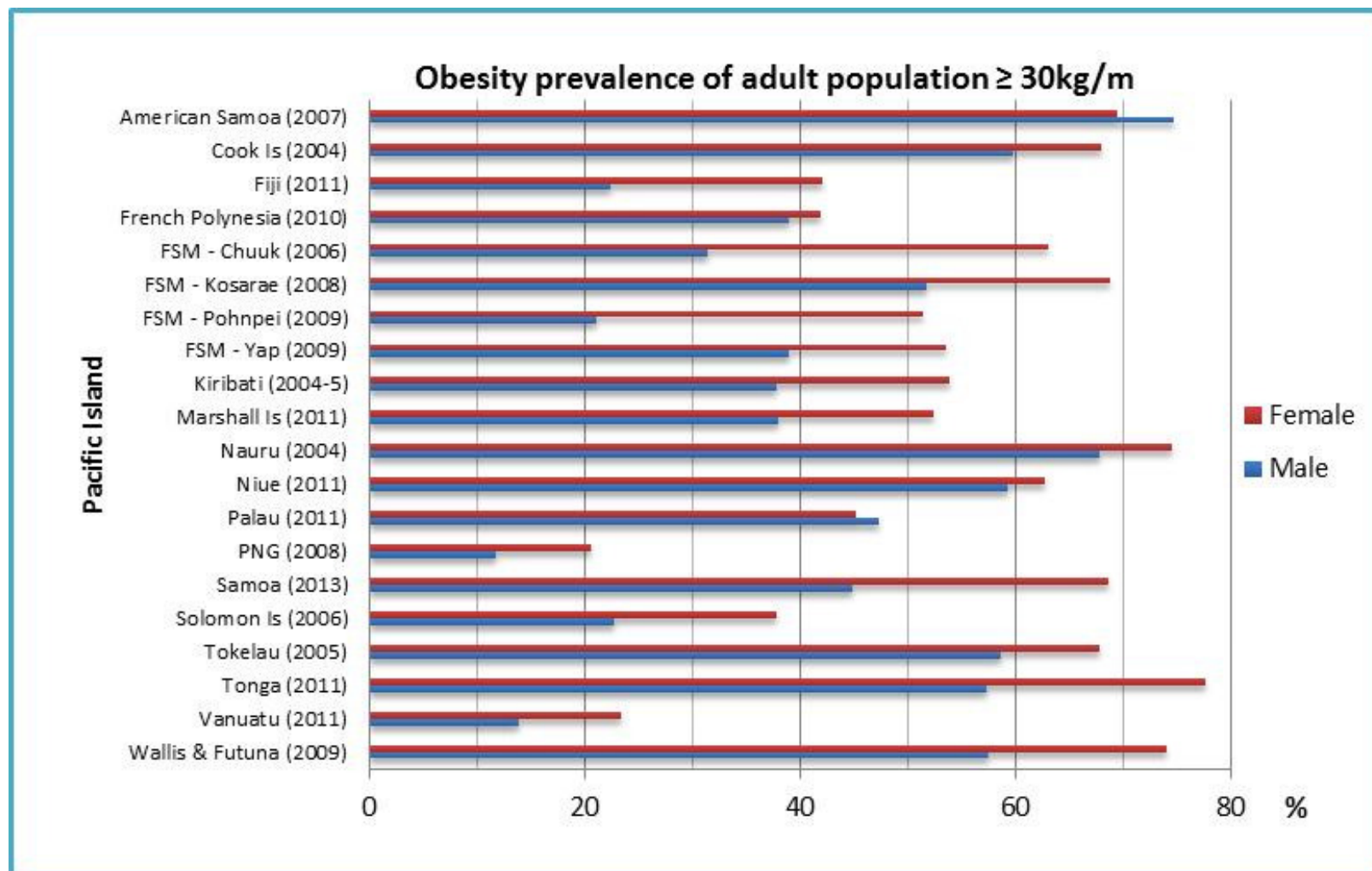
STEPS methods – the Surveillance loop



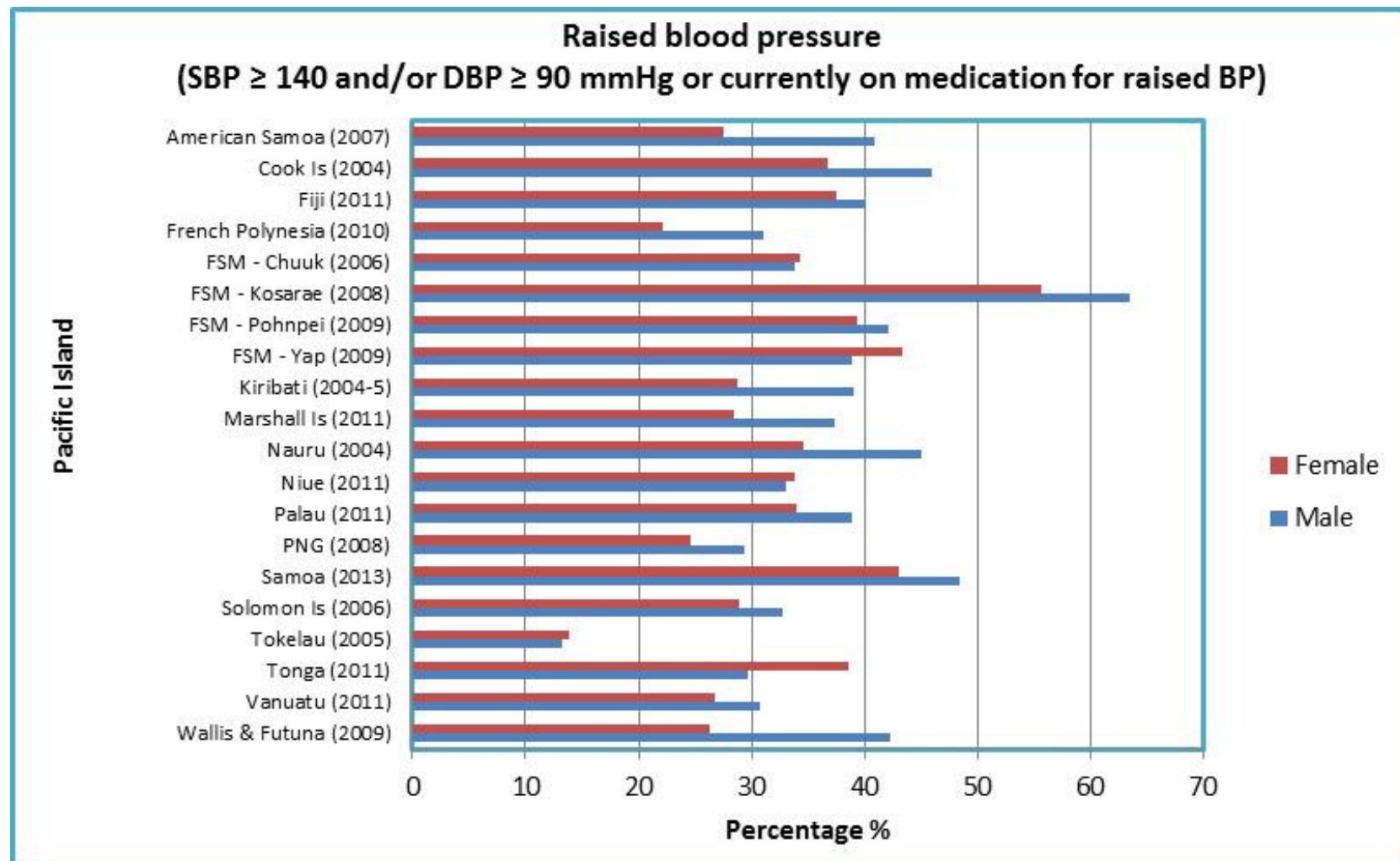
Prevalence of diabetes



Prevalence of obesity



Raised blood pressure



STEPS website

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STEPwise approach to surveillance (STEPS)

The WHO STEPwise approach to Surveillance (STEPS) is a simple, standardized method for collecting, analysing and disseminating data in WHO member countries.

By using the same standardized questions and protocols, all countries can use STEPS information not only for monitoring within-country trends, but also for making comparisons across countries. The approach encourages the collection of small amounts of useful information on a regular and continuing basis.

There are currently two primary STEPS surveillance systems, the STEPwise approach to risk factor surveillance and the STEPwise approach to Stroke surveillance.

Adult Risk Factor Surveillance

- [Introduction](#)
- [STEPS Instrument](#)
- [User Manual](#)
- [Resources](#)
- [Country Reports](#)
- [GPAQ](#)
- [Updates](#)

Stroke Surveillance

- [Introduction](#)

RISK FACTOR SURVEILLANCE



[Introduction](#)

STROKE SURVEILLANCE



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GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY

