



# GLOBAL STATUS REPORT

## on noncommunicable diseases

# 2014

*"Attaining the nine global noncommunicable diseases targets; a shared responsibility"*



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a shared responsibility"*



**World Health  
Organization**

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# Contents

<b>Message from the Director-General</b>	<b>vii</b>
<b>Preface</b>	<b>ix</b>
<b>Abbreviations</b>	<b>x</b>
<b>Executive summary</b>	<b>xi</b>
<b>Introduction</b>	<b>1</b>
Current status of the global agenda on prevention and control of noncommunicable diseases	
<b>Chapter 1. Global target 1:</b>	<b>9</b>
A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	
<b>Chapter 2. Global target 2:</b>	<b>23</b>
At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	
<b>Chapter 3. Global target 3:</b>	<b>33</b>
A 10% relative reduction in prevalence of insufficient physical activity	
<b>Chapter 4. Global target 4:</b>	<b>45</b>
A 30% relative reduction in mean population intake of salt/sodium	
<b>Chapter 5. Global target 5:</b>	<b>53</b>
A 30% relative reduction in prevalence of current tobacco use	
<b>Chapter 6. Global target 6:</b>	<b>67</b>
A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	
<b>Chapter 7. Global target 7:</b>	<b>79</b>
Halt the rise in diabetes and obesity	
<b>Chapter 8. Global target 8:</b>	<b>95</b>
At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	
<b>Chapter 9. Global target 9:</b>	<b>105</b>
An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities	

<b>Chapter 10.</b>	<b>113</b>
Development and implementation of national multisectoral action plans to attain national targets	
<b>Chapter 11.</b>	<b>123</b>
The way forward to attain NCD targets: key messages	
<b>Annexes</b>	<b>133</b>
<b>Annex 1.</b>	<b>134</b>
Global monitoring framework, including 25 indicators and nine voluntary global targets for the prevention and control of noncommunicable diseases	
<b>Annex 2.</b>	<b>137</b>
Methods used for estimating the NCD mortality and risk factor data	
<b>Annex 3.</b>	<b>142</b>
List of countries by WHO Regions and World Bank Income Groups	
<b>Annex 4.</b>	<b>149</b>
Country estimates of noncommunicable disease mortality and selected risk factors, 2010 (baseline) and latest available data	
<b>4.1 Premature NCD Mortality</b>	<b>150</b>
Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease, 2010 and 2012	
<b>4.2 NCD mortality</b>	<b>154</b>
Comparable estimates of NCD mortality (total NCD deaths in 000s; % of NCD deaths occurring under the age of 70; and age-standardized death rate for NCDs per 100 000), 2012	
<b>4.3 Alcohol</b>	<b>162</b>
Comparable estimates, per capita consumption, heavy episodic drinking and prevalence of alcohol use disorders (population aged 15+ years), 2010 and 2012	
<b>4.4a Insufficient physical activity</b>	<b>172</b>
Comparable estimates of prevalence of insufficient physical activity (adults 18+ years), 2010	
<b>4.4b Insufficient physical activity</b>	<b>180</b>
Comparable estimates of prevalence of insufficient physical activity (adolescents 11-17 years), 2010	
<b>4.5 Tobacco</b>	<b>184</b>
Comparable estimates of prevalence of current tobacco smoking (population aged 15+ years), 2010 and 2012	
<b>4.6 Body mass index</b>	<b>200</b>
Comparable estimates of mean body mass index (adults 18+ years), 2010 and 2014	

<b>4.7a Overweight and Obesity</b>	<b>208</b>
Comparable estimates of prevalence of overweight and obesity (population aged 18+ years), 2010	
<b>4.7b Overweight and Obesity</b>	<b>224</b>
Comparable estimates of prevalence of overweight and obesity (population aged 18+ years), 2014	
<b>4.8a Raised blood glucose</b>	<b>240</b>
Comparable estimates of prevalence of raised blood glucose (population aged 18+ years), 2010	
<b>4.8b Raised blood glucose</b>	<b>248</b>
Comparable estimates of prevalence of raised blood glucose (population aged 18+ years), 2014	
<b>4.9a Raised blood pressure</b>	<b>256</b>
Comparable estimates of prevalence of raised blood pressure (population aged 18+ years), 2010	
<b>4.9b Raised blood pressure</b>	<b>264</b>
Comparable estimates of prevalence of raised blood pressure (population aged 18+ years), 2014	
<b>Index</b>	<b>273</b>





# Message from the Director-General



**Dr Margaret Chan**  
Director-General  
World Health Organization

The world has reached a decisive point in the history of noncommunicable diseases (NCDs) and has an unprecedented opportunity to alter its course. WHO Member States have agreed on a time-bound set of nine voluntary global targets to be attained by 2025. There are targets to reduce harmful use of alcohol, insufficient physical activity, salt/sodium intake, tobacco use and hypertension, halt the rise in diabetes and of obesity, and improve coverage of treatment for prevention of heart attacks and strokes. There is also a target for improved availability and affordability of technologies and essential medicines to manage NCDs. Countries need to make progress on all these targets to attain the overarching target of a 25% reduction of premature mortality from the four major NCDs by 2025.

Out of the 38 million deaths due to NCDs in 2012, more than 40% were premature, affecting people under 70 years of age. The majority of premature NCD deaths are preventable. This report gives encouraging evidence that premature NCD deaths can indeed be significantly reduced worldwide. Deaths from cardiovascular diseases have been dramatically reduced in many high-income countries owing to government policies which facilitate the adoption of healthier lifestyles and provision of equitable health care. It is imperative that this favourable shift be sustained and, if possible, accelerated in developed countries and replicated in low- and middle-income countries.

NCDs are driven by the effects of globalization on marketing and trade, rapid urbanization and population ageing – factors over which the individual has little control and over which the conventional health sector also has little sway. While individual behaviour change is important, tackling NCDs definitively requires leadership at the highest

levels of government, policy development that involve all government departments, and progress towards universal health coverage.

The primary target audience of this report are Ministers of Health. The report provides information on voluntary global targets and how to scale up national efforts to attain them, in a sustainable manner. The 2010 baseline estimates on NCD mortality and risk factors are provided so that countries may begin reporting to WHO on progress made in attaining the targets, starting in 2015. The country case studies on successful prevention and control of NCDs highlighted in the report can be instructive for others facing similar challenges.

As discussed in this report, there is an agreed set of very cost-effective – and globally applicable – NCD interventions for attaining all nine targets by 2025. Each country needs to apply them within its specific local conditions and contexts, drawing on the best available evidence. Ministers assembled at the United Nations General Assembly in July 2014, agreed that there are no reasons why any country – low- middle- or high-income – should delay moving forward with their implementation. Delay in taking action will result in worsening of the NCD burden and an increase in health-care costs.

The most important message of the second global report on NCDs is that, today, the global community has the chance to change the course of the NCD epidemic. The world now has a truly global agenda for prevention and control of NCDs, with shared responsibilities for all countries based on concrete targets. This is an historic opportunity to tackle the NCD epidemic that no country can afford to miss.

A handwritten signature in black ink, which appears to read 'M. Chan'. The signature is fluid and cursive.





# Preface

**Dr Oleg Chestnov**

Assistant Director-General  
Noncommunicable Disease and Mental Health  
World Health Organization

Noncommunicable diseases (NCDs) are one of the major health and development challenges of the 21st century, in terms of both the human suffering they cause and the harm they inflict on the socioeconomic fabric of countries, particularly low- and middle-income countries. No government can afford to ignore the rising burden of NCDs. In the absence of evidence-based actions, the human, social and economic costs of NCDs will continue to grow and overwhelm the capacity of countries to address them.

Recognizing the devastating social, economic and public health impact of NCDs, in September 2011, world leaders adopted a political declaration containing strong commitments to address the global burden of NCDs and gave several assignments to the World Health Organization (WHO) to help support country efforts. One of them was the development of the WHO Global action plan for prevention and control of noncommunicable diseases 2013–2020 (known as the Global NCD Action Plan), including nine voluntary global targets and a global monitoring framework. The Global NCD Action Plan and the voluntary global targets were adopted by the World Health Assembly in 2013.

The nine voluntary global NCD targets underscore the importance of prioritizing country action to reduce harmful use of alcohol, insufficient physical activity, salt/sodium intake, tobacco use and hypertension; halt the rise of obesity and diabetes; and improve coverage of treatment for prevention of heart attacks and strokes and access to basic technologies and medicines.

In order to support the implementation of the Global NCD Action Plan, WHO has established a Global coordination mechanism, which will enhance coordination of NCD activities, multi-stakeholder engagement and action across different sectors.

Additional support for the implementation of the Global NCD Action Plan will be provided by the United Nations Interagency Task Force on the Prevention and Control of NCDs, established by the Secretary-General to coordinate the relevant United Nations organizations and other intergovernmental organizations.

This second global status report comes at a time when only a decade is left to achieve the internationally agreed voluntary global NCD targets. It is also a time when we can be more optimistic about the future of prevention and control of NCDs, than perhaps at any stage in recent history. In order to attain the global NCD targets, governments, international partners and WHO will need to work together, sharing and exchanging evidence and information and taking necessary steps for reducing gaps in capacity and resources.

No country should be left behind, as the world steps decisively into the future to address one of the greatest public health challenges of the 21st century.

## Abbreviations

<b>BMI</b>	body mass index
<b>CTCA</b>	Centre for Tobacco Control in Africa
<b>DALY</b>	disability-adjusted life-year
<b>ECOSOC</b>	Economic and Social Council
<b>HAI</b>	Health Action International
<b>HbA1c</b>	haemoglobin A1c
<b>HiAP</b>	health in all policies (WHO framework)
<b>ISH</b>	International Society of Hypertension
<b>MET</b>	metabolic equivalent
<b>NCD</b>	noncommunicable disease
<b>NGO</b>	nongovernmental organization
<b>PAHO</b>	Pan American Health Organization
<b>PEN</b>	(WHO) package of essential noncommunicable disease interventions
<b>SARA</b>	Service Availability and Readiness Assessment
<b>TAPS</b>	tobacco advertising, promotion and sponsorship
<b>UK</b>	United Kingdom of Great Britain and Northern Ireland
<b>UN</b>	United Nations
<b>USA</b>	United States of America
<b>VIA</b>	visual inspection with acetic acid
<b>WHA</b>	World Health Assembly
<b>WHO</b>	World Health Organization
<b>WHO FCTC</b>	WHO Framework Convention on Tobacco Control

# Executive summary

This global status report is the second in a triennial series tracking worldwide progress in prevention and control of noncommunicable diseases (NCDs). The primary target audience of this report are ministers of health. Other target audiences include policy-makers in health and relevant non-health sectors, health officials, nongovernmental organizations, academia, development agencies and civil society.

The human, social and economic consequences of NCDs are felt by all countries but are particularly devastating in poor and vulnerable populations. Reducing the global burden of NCDs is an overriding priority and a necessary condition for sustainable development. As the leading cause of death globally, NCDs were responsible for 38 million (68%) of the world's 56 million deaths in 2012. More than 40% of them (16 million) were premature deaths under age 70 years. Almost three quarters of all NCD deaths (28 million), and the majority of premature deaths (82%), occur in low- and middle-income countries.

During 2011–2025, cumulative economic losses due to NCDs under a “business as usual” scenario in low- and middle-income countries have been estimated at US\$ 7 trillion. This sum far outweighs the annual US\$ 11.2 billion cost of implementing a set of high-impact interventions to reduce the NCD burden.

In September 2011, world leaders agreed on a roadmap of concrete commitments to address the global burden of NCDs, including a commitment to establish multisectoral action plans and policies for the prevention and control of NCDs.

To accelerate national efforts to address NCDs, in 2013 the World Health Assembly adopted a comprehensive global monitoring framework with 25 indicators and nine voluntary global targets for 2025 (Annex 1). The World Health Assembly also endorsed a set of actions organized around the World Health Organization (WHO) Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (Global NCD Action Plan 2013–2020) which, when implemented collectively by Member States, international partners and WHO, will help to achieve the commitments made by world leaders in September 2011. The set of actions is organized around six objectives (see **Box 1.2**), aimed at strengthening national capacity, multisectoral action and boosting international cooperation to reduce exposure to risk factors, strengthen health systems, and monitor progress in attaining the global NCD targets.

In July 2014, the United Nations General Assembly conducted a review to assess progress in implementing the 2011 Political Declaration, and recognized the progress achieved at national level since September 2011. Recognizing also that progress in implementing the roadmap of commitments included in the 2011 Political Declaration was insufficient and highly uneven, and that continued and increased efforts are essential, the members of the United Nations committed themselves to a set of measures within four priority areas – governance, prevention, health care, and surveillance and monitoring. These time-bound measures include setting national NCD targets consistent with global targets, developing national NCD multisectoral plans by

2015, and starting implementation of those plans by 2016, in order to achieve the national targets.

This global status report on prevention and control of NCDs (2014), is framed around the nine voluntary global targets. The report provides data on the current situation, identifying bottlenecks as well as opportunities and priority actions for attaining the targets. The 2010 baseline estimates on NCD mortality and risk factors are provided so that countries can report on progress, starting in 2015. In addition, the report also provides the latest available estimates on NCD mortality (2012) and risk factors (2010 and 2014).

All ministries of health need to set national NCD targets and lead the development and implementation of policies and interventions to attain them. There is no single pathway to attain NCD targets that fits all countries, as they are at different points in their progress in the prevention and control of NCDs and at different levels of socioeconomic development. However all countries can benefit from the comprehensive response to attaining the voluntary global targets presented in this report.

### **Global target 1: A 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases**

Progress in attaining all other targets contributes to the attainment of this overarching target on premature mortality. Chapter 1 presents 2012 mortality data that show that (i) NCDs affect all countries; (ii) their impact is particularly severe in low- and middle-income countries; and (iii) the majority of premature NCD deaths occur in low- and middle-income countries.

The ability to meet this target will vary greatly across the world. While low- and middle-income countries could use a target of 25%, high-income countries that are already showing a decline in major NCDs may want to set their targets higher than 25%.

Chapter 1 outlines the comprehensive, multi-sectoral policy actions, interventions and country capacity, including civil/vital registration and surveillance systems, required to attain this target. The shortage of resources in many countries means that

implementation of the very cost-effective policy options and interventions (“best buys”) would have to be accorded the highest priority.

### **Global target 2: At least 10% relative reduction in the harmful use of alcohol as appropriate, within the national context**

In 2012, an estimated 5.9% (3.3 million) of all deaths worldwide and 5.1% of disability-adjusted life years (DALYs) were attributable to alcohol consumption. More than half of these deaths resulted from NCDs.

The level of alcohol consumption worldwide in 2010 was estimated at 6.2 litres of pure alcohol per person aged 15 years and over (equivalent to 13.5 g of pure alcohol per day). The prevalence of heavy episodic drinking is associated with the overall levels of alcohol consumption and is highest in the WHO European Region and the Region of the Americas.

There are cost-effective policy options to reduce the harmful use of alcohol. They include pricing policies, reduced availability and marketing of alcohol, improved response by health services, and drink-driving policies and countermeasures. Individual interventions such as screening for harmful drinking and treatment of alcohol dependence are also effective, although they are more costly to implement than population-based measures.

As discussed in Chapter 2, a certain amount of progress in addressing the harmful use of alcohol has been made since the Global strategy to reduce the harmful use of alcohol was endorsed by the World Health Assembly in 2010. Increasing numbers of countries have developed or reformulated their national alcohol policies and action plans. Of 76 countries with a written national policy on alcohol, 52 have taken steps to operationalize it. Some 160 WHO Member States have regulations on age limits for sale of alcoholic beverages.

### **Global target 3: A 10% relative reduction in the prevalence of insufficient physical activity**

Insufficient physical activity contributes to 3.2 million deaths and 69.3 million DALYs each year. Adults who are insufficiently physically active have a higher risk of all-cause mortality compared with

those who do at least 150 minutes of moderate-intensity physical activity per week, or equivalent, as recommended by WHO. Regular physical activity reduces the risk of ischaemic heart disease, stroke, diabetes, and breast and colon cancer.

In 2010, 23% of adults aged 18 years and over were insufficiently physically active. Women were less active than men and older people were less active than younger people. Globally, 81% of adolescents aged 11–17 years were insufficiently physically active in 2010. Adolescent girls were less active than adolescent boys, with 84% versus 78% not meeting the WHO recommendation of 60 minutes of physical activity per day.

Several high-income countries have reported increased physical activity over the past decade as a result of national policies and programmes to improve physical activity. In recent years, more low- and middle-income countries have also set up initiatives to address physical inactivity. Reaching the physical activity target requires multisectoral collaboration between transport, urban planning, recreation, and sports and education departments, to create safe environments that are conducive to physical activity for all age groups.

#### **Global target 4: A 30% relative reduction in the mean population intake of salt /sodium**

Excess consumption of dietary sodium is associated with increased risk of hypertension and cardiovascular disease. Globally, 1.7 million annual deaths from cardiovascular causes have been attributed to excess sodium intake. Current estimates suggest that the global mean intake of salt is around 10 g daily (4 g/day of sodium). WHO recommends a reduction in salt intake to less than 5 g/day (2 g/day of sodium), to reduce blood pressure and the risk of coronary heart disease and stroke.

The main source of salt in many countries is processed foods and ready-made meals, while salt added during the preparation of food at home and at the table is significant in others. With the greater availability of processed foods in low- and middle-income countries, sources of sodium are shifting rapidly towards these foods.

As discussed in Chapter 4, establishing a baseline of salt intake is key to setting national targets and devising effective consumer campaigns. Sodium-reduction targets need to be established for each category of food, prioritizing the ones that contribute most to population intake.

Policies aimed at reducing population-wide salt consumption should be intersectoral and multidisciplinary and include the participation of all relevant stakeholders. They should be applicable to diverse settings and make use of all available tools, including labelling, legislation, product reformulation, fiscal incentives that encourage the production and consumption of foods with reduced sodium content, and consumer education to ensure their effective implementation. Considerable progress has been made in implementing these activities in some countries.

#### **Global target 5: A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years**

It is estimated that currently around 6 million people die annually from tobacco use, with over 600 000 deaths due to exposure to second-hand smoke.

Measures to ensure reduction in tobacco use include: protecting people from second-hand smoke through national “100% smoke-free” legislation; offering help in quitting tobacco use, warning people about the dangers of tobacco use; enforcing bans on tobacco advertising, promotion and sponsorship; and raising tobacco taxes.

Considerable progress has been made in global tobacco control in recent years, in both the number of countries protecting their population and the number of people worldwide protected by effective tobacco-control measures. In 2013, 95 countries had implemented at least one of the four tobacco control “best-buy” interventions (very cost-effective interventions), at the highest level of achievement, and two countries had all four “best-buys” in place at the highest level. Many of the countries making progress in implementing “best-buy” measures were low- or middle-income countries.



As discussed in Chapter 5, more work is needed in many countries to pass and enforce effective tobacco-control measures. This includes expanding activities to implement “best-buy” demand-reduction measures at the highest level of achievement, where they have not been yet implemented; reinforcing and sustaining existing programmes to incorporate a full range of measures; and, ultimately, implementing the full WHO Framework Convention on Tobacco Control. The achievements of the majority of countries in applying tobacco demand-reduction measures demonstrate that it is possible to tackle the tobacco epidemic irrespective of a country’s size or level of development.

**Global target 6: A 25% relative reduction in the prevalence of raised blood pressure, or contain the prevalence of raised blood pressure, according to national circumstances**

Raised blood pressure is estimated to have caused 9.4 million deaths and 7% of disease burden – as measured in DALYs – in 2010. If left uncontrolled, hypertension causes stroke, myocardial infarction, cardiac failure, dementia, renal failure and blindness. There is strong scientific evidence of the health benefits of lowering blood pressure through population-wide and individual (behavioural and pharmacological) interventions. The global prevalence of raised blood pressure (defined as systolic and/or diastolic blood pressure equal to or above 140/90 mmHg) in adults aged 18 years and over was around 22% in 2014.

Many modifiable factors contribute to the high prevalence rates of hypertension. They include eating food containing too much salt and fat, inadequate intake of fruits and vegetables, overweight and obesity, harmful use of alcohol, physical inactivity, psychological stress, socioeconomic determinants, and inadequate access to health care. Worldwide, detection, treatment and control of hypertension are inadequate, owing to weaknesses in health systems, particularly at the primary care level.

In order to achieve this target, population-wide policies and interventions are required to address

these modifiable risk factors. In addition, integrated programmes need to be established at the primary care level, to improve the efficiency and effectiveness of detection and management of hypertension and other cardiovascular risk factors through a total-risk approach, as recommended by WHO.

**Global target 7: Halt the rise in diabetes and obesity**

Obesity increases the likelihood of diabetes, hypertension, coronary heart disease, stroke and certain types of cancer. Worldwide, the prevalence of obesity has nearly doubled since 1980. In 2014, 11% of men and 15% of women aged 18 years and older were obese. More than 42 million children under the age of 5 years were overweight in 2013. The global prevalence of diabetes in 2014 was estimated to be 9%.

Obesity and diabetes can be prevented through multisectoral action that simultaneously addresses different sectors that contribute to the production, distribution and marketing of food, while concurrently shaping an environment that facilitates and promotes adequate levels of physical activity.

Diabetes risk can be reduced by moderate weight loss and moderate daily physical activity in persons at high risk. This intervention has been scaled up to the whole population in a small number of high-income countries. However, it is difficult to implement this intervention at scale in low- and middle-income countries, partly because current methods for identifying people at high risk are cumbersome and rather costly.

Further research is urgently needed to evaluate the effectiveness of interventions to prevent obesity and diabetes.

**Global target 8: At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes**

Cardiovascular disease was the leading cause of NCD deaths in 2012 and was responsible for 17.5 million deaths, or 46% of NCD deaths. Of these deaths, an estimated 7.4 million were due to heart attacks (ischaemic heart disease) and 6.7 million were due to strokes.



This target to reduce heart attacks and strokes is aimed at improving the coverage of drug treatment and counselling in people with raised cardiovascular risk and established disease. It is an affordable intervention that can be delivered through a primary health-care approach, even in resource-constrained settings

There are major gaps in the coverage of this intervention to prevent heart attacks and strokes, particularly in low- and middle-income countries. Poor access to basic services in primary care, lack of affordability of laboratory tests and medicines, inappropriate patterns of clinical practice, and poor adherence to treatment are some of the main reasons for these treatment gaps.

This intervention to prevent heart attacks and strokes needs to be part of the basic benefits package for moving towards universal health coverage. In addition, context-specific strategies will be required to address multiple gaps in health systems related to access to basic technologies and medicines, the health workforce, service delivery, health information, and referral, with a special focus on primary care. Several countries have already included this intervention in the basic benefits package, and have taken steps to implement it through a primary health care approach.

**Global target 9: An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities**

This target includes the basic requirement of technologies and medicines for implementing cost-effective primary care interventions to address cardiovascular disease, diabetes and asthma. The essential medicines include aspirin, a statin, an angiotensin-converting enzyme inhibitor, a thiazide diuretic, a long-acting calcium channel-blocker, a beta-blocker, metformin, insulin, a bronchodilator and a steroid inhalant. The basic technologies include, at least, a blood pressure measurement device, a weighing scale, height measuring equipment, blood sugar and blood cholesterol

measurement devices with strips, and urine strips for albumin assay.

These are minimum requirements, without which even basic NCD interventions cannot be implemented in primary care. Currently, there are major gaps in the affordability and availability of basic health technologies and essential medicines, particularly in low- and middle-income countries. The lack of access means that patients delay seeking care and either develop complications unnecessarily or pay high out-of-pocket costs, which can financially devastate households. Sustainable health financing is necessary to ensure adequate and reliable procurement and distribution systems to guarantee the supply of technologies and essential NCD medicines to all levels of health care, including primary care. Consequently, national policies that encourage the availability of basic health technologies and essential medicines should be central to efforts focused on achieving universal health coverage. Drugs must also be used appropriately, so there must be adherence to evidence-based guidelines and education in rational use for both health-care professionals and patients.

Policies and interventions to attain the nine targets (see **Chapters 1–9**), should be given high priority and budgeted in national multisectoral NCD action plans. Chapter 10, on the development of a national multisectoral NCD plan, highlights the key NCD domains that should be covered: governance, prevention and reduction of risk factors, health care, and surveillance and monitoring. To maximize the chances of effective implementation, the process of development of the plan must necessarily engage all stakeholders in health and non-health sectors, including civil society and the private sector.

The final chapter presents the way forward to attain the nine voluntary global targets by 2025, and highlights the key messages of this report.

**Message 1: Noncommunicable diseases act as key barriers to poverty alleviation and sustainable development**

The data presented in this report demonstrate that NCDs affect all countries and that the burden of

death and disease is heavily concentrated in low- and middle-income countries. Loss of productivity due to premature deaths, and the individual and national costs of addressing NCDs, act as important barriers to poverty reduction and sustainable development. Progress in attaining the NCD targets is therefore vital for attaining the sustainable development goals.

### **Message 2: While some countries are making progress, the majority are off course to meet the global NCD targets**

As many motivational case-studies illustrate, countries in which political leaders have shown high commitment are already making significant advances in addressing NCDs. However, progress remains uneven and inadequate. Data presented in this report identify many missed opportunities to strengthen governance, prevention and reduction of risk factors, health care, and surveillance and monitoring, particularly in low- and middle-income countries.

### **Message 3: Countries can move from political commitment to action by prioritizing high-impact, affordable interventions**

It is evident that a lack of interventions is clearly not the primary obstacle for inadequate progress in prevention and control of NCDs. High rates of death and disease, particularly in low- and middle-income countries, are a reflection of inadequate investment in cost-effective NCD interventions. Resources should be used strategically to improve NCD outcomes. All countries can move from commitment to action, by prioritized implementation of very cost-effective policies and interventions (“best buys”).

### **Message 4: All countries need to set national NCD targets and be accountable for attaining them**

The nine voluntary global targets give a clear signal of where the world can be by 2025 in relation to

NCDs. All countries need to set national targets and establish a monitoring framework to track progress in attaining them. Since the global targets focus on a limited set of key NCD outcomes, setting national targets and implementing policies and interventions to attain them will enable countries to make the best use of resources. For best results, lessons learnt from implementation should be rapidly incorporated in decision-making, through operational research.

### **Message 5: Structures and processes for multisectoral and intersectoral collaboration need to be established**

Collaboration across sectors outside health (multi-sectoral collaboration) and between the government and non-state actors (intersectoral collaboration) is key to equitable prevention and control of NCDs and to attainment of national targets. Mechanisms and processes to facilitate multisectoral and intersectoral collaboration need to be embedded in the planning stage of NCD programmes and should continue through implementation, enactment of public policies, and monitoring and evaluation.

### **Message 6: Investment in health systems is critical for improving NCD outcomes**

Analysis of health systems shows that gaps in the key elements of the health system, particularly at the primary care level present obstacles to the provision of equitable health care for people suffering from NCDs. Health-system strengthening – including health financing, governance, the health workforce, health information, access to basic technologies and essential medicines, and health-service delivery – should be a major focus of scaling up NCD prevention and control. The global move towards universal health coverage offers an opportunity to explicitly prioritize very cost-effective NCD interventions in basic benefits packages.

## **Message 7: Institutional and human resource capacities and financial resources for NCD prevention and control require strengthening**

Attainment of national targets requires institutional and human resources capacity as well as adequate financial resources to deal with the complexity of issues relating to NCD prevention and control, such as interaction with food and agricultural systems, law, trade, transport and urban planning. The competency and capacity of the health workforce to address NCDs will require strengthening, including through incorporation of public health aspects of NCD prevention and control in the teaching curricula for medical, nursing and allied health personnel, and provision of in-service training.

While governments must continue to recognize their primary responsibility in responding to the challenge of NCDs, setting their national targets and developing their national plans of action, achieving the global targets will require the efforts and engagement of all sectors of society at national, regional and global levels. There are new global mechanisms in place to accelerate national NCD action. The United Nations Interagency Task Force on the Prevention and Control of NCDs, which the Secretary-General established in June 2013 and placed under the leadership of WHO, is coordinating the activities of the relevant United Nations organizations and other intergovernmental organizations to support the realization of the commitments made by world leaders in the 2011 Political Declaration on NCDs, in particular through the implementation of the WHO Global NCD Action Plan 2013–2020. The Task Force's terms of reference were adopted by the United Nations Economic and Social Council in July 2014. In September 2014, WHO established the WHO Global Coordination Mechanism on the Prevention and Control of NCDs, to facilitate and enhance coordination of activities, multi-stakeholder engagement and action across sectors at the local, national, regional and

global levels, in order to contribute to the implementation of the WHO Global NCD Action Plan 2013–2020.

WHO has a leadership and coordination role to play in promoting and monitoring action against NCDs. As the primary specialized United Nations agency for health, WHO will continue to support national NCD efforts to implement the Global NCD Action Plan 2013–2020. Key areas of continued action in 2015 and beyond include, providing global leadership and offering technical assistance to Member States to set national targets, develop and implement national NCD policies and plans to reach these national targets, and assess trends and monitor progress. In 2015, WHO plans to complete work on a framework to promote country action across health and non-health sectors, as well as on an approach to register and publish contributions of non-state actors to the achievement of the nine voluntary global targets.

The global architecture and the commitment of countries to address effectively the NCD epidemic have never been better. Attainment of the nine global NCD targets by 2025 will help to curb the rapid growth and devastating health and socio-economic impacts of the NCD epidemic. It is a huge task, fraught with many challenges. However, inaction will not be forgiven by future generations. They will have the right to ask why decisive action was not taken, if we allow this chance of altering history to slip through our fingers.

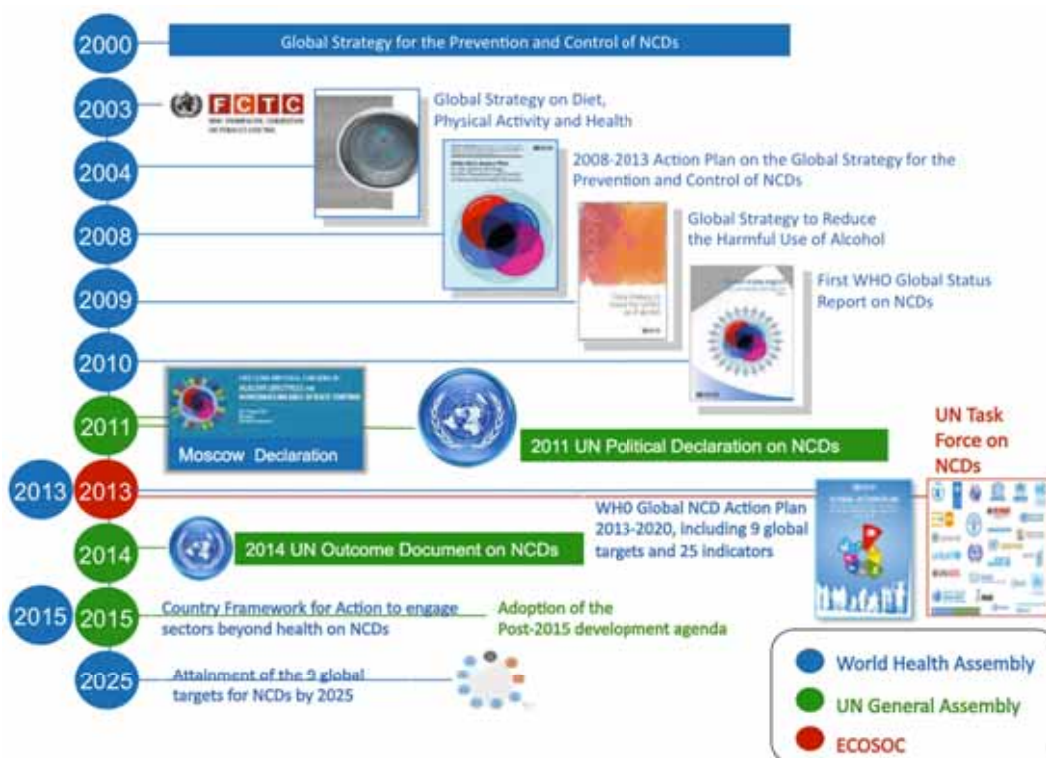




# Introduction: Current status of the global agenda on prevention and control of noncommunicable diseases

The adverse human, social and economic consequences of noncommunicable diseases (NCDs) are felt by all societies and economies, but they are particularly devastating in poor and vulnerable populations (1–4). Since the first global status report on NCDs (2010) was published (3), the global agenda on NCDs has moved forward considerably (see **Fig I.1**). In September 2011, at a United Nations high-level meeting on NCDs, heads of state and government formally recognized these diseases as a major threat to economies and societies and placed them high on the development agenda. That meeting agreed on a bold set of commitments to address the global burden of NCDs (5). In order to translate these commitments into action, in May 2013 the Sixty-sixth World Health Assembly adopted the Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (known as the Global NCD Action Plan) and a comprehensive global monitoring framework, including a set of nine voluntary global targets (see **Box I.1**) and 25 indicators (see **Annex 1**) (1). This second World Health Organization global status report on noncommunicable diseases (2014) is structured according to these nine voluntary global targets, which will need to be attained by 2025 if the world is to realize the commitments made in the United Nations’ *Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases* (5).

**Fig. I.1** Global milestones in the prevention and control of noncommunicable diseases





### Box I.1 Voluntary global targets for prevention and control of noncommunicable diseases to be attained by 2025



(1) A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases



(2) At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context



(3) A 10% relative reduction in prevalence of insufficient physical activity



(4) A 30% relative reduction in mean population intake of salt/sodium



(5) A 30% relative reduction in prevalence of current tobacco use



(6) A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances



(7) Halt the rise in diabetes and obesity



(8) At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes



(9) An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities

The 2011 Political Declaration (5) was one of the major global milestones in the prevention and control of NCDs (see Fig. I.1). It reaffirmed the leadership and coordination role of the World Health Organization (WHO) and gave it several time-bound assignments, which have been completed, as set out below.

The Global NCD Action Plan builds on key strategies and resolutions (6–16). It has six objectives (see Box I.2), each offering a menu of policy options and actions for implementation by Member States, international partners and WHO.

The overarching goal of the Global NCD Action Plan is to achieve the 2025 voluntary global targets (see Box I.1). There has been remarkable progress in implementing the first objective of the plan. International cooperation and advocacy have raised the priority accorded to prevention and control of NCDs. Addressing NCDs is now recognized as a priority not only for health but also for social development and investments in people (17–28). An NCD target has been incorporated in the sustainable development goals and NCDs are poised to be an integral component of the post-2015 development agenda (29). Progress in implementation of the other objectives

### Box I.2 Objectives of the Global NCD Action Plan (1)

1. To raise the priority accorded to the prevention and control of NCDs in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy.
2. To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of NCDs.
3. To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environments.
4. To strengthen and orient health systems to address the prevention and control of NCDs and the underlying social determinants through people-centred primary health care and universal health coverage.
5. To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.
6. To monitor the trends and determinants of NCDs and evaluate progress in their prevention and control.

of the Global NCD Action Plan, and attainment of the global targets, are largely determined by target-oriented action, capacity and resources at country level.

The aim of this global status report on NCDs is to further support the implementation of the Global NCD Action Plan by:

- providing information on voluntary global targets and national NCD targets and advice on how to scale up national efforts to attain them in the context of implementation of multisectoral national action plans;
- providing the 2010 baseline estimates on NCD mortality and risk factors (see **Annexes 2-4**), so that countries may begin reporting to WHO on progress made in attaining the targets, starting in 2015;
- providing the latest available estimates on NCD mortality (2012) and risk factors (see **Annexes 2-4**);
- presenting case-studies of successful country and regional action, to demonstrate how implementation barriers could be overcome at the country level to attain national targets (see **Chapters 1-11**).

The primary target audience of this report are ministers of health. Other target audiences include policy-makers in health and relevant non-health sectors, health officials, nongovernmental organizations, academia, development agencies and civil society.

Since the United Nations high-level meeting, WHO – through its governing bodies and with the participation of Member States – has also completed other global assignments (30) that will support the implementation of the action plan at global, regional and country levels. These assignments include the development of:

- a limited set of action plan indicators for monitoring progress in implementing the Global NCD Action Plan;
- the terms of reference for the United Nations Interagency Task Force for the Prevention and Control of NCDs, established by the Secretary-General;
- the terms of reference for the global coordination mechanism for prevention and control of NCDs.

The Interagency Task Force has been established to facilitate the response of the United Nations system to country demand for technical assistance. It will be convened by WHO and will report to the Economic and Social Council (ECOSOC) through the Secretary-General (31).

The purpose of the global coordination mechanism is to facilitate and enhance coordination of activities, multistakeholder engagement, and action, across sectors at global, regional and national levels. The aim will be to contribute to the implementation of the Global NCD Action Plan, while avoiding

### Box I.3 Key messages of the Global Status Report on Noncommunicable diseases 2014

- Message 1** Noncommunicable diseases act as key barriers to poverty alleviation and sustainable development
- Message 2** While some countries are making progress, the majority are off course to meet the global NCD targets
- Message 3** Countries can move from political commitment to action by prioritizing high-impact, affordable interventions
- Message 4** All countries need to set national NCD targets and be accountable for attaining them
- Message 5** Structures and processes for multisectoral and intersectoral collaboration need to be established
- Message 6** Investment in health systems is critical for improving NCD outcomes
- Message 7** Institutional and human resource capacities and financial resources for NCD prevention and control require strengthening.

duplication of efforts and using resources efficiently (32).

On 10–11 July 2014, the United Nations General Assembly conducted a comprehensive review, taking stock of progress in implementing the commitments of the Political Declaration (5), identifying ways to address gaps, and reaffirming political commitment to respond to the challenge of NCDs (33). The commitments made by countries in the outcome document include the following:

Building on the guidance provided by the WHO Global NCD Action Plan 2013–2020 (1):

- integrate NCDs into health planning and national development plans;
- by 2015, set national NCD targets for 2025, consistent with voluntary global targets;
- by 2015, develop national NCD multisectoral plans to achieve the national targets;
- by 2016, implement policies and interventions to reduce NCD risk factors and underlying social determinants;
- by 2016, strengthen and orient health systems to address NCDs, through people-centred primary health care and universal health coverage;
- report on the progress in attaining the global targets, using the established indicators in the global monitoring framework.

Member States have agreed that the United Nations will convene a third high-level meeting on NCDs in 2018 to take stock of national progress

(33). As discussed in this report, much remains to be done in all countries, and especially in donor-dependent nations, to attain the voluntary global targets by 2025 (see **Box I.3**). There is no single pathway to attain NCD targets that fits all countries, as they are at different points in their progress in the prevention and control of NCDs and at different levels of socioeconomic development. However all countries can benefit from the information and guidance presented in this report, on voluntary global targets and national NCD targets and how to scale up national efforts to attain them.



## References

1. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
2. Global strategy for prevention and control of noncommunicable diseases. Geneva: World Health Organization; 2000 ([http://apps.who.int/gb/archive/pdf\\_files/WHA53/ResWHA53/17.pdf](http://apps.who.int/gb/archive/pdf_files/WHA53/ResWHA53/17.pdf), accessed 3 November 2014).
3. Global status report on noncommunicable diseases 2010. Geneva: World Health Organization; 2011 ([http://www.who.int/nmh/publications/ncd\\_report\\_full\\_en.pdf](http://www.who.int/nmh/publications/ncd_report_full_en.pdf), accessed 3 November 2014).
4. From burden to “best buys”: reducing the economic impact of non-communicable diseases in low- and middle-income countries. Geneva: World Health Organization and World Economic Forum; 2011 ([www.who.int/nmh/publications/best\\_buys\\_summary](http://www.who.int/nmh/publications/best_buys_summary), accessed 3 November 2014).
5. Resolution 66/2. Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. In: Sixty-sixth session of the United Nations General Assembly. New York: United Nations; 2011 (A/67/L.36; [http://www.who.int/nmh/events/un\\_ncd\\_summit2011/political\\_declaration\\_en.pdf](http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf), accessed 3 November 2014).
6. WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2003 (<http://whqlibdoc.who.int/publications/2003/9241591013.pdf>, accessed 3 November 2014).
7. Resolution WHA57.17. Global strategy on diet, physical activity and health. In: Fifty-seventh World Health Assembly, Geneva, 17–22 May 2004. Geneva: World Health Organization; 2004 ([http://apps.who.int/gb/ebwha/pdf\\_files/WHA57/A57\\_R17-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA57/A57_R17-en.pdf), accessed 3 November 2014).
8. Resolution WHA63.13. Global strategy to reduce the harmful use of alcohol. In: Sixty-third World Health Assembly, Geneva, 17–21 May 2010. Geneva: World Health Organization; 2010 ([http://apps.who.int/gb/ebwha/pdf\\_files/WHA63/A63\\_R13-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_R13-en.pdf), accessed 22 October 2014).
9. Resolution WHA64.9. Sustainable health financing structures and universal health coverage. In: Sixty-fourth World Health Assembly, Geneva, 16–24 May 2011. Geneva: World Health Organization; 2011 ([http://apps.who.int/gb/ebwha/pdf\\_files/WHA64/A64\\_R9-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_R9-en.pdf), accessed 3 November 2014).
10. Global strategy and plan of action on public health innovation and intellectual property. Geneva: World Health Organization; 2011 ([http://www.who.int/phi/publications/Global\\_Strategy\\_Plan\\_Action.pdf](http://www.who.int/phi/publications/Global_Strategy_Plan_Action.pdf), accessed 3 November 2014).
11. Consideration and endorsement of the Brazzaville Declaration on Noncommunicable Diseases. In: Sixty-second session of the Regional Committee for Africa, Luanda, Republic of Angola, 19–23 November 2012. Brazzaville: WHO Regional Office for Africa; 2012 (AFR/RC62/R7; <http://apps.who.int/iris/bitstream/10665/80117/1/AFR-RC62-R7-e.pdf>, accessed 3 November 2014).
12. Resolution CSP28.R13. Strategy for the Prevention and Control of Noncommunicable Diseases. In: 28th Pan American Sanitary Conference; 64th Session of the Regional Committee, Washington DC, USA, 17–21 September 2012. Washington, DC: Pan American Health Organization; 2012 ([http://www.paho.org/hq/index.php?option=com\\_docman&task=doc\\_view&gid=19265&Itemid=721](http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=19265&Itemid=721), accessed 3 November 2014).
13. Resolution EMR/RC59/R2. The Political Declaration of the United Nations General Assembly on the Prevention and Control of Non-Communicable Diseases: commitments of Member States and the way forward. In: Fifty-ninth session of the Regional Committee for the Eastern Mediterranean, October 2012. Cairo: WHO Regional Office for the Eastern Mediterranean; 2012 ([http://applications.emro.who.int/docs/RC\\_Resolutions\\_2012\\_2\\_14692\\_EN.pdf?ua=1](http://applications.emro.who.int/docs/RC_Resolutions_2012_2_14692_EN.pdf?ua=1), accessed 3 November 2014).
14. Resolution EUR/RC61/12. Action plan for implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012–2016. In: Sixty-first session of the Regional Committee for Europe, Baku, Azerbaijan 12–15 September 2011. Copenhagen: WHO Regional Office for Europe; 2011 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/147729/wd12E\\_NCDs\\_111360\\_revision.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0003/147729/wd12E_NCDs_111360_revision.pdf?ua=1), accessed 3 November 2014).
15. Resolution SEA/RC65/R5. Noncommunicable diseases, mental health and neurological disorders. Delhi: WHO Regional Office for South-East Asia; 2012 ([http://www.searo.who.int/entity/noncommunicable\\_diseases/events/regional\\_consultation\\_ncd/documents/8\\_3\\_resolution.pdf](http://www.searo.who.int/entity/noncommunicable_diseases/events/regional_consultation_ncd/documents/8_3_resolution.pdf), accessed 3 November 2014).
16. Resolution WPR/RC62.R2. Expanding and intensifying noncommunicable disease prevention and control. Manila: WHO Regional Office for the Western Pacific; 2011 (<http://www2.wpro.who.int/NR/rdonlyres/D80E593C-E7E6-4A4F-B9DF-07B76B284E5A/0/R2Noncommunicablediseasepreventionandcontrol201112.pdf>, accessed 3 November 2014).

17. Resolution A/67/L.36. Global health and foreign policy. In: Sixty-seventh session of the United Nations General Assembly, 6 December 2012. New York: United Nations; 2012 ([http://www.un.org/ga/search/view\\_doc.asp?symbol=A/67/L.36&referer=http://www.un.org/en/ga/info/draft/index.shtml&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/67/L.36&referer=http://www.un.org/en/ga/info/draft/index.shtml&Lang=E), accessed 3 November 2014).
18. Resolution A/RES/66/288. The future we want. In: Sixty-sixth session of the United Nations General Assembly, 11 September 2012. New York: United Nations; 2012 (<http://imuna.org/sites/default/files/ARES66288.pdf>, accessed 3 November 2014).
19. Report of the UN System Task Team on the Post-2015 Development Agenda. Realizing the future we want for all. New York: United Nations; 2012 ([http://www.un.org/en/development/desa/policy/untaskteam\\_undf/report.shtml](http://www.un.org/en/development/desa/policy/untaskteam_undf/report.shtml), accessed 3 November 2014).
20. A new global partnership: eradicate poverty and transform economies through sustainable development. The report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. New York: United Nations; 2013 (<http://www.post2015hlp.org/wp-content/uploads/2013/05/UN-Report.pdf>, accessed 3 November 2014).
21. A life of dignity for all: accelerating progress towards the Millennium Development Goals and advancing the United Nations development agenda beyond 2015. In: Sixty-eighth session of the United Nations General Assembly, 26 July 2013. New York: United Nations; 2013 (A/68/202; <http://www.un.org/millenniumgoals/pdf/A%20Life%20of%20Dignity%20for%20All.pdf>, accessed 3 November 2014).
22. Declaration of Port-of-Spain: uniting to stop the epidemic of chronic NCDs. Georgetown: Caribbean Community; 2011 ([http://www.caricom.org/jsp/communications/meetings\\_statements/declaration\\_port\\_of\\_spain\\_chronic\\_ncds.jsp](http://www.caricom.org/jsp/communications/meetings_statements/declaration_port_of_spain_chronic_ncds.jsp), accessed 3 November 2014).
23. International Conference on Healthy Lifestyles and Noncommunicable Diseases in the Arab World and the Middle East. The Riyadh Declaration. Cairo: WHO Regional Office for the Eastern Mediterranean; 2012 ([http://www.emro.who.int/images/stories/ncd/documents/Riyadh\\_Declaration.Final\\_bilingual.pdf?ua=1](http://www.emro.who.int/images/stories/ncd/documents/Riyadh_Declaration.Final_bilingual.pdf?ua=1), accessed 22 October 2014).
24. Vienna Declaration on Nutrition and Noncommunicable Diseases in the Context of Health 2020. WHO Ministerial Conference on Nutrition and Noncommunicable Diseases, Vienna, Austria, 4–5 July 2013. Copenhagen: WHO Regional Office for Europe; 2013 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/234381/Vienna-Declaration-on-Nutrition-and-Noncommunicable-Diseases-in-the-Context-of-Health-2020-Eng.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0003/234381/Vienna-Declaration-on-Nutrition-and-Noncommunicable-Diseases-in-the-Context-of-Health-2020-Eng.pdf?ua=1), accessed 3 November 2014).
25. Seoul Declaration on Noncommunicable Disease Prevention and Control in the Western Pacific Region. Manila: WHO Regional Office for the Western Pacific; 2011 ([http://www.who.int/entity/nmh/events/2011/seoul\\_decl\\_20110318.pdf?ua=1](http://www.who.int/entity/nmh/events/2011/seoul_decl_20110318.pdf?ua=1), accessed 3 November 2014).
26. Libreville Declaration on Health and Environment in Africa. Brazzaville: WHO Regional Office for Africa; 2008 ([http://www.afro.who.int/index.php?option=com\\_docman&task=doc\\_download&gid=3286](http://www.afro.who.int/index.php?option=com_docman&task=doc_download&gid=3286), accessed 3 November 2014).
27. Honiara Communiqué on the Pacific Noncommunicable Disease Crisis. Ninth meeting of Ministers of Health for the Pacific Island Countries, 30 June 2011. Manila: WHO Regional Office for the Western Pacific; 2011 ([http://www.wpro.who.int/noncommunicable\\_diseases/honiara\\_communique.pdf](http://www.wpro.who.int/noncommunicable_diseases/honiara_communique.pdf), accessed 3 November 2014).
28. Moscow Declaration. First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control Moscow, 28–29 April 2011. New York: United Nations; 2011 ([http://www.un.org/en/ga/president/65/issues/moscow\\_declaration\\_en.pdf](http://www.un.org/en/ga/president/65/issues/moscow_declaration_en.pdf), accessed 3 November 2014).
29. United Nations General Assembly Resolution A/68/970. Integrated and coordinated implementation of and follow-up to the outcomes of the major United Nations conferences and summits in the economic, social and related fields. Sustainable development: implementation of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the outcomes of the World Summit on Sustainable Development and of the United Nations Conference on Sustainable Development 2014. In: Sixty-eighth session of the United Nations General Assembly, 12 August 2014. New York: United Nations; 2014 (A/69/970; <http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Santiago/pdf/Open-Working-Group.pdf>, accessed 3 November 2014).
30. Note by the Secretary-General transmitting the report of the Director-General of the World Health Organization on the prevention and control of non-communicable diseases. In: Sixty-eighth session of the United Nations General Assembly, 10 December 2013. New York: United Nations; 2013 (A/68/650; <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N13/612/99/PDF/N1361299.pdf?OpenElement>, accessed 3 November 2014).
31. United Nations Economic and Social Council Document E/2013/L.23. United Nations Interagency Task Force on the Prevention and Control of Non-communicable Diseases. Geneva: United Nations; 2013 ([http://www.who.int/nmh/events/2013/E.2013.L.23\\_tobacco.pdf](http://www.who.int/nmh/events/2013/E.2013.L.23_tobacco.pdf), accessed 3 November 2014).

32. Provisional agenda item 13.1. Prevention and control of noncommunicable diseases. Terms of reference for the global coordination mechanism on the prevention and control of noncommunicable diseases. In: Sixty-seventh World Health Assembly, 19–24 May 2014. Geneva: World Health Organization; 2014 (A67/14 Add.1; [http://apps.who.int/gb/ebwha/pdf\\_files/WHA67/A67\\_14Add1-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_14Add1-en.pdf), accessed 3 November 2014).
33. Outcome document of the high-level meeting of the General Assembly on the comprehensive review and assessment of the progress achieved in the prevention and control of non-communicable diseases. New York: United Nations; 2014. In: Sixty-eighth session of the United Nations General Assembly, 7 July 2014 (A/68/L.53; [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/68/L.53&L](http://www.un.org/ga/search/view_doc.asp?symbol=A/68/L.53&L), accessed 3 November 2014).



# Key points

- NCDs currently cause more deaths than all other causes combined and NCD deaths are projected to increase from 38 million in 2012 to 52 million by 2030.  
.....
- Four major NCDs (cardiovascular diseases, cancer, chronic respiratory diseases and diabetes) are responsible for 82% of NCD deaths.  
.....
- Approximately 42% of all NCD deaths globally occurred before the age of 70 years; 48% of NCD deaths in low- and middle-income countries and 28% in high-income countries were in individuals aged under 70 years.  
.....
- A well-functioning civil/vital registration system is vital for monitoring progress towards attainment of global target 1.  
.....
- In order to attain the premature mortality target, cost-effective policies and interventions aimed at attaining the other eight NCD targets, should be prioritized and implemented.



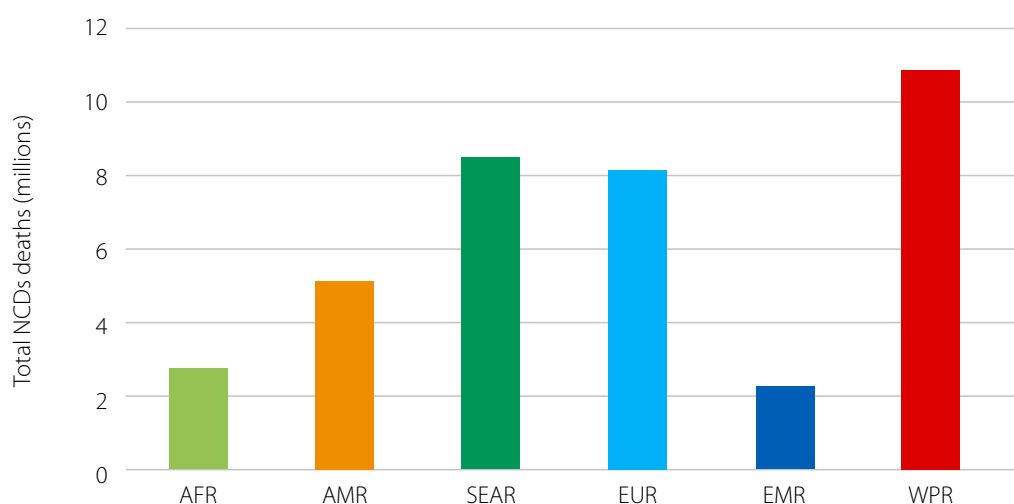
## Global target 1: A 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases

### Mortality from noncommunicable diseases

A total of 56 million deaths occurred worldwide during 2012. Of these, 38 million were due to NCDs, principally cardiovascular diseases, cancer and chronic respiratory diseases (1). Nearly three quarters of these NCD deaths (28 million) occurred in low- and middle-income countries. The number of NCD deaths has increased worldwide and in every region since 2000, when there were 31 million NCD deaths. NCD deaths have increased the most in the WHO South-East Asia Region, from 6.7 million in 2000 to 8.5 million in 2012, and in the Western Pacific Region, from 8.6 million to 10.9 million (see Fig. 1.1). While the annual number of deaths due to infectious disease is projected to decline, the total annual number of NCD deaths is projected to increase to 52 million by 2030 (2,3).

The leading causes of NCD deaths in 2012 were: cardiovascular diseases (17.5 million deaths, or 46.2% of NCD deaths), cancers (8.2 million, or 21.7% of NCD deaths), respiratory diseases, including asthma and chronic obstructive pulmonary disease (4.0 million, or 10.7% of NCD deaths) and diabetes (1.5 million, or 4% of NCD deaths). Thus, these four major NCDs were responsible for 82% of NCD deaths.

**Fig. 1.1** Total NCD deaths, by WHO region, comparable estimates, 2012



AFR=African Region, AMR=Region of the Americas, SEAR =South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region

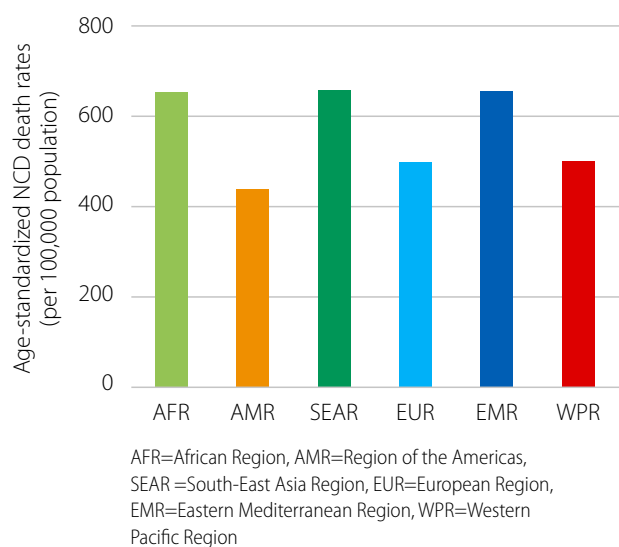
Age-standardized NCD death rates by WHO regions are shown in **Fig. 1.2**. Age-standardized death rates reflect the risk of dying from NCDs, regardless of the total population size or whether the average age in the population is high or low. In 2012, the age-standardized NCD death rate was 539 per 100 000 population globally. The rate was lowest in high-income countries (397 per 100 000) and highest in low-income countries (625 per 100 000) and lower-middle-income countries (673 per 100 000). Regionally, age-standardized death rates for NCDs ranged from 438 per 100 000 in the WHO Region of the Americas to over 650 per 100 000 in the WHO African, South-East Asia and Eastern Mediterranean Regions.

Premature death is a major consideration when evaluating the impact of NCDs on a given population, with approximately 42% of all NCD deaths occurring before the age of 70 years in 2012. This represents 16 million deaths – an increase from 2000 when there were 14.6 million NCD deaths before the age of 70 years. The majority of premature deaths (82%), are in low- and middle-income countries. In low- and middle-income countries, a higher proportion (48%) of all NCD deaths are estimated to occur in people under the age of 70 years, compared with high-income countries (28%). **Fig. 1.3** shows the proportion of NCD deaths by cause in 2012 among people under the age of 70 years. Cardiovascular diseases were responsible for the largest proportion of NCD deaths under the age of 70 years (37%), followed by cancers (27%), and chronic respiratory diseases (8%). Diabetes was responsible for 4% and other NCDs were responsible for approximately 24% of NCD deaths under the age of 70 years.

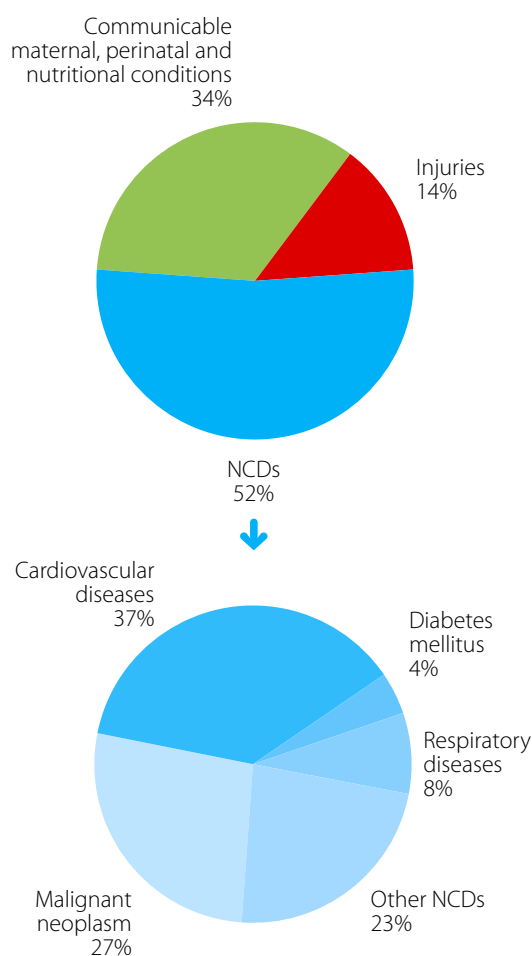
## Monitoring premature mortality from noncommunicable diseases

The premature mortality target is, a 25% reduction in overall mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 2025 (referred to as “25×25”). The probability of dying between the ages of 30 and 70 years from these four diseases, is the indicator in the global

**Fig. 1.2** Age-standardized NCD death rates (per 100 000 population), all ages, by WHO region, comparable estimates, 2012 (1)



**Fig. 1.3** Proportion of global deaths under the age 70 years, by cause of death, comparable estimates, 2012 (1)



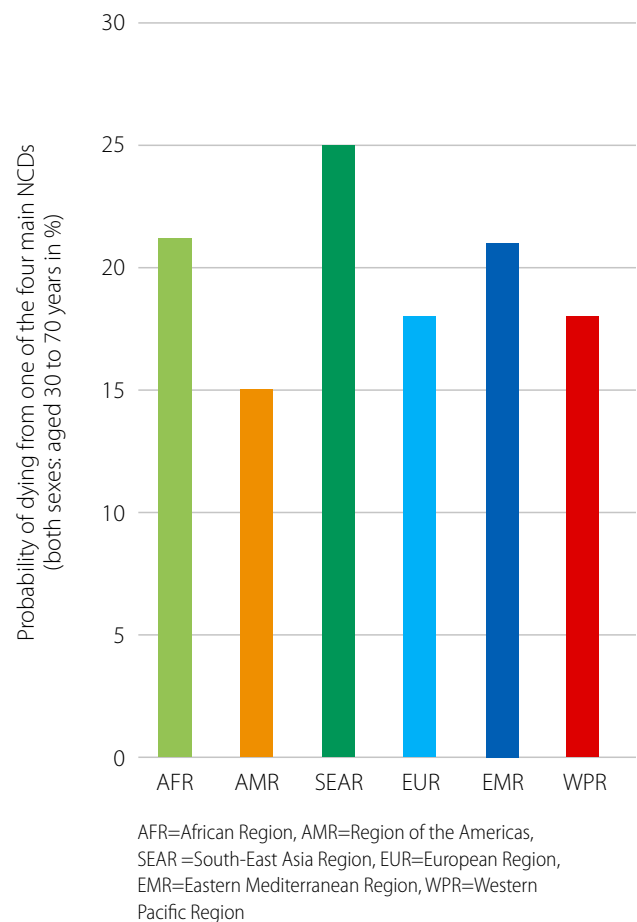


monitoring framework that monitors progress in attaining this target by 2025 (4) (see **Annex 1**).

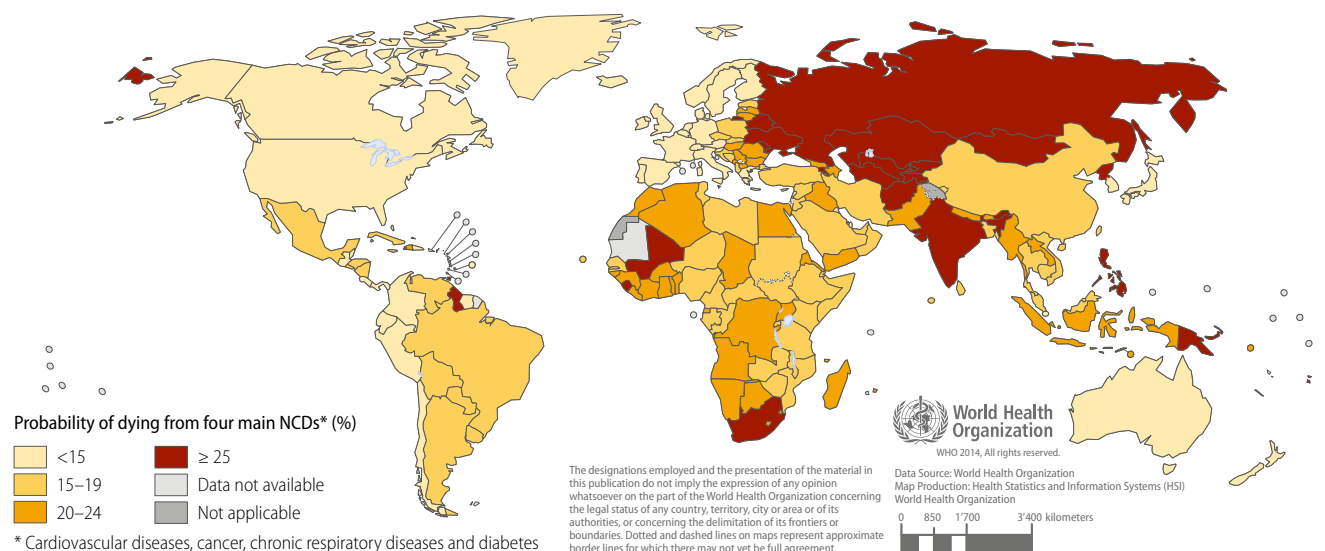
The probability of dying from one of the four main NCDs between ages 30 and 70 by WHO region is shown in **Fig. 1.4**. The probability of dying from one of the four main NCDs between ages 30 and 70 by country is shown in **Fig. 1.5a** and **Fig. 1.5b**. In 2012, a 30-year-old individual had a 19% chance of dying from one of the four main NCDs before his or her 70<sup>th</sup> birthday. This represents an improvement over 2000, when the same 30-year-old individual would have had a 23% chance of dying from these diseases. This probability varied by region, from 15% in the Region of the Americas to 25% in the South-East Asia Region (see **Fig. 1.4**), and by country, from greater than 30% in seven low- and middle-income countries to less than 10% in seven countries (Australia, Israel, Italy, Japan, Republic of Korea, Sweden and Switzerland) (see **Fig. 1.5a** and **Fig. 1.5b**).

Over three quarters of deaths from cardiovascular disease and diabetes, and nearly 90% of deaths from chronic respiratory diseases, occur in low- and middle-income countries. More than two thirds of all cancer deaths occur in low- and middle-income countries (see **Fig. 1.6**) (6). Lung, breast, colorectal, stomach and liver cancers together cause more than half of cancer deaths. In high-income countries, the leading cause of cancer deaths among both men

**Fig. 1.4** Probability of dying from one of the four main noncommunicable diseases between the ages of 30 and 70 years, by WHO region, comparable estimates, 2012

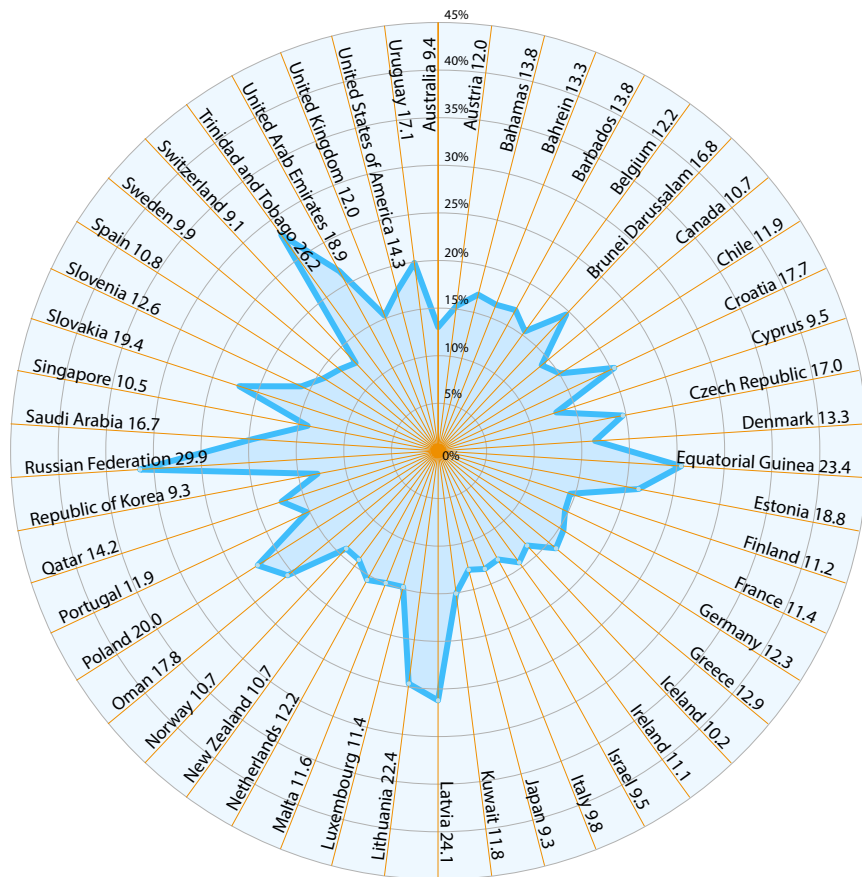


**Fig. 1.5a** Probability of dying from the four main noncommunicable diseases between the ages of 30 and 70 years, comparable estimates, 2012

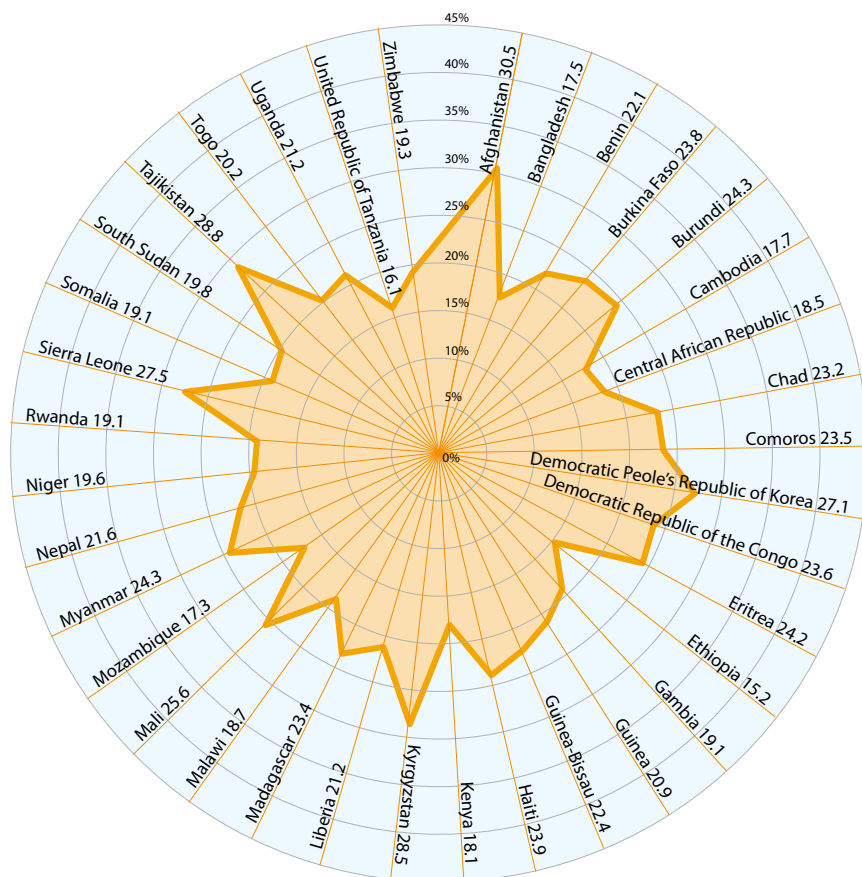


**Fig. 1.5b** Probability of dying from the four main noncommunicable diseases between the ages of 30 and 70 years (%), by individual country, and World Bank income group, comparable estimates, 2012

High-income

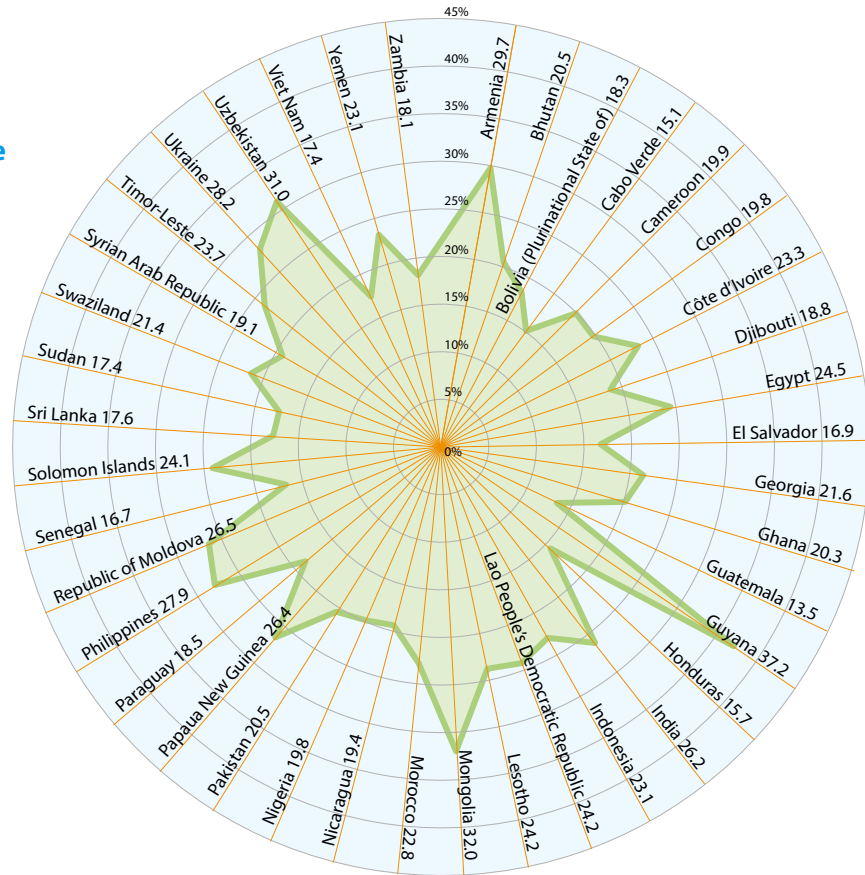


Low-income

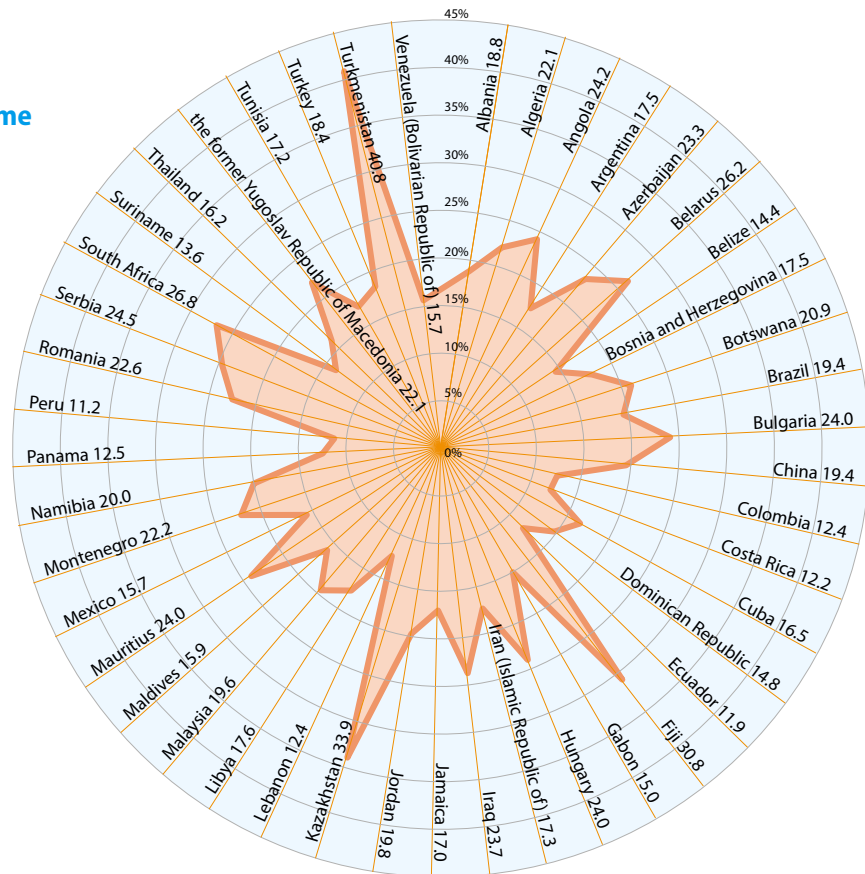




Low-middle-income



Upper-middle-income



and women is lung cancer, followed by breast cancer among women and colorectal cancers among men. In low- and middle-income countries, cancer levels vary according to the prevailing underlying risks, with cervical cancer, liver cancer and stomach cancer all causing a larger proportion of cancer deaths than in high-income countries. In sub-Saharan Africa, for instance, cervical cancer remains the leading cause of cancer death among women.

Population growth and improved longevity are leading to increasing numbers and proportions of older people in many parts of the world. As populations age, annual NCD deaths are projected to rise substantially to 52 million in 2030 (3). Annual cardiovascular disease mortality is projected to increase from 17.5 million in 2012 to 22.2 million in 2030, and annual cancer deaths from 8.2 million to 12.6 million. These increases will occur despite projected decreases in NCD death rates.

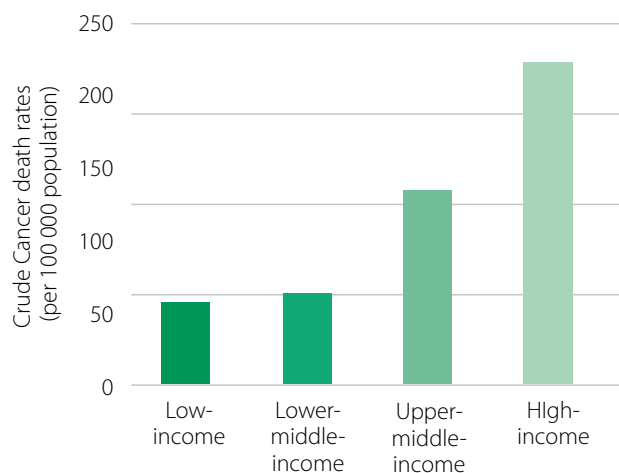
## Key barriers to attaining this target

Key barriers to attaining this target include, the lack of a well-functioning civil/vital registration system for monitoring, weak health system infrastructure and inadequate funding for prevention and control of NCDs.

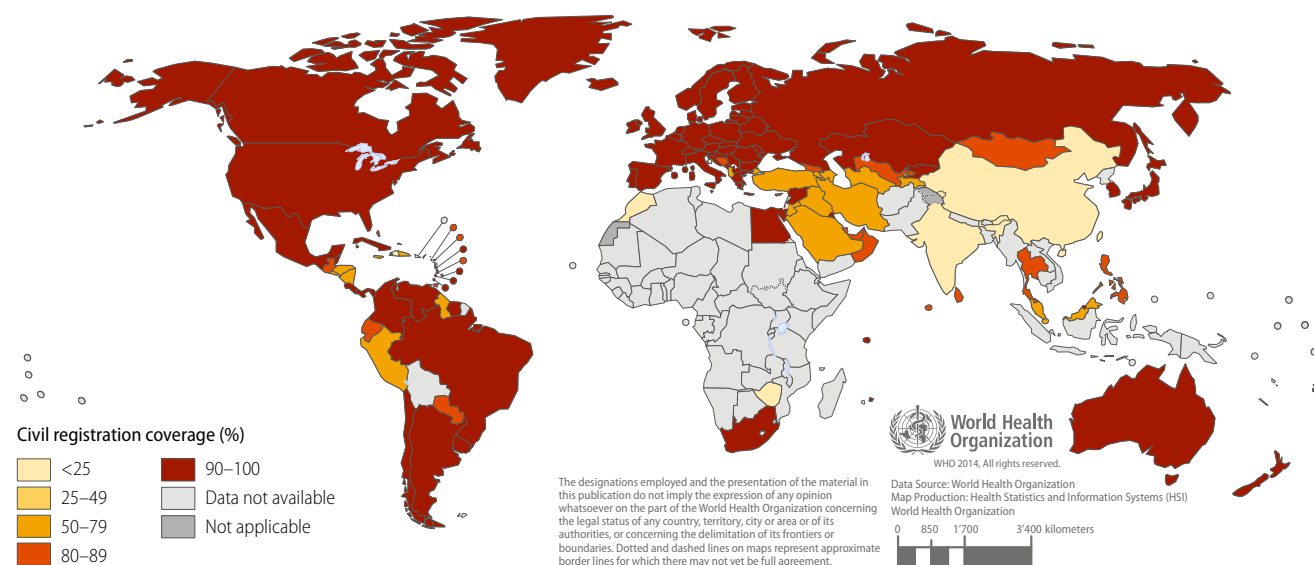
## Status of civil/vital registration systems

A vital registration system that records deaths with sufficient completeness is required to allow estimation of all-cause death rates. Results of the 2013 global survey on assessment of national capacity indicate that 19% of countries (n=178) do not have a system in place for reporting cause-specific mortality in their national health information systems (5). Across income groups, 98% of high-income and 92% of upper-middle-income countries reported having a system for reporting cause-specific

**Fig. 1.6** Global cancer mortality, by World Bank income group, 2012 (crude mortality rate per 100 000 population) (6)



**Fig. 1.7** Civil registration coverage of cause of death, 2005–2011 (7)



mortality, while 70% of lower-middle-income countries and only 45% of low-income countries indicated such capacity. Across WHO regions, a system for generating cause-specific mortality was reported in all countries in the European Region. In all other regions, some of the countries did not have such a system. Seventy four per cent (74%) of countries indicated that cause of death was certified by a medical practitioner. While 77% of countries indicated that hospital-based deaths were included in the reporting registration system, only 72% of countries reported that their registration system also included deaths occurring outside medical facilities.

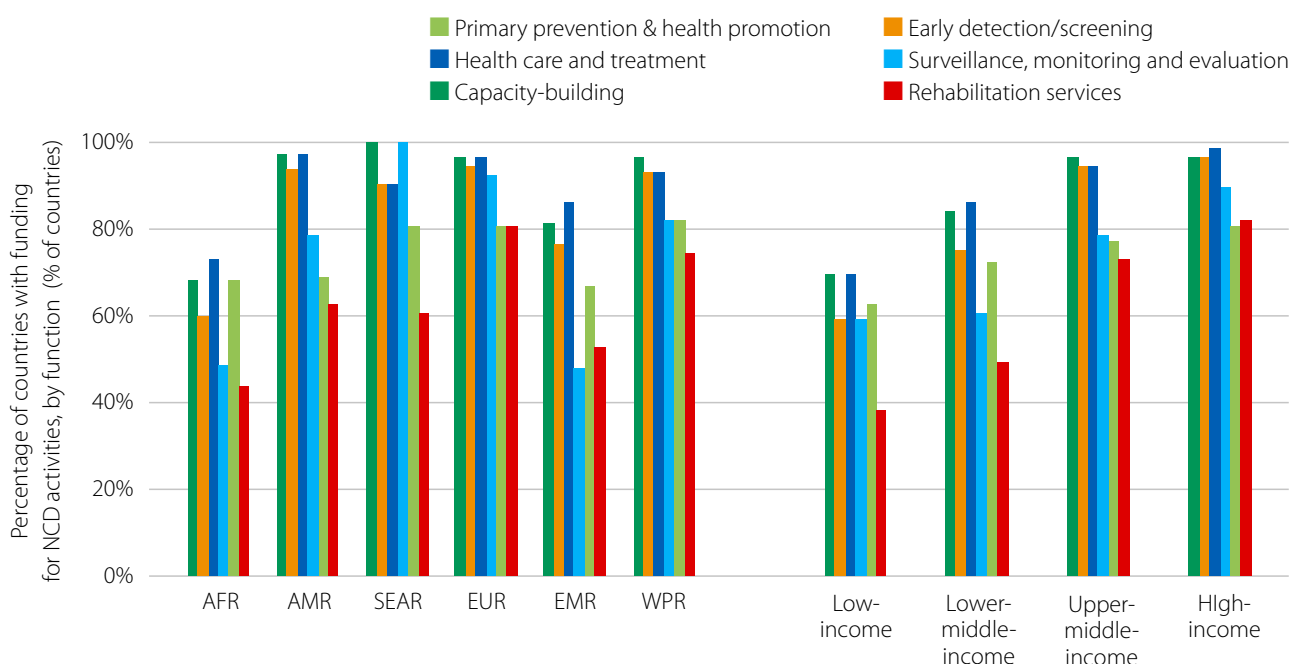
In all, 119 Member States (61%) have reported cause-of-death information to WHO since 2000, and only 97 Member States (50%) report their data regularly (8). Only 34 countries – representing 15% of the world’s population – produce high-quality cause-of-death data, meaning that more than 90% of deaths are registered and fewer than 10% of deaths are coded to ill-defined signs and symptoms (9). As shown in Fig. 1.7, civil registration coverage is less than 50% in many low- and middle-income countries.

### Status of health system infrastructure and funding for noncommunicable diseases

According to the results of the 2013 NCD country capacity assessment survey, some 94% of 178 countries had a unit, branch, division or department with responsibility for NCDs within the ministry of health or equivalent (5). In all, 80% of countries had at least one full-time staff member working on NCDs; thus, 14% of countries have a unit for NCDs in their health ministry but no full-time staff member dedicated to NCDs.

Results showed that 84% of countries reported having funding available for early detection and screening for NCDs, while 89% of countries reported that funding was available for providing health care for NCDs, as well as for primary prevention and health promotion. Funding for surveillance, monitoring and evaluation was reported by a comparatively lower proportion of countries (74%), and was particularly low in the African Region (49%) and Eastern Mediterranean Region (48%) (see Fig. 1.8). Across all countries, only 74% reported having funding for capacity-building, and the availability of funding for rehabilitation services was also moderately low across all regions, with

**Fig. 1.8** Percentage of countries with funding for NCD activities, by function, 2013, by WHO region and by World Bank income group (5)



AFR=African Region, AMR=Region of the Americas, SEAR =South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region

only 64% of countries surveyed having funding. Overall, 6% of countries (i.e. 10 countries) reported no funding stream for NCD activities. There was a significant lack of funding available for NCD activities in low-income countries (18% reported no funding) versus the lower-middle-income (7%) and upper-middle-income and high-income countries (2%). Major sources of funding included government revenues (90%), international donors (64%), health insurance (54%) and earmarked taxes on alcohol and tobacco (32%).

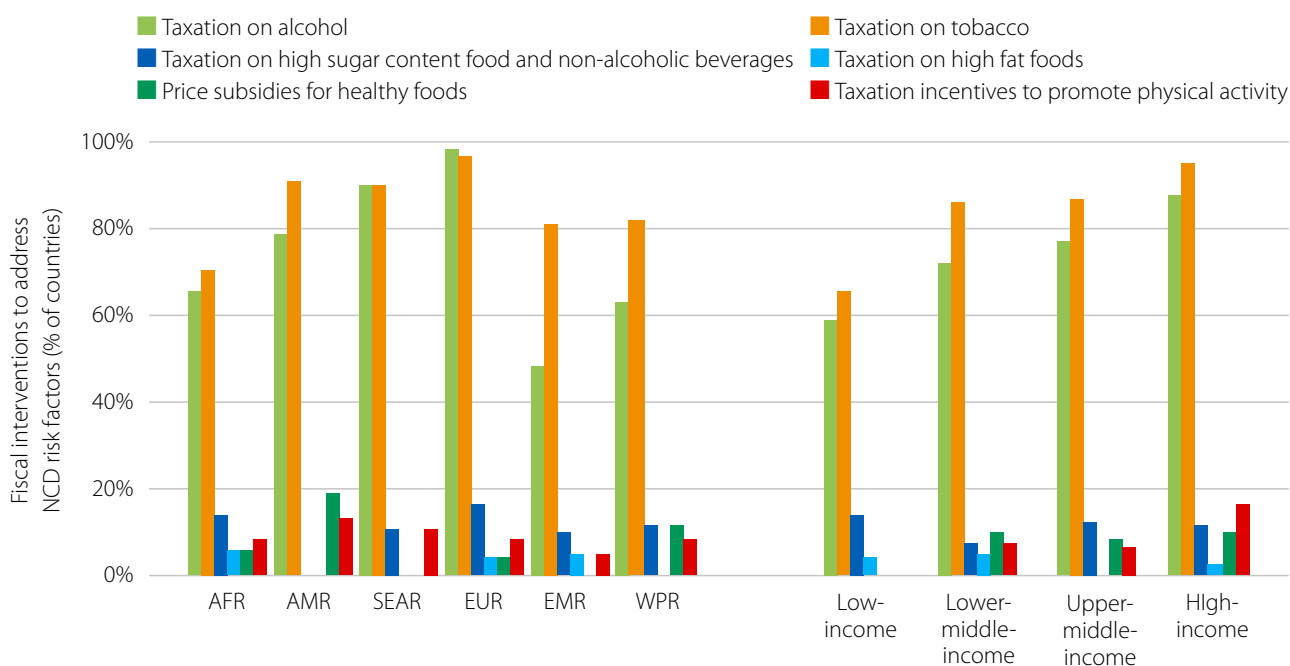
Low-income countries reported receiving less funding for NCD activities from all sources: 66% of low-income countries received government revenues, compared to more than 90% of countries in other income groups. Similarly, although 28% of low-income countries received funds from health insurance, this still remains markedly lower than in countries in other income groups. Use of earmarked taxes to fund NCD activities was reported by 32% of countries.

A comparison of the 172 countries that responded to questions about funding in capacity assessment surveys, conducted in both 2010 (10) and 2013 (5), reveals an improvement since 2010. There was an

increase in the percentage of low-income countries receiving funds from international donors in 2013 (75%) relative to 2010, when the figure was 57%. Similarly, there was an increase in the percentage of countries that reported using earmarked taxes to fund NCD activities (20% in 2010 versus 32% in 2013). The percentage of countries using earmarked funds has increased across all regions except Africa.

Various fiscal interventions could be used to raise funds for prevention and control of NCDs. Results of the 2013 NCD country capacity assessment survey (5), show that there is room for improvement (see Fig 1.9). Only about one third of countries had fiscal interventions to raise funds for health. Taxes on tobacco and alcohol were reported by 85% and 76% of countries respectively. Only 11% of countries reported taxation on food with high sugar content, and non-alcoholic beverages, and only 3% reported taxation on high-fat foods. Only in 39% of countries were such policies and interventions intended to raise general revenues. In 34% of countries, they were intended to influence health behaviour. In a few countries, fiscal interventions were intended to raise funds for health, and most of these (5 of the 11 countries) were in the lower-middle-income grouping.

Fig. 1.9 Fiscal interventions to address NCD risk factors, 2013, by WHO region and by World Bank income group.



AFR=African Region, AMR=Region of the Americas, SEAR=South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region

## Actions required to attain this target

The “25×25” target was based on analysis of trends in the indicator over recent decades. The experience of high-performing countries during 1980–2010 showed that very substantial declines in NCD death rates can be achieved and that the proposed target is achievable. Based on their past performance, high-income countries may wish to set a national target for reducing premature mortality that is higher than the global target. Countries with good-quality cause-of-death data from a complete registration system may also wish to establish more detailed national targets for specific NCDs.

All actions that are required to attain the other eight targets discussed in **chapters 2–9**, will contribute to the attainment of this target on premature mortality. The risk factor and mortality targets were chosen independently from one another, largely based on experiences of countries that had been successful in reducing any one of the corresponding indicators (11). As policy attention and resources are mobilized towards NCD prevention and control, it is useful to know if selected risk factor targets discussed in subsequent chapters, if achieved, would contribute towards reducing NCD mortality, to achieve the “25×25” target (12). A modelling analysis has been done to answer this important question (13). The results show that, achieving six targets (tobacco, harmful use of alcohol, salt, raised blood pressure, raised blood glucose and obesity) by 2025 together, will reduce premature mortality from the four main NCDs to levels that are close to the 25 x 25 target ( 22% in men and 19% in women).

The multifaceted nature of the drivers, causes and determinants of NCDs requires implementation of comprehensive multisectoral policies to reduce premature mortality from NCDs (see **Chapter 10**).

The following 10 key actions will be critical in dismantling barriers and paving the way to attain this target:

1. Obtain explicit high-level/head-of-state commitment, establish/strengthen the NCD unit in the ministry of health, and ensure that NCDs are accorded due consideration in national strategic health planning.
2. Develop a national multisectoral plan, as outlined in **Chapter 10**, taking into account the WHO Global NCD Action Plan 2013–2020 (14) and regional frameworks and action plans.
3. Establish a high-level interministerial platform/commission to facilitate and endorse multisectoral collaboration for prevention and control of NCDs.
4. Set national NCD targets, consistent with the nine global targets, covering risk factors, national systems performance, and mortality, based on national situations.
5. Strengthen national surveillance systems for NCDs, including vital registration that is capable of reporting cause of death, cancer registries, and risk factor surveillance, and ensure these are integrated into national health information systems, to enable regular reporting/auditing/benchmarking and monitoring of progress.
6. Define, finance, prioritize and take to scale the implementation of very cost-effective interventions (see **Box 1.1**).
7. Strengthen the health system at all levels, with emphasis on primary care, and define and finance a national set of NCD interventions/services for health promotion/prevention and curative, rehabilitative and palliative care, to achieve universal health coverage dynamically and incrementally.
8. Protect the implementation of public health policies for NCD prevention and control from interference by vested interests, through comprehensive legislation and enforcement of national laws and regulations.
9. Strengthen training of the health workforce and the scientific basis for decision-making, through partnerships and NCD-related research.
10. Mobilize and track domestic and external resources for NCD prevention and



**Box 1.1 WHO “best buys” – (very cost-effective interventions that are also high-impact and feasible for implementation even in resource-constrained settings) (10–12)**

**Tobacco**

- Reduce affordability of tobacco products by increasing tobacco excise taxes
- Create by law completely smoke-free environments in all indoor workplaces, public places and public transport
- Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns
- Ban all forms of tobacco advertising, promotion and sponsorship

**Harmful use of alcohol**

- Regulate commercial and public availability of alcohol
- Restrict or ban alcohol advertising and promotions
- Use pricing policies such as excise tax increases on alcoholic beverages

**Diet and physical activity**

- Reduce salt intake
- Replace trans fats with polyunsaturated fats
- Implement public awareness programmes on diet and physical activity
- Promote and protect breastfeeding

**Cardiovascular disease and diabetes**

- Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) and counselling to individuals who have had a heart attack or stroke and to persons with high risk ( $\geq 30\%$ ) of a fatal and nonfatal cardiovascular event in the next 10 years
- Acetylsalicylic acid (aspirin) for acute myocardial infarction

**Cancer**

- Prevention of liver cancer through hepatitis B immunization
- Prevention of cervical cancer through screening (visual inspection with acetic acid [VIA] linked with timely treatment of pre-cancerous lesions)

control, including through innovative financing mechanisms.

A range of policies will be required to strengthen the implementation capacity of countries to attain the voluntary global targets. They are summarized in the Global NCD Action Plan (14). A combination of population-wide and individual interventions need to be selected and implemented, based on the availability of resources (14–16). The selection should be guided by impact, feasibility of implementation, cost-effectiveness and affordability. Complementing population-wide interventions with individual interventions is essential, since high-risk individuals will not be adequately protected by the population-level interventions. Although

individual interventions can have relatively high costs compared to population-wide interventions, the investment in at least the limited set of “best buys” that are recommended in this report can yield a good return.

The average annual cost of implementing the very cost-effective interventions (“best buys”, see **Box 1.1**) is estimated be US\$ 11.2 billion (15). On the other hand, the cumulative economic losses due to NCDs in low- and middle-income countries between 2011–2025 under a “business as usual” scenario have been estimated to be a staggering 7 trillion (17). The cost of taking action amounts to an annual investment of under US\$ 1 per capita in low-income countries, US\$ 1.50 per capita in

lower-middle-income countries and US\$ 3 per capita in upper-middle-income countries. Expressed as a proportion of current health spending, the cost of implementing such a package amounts to 4% in low-income countries, 2% in lower-middle-income countries and less than 1% in upper-middle-income countries (15).

In all countries, an increase in investment in NCD prevention and control will be necessary to attain this target. Strengthening surveillance systems, including vital registration, plus multisectoral engagement, population-wide prevention policies, proactive case-finding, and strengthening of health systems with a special focus on primary health care are important goals for all countries. Countries with good economic growth, sound governance, strong NCD policies and health institutions, could achieve the “25×25” target, by scaling up their expenditures on cost-effective programmes in proportion to current allocations. All resource-constrained settings could give priority to targeting additional government spending on very cost-effective high-impact interventions (14,15).

Low- and middle-income countries that spend less than what they can afford on health need to explore means of mobilizing more domestic resources for health from general revenues and social insurance contributions (18). In low-income countries, simply increasing health spending along the lines of past expenditure patterns may not be adequate, because the amounts required to address NCDs, in addition to other health priorities such as communicable diseases and maternal and child health, may be beyond any realistic expectation of the financial resources these countries will be able to generate. Development agencies and international partners have a distinct role to play in supporting these countries.

## References

1. World Health Organization. Global Health Estimates: Deaths by Cause, Age, Sex and Country, 2000-2012. Geneva, WHO, 2014.
2. World Health Organization. Projections of mortality and causes of death, 2015 and 2030 ([http://www.who.int/healthinfo/global\\_burden\\_disease/projections/en/](http://www.who.int/healthinfo/global_burden_disease/projections/en/), [http://www.who.int/gho/ncd/mortality\\_morbidity/en/](http://www.who.int/gho/ncd/mortality_morbidity/en/), accessed 4 November 2014).
3. Mathers CD, Loncar D projections of global mortality and burden of disease 2002–2030. *PLoS Med.* 2006;3(11):e442. doi:10.1371/journal.pmed.0030442
4. NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
5. Assessing national capacity for the prevention and control of noncommunicable diseases. Report of the 2013 global survey. Geneva: World Health Organization; 2014.
6. GLOBOCAN 2012: Estimates Cancer Incidence, Mortality and Prevalence Worldwide in 2012, International Agency for Research on Cancer, Lyon <http://globocan.iarc.fr/Default.aspx>, accessed 16 December 2014).
7. Global Health Observatory, Civil registration of deaths, coverage of registration. Geneva: World Health Organization; 2014 [http://www.who.int/gho/mortality\\_burden\\_disease/registered\\_deaths/en/](http://www.who.int/gho/mortality_burden_disease/registered_deaths/en/), accessed 16 December 2014.
8. World health statistics 2014. Geneva: World Health Organization; 2014 ([http://apps.who.int/iris/bitstream/10665/112738/1/9789240692671\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/112738/1/9789240692671_eng.pdf), accessed 4 November 2014).
9. World Health Statistics 2012. Geneva, World Health Organization; 2012. ([http://www.who.int/gho/publications/world\\_health\\_statistics/2012/en/](http://www.who.int/gho/publications/world_health_statistics/2012/en/), accessed 16 December 2014).
10. Assessing national capacity for the prevention and control of noncommunicable diseases. Report of the 2010 global survey. Geneva: World Health Organization; 2011 ([http://www.who.int/cancer/publications/national\\_capacity\\_prevention\\_ncds.pdf](http://www.who.int/cancer/publications/national_capacity_prevention_ncds.pdf), accessed 4 November 2014).
11. Di Cesare M, Bennett JE, Best N, Stevens GA, Danaei G, Ezzati M. The contributions of risk factor trends to cardiometabolic mortality decline in 26 industrialized countries. *Int J Epidemiol.* 2013;42(3):838–48. doi:10.1093/ije/dyt063.
12. Peto R, Lopez AD, Norheim OF. Halving premature death. *Science.* 2014;345(6202):1272. doi:10.1126/science.1259971.
13. Kontis V, Mathers CD, Rehm J, Stevens GA, Shield KD, Bonita R et al. Contribution of six risk factors to achieving the 25×25 noncommunicable disease mortality reduction target; a modelling study. *Lancet.* 2014;384(9941):427–37. doi: 10.1016/S0140-6736(14)60616-4.
14. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
15. Scaling up action against noncommunicable diseases: how much will it cost? Geneva: World Health Organization; 2011 ([http://whqlibdoc.who.int/publications/2011/9789241502313\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241502313_eng.pdf), accessed 4 November 2014).
16. Global status report on noncommunicable diseases 2010. Geneva: World Health Organization; 2011 ([http://www.who.int/nmh/publications/ncd\\_report\\_full\\_en.pdf](http://www.who.int/nmh/publications/ncd_report_full_en.pdf), accessed 3 November 2014).
17. From burden to “best buys”: reducing the economic impact of non-communicable diseases in low- and middle-income countries. Geneva: World Health Organization and World Economic Forum; 2011 ([www.who.int/nmh/publications/best\\_buys\\_summary](http://www.who.int/nmh/publications/best_buys_summary), accessed 3 November 2014).
18. Evans DB, Etienne C. Health systems financing and the path to universal coverage. *Bull World Health Organ.* 2010;88(6):402. doi:10.2471/BLT.10.078741.







# Key points

- There is a causal relationship between harmful use of alcohol and the morbidity and mortality associated with cardiovascular diseases, cancers and liver diseases.  
.....
- In 2012, an estimated 3.3 million deaths, or 5.9 % of all deaths worldwide, were attributable to alcohol consumption. More than half of these deaths resulted from NCDs.  
.....
- Implementing very cost-effective population-based policy options – such as the use of taxation to regulate demand for alcoholic beverages, restriction of availability of alcoholic beverages, and bans or comprehensive restrictions on alcohol advertising – are key to reducing the harmful use of alcohol and attaining this target.  
.....
- Health professionals have an important role to play in reducing the harmful use of alcohol, by identifying hazardous and harmful drinking or alcohol dependence in their patients and by providing brief interventions and treatment as appropriate.

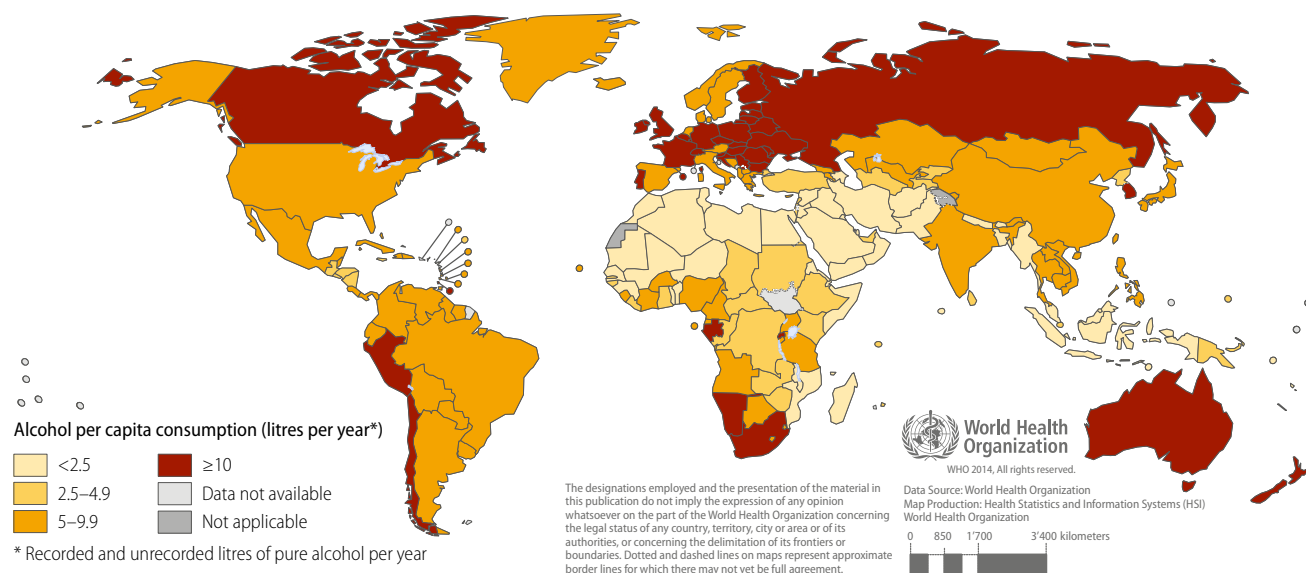
# 2 Global target 2: At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context

## Harmful use of alcohol and its impact on health

Harmful use of alcohol is associated with a risk of developing noncommunicable diseases, mental and behavioural disorders, including alcohol dependence, as well as unintentional and intentional injuries, including those due to road traffic accidents and violence. There is also a causal relationship between harmful use of alcohol and incidence of infectious diseases such as tuberculosis. Alcohol consumption by an expectant mother may cause fetal alcohol syndrome and pre-term birth complications.

In 2012 it was estimated that 3.3 million deaths, or 5.9% of all deaths worldwide, were attributable to alcohol consumption. More than half of these deaths resulted from NCDs – chiefly cardiovascular diseases and diabetes (33.4%), cancers (12.5%) and gastrointestinal diseases, including liver cirrhosis (16.2%). An estimated 5.1% of the global burden of disease – as measured in disability-adjusted life-years (DALYs) – is attributed to alcohol consumption. Cardiovascular diseases, cancers and gastrointestinal diseases (largely due to liver cirrhosis) are responsible for more than one third (37.7%) of this burden (1).

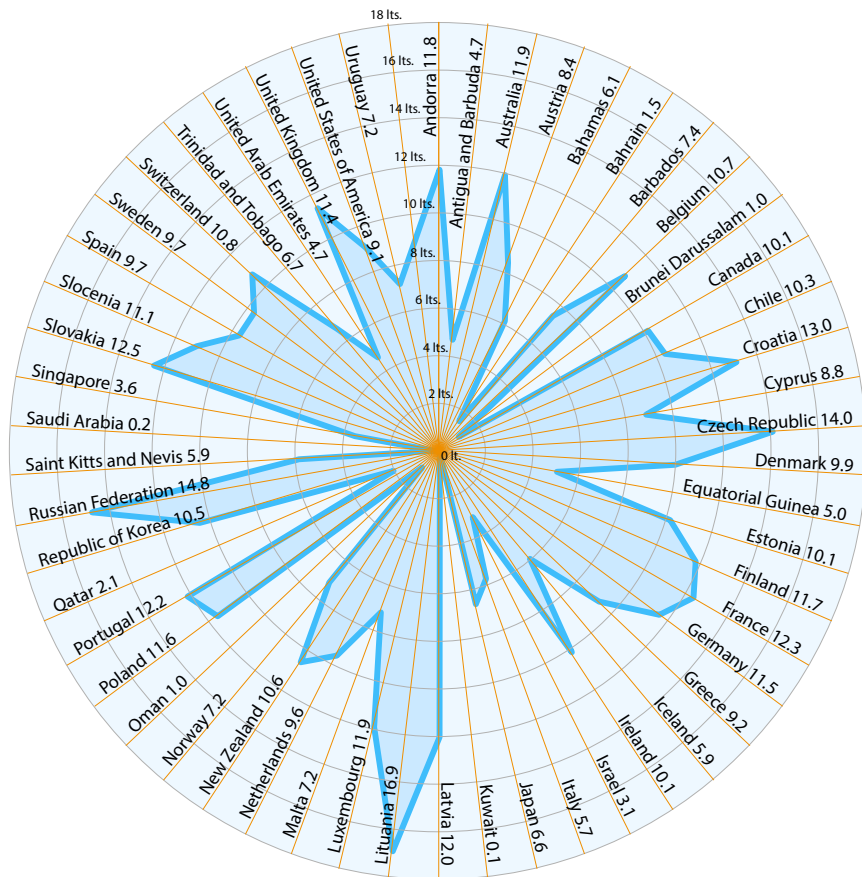
**Fig. 2.1** Total (recorded and unrecorded) alcohol consumption per capita (aged 15 years and over), in litres of pure alcohol within a calendar year, by WHO region, projected estimates for 2012



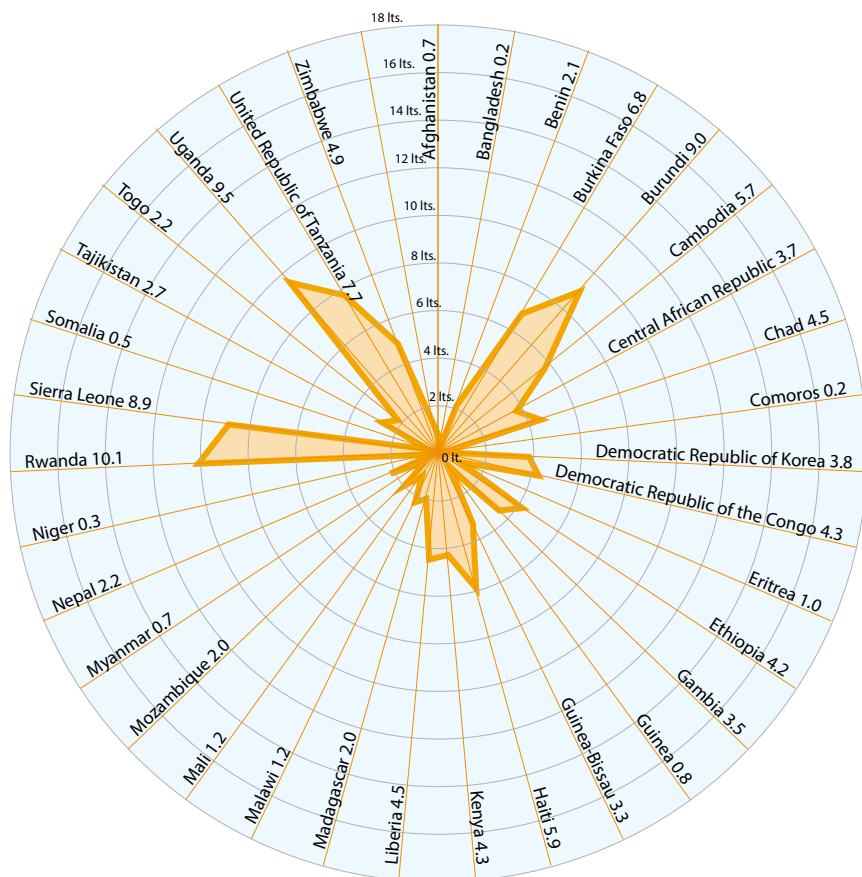


**Fig. 2.2** Total (recorded and unrecorded) alcohol consumption per capita (aged 15 years and over) within a calendar year, in litres of pure alcohol, by individual country, and World Bank income groups, projected estimates for 2012

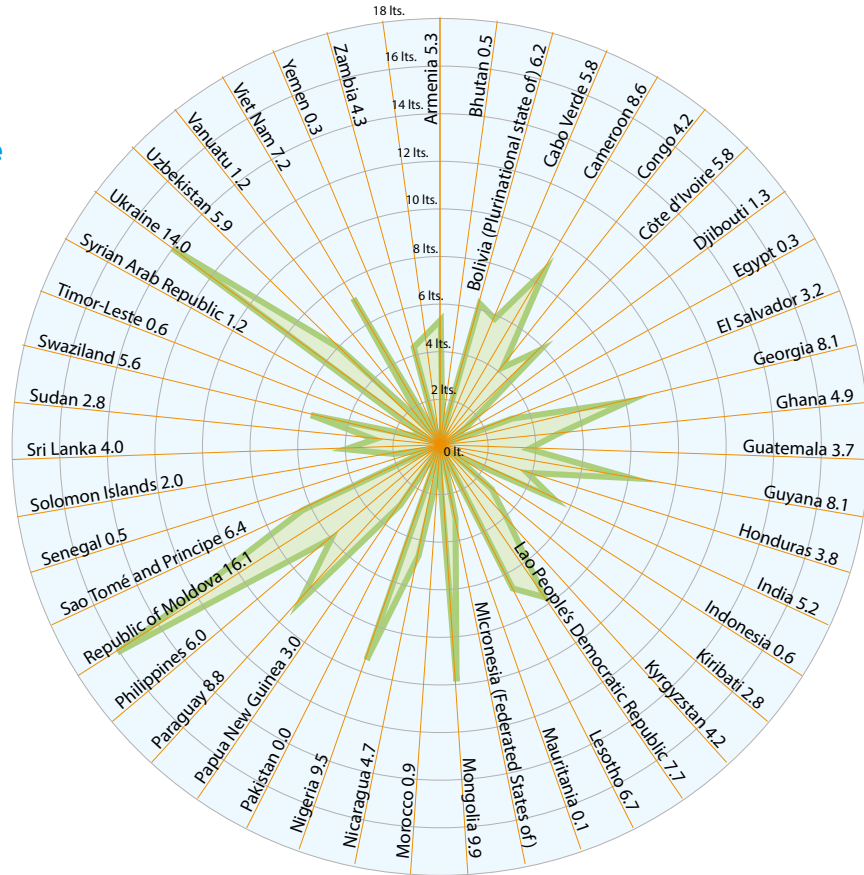
High-income



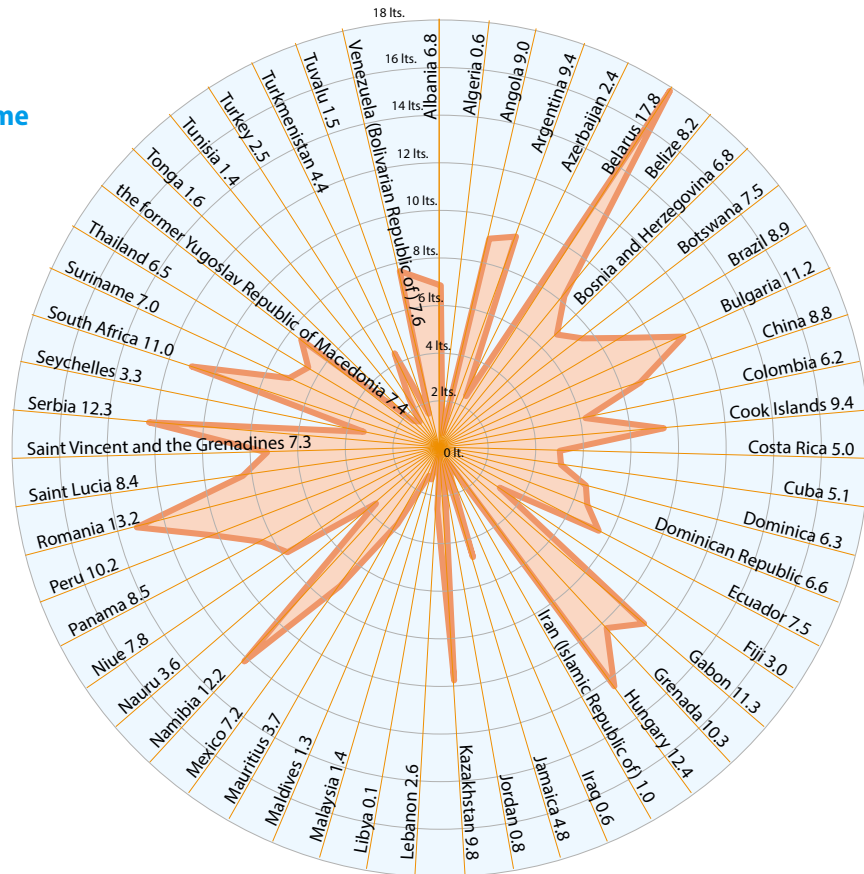
Low-income



Low-middle-income



Upper-middle-income





There is a direct link between high levels of alcohol consumption and the risk of cancers of the mouth, nasopharynx, oropharynx, larynx, oesophagus, colon, rectum, liver and female breast (2). At high levels, alcohol consumption is associated with exponentially increasing risk of liver cirrhosis and pancreatitis (3,4).

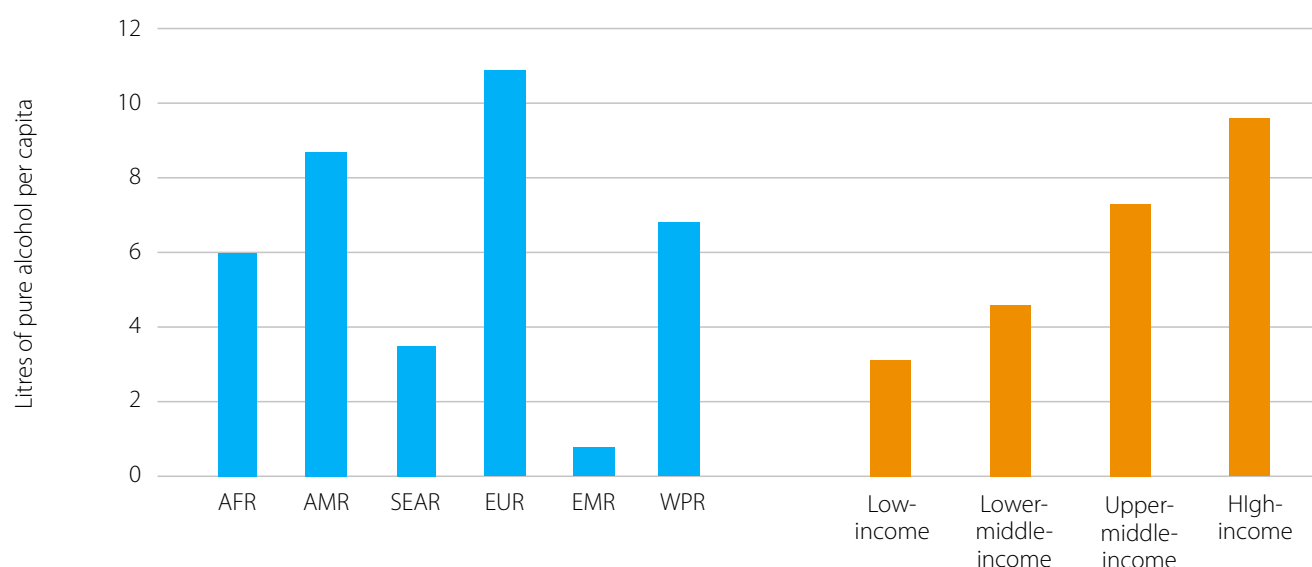
The relationship between alcohol consumption and ischaemic heart and cerebrovascular diseases is complex. Alcohol use is associated with the risk of hypertensive disease, atrial fibrillation and haemorrhagic stroke, yet, on the other hand, lower levels,

and particular patterns, of alcohol consumption in some populations may lower the risk of ischaemic heart disease and ischaemic stroke and associated mortality. However, controversy remains on the potential beneficial effect of low alcohol intake on cardiovascular diseases. Furthermore, beneficial effects of lower levels of alcohol consumption, if any, tend to disappear if the patterns of drinking are characterized by heavy episodic drinking (5), which is highly prevalent in many countries and population groups (1,6).

**Table 2.1** Total alcohol consumption per capita (in litres of pure alcohol) and prevalence of heavy episodic drinking (%) in the total population aged 15 years and over, and among drinkers aged 15 years and over, by WHO region and the world, 2010

WHO region	Among all (15+ years)		Among drinkers only (15+ years)	
	Per capita consumption	Prevalence of heavy episodic drinking (%)	Per capita consumption	Prevalence of heavy episodic drinking (%)
African Region	6.0	5.7	19.5	16.4
Region of the Americas	8.4	13.7	13.6	22.0
South-East Asia Region	3.4	1.6	23.1	12.4
European Region	10.9	16.5	16.8	22.9
Eastern Mediterranean Region	0.7	0.1	11.3	1.6
Western Pacific Region	6.8	7.7	15.0	16.4
World	6.2	7.5	17.2	16.0

**Fig. 2.3** Total alcohol consumption per capita, 2010 (in litres of pure alcohol) in the total population aged 15 years and over by WHO region and World Bank income groups



AFR=African Region, AMR=Region of the Americas, SEAR =South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region

The level of alcohol consumption worldwide in 2010 was estimated at 6.2 litres of pure alcohol per person aged 15 years and over (equivalent to 13.5 g of pure alcohol per day). Although alcohol consumption is deeply embedded in the cultures of many societies, WHO estimates for 2010 showed that 48% of the global adult population had never consumed alcoholic beverages and 62% of the population aged 15 years and older had not consumed alcohol during the previous 12 months. The highest levels of alcohol consumption were found in middle- and high-income countries of the WHO European Region and the Region of the Americas (see Fig. 2.1), while the lowest levels were observed in the Eastern Mediterranean and South-East Asia

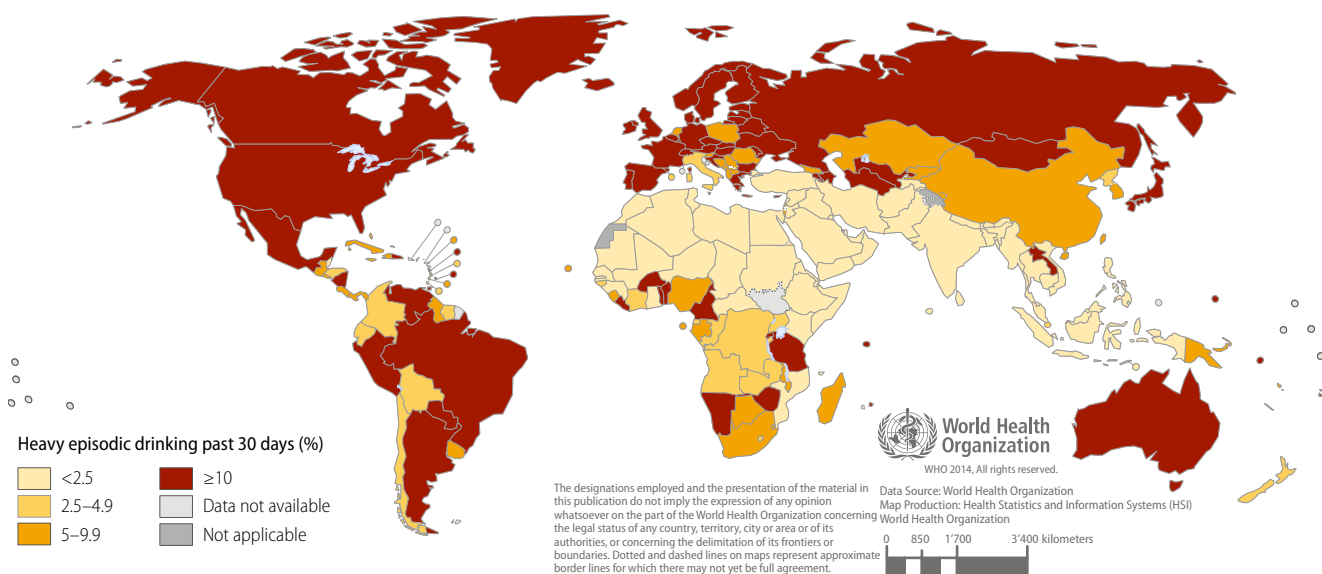
Regions (see Table 2.1). Projected estimates of total (recorded and unrecorded) alcohol consumption per capita (aged 15 years and over) for 2012, by country is shown in Fig 2.2. There is a wide variation in total alcohol consumption between different countries. Prevalence of heavy episodic drinking in past 30 days, is shown in Fig. 2.4. The prevalence of heavy episodic drinking is associated with the overall levels of alcohol consumption and is highest in the European Region and the Region of the Americas (see Table 2.2, Fig. 2.3) (1).

In general, the greater the economic wealth of a country, the more alcohol is consumed and the smaller the number of abstainers is (see Table 2.2).

**Table 2.2** Total alcohol per capita consumption, prevalence (%) of current drinkers, and prevalence of heavy episodic drinking among current drinkers, in the total population aged 15 years and over, by World Bank income group and the world, 2010

Income group	Per capita consumption	Prevalence of current drinkers (%)	Prevalence of heavy episodic drinking among drinkers (%)
Low-income	3.1	18.3	11.6
Lower middle-income	4.1	19.6	12.5
Upper middle-income	7.3	45.0	17.2
High-income	9.6	69.5	22.3
World	6.2	38.3	16.0

**Fig. 2.4.** Age standardized heavy episodic drinking (aged 15 years and over) in past 30 days (%), 2010



## What are the cost-effective policies and interventions for reducing harmful use of alcohol?

WHO's *Global strategy to reduce the harmful use of alcohol* highlights 10 policy areas for multisectoral national action to protect the health of populations and reduce the alcohol-attributable disease burden (7). They include:

- leadership, awareness and commitment;
- health services response;
- community action;
- drink-driving policies and countermeasures;
- availability of alcohol;
- marketing of alcoholic beverages;
- pricing policies;
- reducing the negative consequences of drink-driving and alcohol intoxication;
- reducing the public health impact of illicit alcohol and informally-produced alcohol;
- monitoring and surveillance.

These areas for action are also outlined in the Global NCD Action Plan (8).

Some interventions for reducing harmful use of alcohol are very cost-effective, or “best buys” (see **Box 1.1**). When implemented in health services, individual actions such as screening and brief interventions for hazardous and harmful drinking, and treatment of alcohol dependence, are also effective in reducing the harmful use of alcohol. Such interventions have a good cost-effectiveness profile, although their implementation requires more resources than those for population-based measures (6,9–12). Health professionals play an important role in reducing the harmful use of alcohol, by assessing and monitoring levels and patterns of alcohol consumption in patients and by intervening with brief interventions, counselling and pharmacotherapy – as appropriate – in cases where hazardous and harmful drinking or alcohol dependence are identified (8,13,14).

## Monitoring harmful use of alcohol

The three indicators of the global monitoring framework (see **Annex 1**), for monitoring progress towards attaining this target are:

- total (recorded and unrecorded) alcohol consumption per capita (aged 15 years and over) within a calendar year, in litres of pure alcohol, as appropriate within the national context;
- age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate within the national context; heavy episodic drinking among adults is defined as consumption of at least 60 g or more of pure alcohol on at least one occasion in the previous 30 days;
- alcohol-related morbidity and mortality among adolescents and adults, as appropriate within the national context.

Member States may choose to report against the indicator most appropriate to their national circumstances, or against all three indicators if possible. However, total per capita consumption is one of the most reliable indicators of alcohol exposure and is recommended for monitoring progress in reducing the harmful use of alcohol at population level. Effective monitoring of trends in the prevalence of heavy episodic drinking requires a well-developed system for surveillance of alcohol consumption in populations. Shortcomings seen in a number of surveys – such as poor representation of the whole population, under-representation of heavy drinkers in survey samples, use of different indicators and data-collection instruments, and underreporting of alcohol consumption, particularly in societies with stigmatization and social disapproval of drinking – must be minimized. There are significant challenges in measuring and reporting alcohol-related morbidity and mortality, since reporting on these indicators is significantly influenced by the organization and functioning of the health system. Nevertheless, these indicators can be used for monitoring purposes in well-developed and relatively stable health systems.

**Box 2.1 Mongolia: working with civil society to reduce harmful use of alcohol**

Mongolia's revised law on alcohol prevention and control includes essential strategies for reducing alcohol-related harm – such as a total ban on alcohol advertising, legislation on the population-density requirement for alcohol sales outlets, increased liability of businesses selling alcohol, and strengthened administrative and deterrence systems for infringements and violations. The law aims to bridge the gaps between regulation and implementation that were observed in the past and to improve coordination of alcohol-related strategies and programmes, by strengthening cooperation between different levels of government and other stakeholders.

Mongolia set up a national network of 80 governmental and nongovernmental organizations, to increase public awareness, formulate policies and establish a legal environment to reduce the consequences of alcohol use and strengthen implementation of the law.

Sources: see references (17).

## Progress achieved

Since the *Global strategy to reduce the harmful use of alcohol* (7) was endorsed by the World Health Assembly in 2010, growing numbers of countries have developed or reformulated their national alcohol policies and action plans. Of 76 countries with a written national policy on alcohol, 52 have taken steps to operationalize it (15). Higher minimum legal drinking ages, controls over alcohol sales, fewer outlets (including reduced density of outlets), and limited hours and days of sale reduce both alcohol sales and consumption (16). Some 160 WHO Member States have regulations on age limits for sale of alcoholic beverages, with 18 years as the most frequent age limit for all beverage types and 20–21 years in some countries (e.g. Iceland, Indonesia, Japan, Sweden, the United States of America (USA) (1).

A total ban on advertising alcoholic beverages has been considered by the Government of South Africa, as a necessary measure to reduce the burden attributable to alcohol. Efforts of the Government of the Russian Federation to curb the high level of alcohol consumption include strengthening regulations on availability and marketing of alcoholic beverages, including beer; enforcing drink-driving measures; and increasing the minimum retail price for the most common spirit. A new alcohol strategy introduced in the United Kingdom of Great Britain

and Northern Ireland (UK) in 2012 promotes coordinated actions across different government sectors and prioritizes measures with proven effectiveness in reducing alcohol-related harm. Mongolia has established a national network to strengthen the legal environment for prevention and control of alcohol (see **Box 2.1**) (1).

## Actions required to attain this target

Evidence on the effectiveness and cost-effectiveness of policy options to reduce the harmful use of alcohol strongly indicates that countries should prioritize, according to their national contexts, the following action areas:

- pricing policies;
- availability of alcohol;
- marketing of alcoholic beverages;
- the response of health services;
- drink-driving policies and countermeasures.

The successful implementation by governments of population-based interventions to reduce harmful use of alcohol depends on sustained political commitment and societal support. Effective communication measures are needed to support alcohol-control measures that may restrict individuals' choices and



reduce the economic benefits for enterprises involved in alcohol production and sale (4–7).

Labelling on alcoholic drinks may help consumers to estimate their alcohol content and potentially choose a drink with less alcohol. Nevertheless, a study in Australia supports the view that standard labelling of drinks, without other changes to packaging and marketing, may serve to help young people choose the strongest drink for the lowest cost (18).

Health warnings have been introduced to inform consumers about the risks associated with drinking alcohol and to stimulate reduced consumption. However, international experience shows that health warnings that are poorly visible or have generic messages have a weak impact on drinking behaviour (19). More recent studies recommend direct, more visible and pictorial health warnings, with due consideration of plain packaging for alcohol products, in order to influence recall, perceptions and behaviours (20).

Models of a range of fiscal policy scenarios from a number of countries have indicated the high cost effectiveness of taxation and pricing policies in reducing hazardous drinking and alcohol-attributable mortality, as well as in raising revenue (6,9,21,22). Setting a minimum price per unit for alcohol in retail sales can complement taxation measures and result in health benefits, as demonstrated in a statistical model for England (21), and as supported by the impact on alcohol consumption in one province of Canada (22). A total of 154 WHO Member States have some form of excise tax on beer, wine or spirits, but the effectiveness of these measures in protecting population health depends on their scale and their impact on the demand for alcoholic beverages.

Drink-driving measures, such as random breath-testing and setting and enforcing low limits (0.02–0.05%) for blood-alcohol concentration are effective in reducing not only road traffic injuries but also alcohol consumption by drivers. Thus, these measures have potential to improve population health outcomes associated with NCDs.

## References

1. Global status report on alcohol and health 2014. Geneva: World Health Organization; 2014 ([http://www.who.int/substance\\_abuse/publications/global\\_alcohol\\_report/msb\\_gsr\\_2014\\_1.pdf?ua=1](http://www.who.int/substance_abuse/publications/global_alcohol_report/msb_gsr_2014_1.pdf?ua=1), accessed 4 November 2014).
2. IARC Monographs 100E. Consumption of alcohol. Lyon: International Agency for Research on Cancer; 2012 (<http://monographs.iarc.fr/ENG/Monographs/vol100E/mono100E-11.pdf>, accessed 4 November 2014).
3. Irving HM, Samokhvalov AV, Rehm J. Alcohol as a risk factor for pancreatitis. A systematic review and meta-analysis. *JOP*. 2009;10:387–92.
4. Rehm J, Baliunas D, Borges GL, Graham K, Irving H, Kehoe T et al. The relation between different dimensions of alcohol consumption and burden of disease – an overview. *Addiction*. 2010;105(5):817–43. doi:10.1111/j.1360-0443.2010.02899.x.
5. Roerecke M, Rehm J. Irregular heavy drinking occasions and risk of ischemic heart disease: a systematic review and meta-analysis. *Am J Epidemiol*. 2010;171(6):633–44. doi:10.1093/aje/kwp451.
6. WHO Expert Committee on Problems Related to Alcohol Consumption. Second report. Geneva: World Health Organization; 2007 (WHO Technical Report Series, No. 944; [http://www.who.int/substance\\_abuse/expert\\_committee\\_alcohol\\_trs944.pdf](http://www.who.int/substance_abuse/expert_committee_alcohol_trs944.pdf), accessed 4 November 2014).
7. Global strategy to reduce the harmful use of alcohol. Geneva: World Health Organization; 2010 ([http://www.who.int/substance\\_abuse/activities/gsrhuae/en/](http://www.who.int/substance_abuse/activities/gsrhuae/en/), accessed 4 November 2014).
8. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
9. Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm. Copenhagen: World Health Organization Regional Office for Europe; 2009 (<http://www.euro.who.int/document/E92823.pdf>, accessed 4 November 2014).
10. mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings. Geneva: World Health Organization; 2010 ([http://whqlibdoc.who.int/publications/2010/9789241548069\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241548069_eng.pdf), accessed 4 November 2014).
11. Chisholm D, Rehm J, Ommeren MV, Monteiro M. Reducing the global burden of hazardous alcohol use: a comparative cost-effectiveness analysis. *J Stud Alcohol Drugs*. 2004;65(6):782–93.



12. Anderson P, Chisholm D, Fuhr D. Effectiveness and cost-effectiveness of policies and programmes to reduce the harm caused by alcohol. *Lancet*. 2009;373(9682):2234–46. doi:10.1016/S0140-6736(09)60744-3.
13. Rehm J, Shield K, Rehm M, Gmel GJ, Frick U. Alcohol consumption, alcohol dependence, and attributable burden of disease: potential gains from effective interventions for alcohol dependence. Toronto: Centre for Addiction and Mental Health; 2012 ([http://amphoraproject.net/w2box/data/AMPHORA%20Reports/CAMH\\_Alcohol\\_Report\\_Europe\\_2012.pdf](http://amphoraproject.net/w2box/data/AMPHORA%20Reports/CAMH_Alcohol_Report_Europe_2012.pdf), accessed 4 November 2014).
14. Moyer VA and Preventive Services Task Force. Screening and behavioral Services Task Force recommendation statement. *Ann Intern Med*. 2013;159(3):210–8. doi:10.7326/0003-4819-159-3-201308060-00652.
15. Assessing national capacity for the prevention and control of noncommunicable diseases report of the 2013 global survey. Geneva: World Health Organization; 2014.
16. Gruenewald PJ. Regulating availability: how access to alcohol affects drinking and problems in youth and adults. *Alcohol Res Health*. 2006;34(2):248–57. doi:SPS-AR&H-39.
17. World Health Organization Western Pacific Region. WHO Representative Office Mongolia. Alcohol initiative (<http://www.wpro.who.int/mongolia/mediacentre/alcohol/en/>, accessed 4 November 2014).
18. Jones SC, Gregory P. The impact of more visible standard drink labelling on youth alcohol consumption: helping young people drink (ir) responsibly? Young people's use of standard drink labelling. *Drug Alcohol Rev*. 2009;28(3):230–4.
19. Wilkinson C, Room R. Warnings on alcohol containers and advertisements: international experience and evidence on effects. *Drug Alcohol Rev*. 2009;28(4):426–35. doi:10.1111/j.1465-3362.2009.00055.x.
20. Al-hamdani M. The case for stringent alcohol warning labels: lessons from the tobacco control experience. *J Public Health Policy*. 2014;35(1):65–74. doi:10.1057/jphp.2013.47.
21. Purshouse R, Brennan A, Latimer N, Meng Y, Rafia R. Modelling to assess the effectiveness and cost-effectiveness of public health related strategies and interventions to reduce alcohol attributable harm in England using the Sheffield Alcohol Policy Model version 2.0. Report to the NICE Public Health Programme Development Group, 9 November 2009. Sheffield: University of Sheffield School of Public Health and Related Research; 2009 (<http://www.ias.org.uk/uploads/pdf/UK%20alcohol%20reports/univ-sheffield-am.pdf>, accessed 4 November 2014).
22. Stockwell T, Zhao J, Giesbrecht N, Macdonald S, Thomas G, Wettlaufer A. The raising of minimum alcohol prices in Saskatchewan, Canada: impacts on consumption and implications for public health. *Am J Public Health*. 2012;102(12):e103–10. doi:10.2105/AJPH.2012.301094.



# Key points

- Regular physical activity – at least 150 minutes of moderate-intensity physical activity per week for adults – reduces the risk of cardiovascular disease, diabetes, cancer and all-cause mortality.
- Children and young people aged 5–17 years should accumulate at least 60 minutes of physical activity of moderate to vigorous intensity daily, in order to maintain and improve lung and heart condition, muscular fitness, bone health, cardiovascular and metabolic health biomarkers and mental health.
- Globally, in 2010, 20% of adult men and 27% of adult women did not meet WHO recommendations on physical activity for health. Amongst adolescents, aged 11–17 years, 78% of boys and 84% of girls did not meet these recommendations.
- Under the leadership of the health ministries, strategies to improve physical activity should be developed and implemented through multiple sectors, in order to create an enabling environment for active living.
- Supportive built environment, multicomponent programs including mass media campaigns and use of settings are key to achieving this target.
- The attainment of this target will contribute to attainment of targets on reducing the prevalence of hypertension, on a 0% increase in diabetes and obesity and, ultimately, on reducing premature mortality from NCDs.

# 3 Global target 3: A 10% relative reduction in prevalence of insufficient physical activity

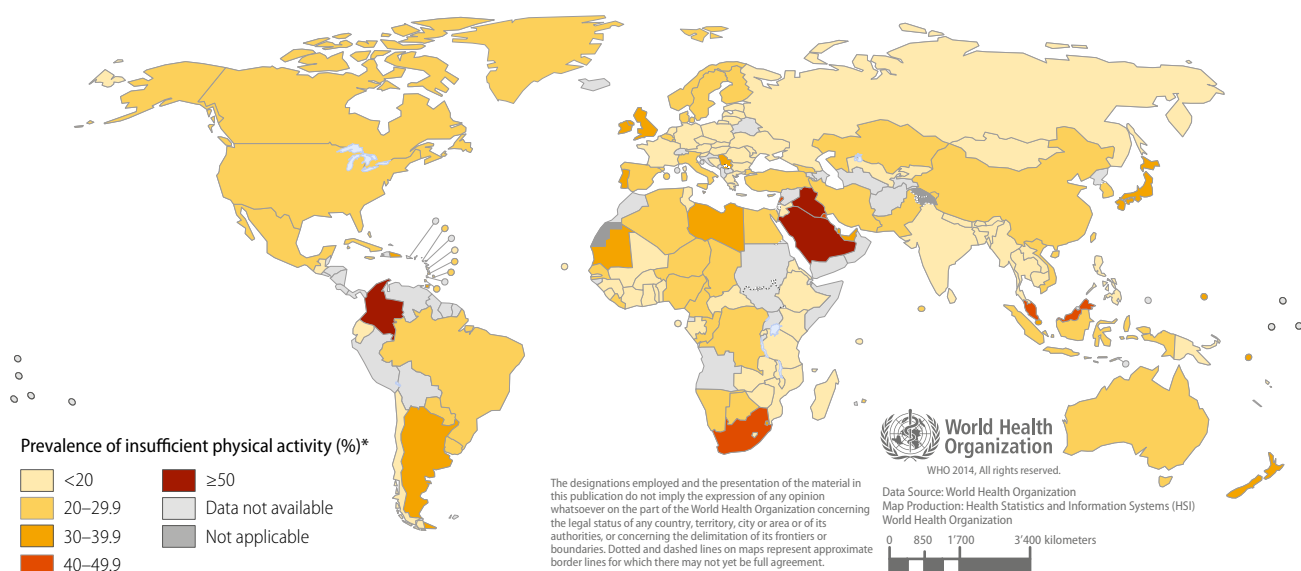
## Insufficient physical activity and its impact on health

Insufficient physical activity is one of the 10 leading risk factors for global mortality, causing some 3.2 million deaths each year (1). In 2010, insufficient physical activity caused 69.3 million DALYs – 2.8% of the total – globally (1).

Adults who are insufficiently physically active have a 20–30% increased risk of all-cause mortality compared to those who do at least 150 minutes of moderate-intensity physical activity per week, or equivalent, as recommended by WHO (2). Regular physical activity reduces the risk of ischaemic heart disease, stroke, diabetes and breast and colon cancer. Additionally, regular physical activity is a key determinant of energy expenditure and is therefore fundamental to energy balance, weight control and prevention of obesity (2).

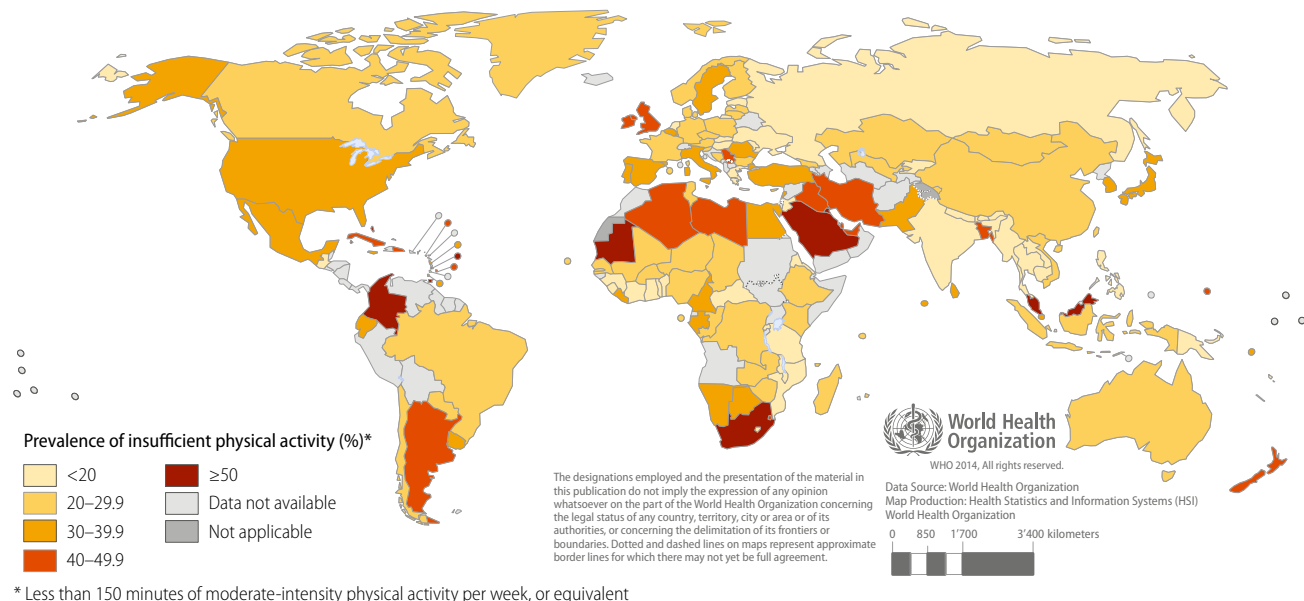
The prevalence of insufficient physical activity in men and women aged 18 years and over in different parts of the world is shown in **Figs. 3.1 and 3.2** respectively.

**Fig. 3.1** Age standardized prevalence of insufficient physical activity in men aged 18 years and over, comparable estimates, 2010



\* Less than 150 minutes of moderate-intensity physical activity per week, or equivalent

**Fig. 3.2** Age standardized prevalence of insufficient physical activity in women aged 18 years and over, comparable estimates, 2010



In 2010, 23% of adults aged 18 years and over were insufficiently physically active – i.e. they had less than 150 minutes of moderate-intensity physical activity per week, or equivalent (2).<sup>1</sup> Women were less active than men, with 27% of women and 20% of men not reaching the recommended level of activity.

Overall, older people were less active than younger people: 19% of the youngest age group did not meet the recommended level, compared to 55% of the oldest age group. However, young women were slightly less active than middle-aged women.

The WHO Eastern Mediterranean Region (31%) and Region of the Americas (32%) had the highest prevalence of insufficient physical activity, while the prevalence was lowest in the South-East Asia (15%) and African (21%) Regions. Across all regions, women were less active than men, with differences in prevalence between men and women of 10% and greater in the Eastern Mediterranean Region and the Region of the Americas (see Fig. 3.3).

1. The definition of “insufficient physical activity” differs from that used in the Global status report on noncommunicable diseases 2010 (3). The previous definition was “less than five times 30 minutes of moderate activity per week, or less than three times 20 minutes of vigorous activity per week, or equivalent”. The new definition reflects new evidence on the recommended amount of physical activity for health.

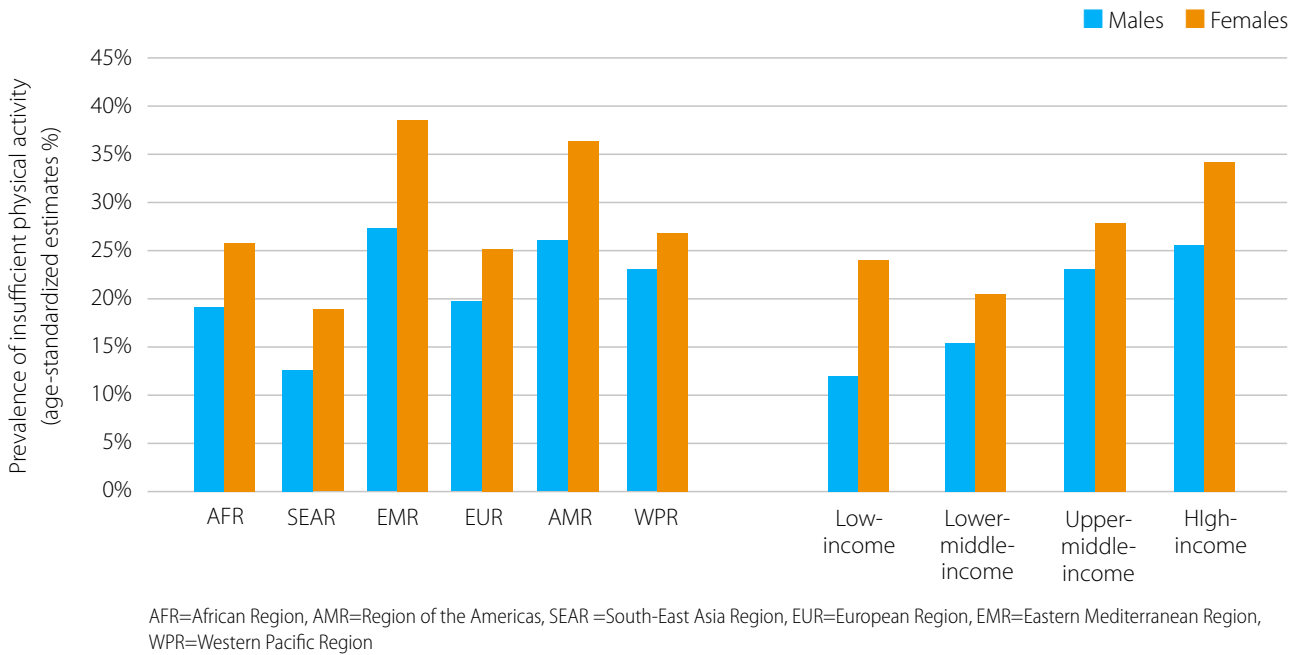
Insufficient physical activity in adults increased according to the level of country income (see Fig.3.5). The prevalence in high-income countries (33%) was about double that in low-income countries (17%). Nearly 28% of women from upper-middle-income countries and 38% in high-income countries did not reach WHO’s recommended level of physical activity.

The higher levels of activity in low-income and lower-middle-income countries may be explained by high levels of occupational and transport activity in these countries (4). In addition to rising income levels, factors such as increased ownership and use of vehicles, different occupation types, urbanization and industrialization seem to be important determinants of levels and patterns of physical activity (5,6).

## Insufficient physical activity among adolescents

Compared to their inactive peers, children and adolescents doing at least 60 minutes of physical activity of moderate to vigorous intensity daily have higher levels of cardiorespiratory fitness, muscular endurance and strength. Documented health benefits of regular physical activity among young people also include reduced body fat, more favourable

**Figure 3.3** Age-standardized prevalence of insufficient physical activity in adults aged 18 years and over, by WHO region and World Bank income group, men and women, comparable estimates, 2010



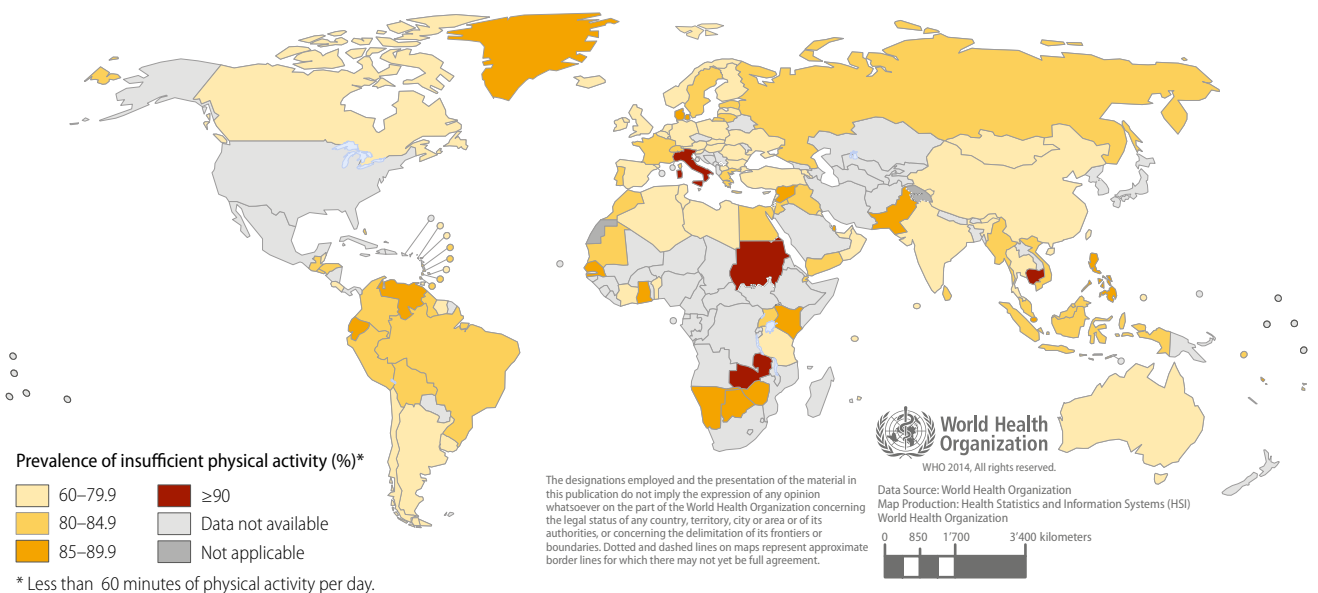
cardiovascular and metabolic disease risk profiles, enhanced bone health, and reduced symptoms of anxiety and depression (2).

Globally, 81% of adolescents aged 11–17 years were insufficiently physically active in 2010 – i.e. they had less than the 60 minutes of moderate-to-vigorous daily physical activity, as recommended by WHO. Adolescent girls were less active

than adolescent boys, (see Fig. 3.4, 3.6 and 3.7) with 84% versus 78% not meeting WHO recommendations. Estimates of physical activity of adolescents, are for school going adolescents due to lack of data on adolescents in the general population in most countries.

As with adults, adolescents from the WHO South-East Asia Region showed by far the lowest

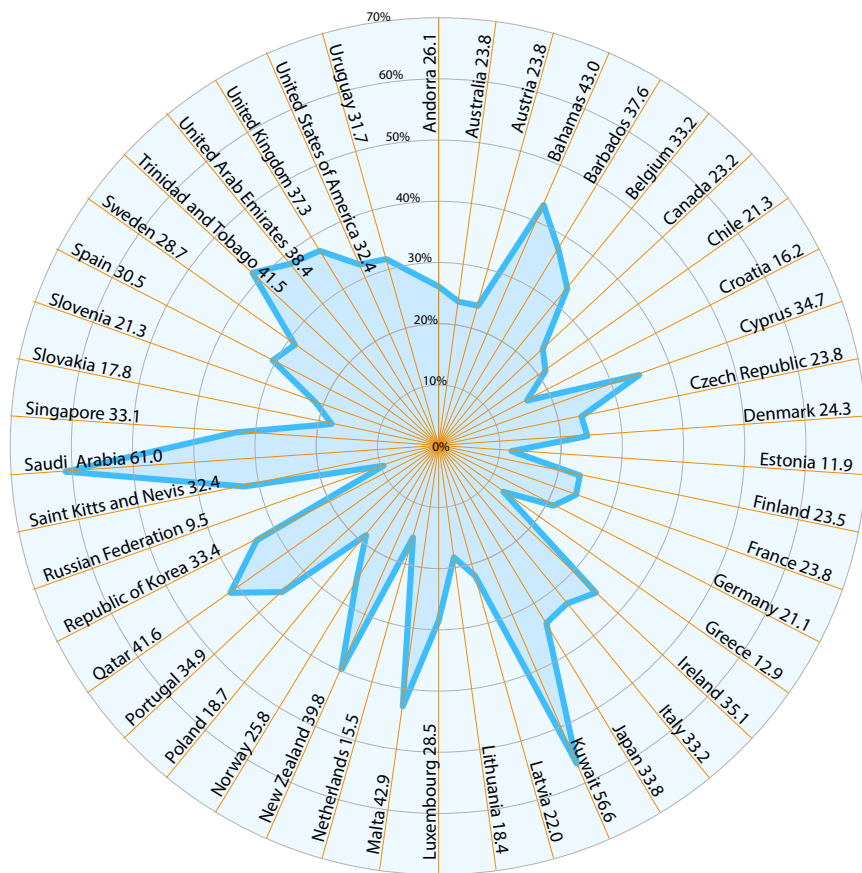
**Figure 3.4** Global prevalence of insufficient physical activity for school going adolescent boys aged 11–17 years, comparable estimates, 2010



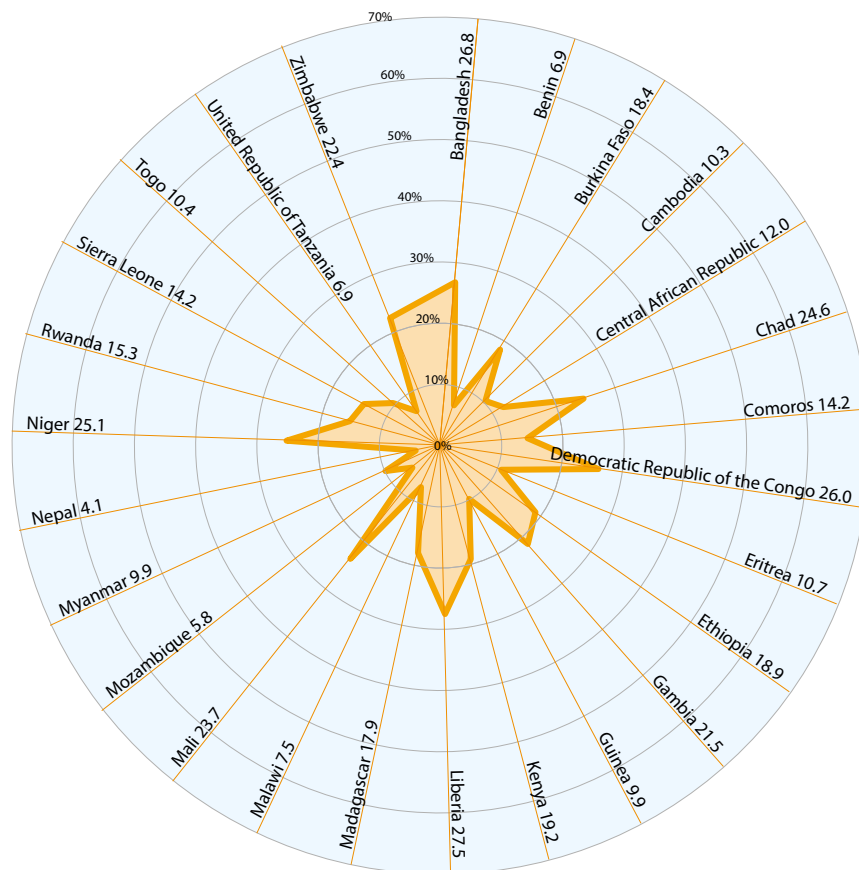


**Figure 3.5** Age-standardized prevalence of insufficient physical activity in adults aged 18 years and over (%), by individual country and World Bank income group, comparable estimates, 2010

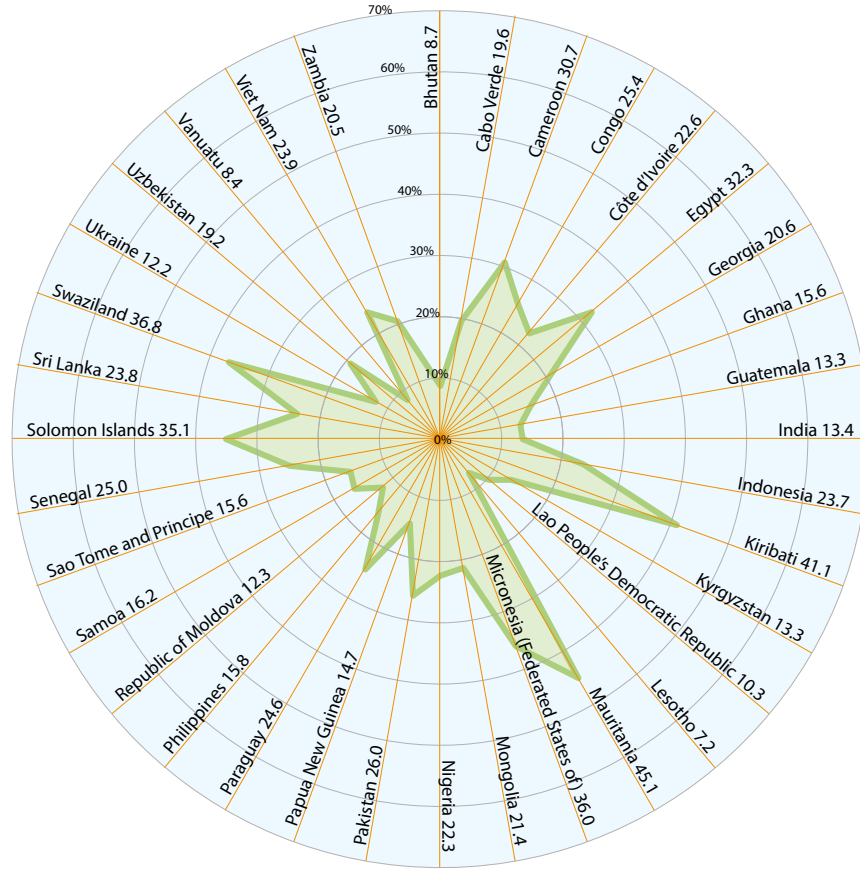
High-income



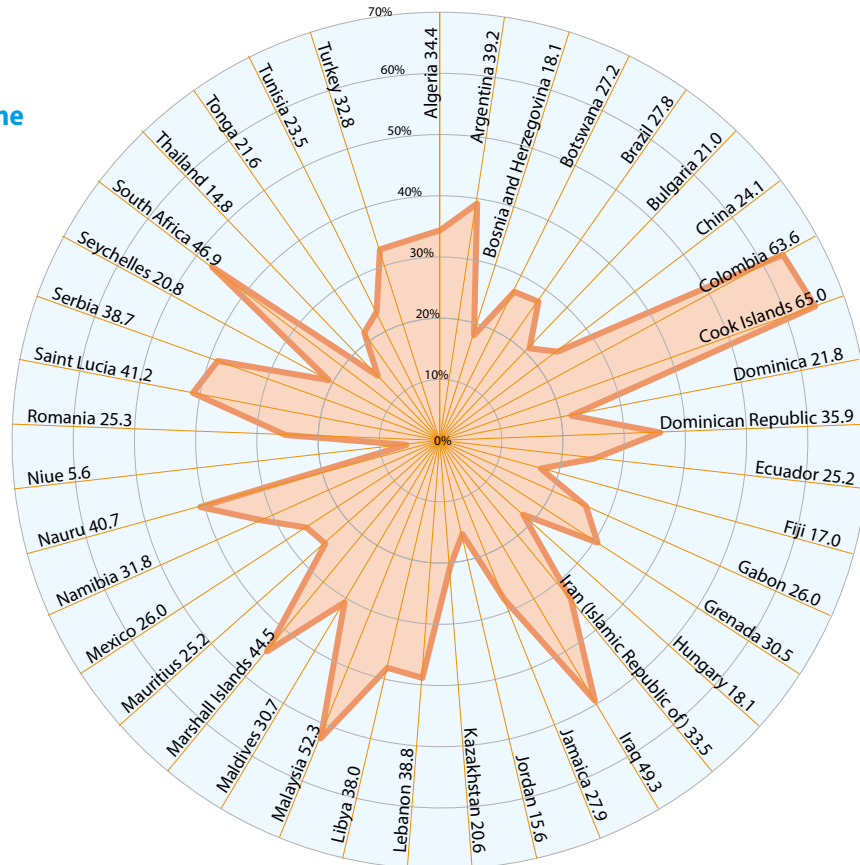
Low-income



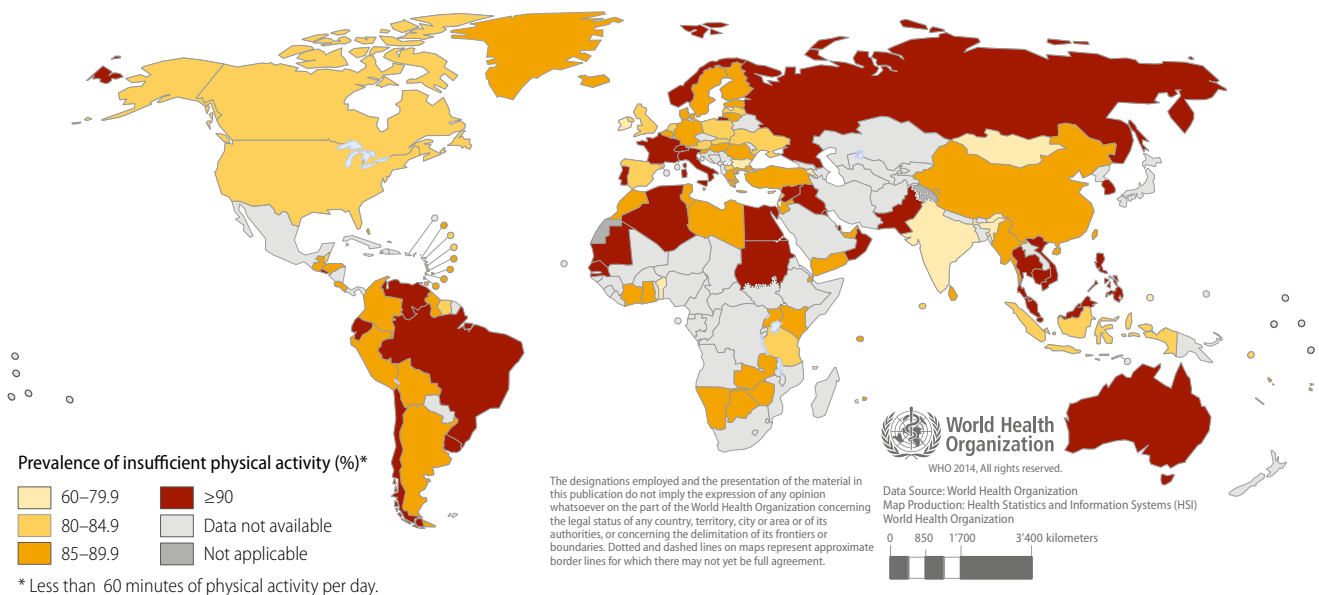
Low-middle-income



Upper-middle-income



**Figure 3.6** Global prevalence of insufficient physical activity for school going adolescent girls aged 11–17 years, comparable estimates, 2010



prevalence of insufficient physical activity (74%). Levels of insufficient physical activity were highest in the Eastern Mediterranean Region, the African Region and the Western Pacific Region (88%, 85% and 85% respectively). Adolescent girls were less active than adolescent boys in all WHO regions (see Fig. 3.7).

There was no clear pattern of insufficient physical activity among adolescents across income groups; the prevalence was highest in upper-middle-income countries and lowest in lower-middle-income countries (see Fig. 3.7).

## What are the cost-effective policies and interventions for reducing insufficient physical activity?

Evidence shows that many effective interventions – focusing on policy and environment, mass media, school settings, workplaces, the community and primary health care – can be implemented by policy-makers to increase people’s physical activity (7). Across these categories, multicomponent interventions adapted to local cultural and environmental contexts are the most successful (see Box 3.1).

Interventions that use the existing social structures and participation of all stakeholders reduce barriers to implementation.

The physical or built environment plays an important role in facilitating physical activity for large portions of the population, by ensuring that walking, cycling and other forms of non-motorized transport are accessible and safe for all (8). The physical environment also provides sports, recreation and leisure facilities and ensures there are adequate safe spaces for active living, for both children and adults (9). Health messages on stairs promote physical activity, while the use of stairs decreases when no message is displayed. A recent study showed that individual preferences and/or the lack of effort required in using escalators or elevators may lead people to avoid using stairs as a physical activity (10).

School-based physical activity interventions show consistent improvements in knowledge, attitudes and behaviour of children and, when tested, in physical and clinical outcomes (8). Workplaces may also reduce individual risk-related behaviours, including physical inactivity, with the potential to reach more than 3.6 billion economically active persons in 2020 (11).

## Monitoring insufficient physical activity

The global monitoring framework (see **Annex 1**), includes two indicators for monitoring insufficient physical activity (12):

1. Prevalence of insufficient physical activity in adolescents, defined as less than 60 minutes of physical activity of moderate to vigorous intensity daily;
2. age-standardized prevalence of insufficient physical activity in persons aged 18 years and over, defined as NOT meeting any of the following criteria:
  - 150 minutes of moderate-intensity physical activity per week;
  - 75 minutes of vigorous-intensity physical activity per week;
  - an equivalent combination of moderate- and vigorous-intensity physical activity, accumulating at least 600 MET-minutes<sup>1</sup> per week.

- 
1. MET refers to metabolic equivalent. It 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 per kg per hour.
- 

## Progress achieved

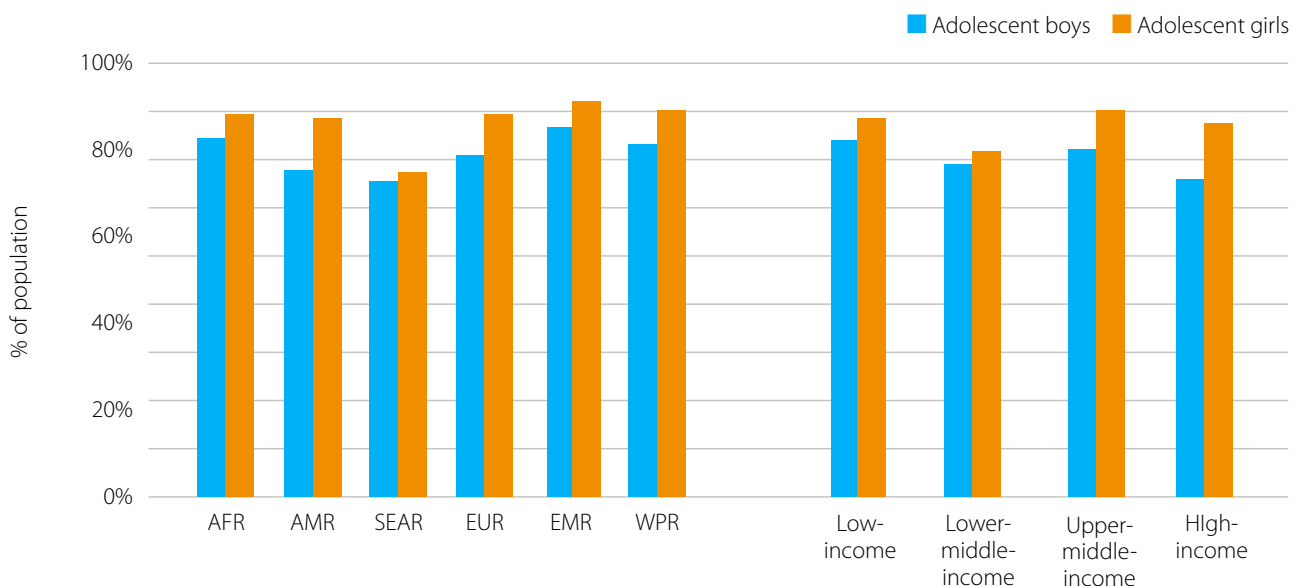
WHO's NCD country capacity assessment survey of 2013 showed that, while 80% of countries reported having policies, plans or strategies for addressing physical inactivity, only 56% indicated that these were operational (13). Only a few countries (8%) reported using tax incentives to promote physical activity – including tax exemptions or rebates on sports equipment, fitness programmes or gym membership, and higher taxation on items such as home entertainment equipment that encourage sedentary lifestyles.

As a result of implementation of national policies and programmes to improve physical activity, several high-income countries, including Canada and Finland, have reported increased physical activity over the last decade (14,15). In recent years more low- and middle-income countries have set up initiatives to address physical inactivity (see **Boxes 3.1–3.3**).

## Actions required to attain this target

All ministries of health need to take leadership in, and responsibility for, implementing national NCD

**Figure 3.7** Age-standardized prevalence of insufficient physical activity in school going adolescent boys and girls (11-17 years), by WHO region and World Bank income group, comparable estimates, 2010



AFR=African Region, AMR=Region of the Americas, SEAR =South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region



### Box 3.1 Walkability is positively associated with physical activity: Curitiba, Brazil



In Curitiba, Brazil, adults living in high-walkability areas were found to be more likely to achieve recommended levels of physical activity, both for transport walking and leisure-time physical activity. The proportion of those who walk for transport for  $\geq 150$  minutes per week was 21.1% in low-walkability areas, and ranged from 33.5% to 35.0% in high-walkability areas. A total of 12.6% of residents were found to walk for leisure for  $\geq 150$  minutes per week. No relationship was found between walkability and income, indicating that walkability is associated

with physical activity, regardless of neighbourhood income level. The results of the study confirm findings from high-income countries that walkability plays an important role in physical activity as daily transport. Thus, policies that influence the built environment may promote population-level physical activity.

Sources: see references (18).

### Box 3.2 Partnership and social marketing to promote physical activity in women: Tonga



Women in Tonga are more sedentary and obese than men, owing to a range of cultural and socioeconomic factors – such as the fact that sporting activities are often designed for and dominated by men. Recognizing the seriousness of women’s sedentary behaviour, the Tongan ministry of health and Ministry of Internal Affairs, with the support of the Australian Sports Outreach Program, joined with the Tonga Netball Association in a campaign that brought together a broad range of technical skills and networks to deliver a highly targeted intervention.

Guided by the Tonga National Strategy to Prevent and Control Non-Communicable Diseases (2010–2015), the partners adopted a social marketing and community mobilization approach known as strategic health communication. This approach aimed to understand the perspective of the target audience and to promote physical activity as “easy, exciting, enjoyable and everywhere”. The campaign used netball as a means of encouraging sport, with benefits to the sports sector. The campaign, branded *Kau Mai Tonga: Netipol* (Come on Tonga, let’s play netball!), was launched in June 2012 and since then has been delivered in annual phases of community mobilization, large-scale advertising and communication, and interpersonal education. Since the first phase, there has been increased participation of women, with more than 20 netball clubs registered, and increased knowledge and awareness of the benefits of physical activity among participants.

Sources: see references (19).

action plans consistent with the Global NCD Action Plan (16) and the Global strategy on diet, physical activity and health (17). Achieving the physical activity targets requires multisectoral collaboration and partnership. It is critical to develop a costed national physical activity plan and convene a national physical activity committee or task force with high-level support and resources and with

representation from multiple sectors, agencies, NGOs and the private sector to provide leadership and guidance in implementing the plan.

A comprehensive set of policy options to improve physical activity is listed in the Global NCD Action Plan (16). In 2010 WHO developed global recommendations on physical activity for health (2). Countries are urged to adapt these recommendations to



**Box 3.3 Bicycle hire to improve physical activity: Islamic Republic of Iran**

Tehran, the capital of the Islamic Republic of Iran, has introduced a bicycle-sharing scheme, funded by the municipal government. The scheme aims to reduce congestion on the city's streets, decrease pollution and provide additional transport. Twelve bicycle "hubs" are positioned across the city in various administrative districts, with each hub having around 40 bicycles. Over 6000 people have subscribed to the scheme, which allows the use of a bicycle for up to 4 h for the equivalent of US\$ 2.

For many, "Bike House" has made travel through the congested streets of Tehran fast and convenient. However, because of Islamic and cultural considerations, women are unable to participate in the programme. The city of Isfahan has developed a similar scheme and the city-wide travel card includes the option of bicycle hire, along with use of the train, tram and buses.

Sources: see references (20,21).

**Box 3.4 Sustainable transport: Freiburg, Germany**

There is growing evidence that dependence on automobile travel contributes to insufficient physical activity, transport-related carbon dioxide emissions, traffic congestion, air pollution and road traffic accidents. The city of Freiburg in southwestern Germany has been successful in implementing sustainable transport policies that may be transferable to car-oriented countries around the world. Over the last three decades, transport policies in Freiburg have encouraged more walking, cycling and use of public transport. During this period, the number of bicycle trips has tripled, travel by public transport has doubled, and the proportion of journeys by automobile has declined from 38% to 32%. Since 1990, motorization rates have levelled off and per capita carbon dioxide emissions from transport have fallen, despite strong economic growth.

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Sources: see references (22,23).

the national context as tools for education, measurement, and policy decisions and interventions, while incorporating physical activity into surveillance systems and setting national targets for change. Policy development should be encouraged at national and subnational levels, in cooperation with relevant sectors, to promote physical activity through activities of daily living.

Urban planning and active transport policies can improve community walking and cycling opportunities, and education policies can mandate quality physical education and physical activity programmes throughout the school years.

Sustainable transport policies provide opportunities for active and non-motorized travel (see **Box 3.4**). Urban planning policy and built environment strategies, supported by efforts from parks and recreation authorities, create facilities and opportunities for people to be active. Crime prevention policies create safe environments, and new urban design creates walkable communities and environments that promote physical activity.

Policies and programmes to create and preserve built and natural environments that support physical activity are best implemented through settings such as schools, universities, workplaces,

health-care services, and the local and wider community. Partners in the education sector can create physical activity programmes before, during and after school, and create supportive built environments in schools. The sports sector can encourage regular structured activities, especially among children and adolescents, and can strengthen the link between physical activity, sports and health. Partnerships with communities, the private sector and NGOs can also contribute to developing facilities for physical activity. Partnerships with workplaces and occupational settings can help develop healthy environments, promote physical activity at work and provide incentives and opportunities for active commuting to and from work.

As part of the national programme, there is also a need to advocate for physical activity through political engagement, and to mobilize communities through social marketing and mass media campaigns – including education of the public on the benefits of physical activity (e.g. NCD prevention, less air pollution as a result of reduced traffic, sustainable development).

Evaluation and validation efforts are required to promote best practices, monitor implementation and assess population reach.

## References

1. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380(9859):2224–60. doi:10.1016/S0140-6736(12)61766-8.
2. Global recommendations on physical activity for health. Geneva: World Health Organization; 2010 ([http://whqlibdoc.who.int/publications/2010/9789241599979\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf), accessed 4 November 2014).
3. Global status report on noncommunicable diseases 2010. Geneva: World Health Organization; 2011 ([http://www.who.int/nmh/publications/ncd\\_report\\_full\\_en.pdf](http://www.who.int/nmh/publications/ncd_report_full_en.pdf), accessed 3 November 2014).
4. Guthold R, Louazani SA, Riley LM, Cowan MJ, Bovet P, Damasceno A et al. Physical activity in 22 African countries. Results from the World Health Organization STEPwise approach to chronic disease risk factor surveillance. *Am J Prev Med*. 2011;41(1):52–60. doi:10.1016/j.amepre.2011.03.008.
5. Pratt M, Sarmiento OL, Montes F, Ogilvie D, Marcus BH, Perez LG et al; Lancet Physical Activity Series Working Group. The implications of megatrends in information and communication technology and transportation for changes in global physical activity. *Lancet*. 2012;380(9838):282–93. doi:10.1016/S0140-6736(12)60736-3.
6. Bauman AE, Reis RS, Sallis JF, Wells JC, Loos RJ, Martin BW; Lancet Physical Activity Series Working Group. Correlates of physical activity: why are some people physically active and others not? *Lancet*. 2012;380(9838):258–71. doi:10.1016/S0140-6736(12)60735-1.
7. Interventions on diet and physical activity. What works? Summary report. Geneva: World Health Organization; 2009 (<http://www.who.int/dietphysicalactivity/summary-report-09.pdf>, accessed 4 November 2014).
8. Kahn EB, Ramsey LT, Brownson RC, Heath GW, Howze EH, Powell KE et al. The effectiveness of interventions to increase physical activity. A systematic review. *Am J Prev Med*. 2002;22(4 Suppl):73–107.
9. Mozaffarian D, Afshin A, Benowitz NL, Bittner V, Daniels SR, Franch HA et al; American Heart Association Council on Epidemiology and Prevention, Council on Nutrition, Physical Activity and Metabolism, Council on Clinical Cardiology, Council on Cardiovascular Disease in the Young, Council on the Kidney in Cardiovasc. Population approaches to improve diet, physical activity, and smoking habits: a scientific statement from the American Heart Association. *Circulation*. 2012;126:1514–63.

10. Aksay E. Do simple warning signs enhance the use of stairs? *Health Education Journal*. 28 November 2013;0017896913511810. doi:10.1177/0017896913511810 (<http://hej.sagepub.com/content/73/6/683>, accessed 4 November 2014).
11. Task Force on Community Preventive Services. A recommendation to improve employee weight status through worksite health promotion programs targeting nutrition, physical activity, or both. *Am J Prev Med*. 2009;37(4):358–9. doi:10.1016/j.amepre.2009.07.004.
12. NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
13. Assessing national capacity for the prevention and control of noncommunicable diseases. Report of the 2013 global survey. Geneva: World Health Organization; 2014 ([http://www.who.int/entity/cancer/publications/national\\_capacity\\_prevention\\_ncds.pdf](http://www.who.int/entity/cancer/publications/national_capacity_prevention_ncds.pdf), accessed 4 November 2014).
14. Vuori I, Lankenau B, Pratt M. Physical activity policy and program development: the experience in Finland. *Public Health Rep*, 2004. 119(3):331–45.
15. Muhajarine N, Labonte R, Winquist BD. The Canadian Index of Wellbeing: key findings from the healthy populations domain. *Can J Public Health*. 2012;103(5):e342–7.
16. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
17. Resolution WHA 57.17. Global strategy on diet, physical activity and health. In: Fifty-seventh World Health Assembly, Geneva, 17–22 May 2004. Geneva: World Health Organization; 2004 (WHA57/2004/REC/1; [http://apps.who.int/gb/ebwha/pdf\\_files/WHA57/A57\\_R17-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA57/A57_R17-en.pdf), accessed 4 November 2014).
18. Siqueira Reis R, Hino AA, Ricardo Rech C, Kerr J, Curi Hallal P. Walkability and physical activity: findings from Curitiba, Brazil. *Am J Prev Med*. 2013;45(3):269–75. doi:10.1016/j.amepre.2013.04.020.
19. Ministry of Information and Communications. Kau Mai Tonga campaign wins WHO Health Islands Recognition Award (<http://www.mic.gov.to/health-a-ncds/ncds/4493-kau-mai-tonga-ke-tau-netipolo-campaign-wins-who-health-islands-recognition-award>, accessed 5 November 2014).
20. Promoting physical activity through the life course. A regional call to action. Cairo : World Health Organization Regional Office for the Eastern Mediterranean; 2014 ([http://applications.emro.who.int/dsaf/EMROPUB\\_2014\\_EN\\_1697.pdf?ua=1](http://applications.emro.who.int/dsaf/EMROPUB_2014_EN_1697.pdf?ua=1), accessed 5 November 2014).
21. The Bike-sharing Blog (<http://bike-sharing.blogspot.ch/2010/03/tehrans-bike-house-shines-green.html>, accessed 5 November 2014).
22. A European vision for sustainable transport. Brussels: European Commission; 2009 ([http://ec.europa.eu/research/transport/news/items/a\\_european\\_vision\\_for\\_sustainable\\_transport\\_en.htm](http://ec.europa.eu/research/transport/news/items/a_european_vision_for_sustainable_transport_en.htm), accessed 5 November 2014).
23. Buehler R, Pucher J. Sustainable transport in Freiburg: lessons from Germany’s environmental capital. *Int J Sustain Transp*. 2011;5:43–70.



# Key points

- Globally, 2010, 1.7 million annual deaths from cardiovascular causes have been attributed to excess salt/sodium intake.  
.....
- High salt consumption (more than 5 g per day) contributes to raised blood pressure and increases the risk of heart disease and stroke.  
.....
- Current estimates suggest that the global mean intake of salt is around 10 g of salt daily (4 g/day of sodium).  
.....
- WHO recommends reducing salt consumption to less than 5 g (about 1 teaspoon) per day in adults, to help prevent hypertension, heart disease and stroke.  
.....
- Reducing salt intake has been identified as one of the most cost-effective measures for improving population health.  
.....
- Multisectoral collaboration is required to improve access to products with lower sodium content.  
.....
- The attainment of this target will contribute to the attainment of the targets on reducing the prevalence of raised blood pressure and, ultimately, on reducing premature mortality from NCDs.

# 4 Global target 4: A 30% relative reduction in mean population intake of salt/sodium

## Salt/sodium intake and its impact on health

Excess consumption of dietary sodium is associated with increased risk of hypertension and cardiovascular disease (1–4). It has been estimated that excess sodium intake was responsible for 1.7 million deaths from cardiovascular causes globally in 2010 (1). The main dietary source of sodium worldwide is salt. However, sodium can be found in other forms, and the main source of dietary sodium consumption depends on the cultural context and dietary habits of the population, but in many countries processed foods are the main source.

Considerable evidence, including from clinical trials (5–8), shows that lowering sodium intake can reduce blood pressure. A meta-analysis of 36 studies found that decreased sodium intake resulted in a decrease in resting systolic blood pressure of 3.4 mmHg and a decrease in resting diastolic blood pressure of 1.5 mmHg (8). Sodium consumption is also associated with cardiovascular disease events in persons who consume more than 3.5 g/day of sodium (9–11).

WHO recommends a reduction in salt intake to less than 5 g/day (sodium 2 g/day) to reduce blood pressure and the risk of coronary heart disease and stroke. For children, the recommended maximum level of intake of 2 g/day of sodium for adults should be adjusted downwards on the basis of the energy requirements of children relative to those of adults (12).

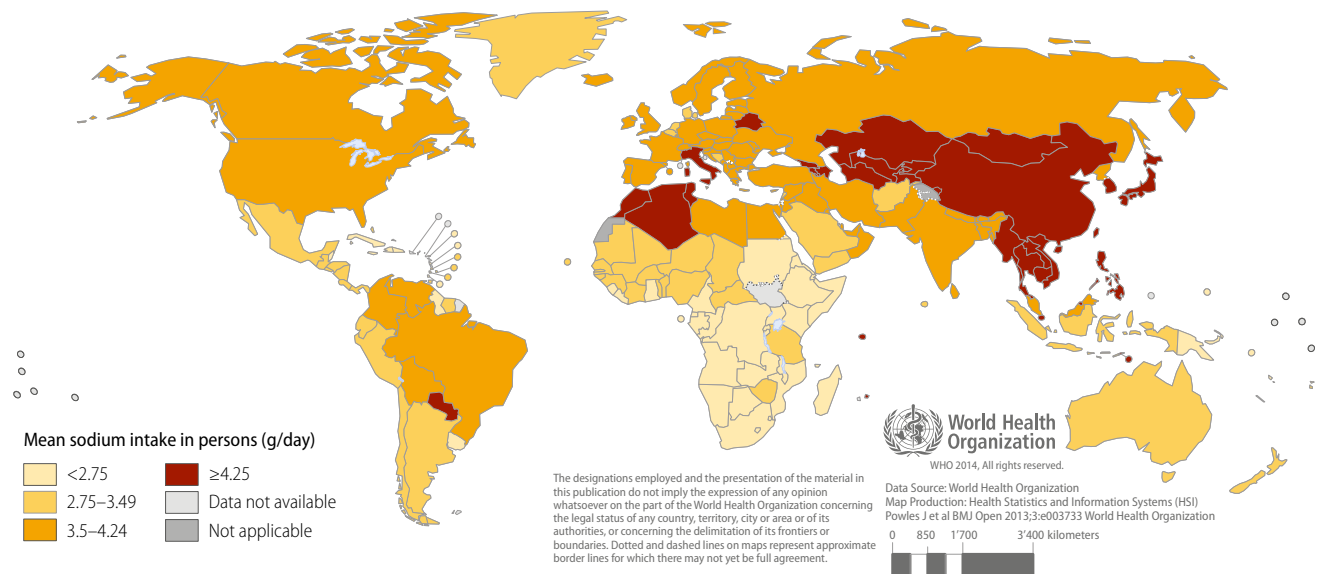
Current estimates suggest that the global mean intake of salt is around 10 g of salt daily (4 g/day of sodium) (1). Measured data on mean population sodium intake are currently available mainly for high- and middle-income countries. However, additional figures on population intake of salt are becoming available through new population surveillance data, providing a broader picture of the extent of the problem.

In many countries, most of the salt consumed comes from processed foods and ready-made meals, while salt added at the table or during food preparation at home is significant in others. With increased processing in the food industry and greater availability of processed foods in both urban and rural areas of low- and middle-income countries, sources of sodium are shifting rapidly towards these foods.

Significant regional variations exist (see **Fig. 4.1**). Intake levels appear highest in south-east and central Asia and parts of Europe. The WHO Region of the Americas, and European and Western Pacific Regions all show levels of consumption that greatly exceed WHO recommendations. Intakes appear lower in Africa but there is uncertainty about the estimates, since data for the WHO African Region are sparse



**Fig. 4.1** Mean sodium intake in persons aged 20 years and over, comparable estimates, 2010



### Box 4.1 Salt-smart Americas



The Pan American Health Organization (PAHO) initiative “Cardiovascular disease prevention through population-wide dietary salt reduction” supports countries of the Americas in reducing sodium intake, by providing effective tools, strategies and interventions. These include evaluating population-based salt intake, raising awareness, promoting voluntary salt reduction, regulating salt use in manufacturing, improving food labelling, and promoting food science and health research. Since 2011, public health authorities in

Argentina, Brazil and Chile in the south, and Canada, Mexico and the USA in the north have promoted voluntary national reformulation targets and timelines with the food industry. Most of these countries are targeting salt reduction in packaged foods and bread, while Mexico has focused on foods available in the school environment. Argentina has already achieved a 25% reduction in the salt content of bread. Keys to successful outcomes include voluntary salt reduction, education, health promotion, food labelling, regulation, ongoing monitoring, evaluation and reporting, research, and collaboration with the private sector.

Sources: see references (18).

and are based on food-consumption data rather than on more accurate measures of sodium excretion.

## Monitoring population intake of salt/sodium

The indicator for monitoring this target is age-standardized mean population intake of salt (sodium chloride) in grams per day in persons aged 18 years and over (13). Few countries have a baseline level of population salt/sodium intake, or knowledge of the most common sources of sodium in the diet.

Data need to be gathered from a population-based (preferably nationally representative) survey, either as a stand-alone survey or as part of a risk factor survey. For instance, in many countries, the population used for the NCD STEPS survey (14) is used to estimate data on salt consumption. The recommended standard for estimating salt intake is 24-h urine collection; however, other methods such as spot urine, single morning fasting urine and food frequency surveys have been used to obtain estimates at the population level. There may be wide differences in sodium intake within countries,

**Box 4.2 National campaign to reduce salt consumption in Thailand**

In 2011, The Ministry of Public Health of Thailand, along with other stakeholders, initiated a campaign aimed at reducing salt consumption by 50%. Academics and food producers jointly collaborate to undertake salt-reduction activities. Attention is mainly on foods for children, especially snacks. The academic sector collaborated with the commercial sector to reformulate snack recipes. However, the reformulated products were not acceptable to the public and gradually disappeared from the market. Consequently, a more successful approach was initiated, where

food producers were asked to reformulate their products themselves. This strategy resulted in many good market products, such as potato chips with sodium reduced by 50%, and instant noodles with sodium reduced by 20% (using potassium chloride). When instant noodles with reduced sodium become widely available, this should have a significant impact, since this product is consumed widely – more than 8 million packages a day are sold to people of all socioeconomic classes.

Sources: see references (19).

**Box 4.3 A regulatory approach to reduce unhealthy food and beverages in the Pacific islands and Kiribati**

As a means of reducing the availability of products that are high in salt and fat, the Ministry of Health and Medical Services has decided to include maximum levels of sodium and fat in selected processed food items in the draft Food Regulations and Standards. The maximum levels of salt and fat are derived from the “Salt targets in Pacific Foods” that were agreed and mandated by the meeting of Pacific Ministers of Health in 2013 and supported by WHO, to help address the NCD crisis in the Pacific. The draft Food Regulations and Standards also include restrictions on marketing of food and non-alcoholic beverages to children, as well as restrictions on the promotion of breast-milk substitutes and baby-feeding accessories.

Sources: see references (20).

especially in emerging economies and in countries with rapidly increasing urbanization and peri-urban populations.

**Progress achieved**

National efforts to reduce population salt consumption are under way in many countries (15–17) (see **Boxes 4.1–4.5**). Following implementation of national strategies to reduce sodium in manufactured foods, both Finland and the UK have reported significant reductions in sodium levels in manufactured foods, in population sodium intake, and in blood pressure, in both men and women (24–27).

In Finland there is evidence of a 65% reduction in age-adjusted mortality from coronary heart disease over the last four decades. Changes in food manufacturing and public health policies implemented at national level made an important contribution to these mortality reductions (24,25).

There is good evidence that regulatory policies to reduce specific nutrients in foods (e.g. salt, trans fatty acids, certain fats) are beneficial, useful and effective in changing population dietary patterns (28). In some countries, mandatory regulation has resulted in changes to the food supply and dietary intake (24,25). Many countries have concluded voluntary agreements with the food industry, through

#### Box 4.4 Working with the private sector to reduce salt consumption in Argentina and South Africa



The majority of WHO Member States have opted for setting voluntary targets for salt reformulation. However, others, including Argentina and South Africa, have opted for legislative regulation to set specific targets for various food groups. Both methods of adopting targets involve dialogue with the private sector to facilitate reformulation, and also require consumer awareness to enable informed consumers to make the full use of the enabling environment.

Sources: see references (22).

#### Box 4.5 Salt-reduction campaigns in Bahrain, Kuwait and Qatar



The ministry of health of Kuwait established a national salt-reduction programme in January 2013. The Salt and Fat Intake Reduction task force developed and implemented a national strategy to reduce salt consumption, in consultation with nutrition experts and scientists and officials from Kuwait's Food Standards Office, and in collaboration with the food industry. By the end of 2013, one of the food companies had reduced the salt content of bread – including white pitta bread, burger buns and whole-wheat toast – by 20%. Kuwait is exploring ways of reducing the salt content of another commonly consumed food item – cheese. The Qatar government

is working with one of the country's major bakeries to reduce the use of salt by 20%, and Bahrain is setting up a similar campaign.

Sources: see references (23).

programmes such as Heart SAFE in New Zealand and the Korea Center for Less Salt campaign in the Republic of Korea, through national initiatives that involve states and local health authorities, or through obtaining signed pledges from the food industry (15). South Africa passed legislation for a phased reduction in salt in targeted processed foods items (21).

Finland and the UK provide national examples of the impact of product reformulation policies. In the UK, voluntary measures and close collaboration between the public health and catering sectors have led to substantial improvements in the quality of processed foods and the diet of the population (24,25). There is evidence that mandating the use of “nutrition facts” panels or front-of-pack labels/icons can improve dietary patterns, by influencing the food industry to reformulate products to meet healthier labelling requirements (15).

Implementing programmes and policies through settings such as schools, workplaces, villages and urban settings has shown an impact on behaviour. In Fiji, yearly renewal of licences for eating outlets are dependent on the outlets' commitment to, and implementation of, simple salt-reduction actions, such as removing salt-shakers and high-salt sauces from restaurant tables and providing them only on request.

### Actions required to attain this target

The main sources of sodium in the diet need to be identified, in order to develop an effective strategy and to set targets for implementation – including reformulation of processed foods and out-of-home meals. This information is also needed to track changes in population salt intake and to help target specific population groups.

Multisectoral collaboration is required to improve access to products with lower sodium. The ministry of health needs to take the lead in establishing platforms for intersectoral collaboration and targets for reformulation of processed foods (both local and imported), as well as to develop national food-labelling regulations in line with the Codex Alimentarius (29). Food manufacturers need to work with the ministry of health to implement reformulation and labelling regulations. Caterers need to be involved in reducing the amount of salt added during the preparation of meals.

Country-specific public-awareness and community-mobilization campaigns on salt intake, as well as measures directed towards consumers and caterers, need to be developed and implemented, to increase awareness of sodium in foods and its impact on health. Health-care professionals may need training to convey the right messages and ensure effective communication. In addition, training of food producers, manufacturers and caterers – especially those involved in small and medium-sized businesses – is important for creating enabling environments to ensure that reformulation targets are reached and that consumer-awareness campaigns are successful. In countries where salt added at the table or during food preparation is the main source of sodium in the diet, the use of salt substitutes may also be advocated and promoted (6,7,30).

Key measures to reduce salt consumption include (3,4,31):

- identifying the baseline level of population sodium/salt intake and the main foods contributing to this level;
- setting a national target for sodium/salt intake, in line with the global target, as part of a national multisectoral salt-reduction plan;
- establishing sodium-reduction targets for each category of food, prioritizing the ones that contribute most to population intake;
- working with food manufacturers to progressively reduce sodium/salt incrementally in their products, in line with agreed food group targets;
- working with restaurants and catering services to reduce the addition of salt during meal preparation;
- establishing, in line with the Codex Alimentarius (30), consumer-friendly nutrition-labelling regulations that include sodium;
- considering fiscal tools to encourage the production and consumption of foods with reduced sodium content;
- establishing policies for food procurement in public institutions that encourage the purchase of products with lower sodium content;
- establishing national food-based dietary guidelines that incorporate sodium reduction;
- implementing information campaigns to raise consumer awareness of the need to reduce salt intake, and social marketing to impact on consumers' behaviour;
- creating an enabling environment for salt reduction through local policy interventions and promotion of “healthy food” settings such as schools, workplaces, communities and cities;
- monitoring population sodium intake, sodium content of manufactured products, sources of sodium/salt in the diet, and consumer knowledge, attitudes and behaviours relating to the consumption of products containing sodium/salt, in order to inform policy decisions.



## References

1. Mozaffarian D, Fahimi S, Singh GM, Micha R, Khatibzadeh S, Engell RE, Lim S et al.; Global Burden of Diseases Nutrition and Chronic Diseases Expert Group. Global sodium consumption and death from cardiovascular causes. *N Engl J Med.* 2014;371(7):624–34. doi:10.1056/NEJMoa1304127.
2. Diet, nutrition and the prevention of chronic diseases. Report of a Joint WHO/FAO Expert Consultation. Geneva: World Health Organization; 2003 (WHO Technical Report Series, No. 916; [http://whqlibdoc.who.int/trs/who\\_trs\\_916.pdf](http://whqlibdoc.who.int/trs/who_trs_916.pdf), accessed 5 November 2014).
3. Resolution WHA 57.17. Global strategy on diet, physical activity and health. In: Fifty-seventh World Health Assembly, Geneva, 17–22 May 2004. Geneva: World Health Organization; 2004 (WHA57/2004/REC/1; [http://apps.who.int/gb/ebwha/pdf\\_files/WHA57/A57\\_R17-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA57/A57_R17-en.pdf), accessed 4 November 2014).
4. Guideline: sodium intake for adults and children. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/77985/1/9789241504836\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/77985/1/9789241504836_eng.pdf), accessed 5 November 2014).
5. He FJ, Li J, Macgregor GA. Effect of longer-term modest salt reduction on blood pressure. *Cochrane Database Syst Rev.* 2013;(4):C04937. doi:10.1002/14651858.CD004937.pub2.
6. Sacks FM, Svetkey LP, Vollmer WM, Appel LJ, Bray GA, Harsha D et al.; DASH–Sodium Collaborative Research Group. Effects on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. *N Engl J Med.* 2001;344:3–10.
7. Cook NR, Cutler JA, Obarzanek E, Buring JE, Rexrode KM, Kumanyika SK et al. Long term effects of dietary sodium reduction on cardiovascular disease outcomes: observational follow-up of the trials of hypertension prevention (TOHP). *BMJ.* 2007;334:885–8.
8. Effect of reduced sodium intake on blood pressure, renal function, blood lipids and other potential adverse effects. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/79325/1/9789241504911\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/79325/1/9789241504911_eng.pdf), accessed 5 November 2014).
9. Pfister R, Michels G, Sharp SJ, Luben R, Wareham NJ, Khaw KT. Estimated urinary sodium excretion and risk of heart failure in men and women in the EPIC-Norfolk study. *Eur J Heart Fail.* 20 January 2014 (Epub ahead of print). doi:10.1002/ejhf.56.
10. Mente A, O'Donnell MJ, Rangarajan S, McQueen MJ, Poirier P, Wielgosz A et al.; PURE investigators. Association of urinary sodium and potassium excretion with blood pressure. *N Engl J Med.* 2014;371(7):601–11. doi:10.1056/NEJMoa1311989.
11. O'Donnell M, Mente A, Rangarajan S, McQueen MJ, Wang X, Liu L et al.; PURE investigators. Urinary sodium and potassium excretion, mortality, and cardiovascular events. *N Engl J Med.* 2014;371(7):612–23. doi:10.1056/NEJMoa1311889.
12. Guideline: Sodium intake for adults and children. Geneva: World Health Organization; 2012 ([http://www.who.int/nutrition/publications/guidelines/sodium\\_intake\\_printversion.pdf](http://www.who.int/nutrition/publications/guidelines/sodium_intake_printversion.pdf), accessed 5 November 2014).
13. NCD global monitoring framework: indicator definitions and specifications. Geneva: World Health Organization; 2014.
14. World Health Organization. Chronic diseases and health promotion. STEPwise approach to surveillance (STEPS) (<http://www.who.int/chp/steps/en/>, accessed 5 November 2014).
15. WCRF International Nourishing Framework. London: World Cancer Research Fund International (<http://www.wcrf.org/int/policy/nourishing-framework>, accessed 5 November 2014).
16. Legowski B, Legetic B. How three countries in the Americas are fortifying dietary salt reduction: a North and South perspective. *Health Policy.* 2011;102(1):26–33. doi:10.1016/j.healthpol.2011.06.008.
17. Webster JL, Dunford EK, Hawkes C, Neal BC. Salt reduction initiatives around the world. *Hypertens.* 2011;29(6):1043–50. doi:10.1097/HJH.0b013e328345ed83.
18. Salt-smart Americas: a guide for country-level action. Washington (DC): Pan American Health Organization; 2013 ([http://www.paho.org/hq/index.php?option=com\\_docman&task=doc\\_view&gid=21554&Itemid](http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=21554&Itemid), accessed 5 November 2014).
19. Campaign to reduce Thais' salt consumption by half. *Pattaya Mail*, 18 October 2012 (<http://www.pattayamail.com/news/campaign-to-reduce-thais-salt-consumption-by-half-17532>, accessed 5 November 2014).
20. Codex Alimentarius Commission. Joint FAO/WHO Food Standards Programme. NCD issues in the NASWP REGION In: 13th session of the FAO/WHO Coordinating Committee for North America and The South West Pacific, Kokopo, Papua New Guinea, 23–26 September 2014 (CX/NASWP 14/13/10; [ftp://ftp.fao.org/codex/meetings/ccnaswp/ccnaswp13/na13\\_10e.pdf](ftp://ftp.fao.org/codex/meetings/ccnaswp/ccnaswp13/na13_10e.pdf), accessed 5 November 2014).



21. Hoffman KJ, Tollman SM. Population health in South Africa; a view from the salt mines. *Lancet Glob Health*. 2013 Aug;1(2):e66-7. doi: 10.1016/S2214-109X(13)70019-6.
22. Ministerio de Salud Argentina. Argentine initiative to reduce salt consumption ([http://www.paho.org/panamericanforum/wp-content/uploads/2012/08/less-salt-more-life\\_PAHO-consortium\\_ARG.pdf](http://www.paho.org/panamericanforum/wp-content/uploads/2012/08/less-salt-more-life_PAHO-consortium_ARG.pdf), accessed 5 November 2014).
23. Kuwait News Agency. Health Ministry praises Kuwait firm's reduction of salt in bread and salt. 12 January 2014 (<http://www.kuna.net.kw/ArticleDetails.aspx?id=2355046&language=en>, accessed 5 November 2014).
24. Puska P, Vartiainen E, Laatikainen T, Jousilahti P, Paavola M, editors. *The North Karelia project: from North Karelia to national action*. Helsinki: Helsinki University Printing House; 2009 (<https://www.julkari.fi/bitstream/handle/10024/80109/731beafd-b544-42b2-b853-baa87db6a046.pdf?sequence=1>, accessed 5 November 2014).
25. Vartiainen E, Laatikainen T, Peltonen M, Juolevi A, Männistö S, Sundvall J et al. Thirty-five-year trends in cardiovascular risk factors in Finland. *Int J Epidemiol*. 2010;39(2):504–18. doi:10.1093/ije/dyp330.
26. Sadler K, Nicholson S, Steer T, Gill V, Bates B, Tipping S et al. *National Diet and Nutrition Survey – assessment of dietary sodium in adults (aged 19 to 64 years) in England, 2011*. London: Department of Health; 2012 ([http://webarchive.nationalarchives.gov.uk/20130402145952/http://media.dh.gov.uk/network/261/files/2012/06/sodium-survey-england-2011\\_text\\_to-dh\\_final1.pdf](http://webarchive.nationalarchives.gov.uk/20130402145952/http://media.dh.gov.uk/network/261/files/2012/06/sodium-survey-england-2011_text_to-dh_final1.pdf), accessed 5 November 2014).
27. Responsibility Deal Food Network – new salt targets: F9 Salt Reduction 2017 pledge & F10 Out of Home Salt Reduction Pledge. London: Department of Health; 2014 (<https://responsibilitydeal.dh.gov.uk/responsibility-deal-food-network-new-salt-targets-f9-salt-reduction-2017-pledge-f10-out-of-home-salt-reduction-pledge/>, accessed 5 November 2014).
28. Cecchini M, Sassi F, Lauer JA, Lee YY, Guajardo-Barron V, Chisholm D. Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness. *Lancet*. 2010;376(9754):1775–84. doi:10.1016/S0140-6736(10)61514-0.
29. World Health Organization, Food and Agriculture Organization of the United Nations. *Codex Alimentarius. International food standards* (<http://www.codexalimentarius.org/standards/en/>, accessed 5 November 2014).
30. SaltSwitch: a smart(phone) strategy to support healthy food choices. Auckland: National Institute for Health Innovation; 2014 (<http://nihi.auckland.ac.nz/page/current-research/our-nutrition-and-physical-activity-research/saltswitch-smartphone-strategy-su>, accessed 5 November 2014).
31. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 12 December 2014).



# Key points

- Tobacco use remains the cause of 6 million preventable deaths per year globally.  
.....
- Significant progress has been made in implementing the most cost effective tobacco-control measures but much still remains to be done.  
.....
- The WHO Framework Convention on Tobacco Control provides the roadmap to curb the tobacco epidemic.  
.....
- Tobacco-control efforts must be sustained and reinforced, to have any lasting impact on reducing tobacco prevalence. However, there appears to be some complacency that, coupled with insufficient political will and tobacco industry interference, is hindering efforts to move ahead.  
.....
- The attainment of this target will contribute to attainment of the target on reducing premature mortality from NCDs.

# 5

## Global target 5: A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years

### Tobacco use and its impact on health

Tobacco use is currently one of the leading causes of preventable deaths in the world. Risks to health result not only from direct consumption of tobacco but also from exposure to second-hand smoke. Tobacco use increases the risk of cardiovascular disease, cancer, chronic respiratory disease, diabetes and premature death. Six million people are currently estimated to die annually from tobacco use, with over 600 000 deaths due to exposure to second-hand smoke (with 170 000 of these deaths among children) (1,2). Tobacco use accounts for 7% of all female and 12% of all male deaths globally (2,3). Unless strong action continues to be taken by countries, the annual toll is projected to increase to 8 million deaths per year by 2030, or 10% of all deaths projected to occur that year (2). As an entirely avoidable death toll, these figures are unacceptable.

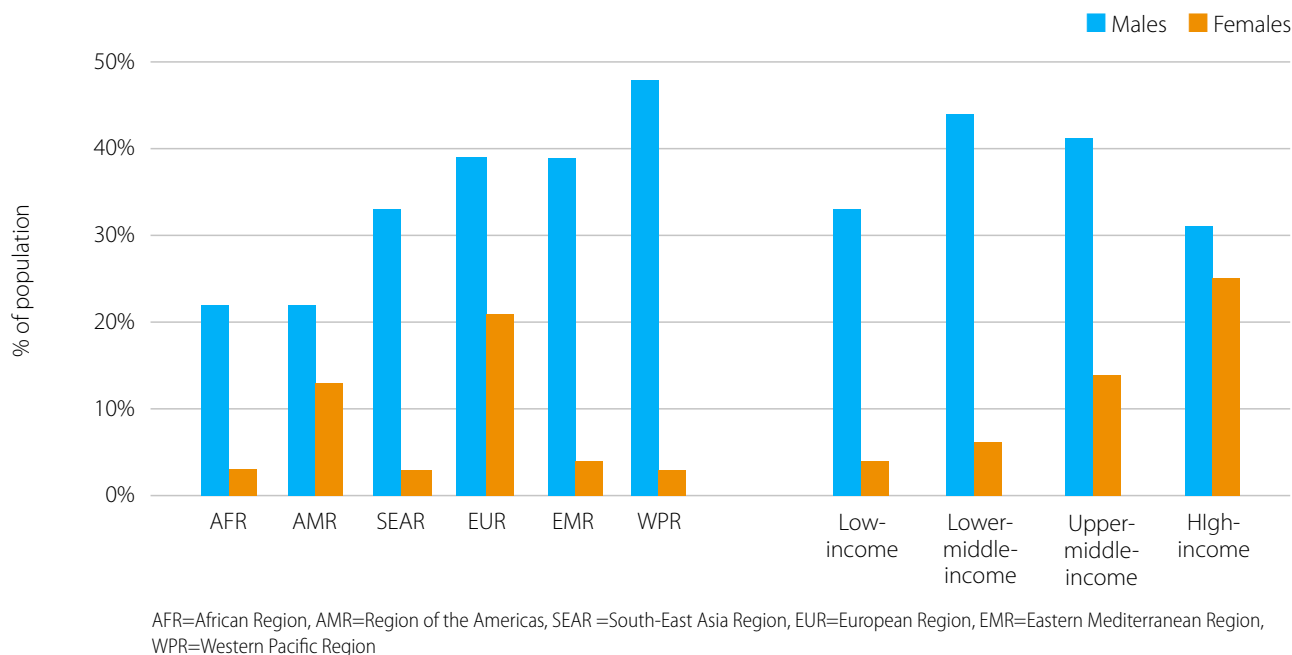
Tobacco use also imposes an economic burden in the form of increased medical costs and from lost productivity. In most economies, the health cost burden from tobacco also exceeds the total tax revenue(s) collected by the governments from tobacco products.

Tobacco use is defined as current use of any tobacco product in either smoked or smokeless form (4). Availability and quality of data on smokeless tobacco use are slowly improving but are insufficient to report globally. Further improvements are needed, especially in the monitoring of use of smokeless tobacco as well as of the novel and emerging tobacco products. Therefore information provided in this report refers primarily to current tobacco smoking among males and females aged 15 years and over.

In 2012 there were some 1.1 billion smokers worldwide, with over 8 out of 10 tobacco smokers smoking daily. Manufactured cigarettes, the most common form of smoked tobacco, are used by over 90% of current smokers. In addition, tobacco is smoked in cigars, pipes and other forms, particularly hookahs and bidis in Africa, Asia and the Middle East. Data on these specific forms of smoked tobacco are not yet readily available globally. In some countries the consumption of smokeless tobacco is as high, or higher than smoked forms of tobacco.

The age-standardized prevalence of current tobacco smoking in persons aged 15 years and over, by WHO region and World Bank income group, in 2012, is shown in **Fig. 5.1**. In 2012, the global prevalence of current tobacco smoking among adults was estimated at around 22%, with smoking rates varying widely across

**Fig. 5.1** Age-standardized prevalence of current tobacco smoking in persons aged 15 years and over, by WHO region and World Bank income group, comparable estimates, 2012



the six WHO regions (see **Fig. 5.1**). The highest regional average rate for tobacco smoking in 2012 was 30% (in the WHO European Region) while the lowest rate was 12% in the African Region, although it is increasing rapidly. Globally smoking prevalence is about five times higher among men (37%) than among women (7%) (see **Fig. 5.2** and **Fig. 5.3**). Smoking prevalence in both high-income and upper-middle-income countries is broadly similar, although slightly higher in high income countries at 25% and middle-income countries at 22%. Among low-income countries, the average prevalence is lower (18%) (see **Fig. 5.4**) and, while various forms of tobacco consumption are popular, cigarette smoking accounts for about 80% of all forms of current smoking.

In order to reduce the health threat of tobacco, the global target is a 30% relative reduction in prevalence of current tobacco use in persons aged 15 years and over by 2025 (using 2010 as baseline). Most governments have already engaged in strengthening their tobacco control measures, leading to the accelerated implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC) which would enable them to reach this target.

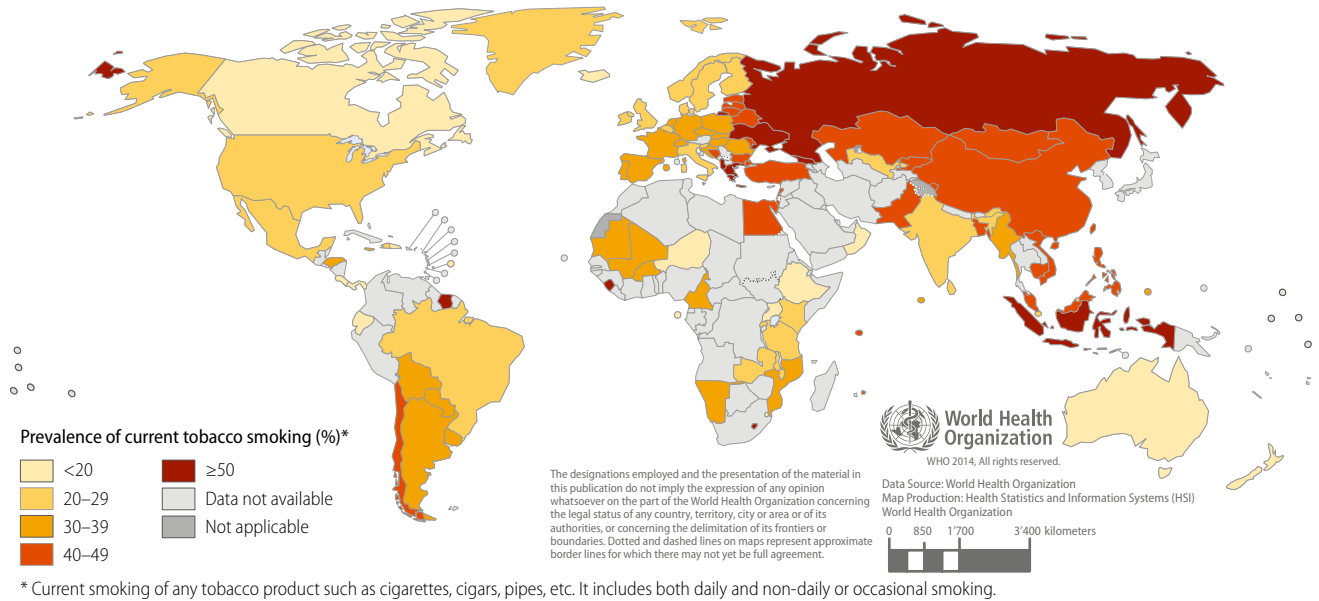
## What are the cost-effective policies and interventions for reducing tobacco use?

The WHO FCTC (5) and its guidelines (6) represent the global instrument that enables its Parties to attain the tobacco reduction target (4). In fact, during its sixth session in October 2014, the Conference of the Parties to the WHO FCTC called on Parties (7) to set national targets for 2025 for relative reduction of current tobacco use in persons aged 15 years and over, taking into account the global target. It also called on Parties to develop or strengthen national multisectoral policies and plans to achieve national targets on reduction of current tobacco use by 2025, taking into account WHO's Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (8).

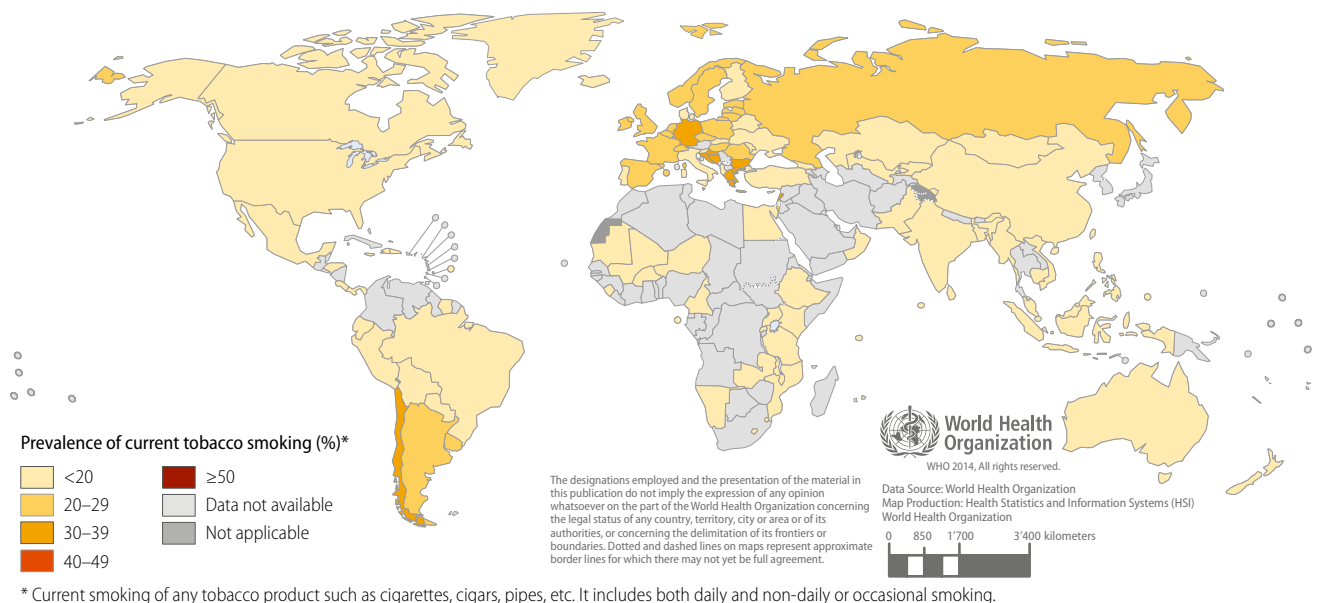
A comprehensive set of policy options for tobacco control is listed in the global NCD action plan (8), including the most cost-effective interventions (“best buys”) for tobacco control (Box 1.1) (9). Evidence shows that the very cost-effective WHO FCTC reduction measures for reducing national tobacco use are:

- reducing the affordability of tobacco products by increasing tobacco excise taxes;

**Fig. 5.2** Age-standardized prevalence of current tobacco smoking in males aged 15 years and over, comparable estimates, 2012



**Fig. 5.3** Age-standardized prevalence of current tobacco smoking in females aged 15 years and over, comparable estimates, 2012



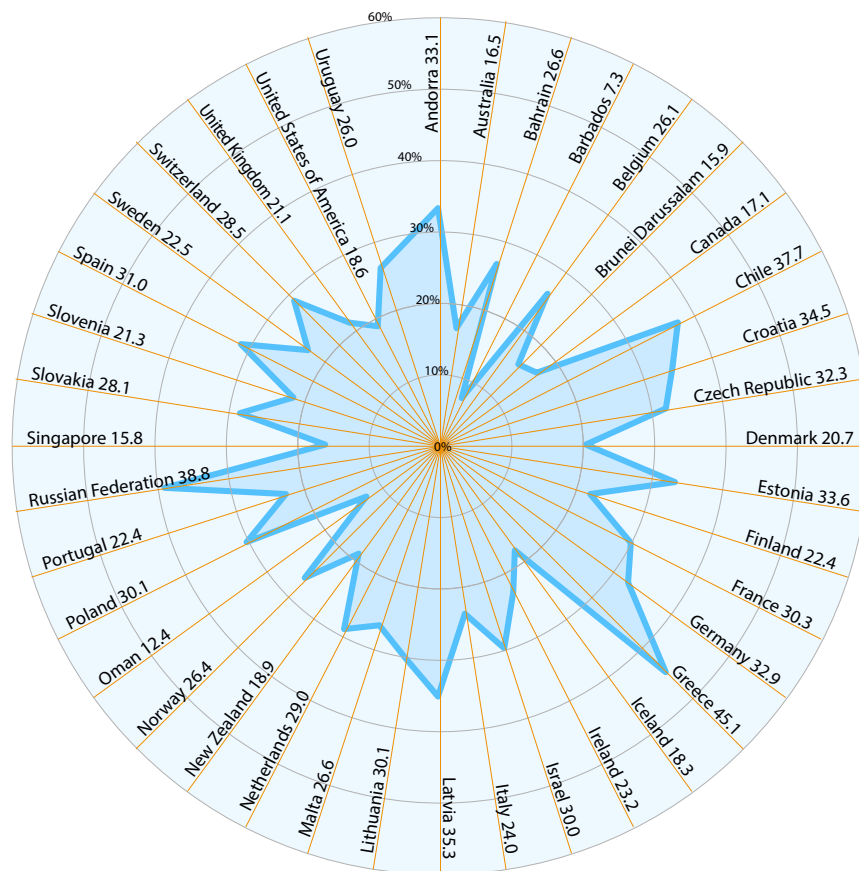
- creating by law completely smoke-free environments in all indoor workplaces, indoor public places and public transport;
- alerting people to the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns; and
- banning all forms of tobacco advertising, promotion and sponsorship.

The public health benefits of these measures are far more likely to be realized if they are implemented in an environment where they form part of a comprehensive approach, as envisaged by the WHO FCTC. Full implementation involves adopting other demand reduction measures such as helping tobacco users to quit and regulating tobacco products. Most smokers want to quit when

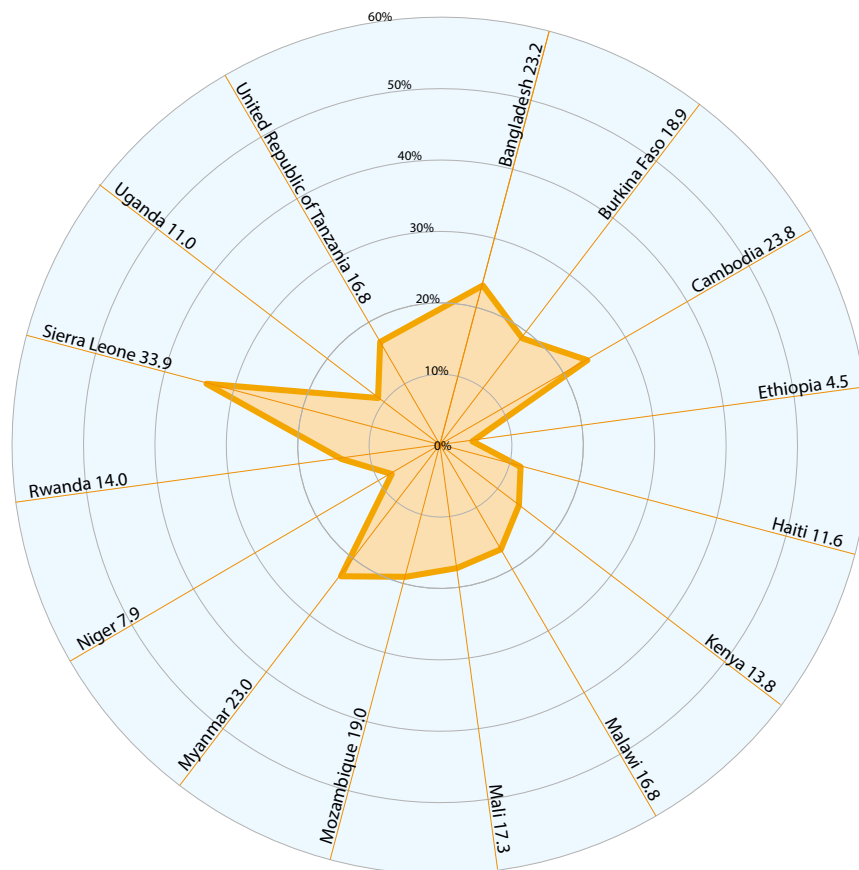


**Fig. 5.4** Age-standardized prevalence of current tobacco smoking in adults aged 15 years and over (%), by individual country and by World Bank Income group, comparable estimates, 2012

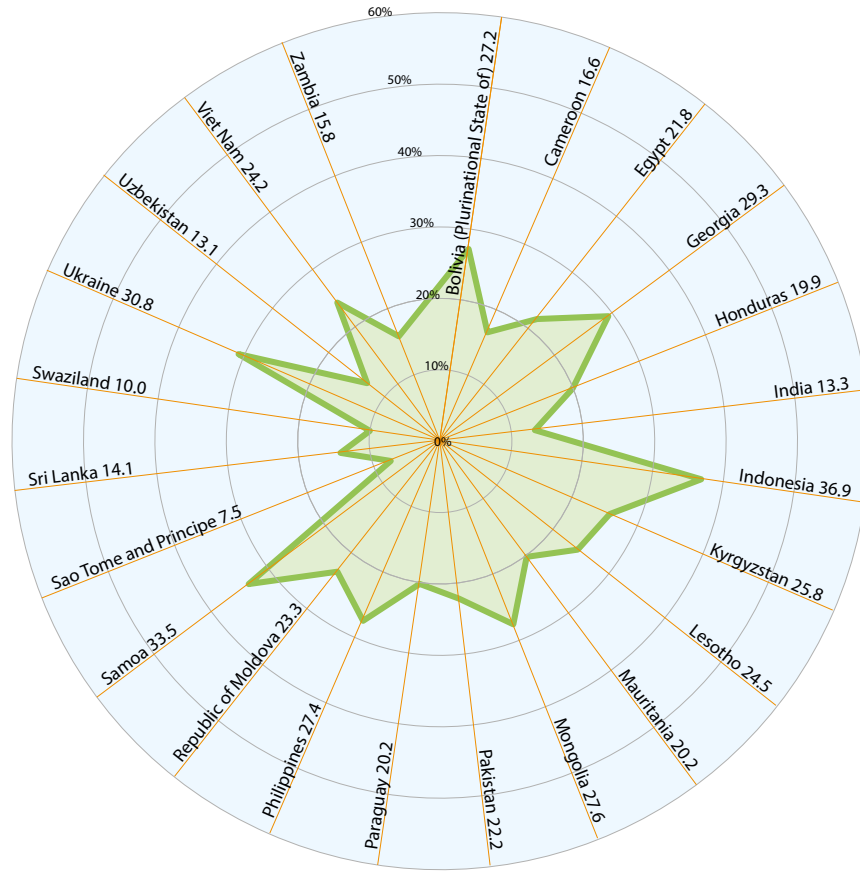
High-income



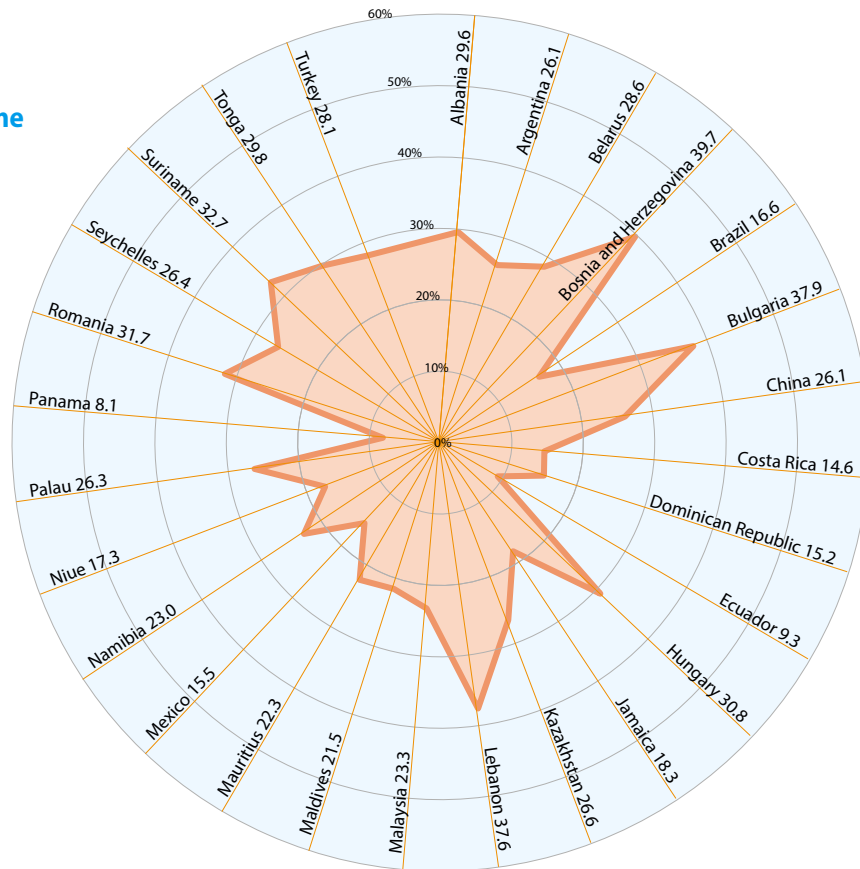
Low-income



Low-middle-income



Upper-middle-income



informed of the health risks. Cessation support and medication increase the likelihood that a smoker will quit successfully, and countries can establish programmes providing low-cost effective interventions for tobacco users to stop. Full implementation of the WHO FCTC also entails supply reduction measures such as combating illicit trade, providing alternative livelihoods to tobacco farmers, and banning the sale or provision of tobacco products by and to minors. Full implementation involves two further important measures: countering tobacco industry interference, and establishing or reinforcing a national multisectoral and interministerial coordinating mechanism for the implementation of the WHO FCTC in each country.

## Monitoring tobacco use

The global monitoring framework indicators (see **Annex 1**), for monitoring progress towards attaining this target are (4):

1. prevalence of current tobacco use among adolescents;
2. age-standardized prevalence of current tobacco use among persons aged 18+ years.

## Progress achieved

Significant progress has been made in global tobacco control in recent years. While much remains to be done, the successes show that it is possible to turn the tide of tobacco usage when strong national political will and public engagement urge the implementation of effective policies.

### Success: one third of the world's people is protected by at least one of the most cost effective tobacco-control measure

The *WHO report on the global tobacco epidemic, 2011 (10)* indicated that, in 2010, 70 countries had already implemented at least one of the four tobacco-control “best-buy” interventions at the highest level of achievement. By 2013, 95 countries had at least one “best-buy” measure in place at the highest level of achievement, and between 2010 and 2013 a total of 40 countries implemented for the first time one or more “best-buy” measures at the highest level. In 2010, no country had all four “best buys” implemented, yet by 2013 two countries – Turkey (see **Box 5.1**) and Madagascar – had all four “best buys” in place at the highest level of achievement, and a further six countries had implemented three

### Box 5.1 Reducing tobacco demand in Turkey



Turkey was the first country to attain the highest level of coverage in all of the WHO “best-buy” demand-reduction measures for reducing tobacco prevalence. In 2012, the country increased the size of health-warning labels to cover 65% of the total surface area of each tobacco or cigarette packet. Tobacco taxes cover 80% of the total retail price, and there is currently a total ban on tobacco advertising, promotion and sponsorship nationwide. The result of these concerted efforts has been a significant decrease (13.4% relative decline) in the smoking rates of a country that has a long tradition of tobacco use and high smoking prevalence. This progress is a

sign of the Turkish government’s sustained political commitment to tobacco control, exemplifying collaboration between government, WHO and other international health organizations, and civil society.

Sources: see references (11).

### Box 5.2 Standardized packaging in Australia



Sources: see references (12).

Australian officials announced in July 2014 that the nation's daily smoking rate among people aged 14 years and over had declined from 15.1% to 12.8% between 2010 and 2013. The drop in the smoking rate shows that the standardized packaging law enforced at the end of 2012 – as well as the 25% tax increase instituted in 2010 – works. Australian law requires tobacco products to be sold in drab packages with large graphic images of tobacco-related diseases. Inclusion of the brand name is allowed but without logos.

### Box 5.3 Graphic health warnings in Thailand



In June 2014, the Supreme Administrative Court of Thailand allowed the implementation of a new regulation requiring packs of cigarettes sold in the country to display graphic health-warning labels covering 85% of both sides of the packets. This is a major step towards implementing this measure, which was signed by the ministry of health in March 2013, but it has come under fire from the tobacco industry and lobbyists. The implementation, originally planned for October 2013, was delayed by a court's decision to suspend implementation of the new warnings until the legal process was over; however, in June 2014 the Supreme Administrative Court ruled against the temporary suspension. If successfully introduced permanently, the law will make Thailand's packet warnings the largest in the world, leading the way to further reducing the tobacco industry's control over advertising.

Sources: see references (13).

out of four “best buys” at the highest level. Many of the countries making progress in implementing “best-buy” measures were low- or middle-income countries, showing that cost is not the main barrier to tobacco reduction.

#### However: some tobacco-control measures have become more established than others

Although many countries have made a great deal of progress since 2010 in both introducing and implementing effective tobacco-control measures, some still have made little to no headway in fighting the tobacco epidemic. Additionally, some “best-buy” demand-reduction measures remain more widely implemented than others.

#### Protecting people from the harms of tobacco smoke

In 2013, 46 countries (including 35 low- and middle-income countries) had complete smoking bans in indoor working places, public transportation and indoor public places. Sixteen countries have adopted comprehensive smoke-free legislation since 2010. Conversely, the number of countries with very weak or no smoke-free laws fell from 92 to 74 between 2010 and 2013, although the improvement does not necessarily mean that they are implementing at the highest level of achievement. A new trend is visible as countries increasingly extend their smoke-free policies to cover outdoor settings such as beaches, public parks, outdoor cafes and markets, and even some streets, as well as settings that



### Box 5.4 Finland, Ireland, New Zealand, Pacific islands and the UK (Scotland): aiming at a tobacco endgame



Some governments have outlined a strategic plan to further reduce tobacco prevalence to a defined low level – usually close to zero – within a fixed period, using the “tobacco endgame approach”. Strategies that can result in an endgame involve full implementation of the WHO FCTC (5), with fundamental denormalization not just of tobacco use but of the tobacco industry, by removing profitability and by making the industry liable for damages. Furthermore, the focus on disadvantaged groups and policy action with tobacco control address the wider social determinants of inequalities and health. A commitment to a tobacco endgame has been made by Finland, Ireland, New Zealand, Pacific islands and the UK (Scotland), which have publicly announced a

target year to end tobacco use in their populations. These countries are committed to decreasing tobacco use to below 5% by the target year.

Sources: see references (15).

### Box 5.5 A knowledge hub for tobacco control in Africa



As part of the Africa project funded by the Bill & Melinda Gates Foundation, WHO has set up the first knowledge hub for tobacco control in the Centre for Tobacco Control in Africa (CTCA) in Kampala, Uganda. CTCA provides technical assistance to a number of countries in sub-Saharan

Africa, on tobacco-control policies, legislation and programmes.

Sources: see references (16).

were not traditionally covered by such regulations, such as prisons and private vehicles when carrying children.

### Warning about the dangers of tobacco

By 2013, 38 countries had legislated strong warning labels occupying at least 50% of the surface of cigarette packages. 19 of these countries had done this since 2010. Middle-income countries are the most likely to have established strong warning-label requirements (27% of middle-income countries have done so). In addition, the number of countries with very weak or no pack health warnings dropped from 91 to 68 between 2010 and 2013. There has been a move towards very large pictorial warnings (occupying, in general, more than 60% of principal display areas) on tobacco packages, and standardized (or plain) packaging in line with the obligations of the WHO FCTC (5).

### Enforcing bans on tobacco advertising, promotion and sponsorship

While 133 countries had banned some forms of tobacco advertising, promotion and sponsorship (TAPS) in 2013, only 27 had completely banned all its forms, nine more than in 2010. Low-income countries have taken greater action to ban TAPS completely (19%) than have high- and middle-income countries (6% and 16% respectively). The number of countries with a very weak or no ban on TAPS fell from 77 in 2010 to 62 in 2013.

### Raising taxes on tobacco

The most cost-effective tobacco-control intervention is to increase the price of tobacco products by raising tobacco tax, but this measure has progressed slowly since 2010. In 2010, 27 countries were levying taxes high enough to represent at least 75% of the retail price of cigarettes but by 2013 this had increased only



### Box 5.6 Mobile cessation (mCessation) in Costa Rica



Costa Rica has had a campaign to lower smoking rates for several years. To increase public outreach, it was decided to use the growing mobile telephone user base to connect with smokers and help them quit, using mCessation methods. In collaboration with the WHO-ITU mHealth initiative, Costa Rica launched its first-ever mobile-based smoking-cessation programme, «Quit Smoking» (Dejar de fumar), to support existing cessation services within the health system. The programme is based on text messaging, using standardized protocols and adapted to the country context.

Further monitoring and evaluation is required to validate findings, but initial results indicate that mobile-based smoking-cessation programmes can be used successfully to help smokers quit in Costa Rica.

Sources: see references (17).

to 32 countries. Low-income countries, although in greater need of government funding for tobacco-control and health programmes, are least likely to have sufficiently high tax rates; only one low-income country has achieved high taxes on cigarettes. In addition, the number of countries with a low tax share of the retail price (below 25%), or no tobacco taxes, increased from 29 in 2010 to 37 in 2013.

Progress has been notable in some countries (see **Boxes 5.2–5.6**). The next step is to encourage other countries to follow suit, by highlighting the effectiveness of existing examples of tobacco-control policies and by offering additional support to adopt and implement such policies.

## Conclusion

There has been great progress in global tobacco-control efforts in recent years, in both the number of countries protecting their people and the number of people worldwide protected by effective tobacco-control measures. However, more work is needed in many countries, in order to focus efforts on passing and enforcing effective tobacco-control measures. This will include expanding activities to implement “best-buy” demand-reduction measures at the highest level of achievement, reinforcing and sustaining current programmes to incorporate a range of measures and, ultimately, implementing the full WHO FCTC (5).

The successes of most countries in applying tobacco demand-reduction measures demonstrate that it is possible to tackle the tobacco epidemic regardless of size or income. Most progress in protecting people with these measures has been made by low- and middle-income countries, which remain at greatest risk from efforts of the tobacco industry to increase tobacco use. Despite the achievements in some countries in establishing effective tobacco-control measures, no country has entirely succeeded in protecting its population from the effects of tobacco. Efforts must be accelerated in all countries to save even more lives.

## Actions required to achieve this target

Parties to the WHO FCTC (5) reported in 2014 an overall implementation of 54% of the substantive obligations of the treaty (18). Despite significant progress and global commitment to reduce tobacco consumption under the obligations of the convention, including the increase in countries implementing tobacco-control “best buys” at the highest level, significant challenges remain for achieving the global target of reducing tobacco use by 30%. The challenges to the successful implementation of tobacco-control policies range from insufficient political will and weak intersectoral cooperation, to weak implementation or enforcement capacities.

The first challenge to tobacco control is a direct result of strong political and public commitment at the time of the WHO FCTC negotiation and some early and positive responses. However, after initial success with a number of the WHO FCTC obligations, especially in areas such as smoke-free policies and large pictorial health warnings, there appears to be some complacency which is hindering efforts to move ahead and leading to “tobacco-control fatigue”. Some countries have begun to discuss how to lower the prevalence of smoking below 5%, in what it is called the “tobacco endgame approach”. However, while discussion of the endgame as a motivational tool for continuing reduction of the tobacco epidemic in some countries is of great importance in overcoming complacency, it should not be mistaken for an announcement of the end of the tobacco epidemic, because much remains to be done.

The second challenge has been the difficulty of ensuring that some “best-buy” policies at the highest level of achievement are actually adopted by governments. The problem is typically due either to poor political will or to interference from the tobacco industry, or both. There is good evidence that tobacco taxation offers the best potential for impact on reduction rates, yet it is one of the least implemented measures in national efforts, with only 32 of 195 countries having developed complete policies on tobacco taxation, demonstrating the need for stronger political engagement (3,19). Greater priority needs to be given to developing new strategies to support whole-of-government action in adopting and implementing sound national policies in accordance with all provisions of the WHO FCTC (5).

The different elements affecting these broader national challenges to global tobacco control can be broken down under the subheadings that follow.

### **Increasing implementation support**

As progress in approval of the WHO FCTC policies (5) continues, many countries face the challenges of implementation and enforcement. These may include providing additional support and guidance to countries, building and engaging in

multisectoral partnerships in specialized areas of tobacco-control policies such as international trade, eliminating illicit trade in tobacco products, and other related activities that serve to facilitate the ground-level adoption and enforcement of tobacco-control policies.

### **Revitalizing political and public willpower**

Countries need to remain aware that tobacco continues to be a significant threat to public health, avoiding a sense that the worst is over, which, as mentioned above, is leading to problems of complacency in implementation efforts. There is also increasing fatigue in communication efforts, which risks a resurgence of tobacco use among communities and individuals, as a result of it ceasing to be considered a major health concern. While attainment of the tobacco-reduction target is achievable, a more audacious strategy may be needed to revitalize political and public willpower to advance progress.

### **Countering tobacco industry interference**

Tobacco industry interference is one of the key challenges to the creation and implementation of tobacco-reduction measures. It continues to undermine control efforts globally, and more needs to be done to counter its negative influence. In fact, during the reporting cycle of the WHO FCTC, which ended at the beginning of 2014, the challenge mentioned most frequently by Parties to the convention was tobacco industry interference. The tobacco industry continues to use legal challenges (often employed without success) to national tobacco-control measures, including litigation or support for litigation under multilateral and bilateral trade and investment agreements, to prevent, delay or weaken implementation of tobacco-control measures. Both the threat and active pursuit of legal challenges appear to be becoming more prominent, as Parties continue to implement the WHO FCTC. Article 5.3 of the treaty (5) clearly mandates Parties to the convention to prevent tobacco industry interference in tobacco control and public health. The tobacco industry is experienced in fostering partnerships with a range of sectors and interest

groups, which has enabled it to put increasing pressure on tobacco-control measures, by diversifying the angles from which they are able to encourage dissent. A clear area of improvement for tobacco-control efforts is in redressing this imbalance by extending preventative action to other sectors such as finance, international trade and agriculture. Additionally, countries should seek to implement clear monitoring systems for industry activities across all sectors, to gauge the extent of influence and map potential obstructions to tobacco-control policies.

### **Approaching tobacco as a multisectoral problem for the whole government**

A focus on tobacco as an exclusively public health concern limits the chance for success in attaining the global target. This limited focus is causing implementation problems in cross-sectoral areas of tobacco-reduction measures, including minimal dialogue between finance, trade and health ministries in many countries. Tobacco control is multisectoral, and therefore requires an increase in intersectoral discussions and actions. These may include policy focus on the relation between tobacco controls and international trade, or alternative livelihoods for tobacco farmers.

A unifocal approach to tobacco control misses opportunities for synergistic programmes with other communicable and noncommunicable disease programmes, such as for tuberculosis or respiratory diseases. It also misses the conspicuous need to integrate tobacco-control efforts within the wider health-development agenda.

## References

1. Oberg M, Jaakkola MS, Woodward A, Peruga A, Prüss-Ustün A. Worldwide burden of disease from exposure to second-hand smoke: a retrospective analysis of data from 192 countries. *Lancet*. 2011;377(9760):139–46. doi:10.1016/S0140-6736(10)61388-8.
2. WHO global report. Mortality attributable to tobacco. Geneva: World Health Organization; 2012 ([http://www.who.int/tobacco/publications/surveillance/rep\\_mortality\\_attributable/en/](http://www.who.int/tobacco/publications/surveillance/rep_mortality_attributable/en/), accessed 5 November 2014).
3. WHO report on the global tobacco epidemic 2013. Geneva: World Health Organization; 2013 ([http://www.who.int/tobacco/global\\_report/2013/en/](http://www.who.int/tobacco/global_report/2013/en/), accessed 5 November 2014).
4. NCD global monitoring framework: indicator definitions and specifications. Geneva: World Health Organization; 2014.
5. WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2003 (<http://whqlibdoc.who.int/publications/2003/9241591013.pdf>, accessed 5 November 2014).
6. Guidelines for implementation of the WHO FCTC Article 5.3 | Article 8 | Articles 9 and 10 | Article 11 | Article 12 | Article 13 | Article 14. Geneva: World Health organization; 2013 ([http://apps.who.int/iris/bitstream/10665/80510/1/9789241505185\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/80510/1/9789241505185_eng.pdf?ua=1), accessed 5 November 2014).
7. Conference of the Parties to the WHO Framework Convention on Tobacco Control, Sixth session decision “Towards a stronger contribution of the Conference of the Parties to achieving the noncommunicable disease global target on reduction of tobacco use” [http://apps.who.int/gb/fctc/E/E\\_cop6.htm](http://apps.who.int/gb/fctc/E/E_cop6.htm)
8. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
9. Scaling up action against noncommunicable diseases: how much will it cost? Geneva: World Health Organization; 2011 ([http://whqlibdoc.who.int/publications/2011/9789241502313\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241502313_eng.pdf), accessed 4 November 2014).
10. WHO report on the global tobacco epidemic, 2011: warning about the dangers of tobacco. Geneva: World Health Organization; 2011 ([http://www.who.int/tobacco/global\\_report/2011/en/](http://www.who.int/tobacco/global_report/2011/en/), accessed 5 November 2014).
11. Tobacco control in Turkey: story of commitment and leadership. Copenhagen: World Health Organization Regional Office for Europe; 2012 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/163854/e96532.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0009/163854/e96532.pdf?ua=1), accessed 5 November 2014).
12. Standardised packaging of tobacco: report of the independent review undertaken by Sir Cyril Chantler [http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=standardised-packaging-of-tobacco-report-of-the-independent-review-undertaken-by-sir-cyril-chantler-pdf](http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF?utm_source=rss&utm_medium=rss&utm_campaign=standardised-packaging-of-tobacco-report-of-the-independent-review-undertaken-by-sir-cyril-chantler-pdf), accessed 6 November 2014).
13. WHO Framework Convention on Tobacco Control. Thailand – new regulations on graphic health warnings introduced ([http://www.who.int/fctc/implementation/news/news\\_thai/en/](http://www.who.int/fctc/implementation/news/news_thai/en/), accessed 6 November 2014).
14. European tobacco control status report 2013. Copenhagen: World Health Organization Regional Office for Europe; 2013 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0011/235973/European-Tobacco-Control-Status-Report-2013-Eng.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0011/235973/European-Tobacco-Control-Status-Report-2013-Eng.pdf?ua=1), accessed 6 November 2014).
15. The Smokefree Coalition. Tupeka kore/Tobacco free Aotearoa/New Zealand by 2020 (<http://www.sfc.org.nz/thevision.php>, accessed 6 November 2014).
16. World Health Organization. Tobacco Free Initiative. African tobacco control ([http://www.who.int/tobacco/control/capacity\\_building/africa/activities/en/](http://www.who.int/tobacco/control/capacity_building/africa/activities/en/), accessed 6 November 2014).
17. ITU. Be he@lthy be mobile. [http://www.itu.int/en/ITU-D/ICT-Applications/eHEALTH/Pages/mHealth\\_CostaRica\\_smoking.aspx](http://www.itu.int/en/ITU-D/ICT-Applications/eHEALTH/Pages/mHealth_CostaRica_smoking.aspx) (accessed 6 November 2014).
18. 2014 global progress report on implementation of the WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2014 (<http://www.who.int/fctc/reporting/2014globalprogressreport.pdf?ua=1>, accessed 5 November 2014).
19. Raising tax on tobacco: what you need to know. Geneva: World Health Organization; 2014 (<http://www.who.int/campaigns/no-tobacco-day/2014/brochure/en/>, accessed 5 November 2014).









# Key points

- Raised blood pressure is one of the leading risk factors for global mortality and is estimated to have caused 9.4 million deaths and 7% of disease burden – as measured in disability-adjusted life-years – in 2010.
- The global prevalence of raised blood pressure (defined as systolic and/or diastolic blood pressure  $\geq 140/90$  mmHg) in adults aged 18 years and over was around 22% in 2014.
- Reducing the incidence of hypertension through implementation of population-wide policies to reduce behavioural risk factors, including harmful use of alcohol, physical inactivity, overweight, obesity and high salt intake, is essential to attaining this target.
- Control of hypertension through a total cardiovascular risk approach is more cost effective than treatment decisions based on individual risk factor thresholds only.
- A total-risk approach needs to be adopted for early detection and cost-effective management of hypertension, to prevent heart attacks, strokes and other complications.
- The attainment of this target will contribute to attainment of the target on reducing premature mortality from NCDs.

# 6 Global target 6: A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances

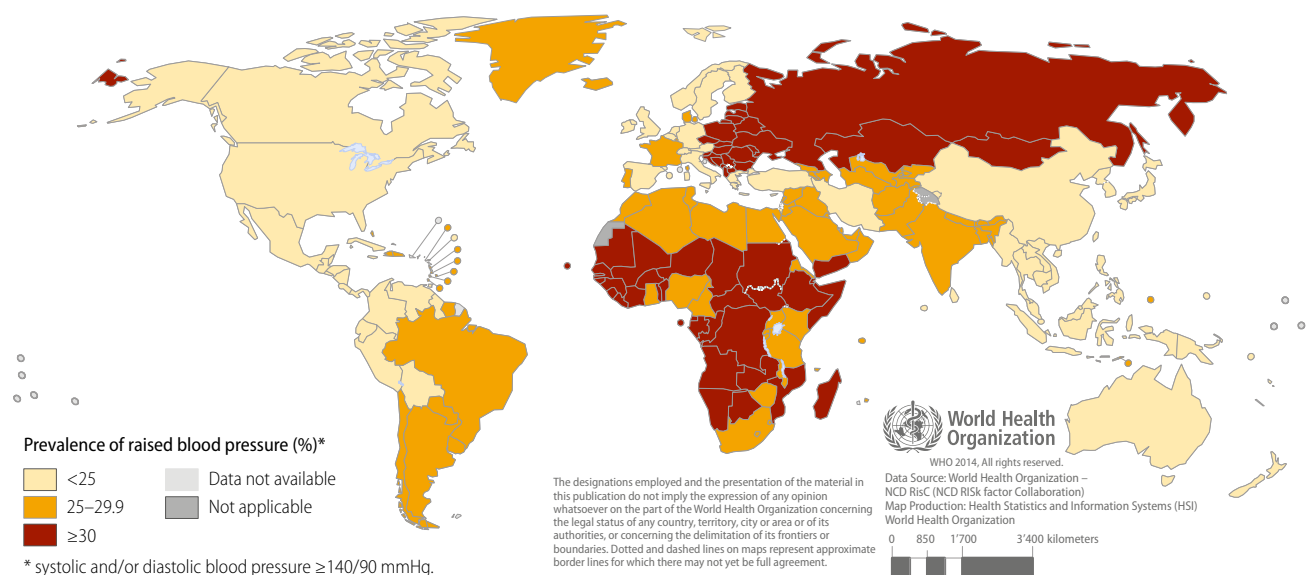
## Raised blood pressure and its impact on health

Raised blood pressure is one of the leading risk factors for global mortality and is estimated to have caused 9.4 million deaths and 7% of disease burden – as measured in DALYs – in 2010 (1). Raised blood pressure is a major cardiovascular risk factor. If left uncontrolled, hypertension causes stroke, myocardial infarction, cardiac failure, dementia, renal failure and blindness, causing human suffering and imposing severe financial and service burdens on health systems (2,3).

Scientific studies have consistently shown the health benefits of lowering blood pressure through population-wide and individual (behavioural and pharmacological) interventions (4–6). For instance, a reduction in systolic blood pressure of 10 mmHg is associated with a 22% reduction in coronary heart disease and 41% reduction in stroke in randomized trials (5), and a 41–46% reduction in cardiometabolic mortality (6) in epidemiological studies.

The global prevalence of raised blood pressure (defined as systolic and/or diastolic blood pressure  $\geq 140/90$  mmHg) in adults aged 18 years and over was around

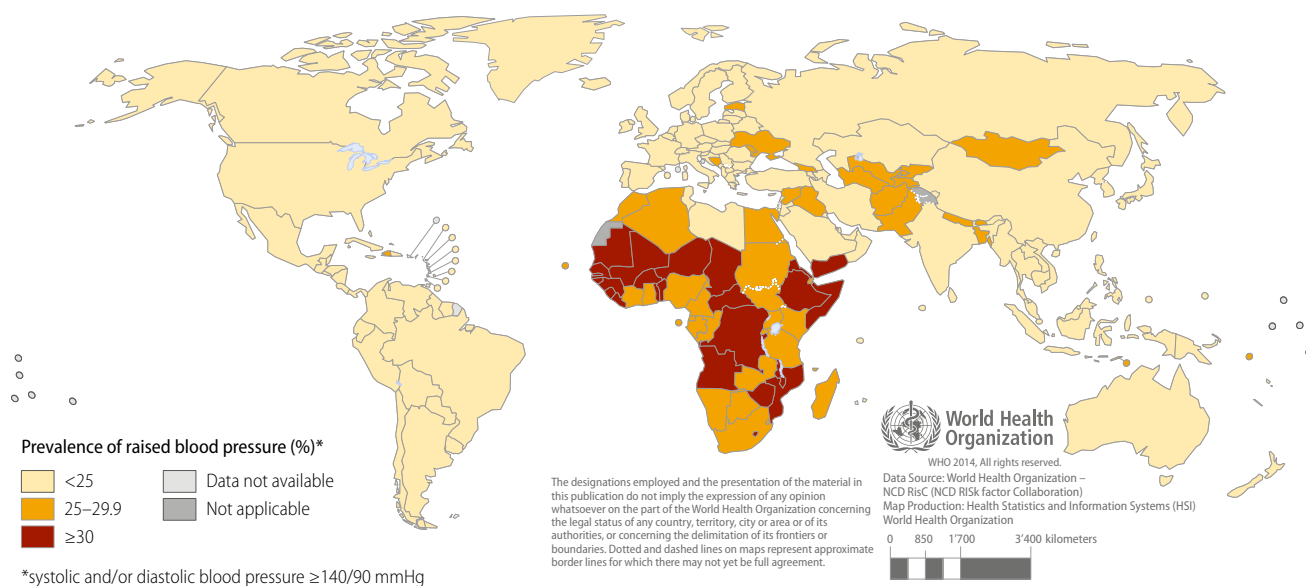
**Fig. 6.1** Age-standardized prevalence of raised blood pressure in males aged 18 years and over (defined as systolic and/or diastolic blood pressure equal to or above 140/90 mm Hg), comparable estimates, 2014



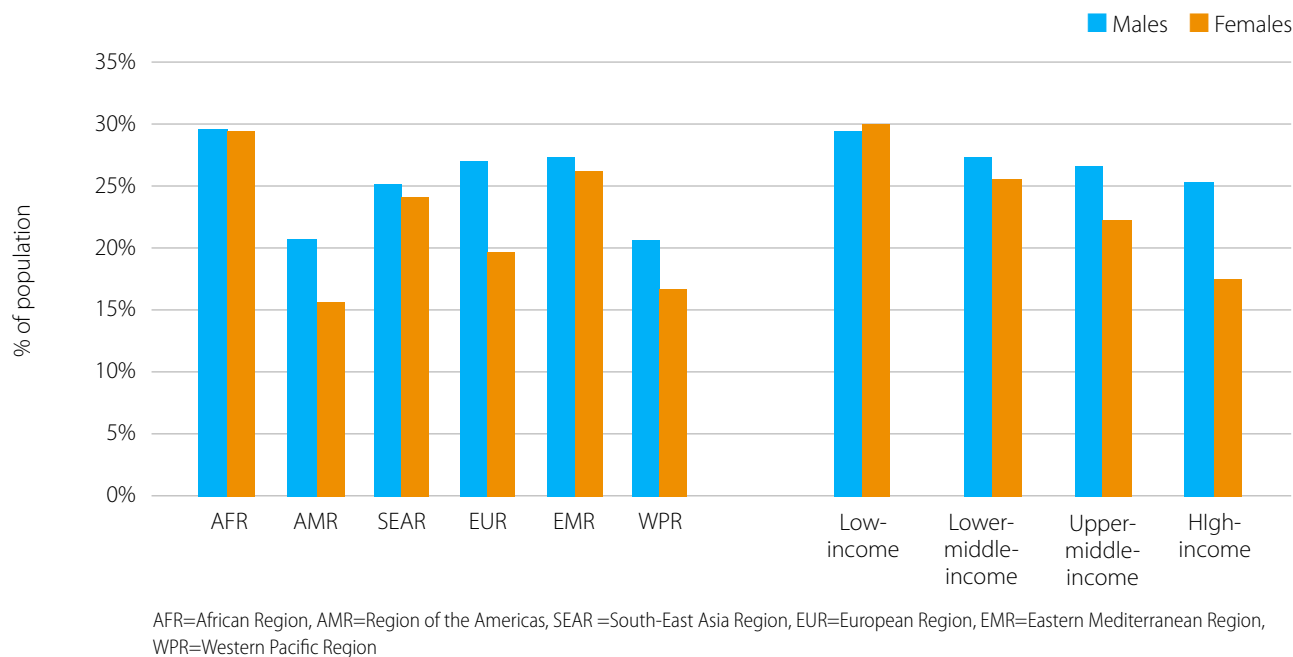
22% in 2014. The proportion of the world's population with high blood pressure or uncontrolled hypertension fell modestly between 1980 and 2010. However, because of population growth and ageing, the number of people with uncontrolled hypertension has risen over the years.

Age-standardized prevalence of raised blood pressure in men and women is shown in **Figs. 6.1 and 6.2** respectively. Across the WHO regions, the prevalence of raised blood pressure was highest in Africa, at 30% for all adults combined. The lowest prevalence of raised blood pressure was in

**Fig. 6.2** Age-standardized prevalence of raised blood pressure in females aged 18 years and over (defined as systolic and/or diastolic blood pressure equal to or above 140/90 mm Hg), comparable estimates, 2014



**Fig. 6.3** Age-standardized prevalence of raised blood pressure in adults aged 18 years and over (defined as systolic and/or diastolic blood pressure equal to or above 140/90 mm Hg), by WHO region and World Bank income group, comparable estimates, 2014



the Region of the Americas, at 18% (see **Fig. 6.3**). Men in this region had higher prevalence (21%) than women (16%). In all WHO regions, men have slightly higher prevalence of raised blood pressure than women. **Fig. 6.5** shows the age-standardized prevalence of raised blood pressure in adults aged 18 years and over by country and World Bank income group in 2014. In general, the prevalence of raised blood pressure was higher in low-income countries compared to middle-income and high-income countries (see **Fig 6.5**).

Many factors contribute to the high prevalence rates of hypertension (see **Fig. 6.4**):

- eating food containing too much salt and fat; not eating enough fruits and vegetables;
- overweight and obesity;
- harmful use of alcohol;
- physical inactivity;
- ageing;
- genetic factors;
- psychological stress;
- socioeconomic determinants;

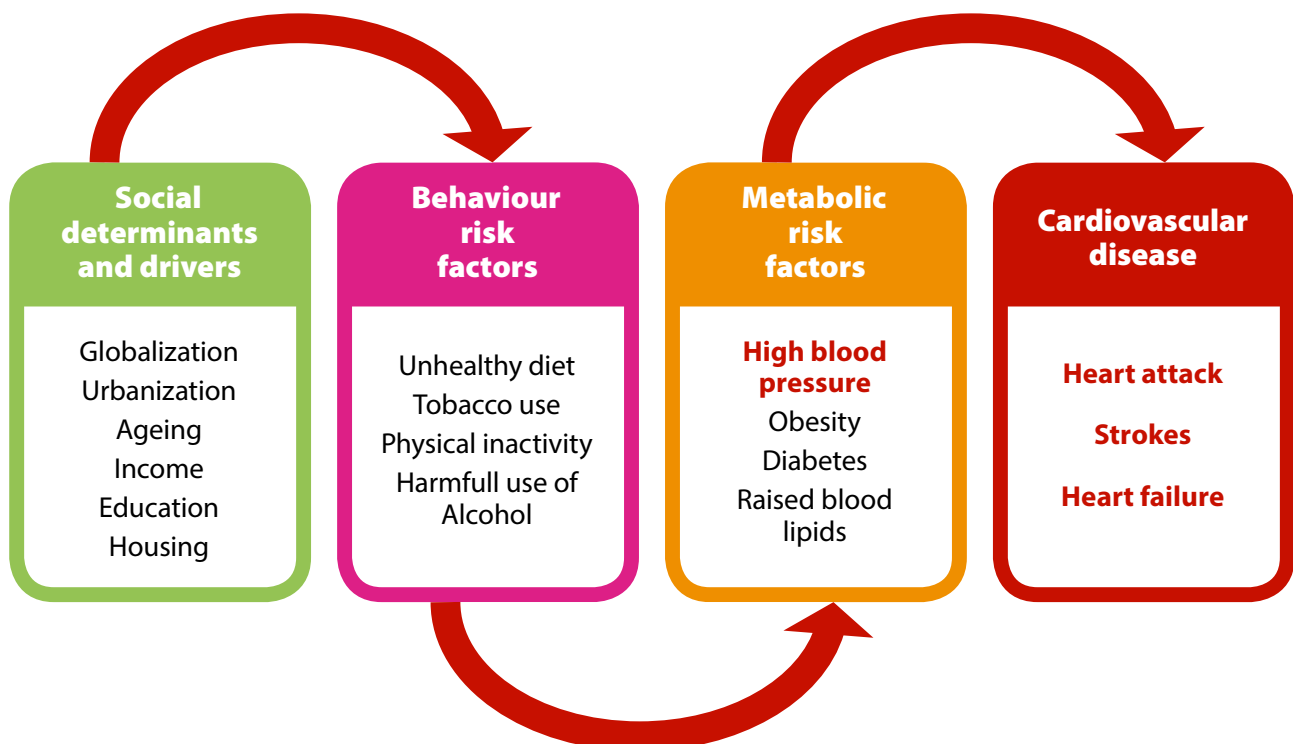
- inadequate access to health care.

Hypertension is not an inevitable consequence of ageing. In the majority of cases, the exact cause of hypertension is unknown, but the presence of several of the above factors, increase the risk of developing the condition. Most of these factors are modifiable.

## What are the cost-effective policies and interventions to reduce the prevalence of raised blood pressure?

In order to achieve this target, a comprehensive set of population-wide and individual interventions and policies is required to address the modifiable risk factors listed above. Very cost-effective population-wide interventions are available to reduce harmful use of alcohol (see **Chapter 2**), physical inactivity (see **Chapter 3**), population intake of salt/sodium (see **Chapter 4**), overweight and obesity and intake of saturated fats (see **Chapter 7**), and to increase the consumption of fruits and vegetables

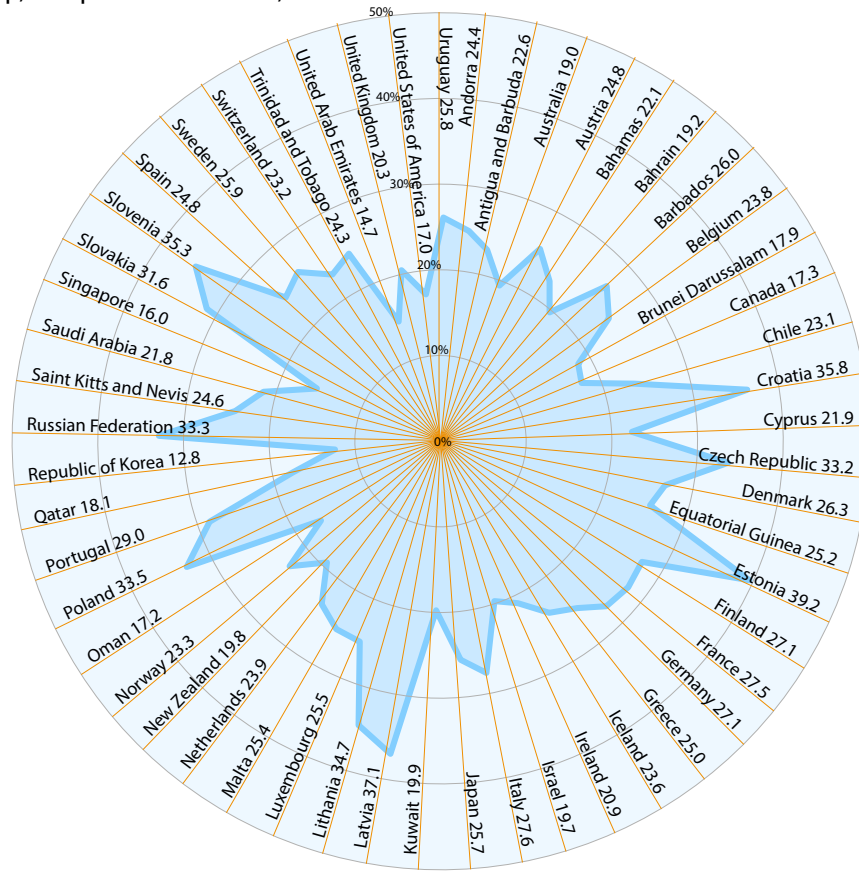
**Figure 6.4** Main contributory factors to high blood pressure and its complications (3)



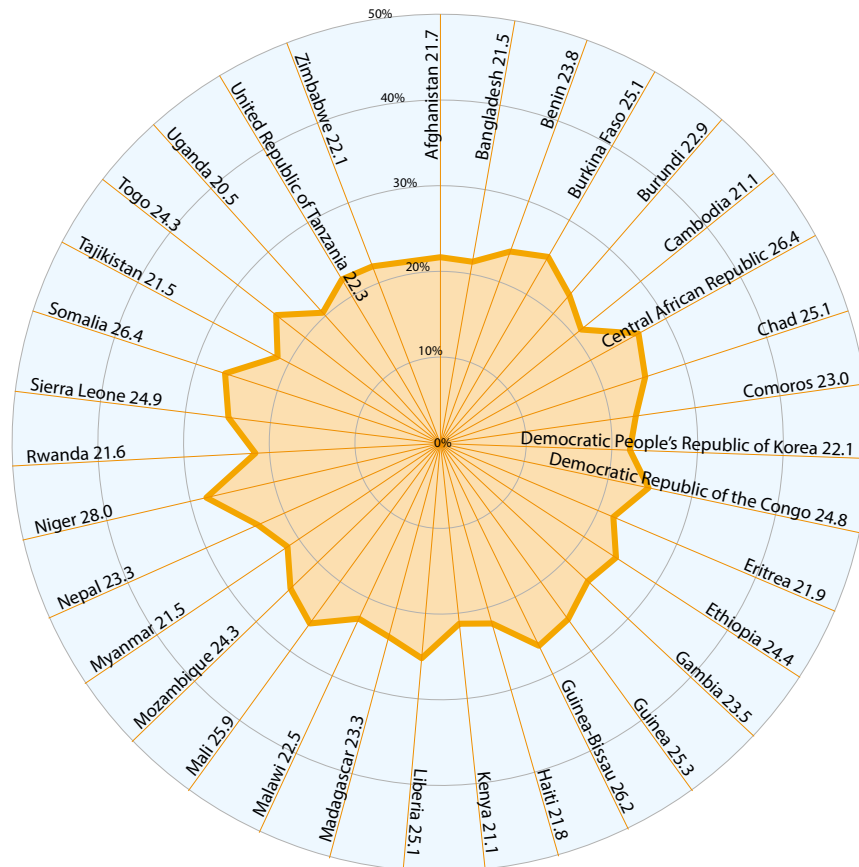


**Fig. 6.5** Age-standardized prevalence of raised blood pressure in adults aged 18 years and over (defined as systolic and/or diastolic blood pressure equal to or above 140/90 mm Hg) (%), by individual country, and by World Bank Income group, comparable estimates, 2014

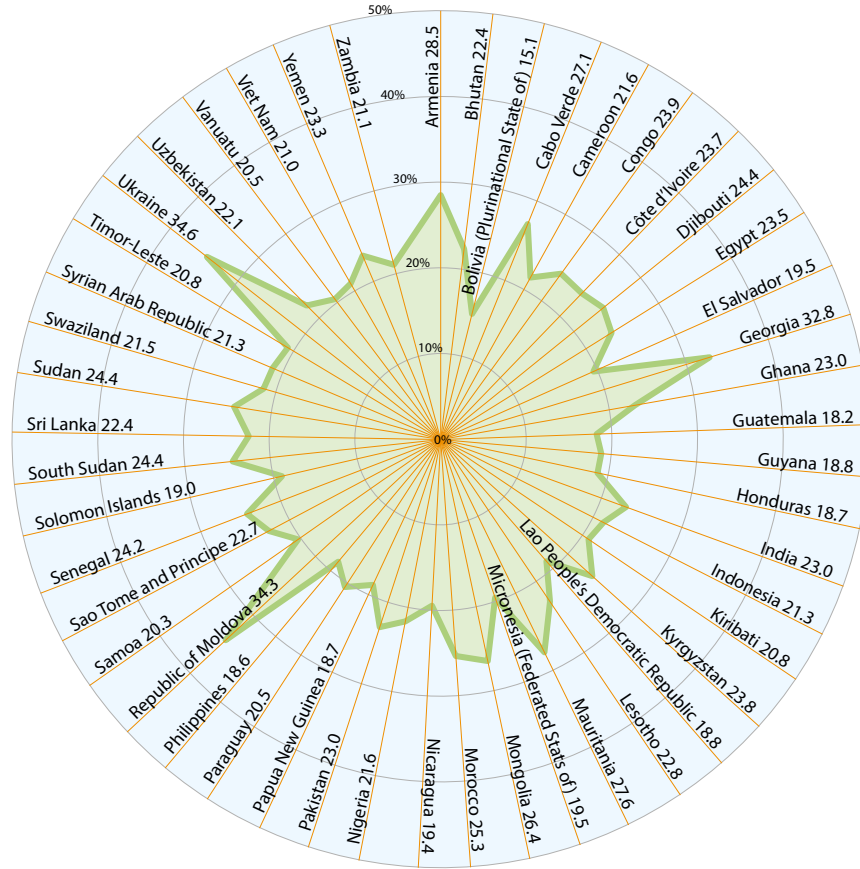
High-income



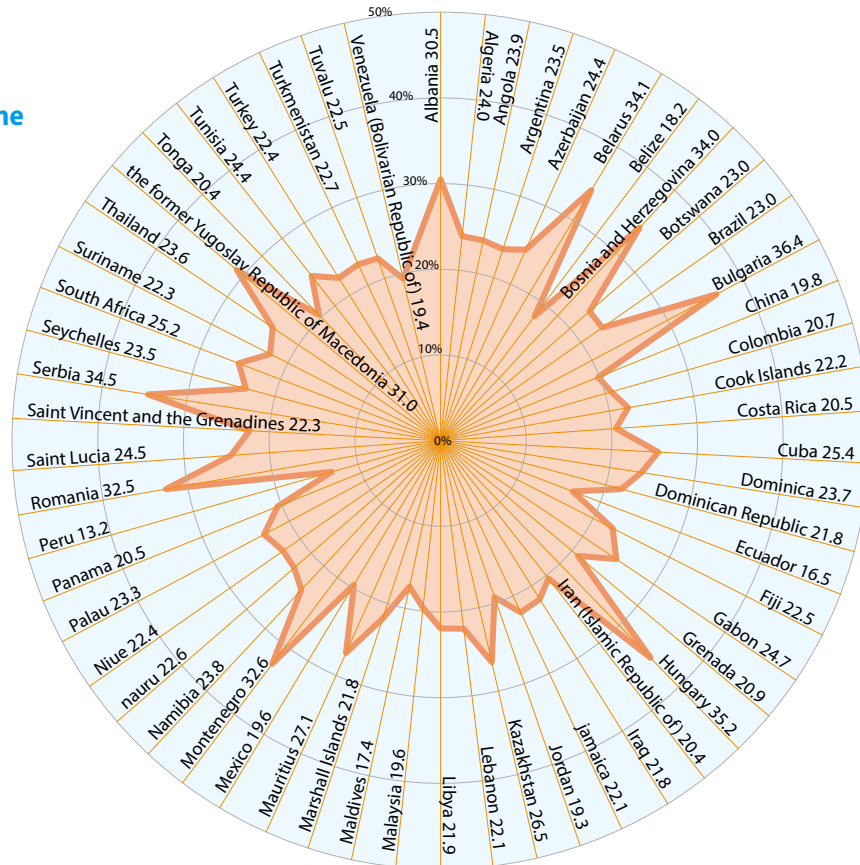
Low-income



Low-middle-income



Upper-middle-income



(see **Box 1.1**). These interventions should be implemented to prevent hypertension and to shift the population distribution of blood pressure to an optimal profile (7).

In addition, there must be equitable access to individual interventions, particularly at primary health-care level. People with hypertension are often asymptomatic until they develop end-organ damage (2,3). Consequently, proactive cost-effective approaches must be adopted for early detection of hypertension. Evidence indicates that targeted screening for total cardiovascular risk with blood pressure measurement (and blood glucose testing) is more cost effective than screening the whole population for a single risk factor, and is more likely to identify individuals at high cardiovascular risk for lower cost (8–10). In settings with access to well-developed primary health-care systems (i.e. where physicians can identify patients at high risk of developing diseases when they see them for other reasons, and can intervene when necessary), adding an organized screening programme to usual practice may not be required. Indeed, in such settings, systematic screening of the population has not resulted in a reduction in incidence of ischaemic heart disease compared to control groups that have access to usual care (11,12).

There are several barriers to accurate and affordable blood pressure measurement, particularly in low-and middle income countries (13). These include:

- The absence of accurate, easily-obtainable, inexpensive devices for blood pressure measurement;
- The frequent marketing of non-validated blood pressure measuring devices;
- The relatively high cost of blood pressure devices given the limited resources available;
- Limited awareness of the problems associated with conventional blood pressure measurement techniques;
- A general lack of trained manpower and limited training of personnel.

The health system must be able to manage those detected with hypertension, using affordable approaches, particularly in resource-constrained

settings (14). A total-risk approach is needed to improve the efficiency and effectiveness of detection and management of hypertension (2,3,15). Decisions on drug treatment should be underpinned by evidence and based on total cardiovascular risk (15,16). Evidence of benefit for lowering blood pressure levels at or above 160/100 mmHg with drug treatment and non-pharmacological measures is very clear (2,3,15). Lower degrees of persistent hypertension ( $\geq 140/90$  mm Hg) with moderate-to-high cardiovascular risk also require drug treatment (2,3,15). On the other hand, there is no evidence to justify drug treatment of persons with borderline hypertension and very low cardiovascular risk. People in this category, however, would benefit from the population-wide interventions alluded to above (2,3).

## Monitoring the prevalence of raised blood pressure

In the global monitoring framework (17, see **Annex 1**), the indicator for monitoring the prevalence of raised blood pressure is the age-standardized prevalence of raised blood pressure among persons aged 18+ years (7). Raised blood pressure is defined as systolic blood pressure  $\geq 140$  mmHg and/or diastolic blood pressure  $\geq 90$  mmHg among persons aged 18+ years. For monitoring of progress, data should be gathered from a population-based (preferably nationally representative) survey in which blood pressure was measured (not self-reported).

## Progress achieved

High-income countries have begun to reduce hypertension through strong public health policies to reduce salt in processed food (see **Chapter 4**), improve the availability and affordability of fruits and vegetables (18), and create environments that promote physical activity (see **Chapter 3**). Declining trends in blood pressure, together with declines in smoking, body mass index (BMI) and serum cholesterol, may have accounted for nearly half the decline in cardiovascular mortality in some

high-income countries (4). However, shortcomings in public health policies to address intake of salt and fruits and vegetables, physical inactivity, and overweight and obesity have resulted in rising trends in blood pressure in low- and middle-income countries.

The country capacity assessment survey conducted in 2013 indicates many gaps in the implementation of public health policies that are key to prevention of hypertension (see **Table 6.1**) (19).

High-income countries had the highest percentage of national policies, plans or strategies. The percentage of countries reporting policies, plans or strategies on behavioural risk factors was generally lowest in the WHO African Region, except for policies, plans or strategies on harmful use of alcohol, which were reported in an even lower percentage of countries in the Eastern Mediterranean Region (see **Fig. 6.6**).

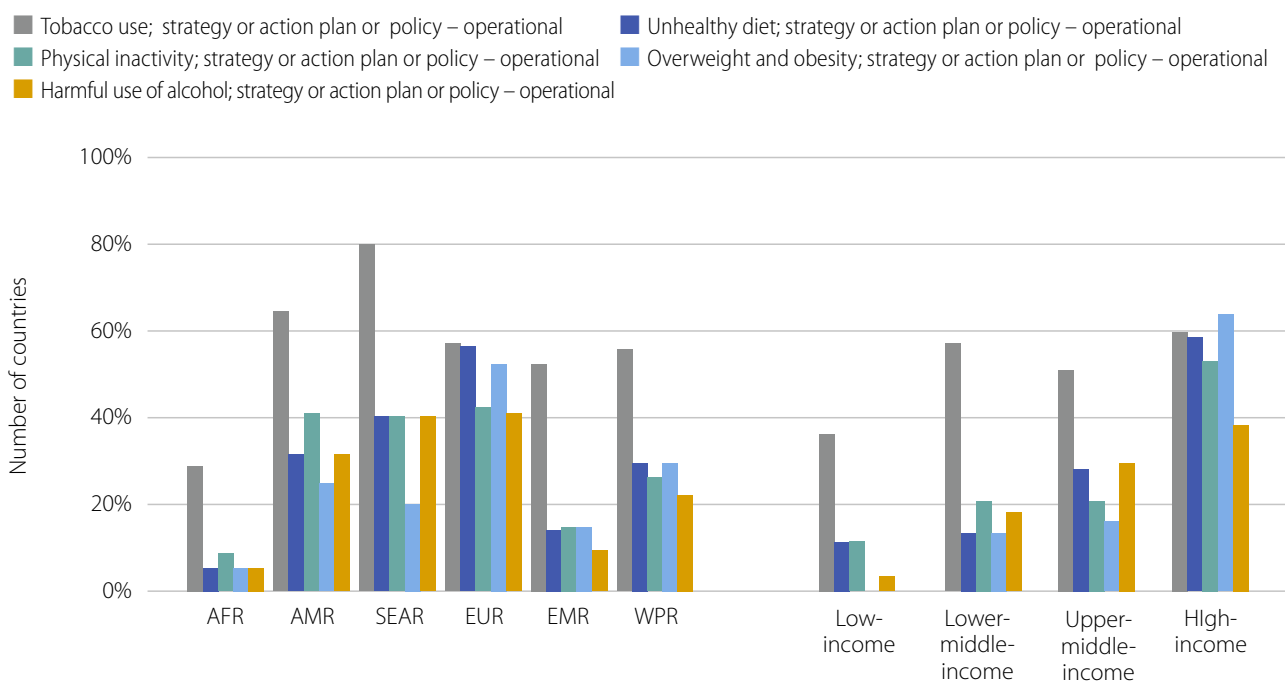
The number of people with undetected and uncontrolled hypertension has increased worldwide

because of population growth and ageing (4). Studies in high-income countries report that about one fifth of people with hypertension are unaware of their condition, about one quarter do not receive treatment and only around half have their blood pressure under control (20,21). The situation is much worse in low- and middle-income countries, where only about half of those with hypertension are aware of their status, only a fraction receive treatment, and the majority do not have their blood pressure under control (22,23). In general, awareness, treatment and control are lower in people with lower levels of literacy and socioeconomic status.

## Actions required to attain this target

There are significant health and economic gains in attaining this target. Worldwide, the high prevalence of hypertension contributes significantly to preventable cardiovascular events. As already

**Fig. 6.6** Policies, plans and strategies to address behavioural risk factors of hypertension, by WHO region and World Bank income level



AFR=African Region, AMR=Region of the Americas, SEAR=South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region



### **Box 6.1 Non-physician health workers implement the total-risk approach using hypertension as an entry point in Bhutan**



In Paro and Bumthang districts of Bhutan, trained non-physician health workers carried out cardiovascular risk assessment and management in primary care, using hypertension as an entry point. In this project, initiated in 2009, simplified protocols of the WHO package of essential noncommunicable disease (PEN) interventions were used to implement a total-risk approach. Regular audits checked the adequacy of human resources, availability of equipment and laboratory reagents, adherence to clinical protocols, and maintenance of stock registers. A performance assessment in 2013 showed that im-

plementation of the total-risk approach in primary health care in Bhutan led to significant improvement in blood pressure and diabetes control, and reduction in cardiovascular risk. In collaboration with ministries of health, WHO has initiated similar projects in primary care in some 30 resource-constrained settings.

*Sources: see references (24,25).*

discussed, in most countries, many people with raised blood pressure are unaware that they have hypertension, and detection and control rates are suboptimal.

Once hypertension develops, it may require lifelong treatment with medicines. Because of the high prevalence, drug treatment can be costly and is a challenge for resource-constrained settings. However, neglecting treatment entails interventions that are even more costly, such as cardiac bypass surgery, carotid artery surgery and renal dialysis, draining both individual and government budgets. The only solution is to control hypertension using an affordable total-risk approach, and concurrently take action to reduce its incidence.

The actions that are needed to attain this target, are listed under the subheadings that follow.

#### **Implement public health policies to reduce the incidence of hypertension**

Top priority should be accorded to implementation of public health policies to reduce exposure to behavioural risk factors: harmful use of alcohol (see **Chapter 2**), physical inactivity (see **Chapter 3**), high salt intake (see **Chapter 4**) and tobacco use (see **Chapter 5**). Policies to address overweight and obesity (see **Chapter 7**) also have a significant impact on the incidence of hypertension.

#### **Establish integrated programmes for hypertension and diabetes in primary care**

Integrated NCD programmes can be established at the primary care level, using WHO guidelines and tools (24). One objective of an integrated programme is to reduce total cardiovascular risk to prevent heart attack, stroke, kidney failure and other complications of hypertension and diabetes. Hypertension and diabetes often coexist and they cannot be dealt with in isolation. Adopting this comprehensive approach ensures that limited resources are used for the treatment of those at medium and high risk. It also prevents unnecessary drug treatment of people with borderline hypertension and very low cardiovascular risk. Inappropriate drug treatment exposes people to unwarranted harmful effects and increases the cost of health care. Both should be avoided.

Investments are needed to improve health-service infrastructure and human and financial resources, to create a health-care system that is capable of deploying and sustaining equitable and quality-assured programmes for addressing cardiovascular risk (see **Chapter 8**). Appropriate communication and awareness-creation strategies are essential to ensure high coverage and follow-up care. Information systems should be in place to facilitate monitoring and evaluation of inputs and outcomes. Effective

training and reorientation of health-care workers, including non-physician health workers, are critical for improving provider performance and competency. With adequate training and supervision, non-physician health workers can play a key role in cardiovascular risk assessment and management, particularly in primary health care (see **Box 6.1**).

have the potential to reach a significant proportion of employed adults for early detection of hypertension, diabetes and other illnesses.

### **Strategies to enhance adherence**

The control of hypertension and cardiovascular risk, rely on individuals being adherent to measures to reduce behavioural risk factors and drug treatment as prescribed. Adherence requires a strategic policy to address the issue at the outset. Patients should be educated upon diagnosis and adherence enhancing strategies should be implemented to ensure ongoing control of cardiovascular risk.

Where measurement devices are affordable, self-monitoring of blood pressure is recommended for the management of hypertension and diabetes (24). As with other NCDs, evidence-based approaches to strengthen self-care can facilitate early detection of hypertension, adherence to medication, and healthy behaviours, better control, and awareness of the importance of seeking medical advice when necessary. Self-care is important for all, but it is particularly useful for persons who have limited access to health services due to geographical, physical or economic reasons.

### **Promote workplace wellness programmes**

The United Nations high-level meeting on NCD prevention and control in 2011 called on the private sector to “promote and create an enabling environment for healthy behaviours among workers (26), including by establishing tobacco-free workplaces and safe and healthy working environments through occupational safety and health measures, including, where appropriate, through good corporate practices, workplace wellness programmes and health insurance plans”. Workplace wellness programmes should focus on promoting worker health through the reduction of individual risk-related behaviours (e.g. tobacco use, unhealthy diet, harmful use of alcohol, physical inactivity and other health-risk behaviours). These programmes

## References

1. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380(9859):2224–60. doi:10.1016/S0140-6736(12)61766-8.
2. A global brief on hypertension. Silent killer, global public health crisis. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/79059/1/WHO\\_DCO\\_WHD\\_2013.2\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/79059/1/WHO_DCO_WHD_2013.2_eng.pdf), accessed 5 November 2014).
3. Prevention of cardiovascular disease: guidelines for assessment and management of cardiovascular risk. Geneva: World Health Organization; 2007 ([http://www.who.int/cardiovascular\\_diseases/guidelines/Full%20text.pdf](http://www.who.int/cardiovascular_diseases/guidelines/Full%20text.pdf), accessed 5 November 2014).
4. Danaei G, Finucane MM, Lin JK, Singh GM, Paciorek CJ, Cowan MJ et al; Global Burden of Metabolic Risk Factors of Chronic Diseases Collaborating Group (Blood Pressure). National, regional, and global trends in systolic blood pressure since 1980: systematic analysis of health examination surveys and epidemiological studies with 786 country-years and 5.4 million participants. *Lancet*. 2011;377(9765):568–77. doi: 10.1016/S0140-6736(10)62036-3.
5. Law MR, Morris JK, Wald NJ. Use of blood pressure lowering drugs in the prevention of cardiovascular disease: meta-analysis of 147 randomised trials in the context of expectations from prospective epidemiological studies. *BMJ*. 2009;338:b1665. doi:10.1136/bmj.b1665.
6. Di Cesare M, Bennett JE, Best N, Stevens GA, Danaei G, Ezzati M. The contributions of risk factor trends to cardiometabolic mortality decline in 26 industrialized countries. *Int J Epidemiol*. 2013;42(3):838–48. doi:10.1093/ije/dyt063.
7. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
8. WHO guideline for screening of cardiovascular risk including diabetes. Geneva: World Health Organization; 2014 (in press).
9. Lawson KD, Fenwick EA, Pell AC, Pell JP. Comparison of mass and targeted screening strategies for cardiovascular risk: simulation of the effectiveness, cost-effectiveness and coverage using a cross-sectional survey of 3921 people. *Heart*. 2010;96(3):208–12. doi:10.1136/hrt.2009.177204.
10. Baker J, Mitchell R, Lawson K, Pell J. Ethnic differences in the cost-effectiveness of targeted and mass screening for high cardiovascular risk in the UK: cross-sectional study. *Heart*. 2013;99(23):1766–71. doi:10.1136/heartjnl-2013-304625.
11. Jørgensen T, Jacobsen RK, Toft U, Aadahl M, Glümer C, Pisinger C. Effect of screening and lifestyle counselling on incidence of ischaemic heart disease in general population: Inter99 randomised trial. *BMJ*. 2014;348:g3617. doi:10.1136/bmj.g3617.
12. Krogsbøll LT, Jørgensen KJ, Larsen CG, Gøtzsche PC. General health checks in adults for reducing morbidity and mortality from disease. *Cochrane systematic review and meta-analysis*. *BMJ*. 2012;345:e7191. doi:10.1136/bmj.e7191.
13. Affordable technology. Blood pressure measuring devices for low resource settings. Geneva: World Health Organization; 2005.
14. Ndindjock R, Gedeon J, Mendis S, Paccaud F, Bovet P. Potential impact of single-risk-factor versus total risk management for the prevention of cardiovascular events in Seychelles. *Bull World Health Organ*. 2011;89(4):286–95. doi:10.2471/BLT.10.082370.
15. Prevention and control of noncommunicable diseases: guidelines for primary health care in low-resource settings; diagnosis and management of type 2 diabetes and management of asthma and chronic obstructive pulmonary disease. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/76173/1/9789241548397\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/76173/1/9789241548397_eng.pdf), accessed 5 November 2014).
16. Sundström J, Arima H, Woodward M, Jackson R, Karmali K, Lloyd-Jones D et al; Blood Pressure Lowering Treatment Trialists' Collaboration. Blood pressure-lowering treatment based on cardiovascular risk: a meta-analysis of individual patient data. *Lancet*. 2014;384(9943):591–8. doi:10.1016/S0140-6736(14)61212-5.
17. NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
18. Ganann R, Fitzpatrick-Lewis D, Ciliska D, Peirson LJ, Warren RL, Fieldhouse P et al. Enhancing nutritional environments through access to fruit and vegetables in schools and homes among children and youth: a systematic review. *BMC Res Notes*. 2014;7:422. doi:10.1186/1756-0500-7-422.
19. Assessing national capacity for the prevention and control of noncommunicable diseases; report of the 2013 global survey. Geneva: World Health Organization; 2014.

20. Liddy C, Singh J, Hogg W, Dahrouge S, Deri-Armstrong C, Russell G et al. Quality of cardiovascular disease care in Ontario, Canada: missed opportunities for prevention – a cross sectional study. *BMC Cardiovasc Disord.* 2012;12:74. doi:10.1186/1471-2261-12-74.
21. Joffres M, Falaschetti E, Gillespie C, Robitaille C, Loustalot F, Poulter N et al. Hypertension prevalence, awareness, treatment and control in national surveys from England, the USA and Canada, and correlation with stroke and ischaemic heart disease mortality: a cross-sectional study. *BMJ Open.* 2013;3(8):e003423. doi:10.1136/bmjopen-2013-003423.
22. Chow CK, Teo KK, Rangarajan S, Islam S, Gupta R, Avezum A et al.; PURE (Prospective Urban Rural Epidemiology) study investigators. Prevalence, awareness, treatment, and control of hypertension in rural and urban communities in high-, middle-, and low-income countries. *JAMA.* 2013;310(9):959–68. doi:10.1001/jama.2013.184182.
23. Iwelunmor J, Airhihenbuwa CO, Cooper R, Tayo B, Plange-Rhule J, Adanu R et al. Prevalence, determinants and systems-thinking approaches to optimal hypertension control in West Africa. *Global Health.* 2014;10:42. doi:10.1186/1744-8603-10-42.
24. Implementation tools: package of essential noncommunicable (WHO-PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2013 ([http://www.who.int/cardiovascular\\_diseases/publications/implementation\\_tools\\_WHO\\_PEN/en/](http://www.who.int/cardiovascular_diseases/publications/implementation_tools_WHO_PEN/en/), accessed 5 November 2014).
25. Wangchuk D, Viridi NK, Garg R, Mendis S, Nair N, Wangchuk D, Kumar R. Package of essential non-communicable disease (PEN) interventions in primary health-care settings of Bhutan: a performance assessment study. *WHO South-East Asia Journal of Public Health*, 2014, 3 (2)
26. Resolution 66/2. Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. In: Sixty-sixth session of the United Nations General Assembly. New York: United Nations; 2011 (A/67/L.36; [http://www.who.int/nmh/events/un\\_ncd\\_summit2011/political\\_declaration\\_en.pdf](http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf), accessed 3 November 2014).





# Key points

- Worldwide, obesity has more than doubled since 1980, and in 2014, 11% of men and 15% of women aged 18 years and older were obese.  
.....
- An estimated 42 million children under the age of 5 years were overweight in 2013.  
.....
- The global prevalence of diabetes was estimated to be 9% in 2014.  
.....
- Obesity can be prevented through multisectoral population-based interventions that promote physical activity and consumption of a healthy diet, throughout the life-course.  
.....
- Research is urgently needed to evaluate the effectiveness of interventions to prevent and control obesity.  
.....
- The attainment of this target will contribute to attainment of targets on reducing the prevalence of hypertension and on reducing premature mortality from NCDs.



## Global target 7: Halt the rise in diabetes and obesity

### Overweight and obesity and their impact on health

The link between obesity, poor health outcomes and all-cause mortality is well established. Obesity increases the likelihood of diabetes, hypertension, coronary heart disease, stroke, certain cancers, obstructive sleep apnoea and osteoarthritis. It also negatively affects reproductive performance. Overweight and obesity – i.e. BMI  $\geq 25$  kg/m<sup>2</sup> and  $\geq 30$  kg/m<sup>2</sup> respectively – were estimated to account for 3.4 million deaths per year and 93.6 million DALYs in 2010 (1).

To achieve optimal health, the median BMI for adult populations should be in the range 21–23 kg/m<sup>2</sup>, while the goal for individuals should be to maintain a BMI in the range 18.5–24.9 kg/m<sup>2</sup>. The risk of comorbidities increases with a BMI in the range 25.0–29.9 kg/m<sup>2</sup>, and the risk is moderate to severe with a BMI greater than 30 kg/m<sup>2</sup> (2).

### Prevalence of overweight and obesity in adults

Obesity has been increasing in all countries. In 2014, 39% of adults aged 18 years and older (38% of men and 40% of women) were overweight. The worldwide prevalence of obesity nearly doubled between 1980 and 2014. In 2014, 11% of men and 15% of women worldwide were obese. Thus, more than half a billion adults worldwide are classed as obese.

Age-standardized estimates on prevalence of obesity in males and females, aged 18 years and over are shown in **Figs. 7.1** and **7.2**, respectively. The prevalence of overweight and obesity is highest in the Region of the Americas (61% overweight or obese in both sexes, and 27% obese) and lowest in the South-East Asia Region (22% overweight in both sexes, and 5% obese) (see **Fig. 7.3**). In the European and Eastern Mediterranean Regions and Region of the Americas, over 50% of women are overweight, and in all three regions roughly half of overweight women are obese (25% in the European region, 24% in the Eastern Mediterranean Region, 30% in the Region of the Americas). In all WHO regions, women are more likely to be obese than men. In the African, South-East Asia and Eastern Mediterranean regions, women have roughly double the obesity prevalence of men. **Fig. 7.5** shows the age-standardized prevalence of obesity in adults aged 18 years and over, by country, and World Bank income groups in 2014. The prevalence of overweight and obesity increases with the income level of countries. The prevalence of obesity in high-income and upper-middle-income countries is more than double that of low-income countries. (see **Fig. 7.3**)

and 7.5). Although the Western Pacific Region ranks low in prevalence of obesity, the Pacific countries show high rates similar to the Americas.

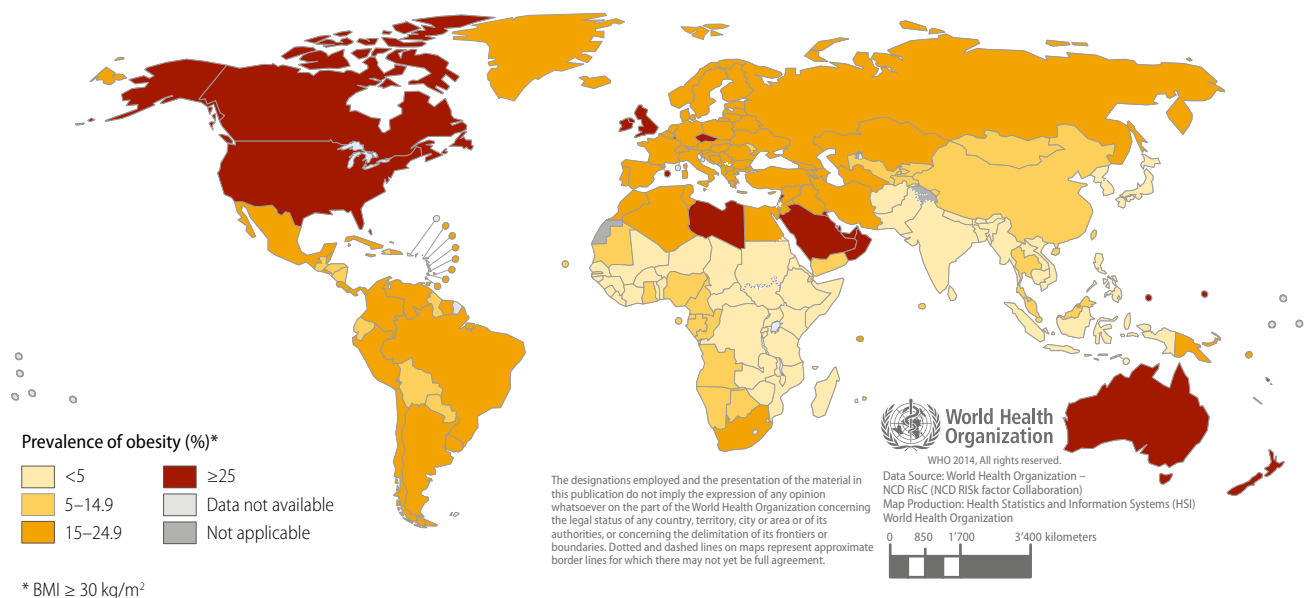
## Prevalence of overweight and obesity in children

Overindulgence in high calorie food and indoor leisure activities (e.g. television viewing, internet, and computer games) alone or in combination with

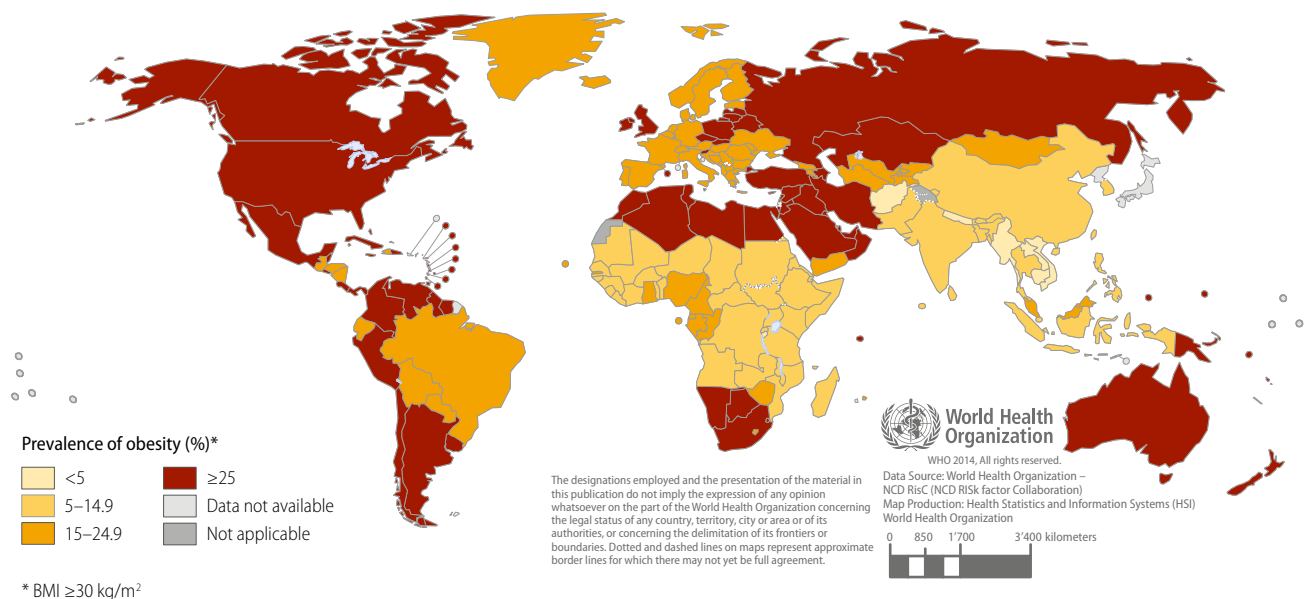
factors that dissuade walking and other outdoor activities, contribute to childhood obesity. The prevalence of overweight pre-school aged children is increasing fastest in low- and lower-middle-income countries (see **Figs. 7.4** and **7.6**) (3). In 2013, an estimated 42 million children (6.3%) aged under 5 years were overweight (3).

The latest estimates show that the global prevalence of overweight and obesity in children aged under 5 years has increased from around 5% in 2000

**Fig. 7.1** Age-standardized prevalence of obesity in men aged 18 years and over (BMI  $\geq 30$  kg/m<sup>2</sup>), 2014



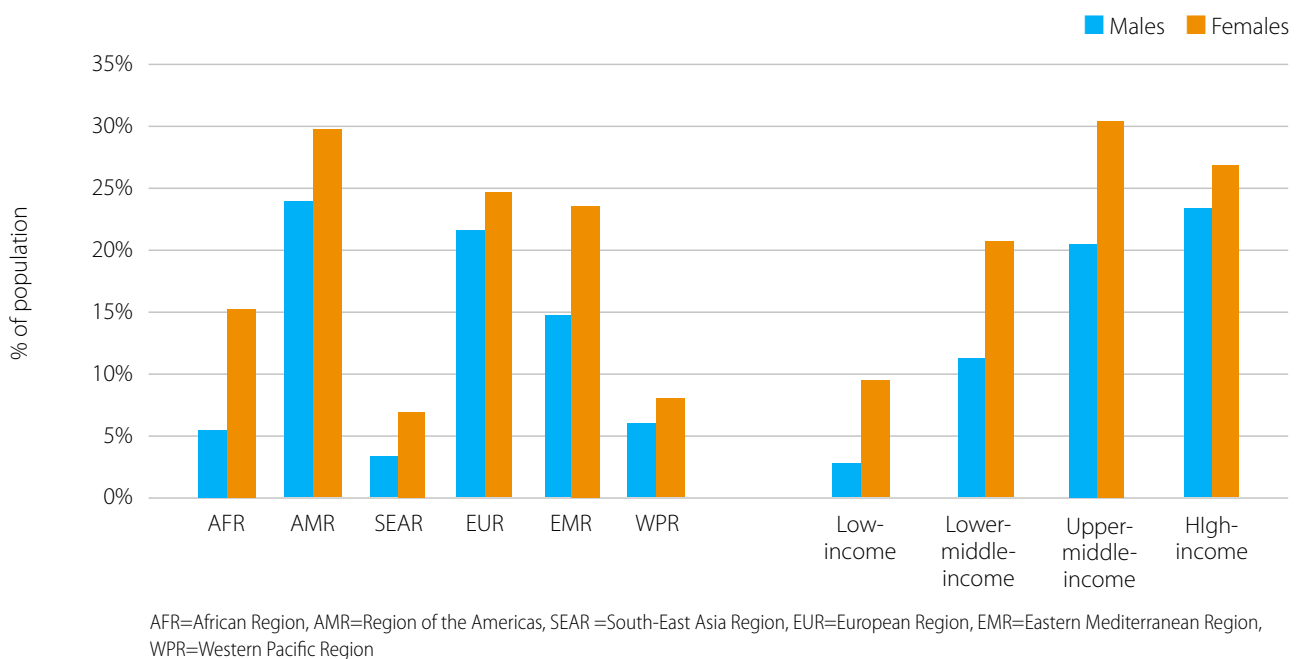
**Fig. 7.2** Age-standardized prevalence of obesity in women aged 18 years and over (BMI  $\geq 30$  kg/m<sup>2</sup>), 2014



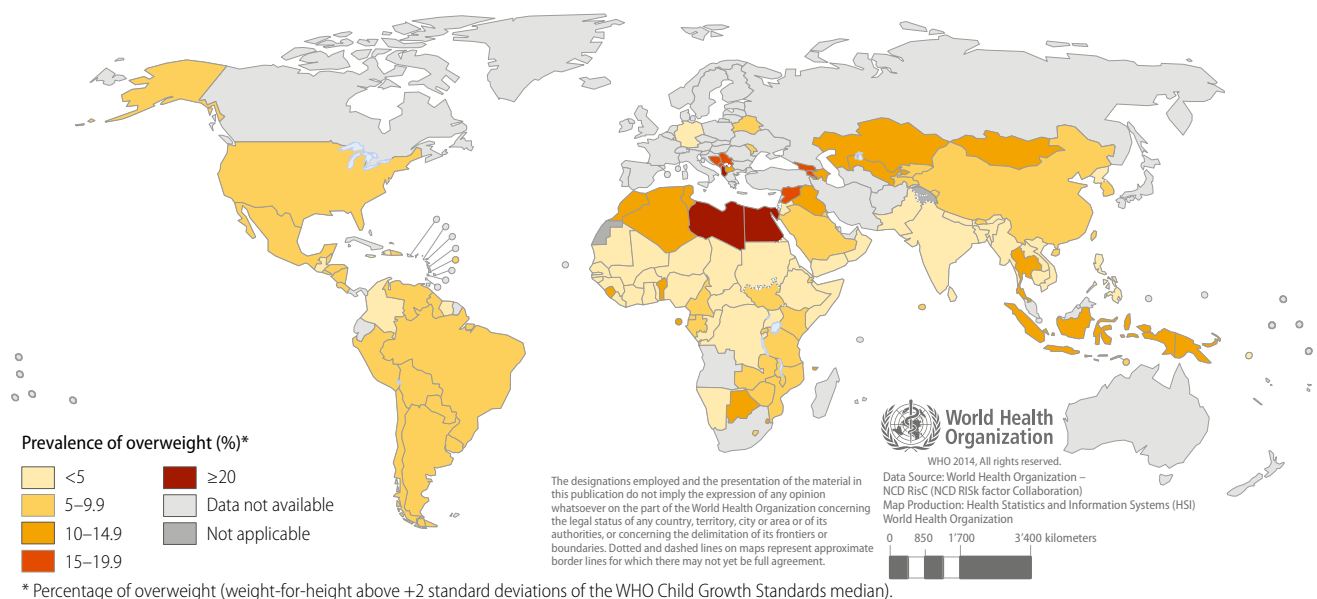
to 6% in 2010 and 6.3% in 2013 (4). The prevalence of childhood overweight is increasing worldwide, but especially in Africa and Asia. Between 2000 and 2013, the prevalence of overweight in children aged under 5 years increased from 11% to 19% in some countries in southern Africa and from 3% to 7% in South-East Asia (UN region). In 2013, there were an estimated 18 million overweight children aged under 5 years

in Asia, 11 million in Africa and 4 million in Latin America and the Caribbean. There was little change in the prevalence of overweight in children in Latin America and the Caribbean over the last 13 years, but countries with large populations had levels of 7% and higher. It is estimated that the prevalence of overweight in children aged under 5 years will rise to 11% worldwide by 2025 if current trends continue (4).

**Fig. 7.3** Age-standardized prevalence of obesity in adults aged 18 years and over (BMI  $\geq 30$  kg/m<sup>2</sup>), by WHO region and World Bank income group, comparable country estimates, 2014

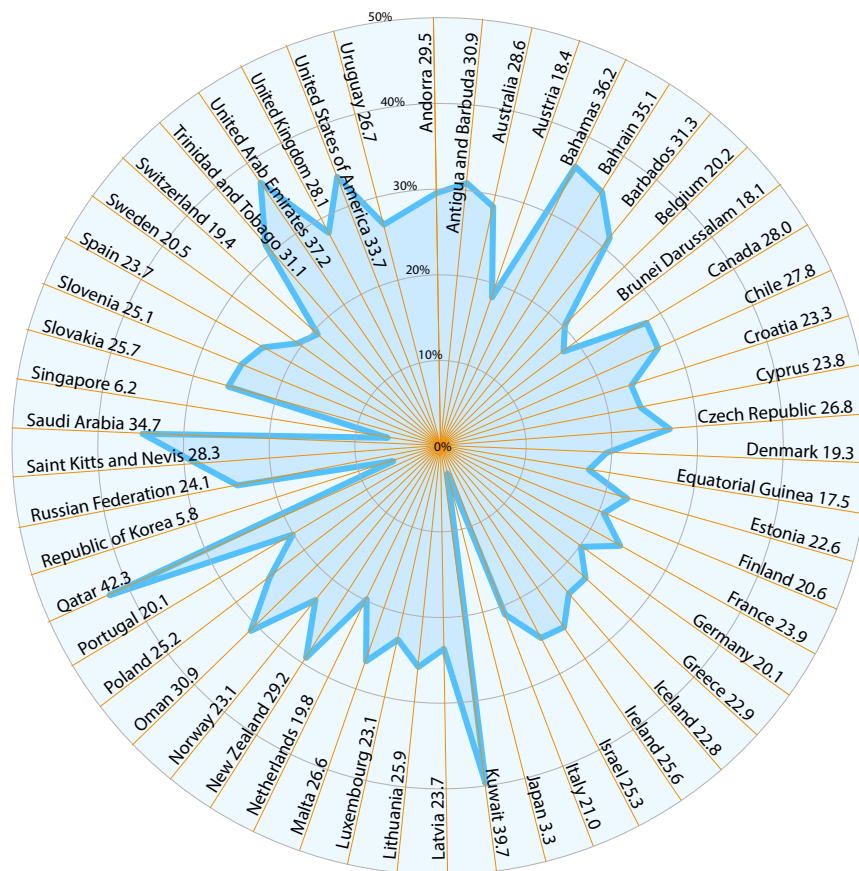


**Fig. 7.4** Age-standardized prevalence of overweight in children under five years of age, comparable estimates, 2013

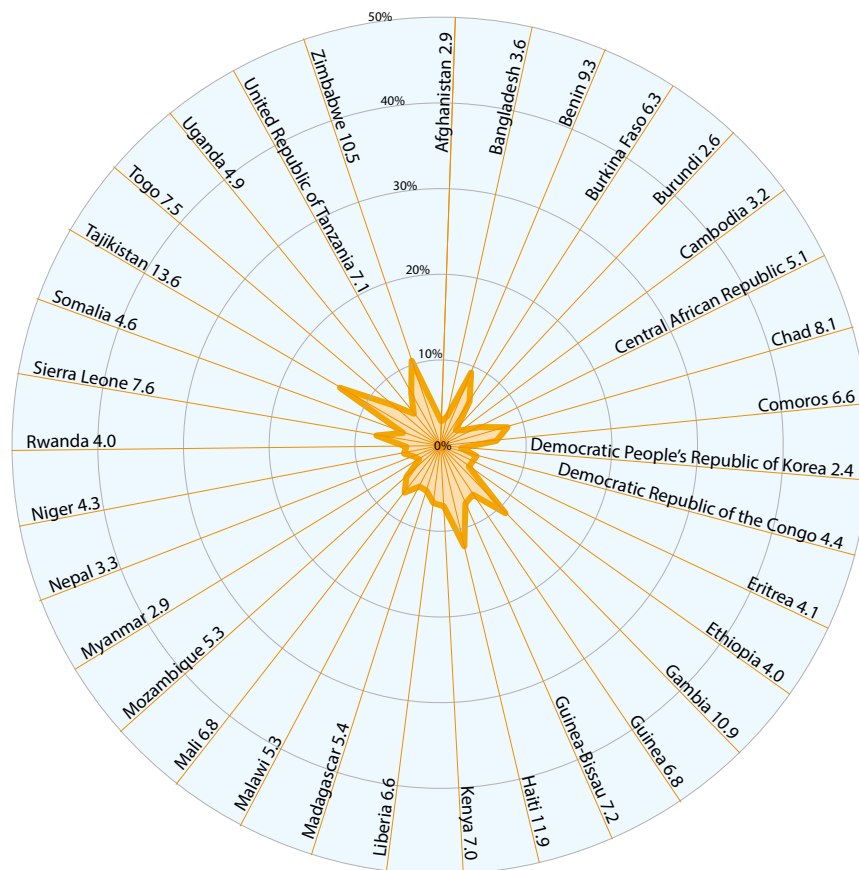


**Fig. 7.5** Age-standardized prevalence of obesity in adults aged 18 years and over, (BMI  $\geq 30$  kg/m<sup>2</sup>) (%), by individual country, and World Bank Income group, 2014

High-income



Low-income







There has been an increasing global recognition of the need for effective strategies to prevent and control childhood overweight and obesity. In 2012, the World Health Assembly agreed a target of no increase in childhood overweight by 2025 (5). To accelerate WHO's efforts to address the issue, in May 2014 the Director-General of WHO established a high-level Commission on Ending Childhood Obesity.

## Diabetes/raised blood glucose and its impact on health

Diabetes is a well-recognized cause of premature death and disability, increasing the risk of cardiovascular disease, kidney failure, blindness and lower-limb amputation (6). People with impaired glucose tolerance and impaired fasting glycaemia are also at risk of future development of diabetes and cardiovascular disease (7). In recent decades, the prevalence of diabetes has been increasing globally, and has been particularly accelerated in low- and middle-income countries. This rise is largely driven by modifiable risk factors – particularly physical activity, overweight and obesity (8). A few high-income countries have documented a levelling-off of obesity prevalence in children (9,10),

although the beneficial effect of this on diabetes risk will take time, unless a similar change occurs in adults. Population ageing is also an important factor, as glucose intolerance increases with age. Much of the diabetes burden can be prevented or delayed by behavioural changes favouring a healthy diet and regular physical activity.

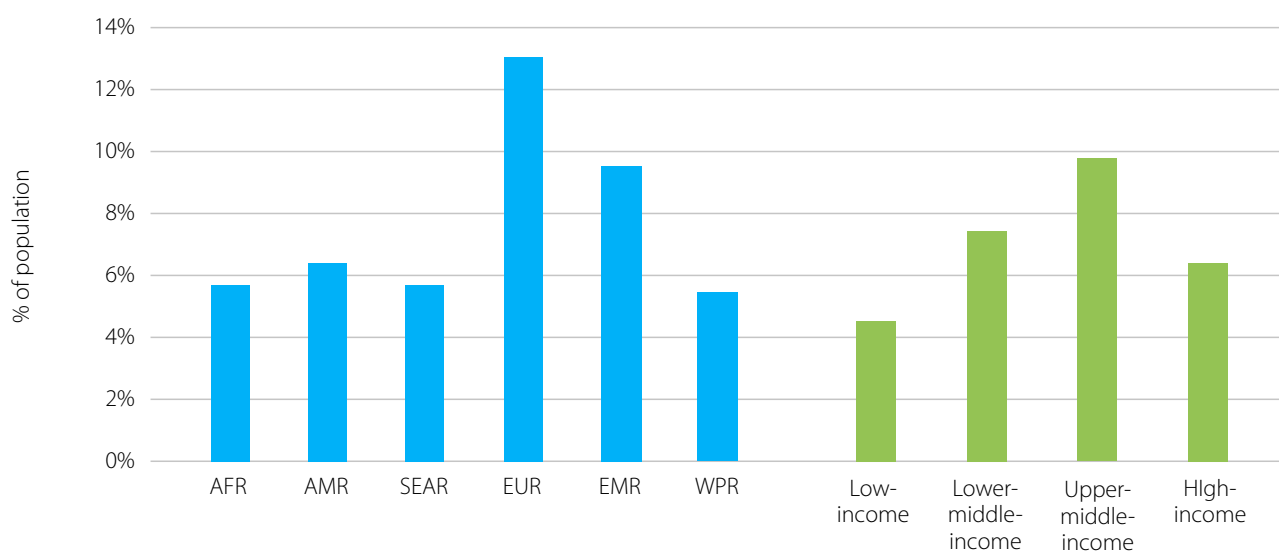
Diabetes was directly responsible for 1.5 million deaths in 2012 and 89 million DALYs. The global prevalence of diabetes (defined as a fasting plasma glucose value  $\geq 7.0$  mmol/L [126 mg/dl] or being on medication for raised blood glucose) was estimated to be 9% in 2014. The prevalence of diabetes was highest in the WHO Region of the Eastern Mediterranean Region (14% for both sexes) and lowest in the European and Western Pacific Regions (8% and 9% for both sexes, respectively) (see **Figs. 7.7** and **7.8**).

In general, low-income countries showed the lowest prevalence and upper-middle-income countries showed the highest prevalence of diabetes for both sexes (see **Fig. 7.9**).

## Monitoring the rates of obesity and diabetes

Indicators in the global monitoring framework (11) for monitoring progress in attaining this target are:

**Fig. 7.6** Prevalence of overweight in children aged under 5 years, by WHO region and World Bank income group, comparable estimates, 2013



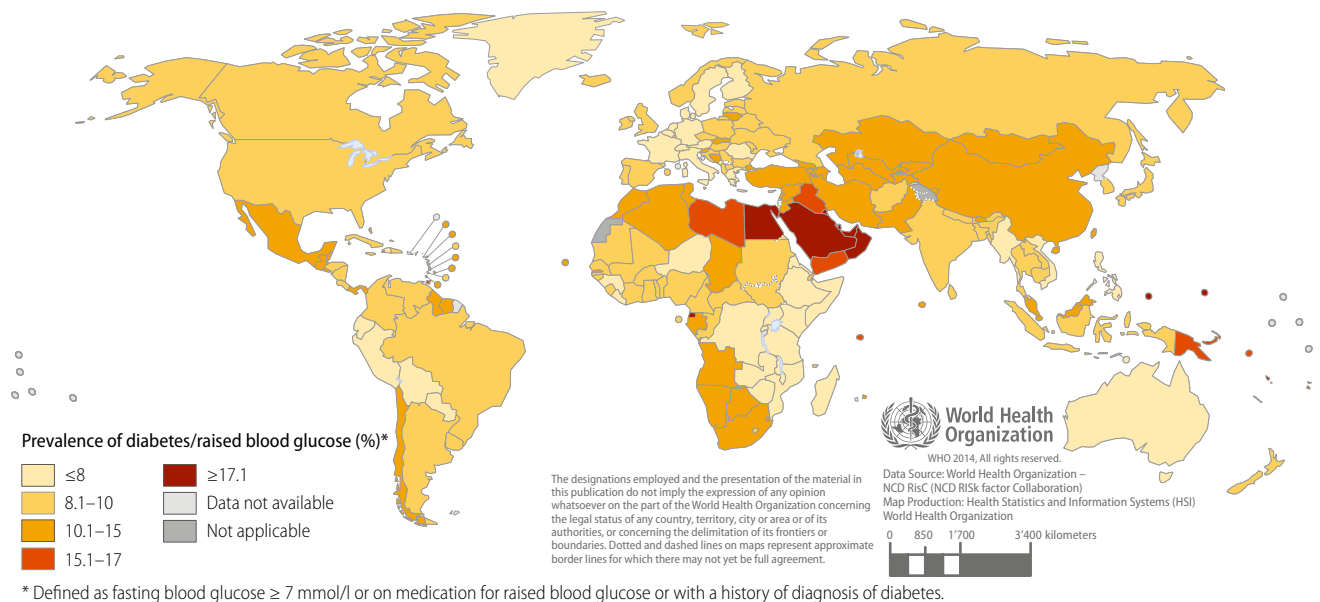
AFR=African Region, AMR=Region of the Americas, SEAR =South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region

1. age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years, or on medication for raised blood glucose;
2. age-standardized prevalence of overweight and obesity in persons aged 18+ years;
3. prevalence of overweight and obesity in adolescents.

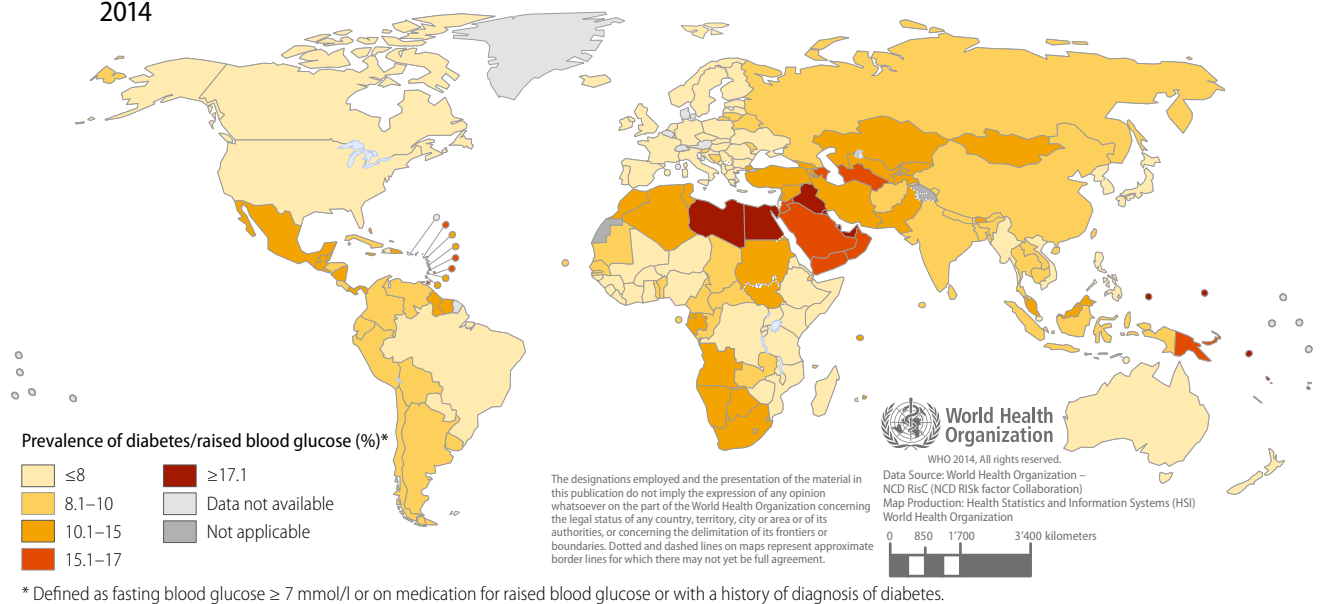
The measurement of overweight in children under 5 years is included in the global monitoring framework on maternal, infant and young child nutrition (12). Overweight is defined as having a weight-for-height above two standard deviations from the median.

WHO defines overweight in school-aged children and adolescents (persons aged 10–19 years)

**Fig. 7.7** Age-standardized prevalence of diabetes, (Fasting glucose  $\geq 7.0$  mmol/L, or on medication for raised blood glucose or with a history of diagnosis of diabetes), in men aged 18 years and over, comparable estimates, 2014

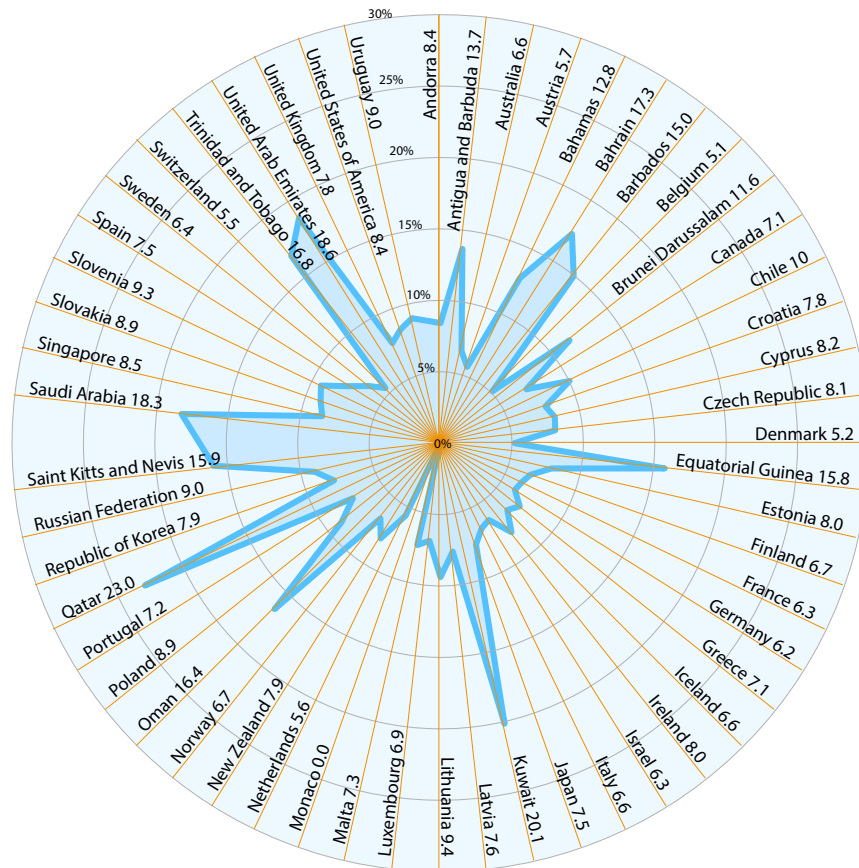


**Fig. 7.8** Age-standardized prevalence of diabetes (Fasting glucose  $\geq 7.0$  mmol/L, or on medication for raised blood glucose or with a history of diagnosis of diabetes), in women aged 18 years and over, comparable estimates, 2014

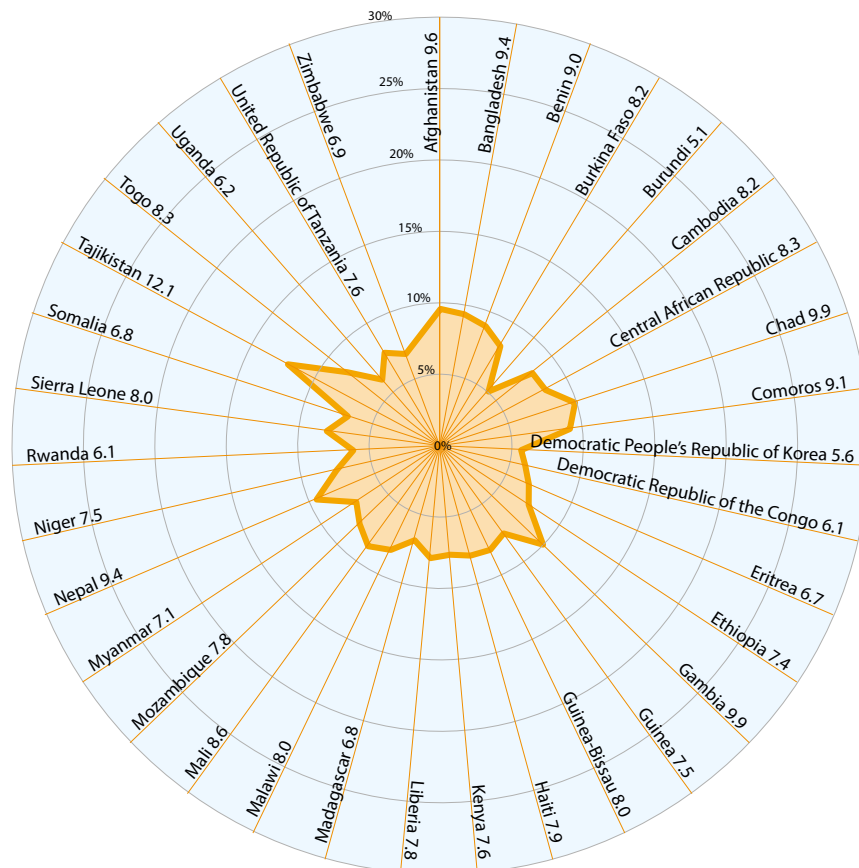


**Fig. 7.9** Age-standardized prevalence of diabetes in adults aged 18 years and over, (Fasting glucose  $\geq 7.0$  mmol/L, or on medication for raised blood glucose or with a history of diagnosis of diabetes) (%), by individual country, and World Bank Income group, 2014

High-income

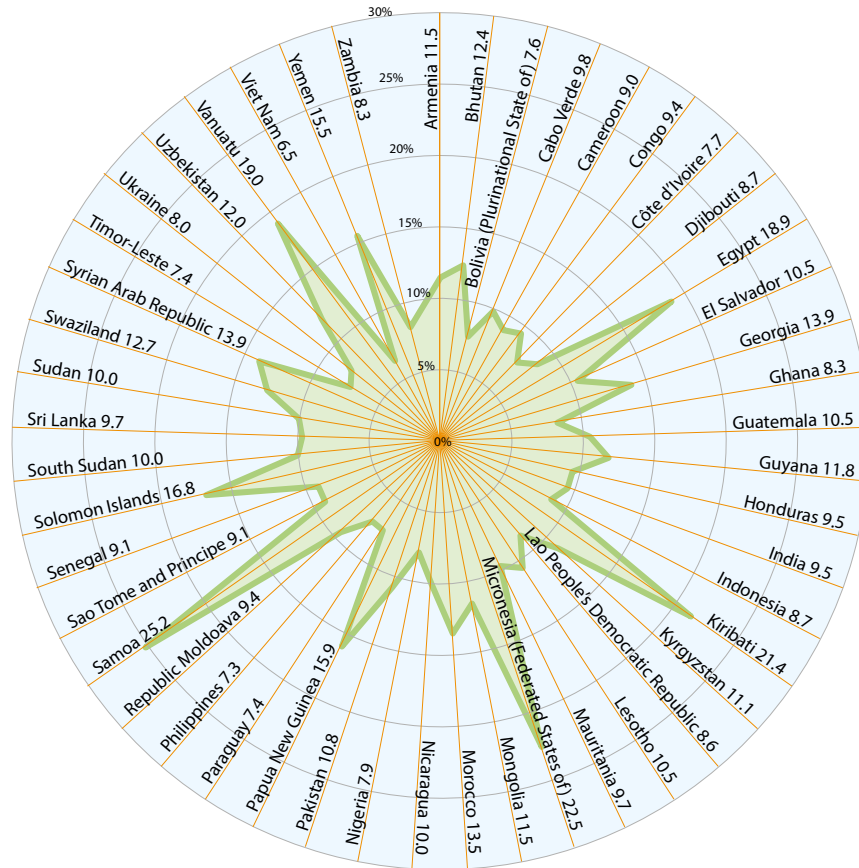


Low-income

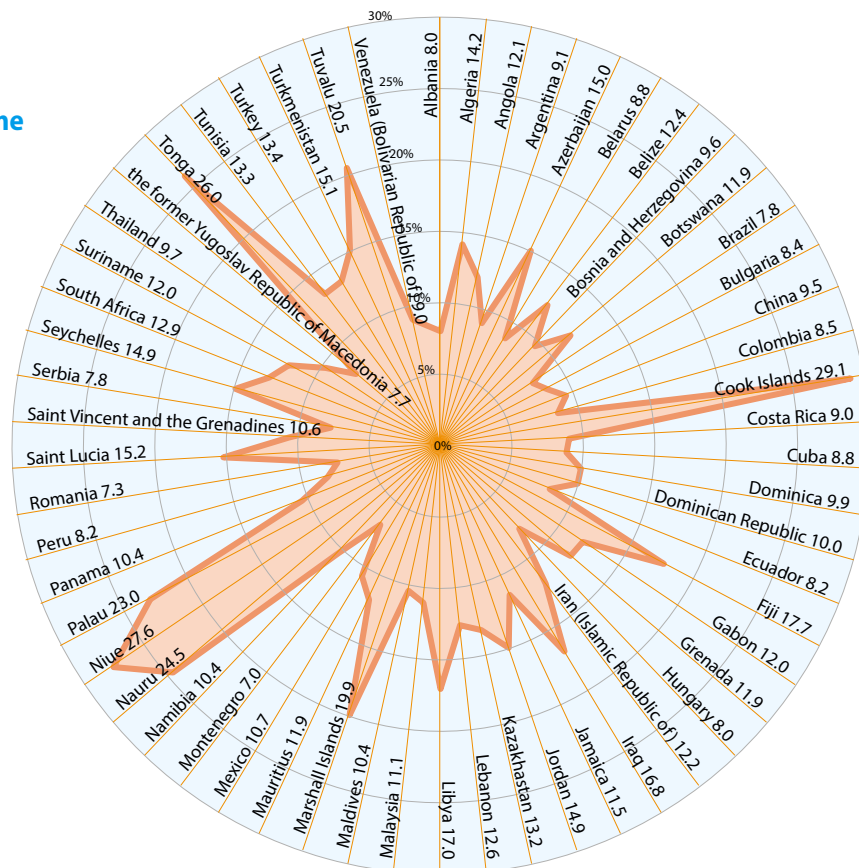




Low-middle-income



Upper-middle-income





### Box 7.1 Hungary – impact assessment of the Public Health Product Tax



On 19 July 2011 Hungary passed the law “Act CIII of 2011 on the Public Health Product Tax” related to tax on food and drink components with a high risk for health. The tax liability of a product depends on its sugar, salt and caffeine content. One year later, an impact assessment was conducted, based on surveys of the public and manufacturers. Results show that 40% of responding manufacturers changed the product formula to reduce the taxable ingredient. The sale of products subject to tax decreased by 27% and people consumed 25–35% fewer products subject to tax than one year earlier.

Sources: see references (25).

as one standard deviation BMI-for-age (equivalent to BMI 25 kg/m<sup>2</sup> at 19 years), and obesity in the same group as two standard deviations BMI-for-age (equivalent to BMI 30 kg/m<sup>2</sup> at 19 years) from the median (13).

The WHO STEPwise approach to Surveillance of NCD Risk Factors (STEPS) is used by many countries to track national prevalence data for obesity and raised blood glucose in adults (14). In some countries, demographic and health surveys also collect data on BMI. WHO’s Global school-based student health survey (15) is used in many countries to measure and monitor overweight and obesity in adolescents; while data in children aged under 5 years are collected routinely through demographic and health surveys, multiple indicator cluster surveys, and other surveys.

The national target can be fixed according to the epidemiological profile of each country and what might be achievable. The national target can aim to halt the epidemic and ultimately reverse the trend. Countries may consider an immediate focus on reducing the incidence of obesity in children and adolescents, and a longer-term target of reducing the prevalence in adults.

A zero increase in diabetes incidence rather than prevalence would be confirmation that modifiable risk factors are being controlled successfully. However, this is a much stricter target and measurement of the number of new cases would be too complex, since diabetes is asymptomatic and undiagnosed in 30–80% of cases (16).

## What are the cost-effective policies and interventions for reducing the prevalence of obesity and diabetes ?

Although evidence on what works as a package of interventions for obesity prevention is limited, much is known about promotion of healthy diets and physical activity, which are key to attaining the obesity and diabetes targets. Evidence of population-wide policies and settings-based and individual-based interventions that have worked in different countries is described below.

### Population-wide policies

Evidence suggests that changes in agricultural subsidies to encourage fruit and vegetable production could be beneficial in increasing the consumption of fruits and vegetables and improving dietary patterns (17). Evidence strongly supports the use of such subsidies and related policies to facilitate sustained long-term production, transportation and marketing of healthier foods (17).

Price is often reported as a barrier to the purchase and consumption of healthy foods (18). Pricing strategies that increase incentives for purchasing healthier food options also increase the purchase of those options (19). Taxation schemes that produce large changes in price can change purchasing habits and are likely to improve health (20,21).

Hungary introduced a “junk food tax” on foods high in sugar, salt and caffeine (see **Box 7.1**), and

**Box 7.2 Brazil – healthy school food policy**

Brazil's national school feeding programme, launched in 1955, is mentioned in the country's constitution and covers nearly 47 million children. Its objectives are to contribute to the growth, development and learning capabilities of students, to support the formation of healthy habits through food and nutrition education, and to promote local family farming through food purchase. School meals meet national nutrition standards, with mandatory inclusion of fruits and vegetables. The national programme requires that schools purchase locally grown or manufactured products, stimulating the local economy. Brazilian law requires that 70%

of the food served to children in school meal programmes is unprocessed (e.g. rice, beans, meat, fish, fruits or vegetables) and 30% is locally sourced. Regular government purchases from family farms have led to improved quality of unprocessed food and increased availability and consumption of fruits and vegetables by school children.

Sources: see references (34,35).

France introduced a tax on sweetened drinks (22). In 2013, the Mexican congress passed taxes on soda and junk food (23). Several other countries are also considering such taxes (24).

Trade and regulatory measures have also proven effective in reducing the availability of unhealthy foods and changing population dietary patterns (26,27). In 2000, Fiji banned the supply of mutton flaps (high in fat) under the Trading Standards Act (26). In Mauritius, the focus of regulation was the reduction of saturated fatty acids in cooking oil and its replacement with soybean oil. The policy is estimated to have changed consumption patterns favourably and reduced average total cholesterol levels (27). Measuring the impact of these approaches on obesity and diabetes is of utmost importance.

There is ample evidence that marketing of foods and non-alcoholic beverages influences children's knowledge, attitudes, beliefs and preferences. Based on this evidence, WHO has developed a set of recommendations and an implementation framework on the marketing of foods and non-alcoholic beverages to children (28). This aims to assist Member States to design and implement new policies, or strengthen existing ones, on food-marketing communications to children. To facilitate implementation, WHO has developed a regional nutrient profile model in the European Region, to guide the marketing of food and non-alcoholic beverages to

children. Other WHO regions are developing their own nutrition profile models.

Nutrition labelling can be useful in orienting consumers to products that contribute to a healthier diet. There is evidence that simple, front-of-pack labels on packaged foods, or point-of-purchase information in grocery stores, cafeterias or restaurants, can be beneficial, as can menu labelling to support healthier options (29–31). There is also evidence that combining nutrition labelling with environmental and/or nutrition education measures can be even more effective in changing consumer behaviour and consumption patterns (30).

Consumer awareness of healthy diet and physical activity can be achieved through sustained media and educational campaigns aimed at increasing consumption of healthy foods, or reducing consumption of less healthy ones and increasing physical activity. These campaigns have greater impact and are more cost-effective when used within multicomponent strategies (24).

**Settings-based interventions**

Settings-based interventions can be effective in preventing and controlling diabetes and obesity. A settings-based approach reaches families and communities where they live, work and play. Settings include schools, universities, workplaces, communities, and health-care and religious settings.

The school is an important setting for promoting healthy diets and physical activity. WHO's Health Promoting Schools Initiative (32) and the Nutrition-Friendly School Initiative (33) were developed to address the double burden of undernutrition and overweight/obesity that many countries face. A "whole of school" approach focused on improving both diet and physical activity (including provision of a healthy food option in school cafeterias, a supportive environment for physical activity, and specialized educational curricula) can be very effective in improving dietary patterns both inside and outside school (24,30,31). Provision of fresh fruit and vegetables to students at school can influence dietary behaviour outside school without extra cost (see **Box 7.2**) (22).

Worksite interventions addressing diet and physical activity are effective in changing behaviours and health-related outcomes (36,37). Workplace vending machine prompts, labels or icons can be successful in changing dietary patterns, when combined with increased availability of healthier food options (24). Healthy-eating messages in cafeterias and restaurants have been shown to stimulate consumption of healthy food – provided that healthy food items are made available as part of the intervention (38).

### Individual interventions

Diet and physical activity counselling through primary health care have the potential to change behaviours related to obesity and diabetes (39). The provision of dietary counselling, especially as a component of a total-risk approach, has the potential to be beneficial (39).

Positive results of effective risk-factor control can be seen in a short time, since any reduction in body weight and increase in physical activity has a beneficial effect on the risk of diabetes. This intervention has been scaled up to the whole population in a few high-income countries, and encouraging results on feasibility have been reported from Finland (40). However, it has not been implemented at scale in low- and middle-income countries. There is currently no evidence on the effectiveness of large-scale interventions on the whole population

for reversing or stopping the increasing prevalence of overweight and obesity. There is some evidence that diabetes incidence, prevalence and mortality have been reduced where external circumstances imposed a lowering of the caloric intake and an increase in physical activity on the whole population (41,42).

## Actions required to attain this target

The target of no increase in prevalence of obesity and diabetes is closely linked with the target of decreasing physical inactivity (see **Chapter 3**). To maintain a healthy weight, there must be a balance between energy consumed (through diet) and energy expended (through physical activity). Failure to breastfeed, or a shorter duration of breastfeeding, are also associated with a higher risk of overweight later in life (43).

To prevent obesity, multisectoral population-based action is required, focusing on prenatal, infancy and childhood health actions targeting the most vulnerable groups. The ministry of health will need to take leadership and engage with other relevant government sectors in a national multisectoral action plan (see **Chapter 10**). Policies should simultaneously address different sectors that contribute to the production, distribution and marketing of food, while concurrently shaping an environment that facilitates and promotes adequate levels of physical activity (44–47).

For the management of obesity, low-energy diets are effective in the short term, but reducing inactivity, increasing walking, and developing an activity programme can increase the effectiveness of obesity therapy. Treating associated health risks and established complications is important. In addition, there needs to be strengthening of health systems to address obesity and diabetes as clinical entities through primary health-care services for early detection and management.

Regular monitoring of the prevalence of obesity and diabetes should be instituted as part of routine NCD surveillance.

The agenda for attaining this target could implement and evaluate the following:

- multisectoral population-based policies to influence production, marketing and consumption of healthy foods;
- fiscal policies to increase the availability and consumption of healthy food and reduce consumption of unhealthy ones;
- promotion of breast feeding and healthy complementary feeding according to WHO recommendations (12);
- policies and interventions to attain the target on reducing physical inactivity;
- education and social marketing campaigns focused on impacting dietary and physical activity behaviour in both children and adults;
- implementation of restrictions on marketing of foods and beverages that are high in sugar, salt and fat to children;
- measures to create healthy eating environments in settings (schools, workplaces, universities, religious settings, villages, cities) and communities, including disadvantaged communities;
- research to generate evidence on the effectiveness of individual and population-wide interventions to prevent and control obesity and diabetes.

To be effective, proposed actions need to be specific to the country or region and should take into account the available resources and the cultural and ethnic differences. It is important to make decisions regarding policy options and priority areas locally, and to engage all relevant stakeholders. WHO has developed a tool to identify and prioritize childhood obesity-prevention policies and interventions (48).

## References

1. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380(9859):2224–2260. doi:10.1016/S0140-6736(12)61766-8.
2. Obesity: preventing and managing the global epidemic. Report of a WHO consultation. Geneva: World Health Organization; 2000 (WHO Technical Report Series, No. 894; [http://www.who.int/nutrition/publications/obesity/WHO\\_TRS\\_894/en/](http://www.who.int/nutrition/publications/obesity/WHO_TRS_894/en/), accessed 5 November 2014).
3. WHO Global Database on Child Growth and Malnutrition. 2013 joint child malnutrition estimates – levels and trends (<http://www.who.int/nutgrowthdb/estimates2013/en/>, accessed 5 November 2014).
4. UNICEF-WHO-The World Bank. Joint child malnutrition estimates (<http://apps.who.int/gho/data/node.main.ngest?lang=en>)
5. Resolution WHA65.6. Maternal, infant and young child nutrition. In: Sixty-fifth World Health Assembly, Geneva, 21–26 May 2012. Geneva: World Health Organization; 2012 ([http://apps.who.int/gb/ebwha/pdf\\_files/WHA65/A65\\_R6-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA65/A65_R6-en.pdf), accessed 5 November 2014).
6. Levitan B, Song Y, Ford ES, Liu S. Is nondiabetic hyperglycaemia a risk factor for cardiovascular disease? A meta-analysis of prospective studies. *Arch Intern Med*. 2004;164:2147–55.
7. Global status report on noncommunicable diseases 2010. Geneva: World Health Organization; 2011 ([http://www.who.int/nmh/publications/ncd\\_report\\_full\\_en.pdf](http://www.who.int/nmh/publications/ncd_report_full_en.pdf), accessed 3 November 2014).
8. Finucane MM, Stevens GA, Cowan MJ, Danaei G, Lin JK, Paciorek CJ et al.; Global Burden of Metabolic Risk Factors of Chronic Diseases Collaborating Group (Body Mass Index). National, regional, and global trends in body-mass index since 1980: systematic analysis of health examination surveys and epidemiological studies with 960 country-years and 9.1 million participants. *Lancet*. 2011;377:557–67. doi:10.1016/S0140-6736(10)62037-5.
9. de Wilde JA, Verkerk PH, Middelkoop BJ. Declining and stabilising trends in prevalence of overweight and obesity in Dutch, Turkish, Moroccan and South Asian children 3–16 years of age between 1999 and 2011 in the Netherlands. *Arch Dis Child*. 2014;99(1):46–51. doi:10.1136/archdischild-2013-304222.
10. Murer SB, Saarsalu S, Zimmermann MB, Aeberli I. Pediatric adiposity stabilized in Switzerland between 1999 and 2012. *Eur J Nutr*. 2014;53(3):865–75.



11. NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
12. WHA resolution 65/6. Maternal, infant and young child nutrition. In: Sixty-fifth World Health Assembly, Geneva, 21–26 May 2012. Geneva: World Health Organization; 2012 ([http://apps.who.int/gb/ebwha/pdf\\_files/WHA65/A65\\_R6-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA65/A65_R6-en.pdf), accessed 6 November 2014).
13. de Onis M, Lobstein T. Defining obesity risk status in the general childhood population: Which cut-offs should we use? *Int J Pediatr Obes.* 2010;5(6):458–60. doi:10.3109/17477161003615583.
14. World Health Organization. Chronic diseases and health promotion. STEPwise approach to surveillance (STEPS) (<http://www.who.int/chp/steps/en/>, accessed 5 November 2014).
15. World Health Organization. Global school-based student health survey (GSHS) (<http://www.who.int/chp/gshs/en/>, accessed 6 November 2014).
16. Beagley J, Guariguata L, Weil C, Motala AA. Global estimates of undiagnosed diabetes in adults. *Diabetes Res Clin Pract.* 2014;103(2):150–60. doi:10.1016/j.diabres.2013.11.001.
17. Wallinga D. Agricultural policy and childhood obesity: a food systems and public health commentary. *Health Aff (Millwood).* 2010;29(3):405–10. doi:10.1377/hlthaff.2010.0102.
18. Waterlander WE, de Mul A, Schuit AJ, Seidell JC, Steenhuis IH. Perceptions on the use of pricing strategies to stimulate healthy eating among residents of deprived neighbourhoods: a focus group study. *Int J Behav Nutr Phys Act.* 2010;7:44. doi:10.1186/1479-5868-7-44.
19. Phipps EJ, Braitman LE, Stites SD, Wallace SL, Singletary SB, Hunt LH. The use of financial incentives to increase fresh fruit and vegetable purchases in lower-income households: results of a pilot study. *J Health Care Poor Underserved.* 2013;24(2):864–74. doi:10.1353/hpu.2013.0064.
20. Mytton OT, Clarke D, Rayner M. Taxing unhealthy food and drinks to improve health. *BMJ.* 2012;344:e2931–8. doi:10.1136/bmj.e2931.
21. Sharma A, Hauck K, Hollingsworth B, Siciliani L. The effects of taxing sugar-sweetened beverages across different income groups. *Health Econ.* 2014 Sep;23(9):1159–84. doi:10.1002/hec.3070.
22. Villanueva T. European nations launch tax attack on unhealthy foods. *CMAJ.* 2011;183(17):E1229–30. doi:10.1503/cmaj.109-4031.
23. Mexico enacts soda tax in effort to combat world's highest obesity rate. *The Guardian*, 16 January 2014 (<http://www.theguardian.com/world/2014/jan/16/mexico-soda-tax-sugar-obesity-health>, accessed 5 November 2014).
24. Cecchini M1, Sassi F, Lauer JA, Lee YY, Guajardo-Barron V, Chisholm D. Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness. *Lancet.* 2010;376(9754):1775–84. doi:10.1016/S0140-6736(10)61514-0.
25. Act CIII of 2011 on the Public Health Product Tax. Budapest: Hungarian National Institute for Health and Development; 2013 ([http://www.oefi.hu/NETA\\_hatasvizsgalat.pdf](http://www.oefi.hu/NETA_hatasvizsgalat.pdf), accessed 6 November 2014).
26. Snowdon W, Thow AM. Trade policy and obesity prevention: challenges and innovation in the Pacific Islands. *Obes Rev.* 2013;13(Suppl 2):150–8. doi:10.1111/obr.12090.
27. Uusitalo U, Feskens EJ, Tuomilehto J, Dowse G, Haw U, Fareed D et al. Fall in total cholesterol concentration over five years in association with changes in fatty acid composition of cooking oil in Mauritius: cross sectional survey. *BMJ.* 1996;313:1044–6.
28. Set of recommendations on the marketing of foods and non-alcoholic beverages to children. Geneva: World Health Organization; 2010 (<http://www.who.int/dietphysicalactivity/publications/recsmarketing/en/>, accessed 5 November 2014).
29. Capacci S, Mazzocchi M, Shankar B, Macias JB, Verbeke W, Pérez-Cueto FJ et al. Policies to promote healthy eating in Europe: a structured review of policies and their effectiveness. *Nutr Rev.* 2012;70(3):188–200. doi: 10.1111/j.1753-4887.2011.00442.x.
30. School policy framework: implementation of the WHO global strategy on diet, physical activity and health. Geneva: World Health Organization 2008 (<http://www.who.int/dietphysicalactivity/SPF-en-2008.pdf>, accessed 1 December 2014).
31. Branca F, Nikogosian H, Lobstein T, editors. The challenge of obesity in the WHO European Region and the strategies for response. Copenhagen: World Health Organization Regional Office for Europe; 2007 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/98243/E89858.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0008/98243/E89858.pdf?ua=1), accessed 5 November).
32. Health promoting schools. A healthy setting for living, learning and working. Geneva: World Health Organization; 1998 ([http://www.who.int/school\\_youth\\_health/media/en/92.pdf](http://www.who.int/school_youth_health/media/en/92.pdf), accessed 6 November 2014).
33. World Health Organization. Nutrition-friendly schools initiative ([http://www.who.int/nutrition/topics/nutrition\\_friendly\\_schools\\_initiative/en/](http://www.who.int/nutrition/topics/nutrition_friendly_schools_initiative/en/), accessed 6 November 2014).
34. Fraser B. Latin American countries crack down on junk food. *Lancet.* 2013;382:385–6.
35. State of school feeding worldwide. Rome: World Food Programme; 2013 (<http://documents.wfp.org/stellent/groups/public/documents/communications/wfp257481.pdf>, accessed 6 November 2014) (34).



36. Task Force on Community Preventive Services. A recommendation to improve employee weight status through worksite health promotion programs targeting nutrition, physical activity, or both. *Am J Prev Med.* 2009;37(4):358–9. doi:10.1016/j.amepre.2009.07.004.
37. Preventing noncommunicable diseases in the workplace through diet and physical activity. WHO/World Economic Forum report of a joint event. Geneva: World Health Organization/World Economic Forum; 2008 ([http://whqlibdoc.who.int/publications/2008/9789241596329\\_eng.pdf?ua=1](http://whqlibdoc.who.int/publications/2008/9789241596329_eng.pdf?ua=1), accessed 5 November 2014).
38. Uglem S, Stea TH, Raberg Kjøllesdal MK, Frölich W, Wandel M. A nutrition intervention with a main focus on vegetables and bread consumption among young men in the Norwegian National Guard. *Food Nutr Res.* 2013 Oct 21:57. doi:10.3402/fnr.v57i0.21036 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3805840/>, accessed 5 November 2014).
39. Package of essential noncommunicable (WHO PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2013 ([http://www.who.int/nmh/publications/essential\\_ncd\\_interventions\\_lr\\_settings.pdf](http://www.who.int/nmh/publications/essential_ncd_interventions_lr_settings.pdf), accessed 5 November 2014).
40. Tuomilehto J, Lindström J, Eriksson JG, Valle TT, Hämäläinen H, Ilanne-Parikka P et al; Finnish Diabetes Prevention Study Group. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med.* 2001;344(18):1343–50.
41. Uusitupa M, Tuomilehto J, Puska P. Are we really active in the prevention of obesity and type 2 diabetes at the community level? *Nutr Metab Cardiovasc Dis.* 2011;21(5):380–9. doi:10.1016/j.numecd.2010.12.007.
42. Franco M, Bilal U, Orduñez P, Benet M, Morejón A, Caballero B et al. Population-wide weight loss and regain in relation to diabetes burden and cardiovascular mortality in Cuba 1980–2010: repeated cross sectional surveys and ecological comparison of secular trends. *BMJ.* 2013;346:f1515. doi:10.1136/bmj.f1515.
43. Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, de Onis M et al; Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet.* 2013;382(9890):427–51. doi:10.1016/S0140-6736(13)60937-X.
44. Hawkes C, Jewell J, Allen K. A food policy package for healthy diets and the prevention of obesity and diet-related non-communicable diseases: the NOURISHING framework. *Obes Rev.* 2013;14 (Suppl 2):159–68. doi:10.1111/obr.12098.
45. Interventions on diet and physical activity: what works. Summary report. Geneva: World Health Organization; 2009 (<http://www.who.int/dietphysicalactivity/summary-report-09.pdf>, accessed 5 November 2014).
46. Global recommendations on physical activity for health. Geneva: World Health Organization; 2010 ([http://www.who.int/dietphysicalactivity/factsheet\\_recommendations/en/](http://www.who.int/dietphysicalactivity/factsheet_recommendations/en/), accessed 5 November 2014).
47. Population-based approaches of childhood obesity prevention. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/80149/1/9789241504782\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/80149/1/9789241504782_eng.pdf), accessed 1 December 2014).
48. Prioritizing areas for action in the field of population-based prevention of childhood obesity. A set of tools for Member States to determine and identify priority areas for action. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/80147/1/9789241503273\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/80147/1/9789241503273_eng.pdf), accessed 5 November 2014).



# Key points

- Cardiovascular disease was the leading cause of NCD deaths in 2012 and was responsible for 17.5 million deaths.
- Heart attacks and strokes can be prevented if high-risk individuals are detected early and treated.
- A very cost-effective intervention, which can be implemented in primary care even in resource-constrained settings, is available for prevention of heart attacks and strokes.
- Prevention of heart attacks and strokes through a total cardiovascular risk approach is more cost-effective than treatment decisions based on individual risk factor thresholds only, and should be part of the basic benefits package for pursuing universal health coverage.
- Integrated programmes based on a total-risk approach need to be established in primary care, using hypertension, diabetes and other cardiovascular risk factors as entry points.
- Achieving this target requires strengthening of the key components of the health system including sustainable health-care financing, to ensure access to basic health technologies and essential NCD medicines.
- The attainment of this target will contribute to attainment of the target on reducing premature mortality from NCDs.



## **Global target 8: At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes**

### **Cardiovascular disease: heart disease and stroke**

Of the 17.5 million deaths due to cardiovascular disease in 2012, an estimated 7.4 million were due to heart attacks (ischaemic heart disease) and 6.7 million were due to strokes (1).

Over the last four decades, the rate of death from cardiovascular diseases has declined in high-income countries, owing to reductions in cardiovascular risk factors and better management of cardiovascular disease (2). Recent studies indicate that, although the risk-factor burden is lower in low-income countries, the rates of major cardiovascular disease and death are substantially higher in low-income countries than in high-income countries (3). Currently, over 80% of cardiovascular deaths occur in low- and middle-income countries. In 2012, heart disease and stroke were among the top three causes of years of life lost due to premature mortality globally (4).

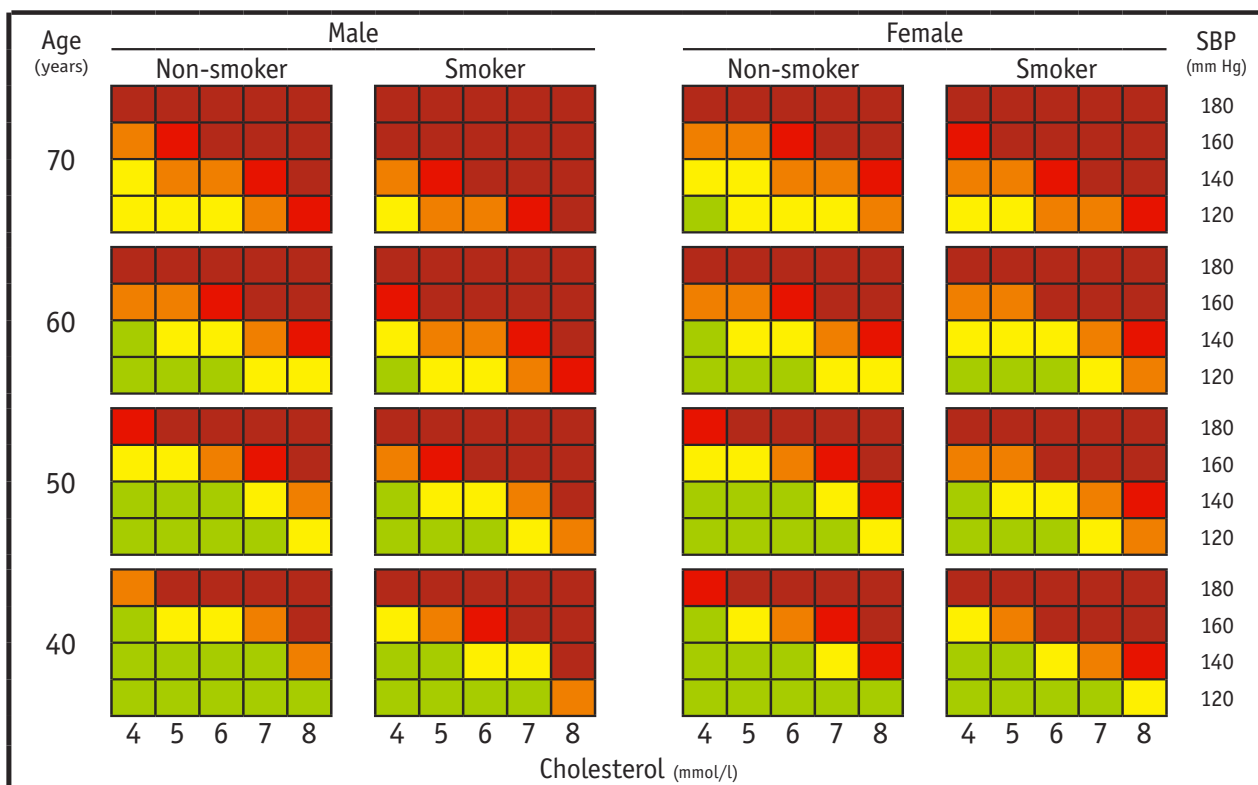
The current high rates of premature cardiovascular death are unacceptable because very cost-effective interventions are available to prevent heart disease and stroke (5–7).

The target to reduce heart attacks and strokes aims to improve the coverage of drug treatment and counselling to prevent heart attacks and strokes in people with raised cardiovascular risk and established disease. It is an affordable intervention that can be delivered through a primary health-care approach, even in resource-constrained settings (8–12).

### **What are the cost-effective policies and interventions to prevent heart attacks and strokes?**

First heart attacks and strokes can be prevented if high-risk individuals are detected early and treated (6). For eligible persons aged 40–79 years, a regimen of aspirin, statin and two agents to lower blood pressure has been estimated to avert about one fifth of cardiovascular deaths, with 56% of deaths averted in people under 70 years (13). This intervention can be delivered to persons with raised cardiovascular risk (including those with hypertension, diabetes and other cardiovascular risk factors with medium-to-high cardiovascular risk) through integrated primary care programmes (9–11).

Fig. 8.1 WHO/ISH risk prediction chart



An approach that addresses total cardiovascular risk is more cost effective than approaches that make treatment decisions based on individual risk-factor thresholds only (e.g. hypertension, hypercholesterolaemia) (6,9). A total-risk approach recommended by WHO enables integrated management of hypertension, diabetes and other cardiovascular risk factors in primary care, and targets available resources at persons most likely to develop heart attacks, strokes and diabetes complications (10,11).

In addition to first attacks, recurrent heart attacks and strokes also need to be prevented in those with established disease (secondary prevention). These persons face considerably greater risk of recurrent vascular events and are much more likely to die in a recurrent event. Aspirin, beta-blockers and angiotensin-converting enzyme inhibitors, together with smoking cessation, could prevent up to three quarters of recurrent heart attacks and strokes (7). However, a sole focus on secondary prevention is insufficient to attain this target, as a considerable number of heart attacks and strokes are first attacks

and many persons do not survive the first attack, particularly in low- and middle-income countries with weak emergency health services.

It has been proposed that administration of a fixed-dose combination of aspirin, statin and anti-hypertensive medications (polypill) to all individuals aged over 55 years, regardless of cardiovascular risk status, is a suitable approach for preventing heart attacks and strokes (14). However, there is no definite evidence to support such mass drug treatment, and the efficacy, long-term risks, sustainability and cost effectiveness of the polypill remain to be proven. Overall, results of clinical trials conducted to date show that fixed-dose combination therapy is associated with modest increases in adverse events, but better adherence to treatment, compared to multiple single agents (15). As yet, there are no clinical trials with any fixed-dose combinations that are powered to show differences in morbidity and mortality. Further research, including cost-effectiveness studies, is necessary before considering widespread use of fixed-dose combinations. Furthermore, the use of a

polypill should not undermine comprehensive public health approaches to NCD prevention and control, or efforts to strengthen health systems in low- and middle-income countries.

## Monitoring coverage to prevent heart attacks and strokes

The indicator for monitoring this target in the global monitoring framework (12, see **Annex 1**) is the proportion of eligible persons receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.

Eligible persons are those aged 40 years and older with a 10-year cardiovascular disease risk  $\geq 30\%$  (based on WHO/ISH risk-prediction charts, see **Fig 8.1**), including those with existing cardiovascular disease. Drug therapy is defined as taking medications for primary and secondary prevention of heart attacks and strokes, based on WHO recommendations (6,7,9,10). This includes medications for controlling diabetes, hypertension, blood cholesterol and blood coagulation, based on WHO recommendations. Counselling is defined as receiving advice from a doctor or other health worker to quit using tobacco or not start, reduce salt in the diet, eat at least five servings of fruit and/or vegetables per day, reduce fat in the diet, start or do more physical activity, maintain a healthy body weight, or lose weight. Data on monitoring coverage of this essential health service should be gathered from a population-based (preferably nationally representative) multiple risk factor survey, that also records the history of cardiovascular disease, and counselling and drug therapy to reduce cardiovascular risk including the use of statins.

## Progress achieved

In the global capacity assessment survey conducted in 2013, 85% of countries reported offering risk-factor and disease management in their primary health-care systems (16). Low-income countries were less likely to have these services at the primary care level. Overall, 94% of countries indicated that they were

able to screen for diabetes, with 92% having staff generally available to do the testing, but the availability of tests and staff was low in low-income countries. For instance, while 80% of all countries reported having tests and procedures to assay cholesterol, only 34% of low-income countries reported having these available, compared to 77% of lower-middle-income countries and 100% of high-income countries. While the majority of countries (76%) reported having guidelines for management of cardiovascular disease, only about one third reported having fully implemented the guidelines.

More detailed studies reveal significant gaps in the provision of interventions to prevent heart attacks and stroke, even in high-income countries. In a study conducted in 22 European countries, the proportion of patients with heart disease and prevalent diabetes reaching the treatment targets was 20% for blood pressure, 53% for low-density lipoprotein cholesterol and 22% for haemoglobin A<sub>1c</sub> (HbA<sub>1c</sub>) (17). In another European study on secondary prevention and risk-factor control in patients after ischaemic stroke, 50% of patients did not achieve optimal risk-factor targets (18). Not surprisingly, a much worse situation has been documented in low- and middle-income countries (19,20). In one study, the percentage of those with heart attacks who received beta-blockers was 48%, angiotensin-converting enzyme inhibitors 40%, and statins only 21% (19). In a more recent study in three countries in South-East Asia, over 80% of patients received no effective drug treatment after heart attacks and strokes (20). Poor access to basic services in primary care, lack of affordability of laboratory tests and medicines, inappropriate patterns of clinical practice, and poor adherence to treatment were some of the main reasons for the treatment gaps.

In low- and middle-income countries, the primary care level of the health system, which has to play a critical role in delivering these interventions, is often the weakest. An evaluation of the capacity of primary care facilities to implement interventions to prevent heart attacks, strokes and other NCD complications in eight low- and middle-income countries showed major deficits in health financing, service delivery, access to basic technologies and medicines, medical



### Box 8.1 Phased scale-up of total-risk approach for prevention of heart attacks and strokes in primary care



In order to attain this health-system target on prevention of heart attacks and strokes, several low- and middle-income countries (e.g. Bahrain, Benin, Bhutan, Democratic People's Republic of Korea, Eritrea, Ethiopia, Fiji, Guinea, Indonesia, Kiribati, Kyrgyzstan, Lebanon, Myanmar, Philippines, Republic of Moldova, Samoa, Sierra Leone, Solomon islands, Sri Lanka, Sudan, Tajikistan, Togo, Tonga, Turkey, Uzbekistan, Viet Nam) have taken steps to strengthen primary care for integration of NCD services. They have assessed the capacity of primary care for implementing a total-risk approach. Primary care workers, including family practitioners, are being trained to assess and manage cardiovascular risk, using tools of the WHO

*Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings* (22). Some countries have planned national scale-up through a phased approach, as outlined below:

#### Phase 1: Conduct situation analysis

- Create a conducive policy environment: include prevention of heart attacks and strokes through the total-risk approach in the essential services package and set national targets

#### Phase 2: Address key gaps and strengthen the health system as far as possible

#### Phase 3: Achieve optimum NCD care within the constraints of the situation

- Estimate the cost of scale-up and track resources
- Identify/correct missed opportunities
- Integrate vertical disease-specific primary care programmes (e.g. on hypertension, diabetes)

#### Phase 4: Systematic scale-up and monitoring

- Strengthen supply and quality of services, with emphasis on primary care
- Improve demand for primary care
- Find innovative solutions to overcome barriers to improving supply and demand
- Monitor performance and progress towards attaining the target

Sources: see references (22-25,32).

information systems, and the health workforce (21). Overall, in most low- and middle-income countries, coverage of this essential individual intervention for prevention of heart attacks and strokes is low, with very slow progress in scaling up. However, as many country examples demonstrate (see **Boxes 8.1–8.4**), if there is sufficient political commitment and sustainable action, the current situation can be changed gradually, by strengthening the health system, with a special focus on primary care.

## Actions required to attain this target

A comprehensive set of policy options for attaining this target is listed under objective 4 (Strengthen

and orient health systems to address the prevention and control of NCDs) of the Global NCD Action Plan (5). Many challenges need to be overcome in implementing these policy options. One challenge is to give priority and wider coverage to this very cost-effective high-impact NCD intervention (“best buy”), in moving towards universal health coverage. A second is to address health-system gaps through mechanisms that are sensitive to specific contexts. A third is to develop innovative approaches to expand coverage and track progress as health systems gain capacity in service delivery. Informed decisions need to be made about the sequence of action and the pace at which services are expanded, on the basis of a situation analysis.

### Box 8.2 High-level commitment to strengthen primary care for prevention of heart attacks and strokes in Pacific Island countries



At a joint meeting in July 2014, Economic and Health Ministers of Pacific Island countries agreed to improve the efficiency and impact of existing health budgets, by reallocating scarce health resources to targeted primary and secondary prevention of cardiovascular disease and diabetes, including implementation of WHO PEN (22).

Sources: see references (23).

### Box 8.3 Health-system strengthening to improve NCD outcomes: Bahrain, the West Bank and Gaza Strip, Philippines



Bahrain's ministry of health has taken steps to improve NCD services through a primary health-care approach. In line with the protocols of WHO PEN (22), primary care clinics have been strengthened to address NCDs. The clinics are run by teams consisting of a certified family physician, a trained NCD nurse and a health educator. Clinics cover a wide range of activities, including assessment of risk factors, early detection and management of NCDs and complications, and provision of counselling on diet, physical activity, weight control, smoking cessation and self-care. This approach has improved coverage of key NCD interventions and patient satisfaction.

The ministry of health of the Palestinian Authority adopted WHO PEN (22), in an attempt to move away from a vertical approach. The programme has been piloted in two districts in the West Bank and Gaza Strip. Reviews have included a register review, clinical audit and staff satisfaction surveys, and routine service data have been used to engage staff in analysing trends and quality of performance. Results indicate that on-site training, backed with regular structured supervision and clinical audits, are key elements in improving the quality of care and promoting a sense of accountability.



In Pateros, Metro Manila, Philippines, key activities to introduce the WHO PEN package (22) have been implemented, including: baseline assessment of capacity, consultation with stakeholders, procurement of essential technologies and medicines, training of health-care providers and computerization of the health information system. Cardiovascular risk assessment has been integrated with other public health programmes. The referral system has been strengthened by involving referral doctors during training and drafting a referral protocol. High-visibility NCD days were organized by community health volunteers, to improve community awareness of the availability of services and to promote compliance.

Sources: see references (22,24,25).

### Give priority to attaining this target in moving towards universal health coverage

Attainment of this target requires priority to be accorded to the prevention of heart attacks and strokes, along the route to attaining universal health coverage. Many low- and middle-income

countries are making progress in advancing the universal health coverage agenda (see **Box 8.5**). They are increasingly recognizing that NCD programmes that are focused on inpatient care may neither fully protect against financial risk nor cover services that improve health cost effectively, and that coverage of essential interventions in primary

### Box 8.4. Expansion of access to primary health care in Brazil



Progress on prevention and control of NCDs reported from Brazil can be ascribed largely to political commitment, a focus on social determinants of health, implementation of a comprehensive national health system with strong social participation, and expansion of access to primary health care. Age-adjusted NCD mortality is falling by 1.8% per year, with declines primarily for cardiovascular and chronic respiratory diseases. The prevalence of diabetes, hypertension and obesity, however, is rising, owing to unfavourable changes in diet and physical activity.

Source: see reference (26).

### Box 8.5 Coverage of NCD services in the context of progressive realization of universal health coverage



Some low- and middle-income countries are making progress towards providing the entire population with universal access to a benefit package that includes essential NCD interventions. Other countries have introduced reforms to expand health insurance coverage to include essential NCD services. Different approaches are used for raising prepaid revenues, pooling risk, and purchasing services. Progress can be seen in increasing enrolment in government health insurance, a movement towards expanded benefits packages, and decreasing out-of-pocket spending, accompanied

by an increasing government share of spending on health.

Source: see reference (27,32).

care will yield greater impacts on population health than inpatient services.

Various pathways for achieving universal health coverage have been described (28,29). Coverage of the entire population for a defined set of very cost-effective high-impact interventions – addressing NCDs, injuries, infectious diseases, and maternal and child health – could be the first step. To attain the target, this publicly financed basic benefit package must include very cost-effective interventions, namely prevention of heart attacks and strokes through a total-risk approach (10,11). A more advanced approach could provide an expanded package of interventions, such as the expanded list of cost-effective interventions in the Global NCD Action Plan (5) (see Appendix 3 of the plan). This second package could be financed through a broader range of traditional and innovative financing mechanisms, including general taxation revenue, payroll taxes, mandatory

premiums and co-payments. Exempting the poor (at least those earning less than US\$ 1.25 a day) from contributing to both packages should be considered, not only because health is a human right but also because it is a smart approach to equitable distribution of national wealth.

### Address gaps and reorient health systems to address noncommunicable diseases

As alluded to above, context-specific strategies will be required to address multiple gaps in health systems related to financing, access to basic technologies and medicines, the health workforce, service delivery, health information and referral. Special attention should be given to strengthening primary care coverage and improving the quality of services at primary level. Health workers require training in assessing and managing total cardiovascular risk, based on evidence-based clinical protocols and risk-assessment tools, and using hypertension and

diabetes as entry points (9,10). A comprehensive approach is required to increase staffing ratios, shift certain NCD tasks to lower cadres, and improve the performance of health workers in general practice and family medicine, to address NCDs. Essential technologies (e.g. accurate devices for blood pressure measurement, risk-assessment charts, weighing scales, height measuring equipment, blood sugar and blood cholesterol measurement devices with strips, and urine strips for albumin assay) and, medicines (e.g. at least aspirin, a statin, a thiazide diuretics, an angiotensin-converting enzyme inhibitor, a long acting calcium-channel blocker, a beta-blocker, metformin and insulin ) have to be available and affordable. Efforts are required to make progress on attaining the NCD target, on availability and affordability of these, and other essential NCD medicines and basic technologies (see **Chapter 9**). Adherence to simplified guidelines, evidence-based protocols and evidence-based support for self-care (10,11,30) needs to be ensured. Health-information and referral systems require strengthening, to improve follow-up of patients, to monitor inequalities, and to coordinate between health-care providers, primary care facilities and secondary and tertiary hospitals.

### **Learning lessons from experience, innovation and adaptation, to resource limitations**

Systematic screening for total cardiovascular risk (including hypertension, diabetes and other risk factors), with access to diagnosis and treatment, can advance progress towards attaining this target. Targeted screening for total cardiovascular risk, with blood glucose testing and blood pressure and blood cholesterol measurement, is more cost effective than screening the whole population, and is more likely to identify individuals at high cardiovascular risk, for lower cost (31). WHO tools are available to estimate the costs of widening coverage; the rate of expansion can be adjusted according to the availability of resources (11).

The quality of services provided, particularly in primary care, requires monitoring. Pay-for-performance programmes have been adopted by

policy-makers and service providers, to improve the quality of health care, including for NCDs. However, studies that have directly examined the impact of financial incentives on improving health-care processes and outcomes have reported mixed results. The role of provider and patient incentives in improving quality of care and clinical outcomes in persons with raised cardiovascular risk needs to be explored and evaluated.

A structured and standardized external audit process could be important for monitoring the expanding role of primary care in preventing heart attacks, strokes and complications of diabetes. Audits of primary care centres to analyse databases on coverage of essential NCD interventions, together with review of physical conditions of the premises and of referral links and patient records chosen at random, could provide useful information for developing context-specific solutions to deficiencies in service delivery. Facility-level quality-improvement audits carried out by primary care teams could also gather information for team-based analysis of performance problems and joint solutions to problems.



## References

- World Health Organization. Global Health Estimates: Deaths by Cause, Age, Sex and Country, 2000-2012. Geneva, WHO, 2014.
- O'Flaherty M, Buchan I, Capewell S. Contributions of treatment and lifestyle to declining CVD mortality: why have CVD mortality rates declined so much since the 1960s? *Heart*. 2013;99:159–62. doi:10.1136/heartjnl-2012-302300.
- Yusuf S, Rangarajan S, Teo K, Islam S, Li W, Liu L et al; PURE Investigators. Cardiovascular risk and events in 17 low-, middle-, and high-income countries. *N Engl J Med*. 2014;371(9):818–27. doi:10.1056/NEJMoal311890.
- World health statistics 2014. Geneva: World Health Organization; 2014 ([http://apps.who.int/iris/bitstream/10665/112738/1/9789240692671\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/112738/1/9789240692671_eng.pdf), accessed 4 November 2014).
- Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
- Prevention of cardiovascular disease. Guideline for assessment and management of cardiovascular risk. Geneva: World Health Organization; 2007 ([http://www.who.int/cardiovascular\\_diseases/publications/Prevention\\_of\\_Cardiovascular\\_Disease/en/](http://www.who.int/cardiovascular_diseases/publications/Prevention_of_Cardiovascular_Disease/en/), accessed 6 November 2014).
- Prevention of recurrent heart attacks and strokes in low and middle income populations: evidence-based recommendations for policy makers and health professionals. Geneva: World Health Organization; 2003 ([http://www.who.int/cardiovascular\\_diseases/resources/pub0402/en/](http://www.who.int/cardiovascular_diseases/resources/pub0402/en/), accessed 6 November 2014).
- Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2010 ([http://whqlibdoc.who.int/publications/2010/9789241598996\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241598996_eng.pdf), accessed 6 November 2014).
- Prevention and control of noncommunicable diseases: guidelines for primary health care in low-resource settings. Geneva: World Health Organization; 2012.
- Implementation tools: package of essential noncommunicable (WHO-PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2013 ([http://www.who.int/cardiovascular\\_diseases/publications/implementation\\_tools\\_WHO\\_PEN/en/](http://www.who.int/cardiovascular_diseases/publications/implementation_tools_WHO_PEN/en/), accessed 5 November 2014).
- Scaling up action against noncommunicable diseases: how much will it cost? Geneva: World Health Organization; 2011 ([http://whqlibdoc.who.int/publications/2011/9789241502313\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241502313_eng.pdf), accessed 4 November 2014).
- NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
- Lim SS, Gaziano TA, Gakidou E, Reddy KS, Farzadfar F, Lozano R et al. Prevention of cardiovascular disease in high-risk individuals in low-income and middle-income countries: health effects and costs. *Lancet*. 2007;370:2054–62.
- Wald NJ, Law MR. A strategy to reduce cardiovascular disease by more than 80%. *BMJ*. 2003;326:1419.
- Castellano JM, Sanz G, Fuster V. Evolution of the polypill concept and ongoing clinical trials. *Can J Cardiol*. 2014;30(5):520–6. doi:10.1016/j.cjca.2014.02.016.
- Assessing national capacity for the prevention and control of noncommunicable diseases report of the 2013 global survey. Geneva: World Health Organization; 2014.
- Gyberg V, Kotseva K, Dallongeville J, Backer GD, Mellbin L, Rydén L et al.; EUROASPIRE Study Group. Does pharmacologic treatment in patients with established coronary artery disease and diabetes fulfil guideline recommended targets? A report from the EUROASPIRE III cross-sectional study. *Eur J Prev Cardiol*. 1 April 2014 (Epub ahead of print).
- Heuschmann PU, Kircher J, Nowe T, Dittrich R, Reiner Z, Cifkova R et al. Control of main risk factors after ischaemic stroke across Europe: data from the stroke-specific module of the EUROASPIRE III survey. *Eur J Prev Cardiol*. 19 August 2014 Aug 19. pii: 2047487314546825 (Epub ahead of print).
- Mendis S, Abegunde D, Yusuf S, Ebrahim S, Shaper G, Ghannem H et al. WHO study on prevention of recurrences of myocardial infarction and stroke (WHOPREMISE). *Bull World Health Organ*. 2005;83(11):820–9.
- Yusuf S, Islam S, Chow CK, Rangarajan S, Dagenais G, Diaz R et al; Prospective Urban Rural Epidemiology (PURE) study investigators. Use of secondary prevention drugs for cardiovascular disease in the community in high-income, middle-income, and low-income countries (the PURE Study): a prospective epidemiological survey. *Lancet*. 2011;378(9798):1231–43. doi:10.1016/S0140-6736(11)61215-4.



21. Mendis S, Al Bashir I, Dissanayake L, Varghese C, Fadhil I, Marhe E et al. Gaps in capacity in primary care in low-resource settings for implementation of essential noncommunicable disease interventions. *Int J Hypertens*. 2012;2012:584041. doi: 10.1155/2012/584041.
22. Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2010 ([http://whqlibdoc.who.int/publications/2010/9789241598996\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241598996_eng.pdf), accessed 6 November 2014).
23. Towards healthy islands: Pacific noncommunicable disease response. In: Tenth Pacific Health Ministers meeting, Apia, Samoa, 2–4 July 2013. Manila: World Health Organization Western Pacific Region; 2013 (PIC10/3; [http://www.wpro.who.int/southpacific/pic\\_meeting/2013/documents/PHMM\\_PIC10\\_3\\_NCD.pdf](http://www.wpro.who.int/southpacific/pic_meeting/2013/documents/PHMM_PIC10_3_NCD.pdf), accessed 7 November 2014).
24. Health Annual Report Palestine 2012. Nablus: Ministry of Health, Palestinian Health Information Center; 2012 (<http://www.moh.ps/attach/502.pdf>, accessed 7 November 2014).
25. Regional consultation on strengthening noncommunicable diseases (NCD) prevention and control in primary health care. Beijing China, 14–17 August 2012. Manila: World Health Organization Western Pacific Region; 2012 (WPR/DHP/NCD(1)/2012; [http://www.wpro.who.int/noncommunicable\\_diseases/documents/RegCon\\_StrengtheningNCDinPHC.pdf](http://www.wpro.who.int/noncommunicable_diseases/documents/RegCon_StrengtheningNCDinPHC.pdf), accessed 7 November 2014).
26. Schmidt MI, Duncan BB, Silva GA, Menezes AM, Monteiro CA, Barreto SM et al. Chronic non-communicable diseases in Brazil: burden and current challenges. *Lancet*. 2011;377:1949–61. doi:10.1016/S0140-6736(11)60135-9.
27. Lagomarsino G, Garabrant A, Adyas A, Muga R, Otoo N. Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia. *Lancet*. 2012;380(9845):933–43. doi:10.1016/S0140-6736(12)61147-7.
28. Jamison DT, Summers LH, Alleyne G, Arrow KJ, Berkley S, Binagwaho A et al. Global health 2035: a world converging within a generation. *Lancet*. 2013;382(9908):1898–955. doi:10.1016/S0140-6736(13)62105-4.
29. Making fair choices on the path to universal health coverage. Final report of the WHO Consultative Group on Equity and Universal Health Coverage. Geneva: World Health Organization; 2014 ([http://apps.who.int/iris/bitstream/10665/112671/1/9789241507158\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/112671/1/9789241507158_eng.pdf?ua=1), accessed 6 November 2014).
30. Self-care of cardiovascular disease, diabetes, cancer and chronic respiratory disease. Geneva: World Health Organization; 2013.
31. Screening for cardiovascular risk and diabetes. Geneva: World Health Organization; 2014.
32. Adoption of the Philippine Package of essential noncommunicable disease interventions (PHIL PEN) in the implementation of the Philippine Health's primary care benefit package ([http://www.philhealth.gov.ph/circulars/2013/circ20\\_2013.pdf](http://www.philhealth.gov.ph/circulars/2013/circ20_2013.pdf), accessed 7 November 2014).



# Key points

- The national health strategy should include access to health technologies and essential medicines as an objective and should specify a mechanism for monitoring, evaluation and review of the availability and affordability of basic health technologies and NCD medicines.  
.....
- Achieving this target requires sustainable health-care financing, to ensure adequate procurement of basic health technologies and essential NCD medicines.  
.....
- Country efforts to improve access should first focus on basic health technologies and essential medicines for NCDs, and the national essential medicines list should be the basis for procurement, reimbursement and training of health-care workers.  
.....
- Reliable procurement and distribution systems are needed to guarantee the supply of essential NCD medicines and technologies to all levels of health care, including primary care, and to regional and remote communities.  
.....
- Mechanisms must be in place to ensure that quality-assured generic medicines are procured; prescribers and consumers need to have confidence in the generic medicines in circulation.  
.....
- Evidence-based treatment guidelines and protocols should be promoted and implemented, to support the appropriate use of essential NCD medicines.  
.....
- The attainment of this target will contribute to attainment of targets on reducing the prevalence of hypertension, on improving coverage of treatment for prevention of heart attacks and strokes and, ultimately, on reducing premature mortality from NCDs.

# 9 Global target 9: An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities

## Availability and affordability of basic technologies and medicines

Effective delivery of individual interventions for NCDs requires strengthening of the health system at all levels of care. Weaknesses and inefficiencies are currently encountered in all components of health systems, including supply of essential medicines and technologies (1–4). Priority actions for addressing the NCD crisis include delivering cost-effective and affordable essential medicines and technologies for all priority disorders, and strengthening health systems to provide patient-centred care across different levels of the health system, starting with primary care (4,5).

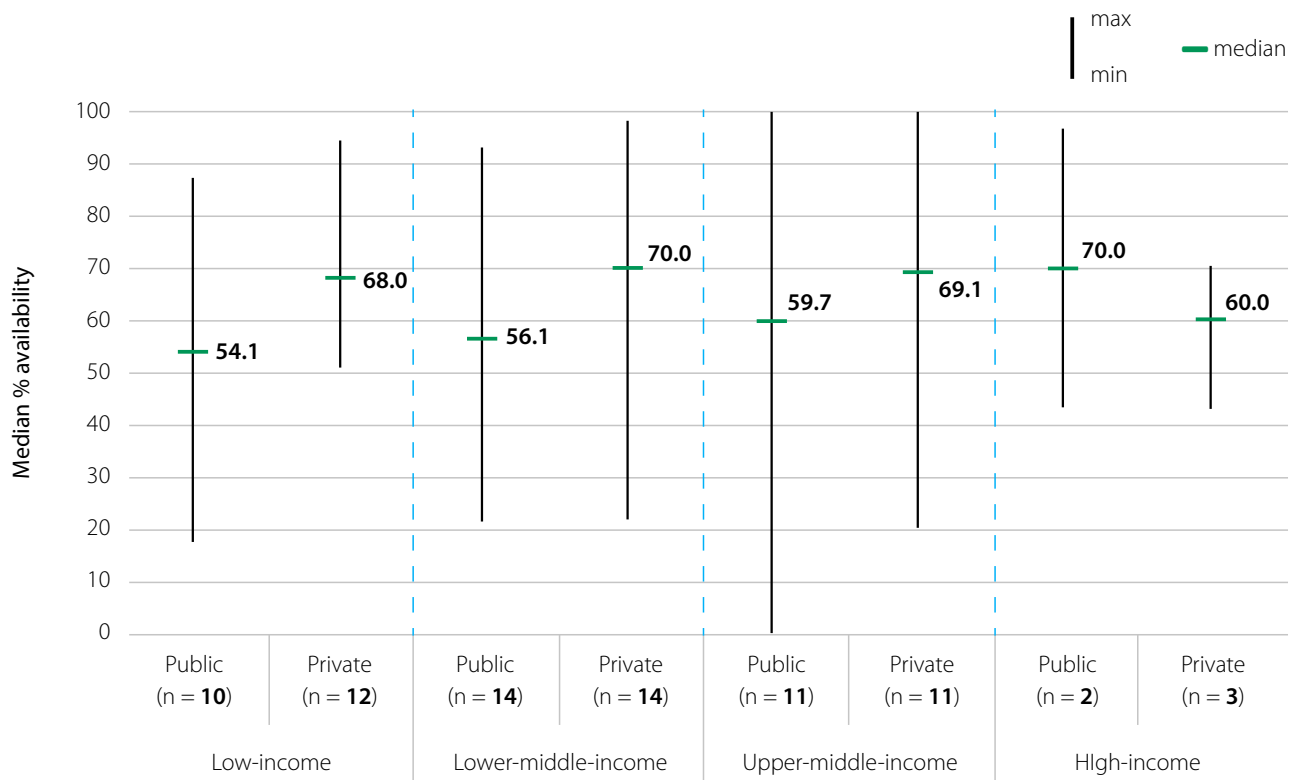
This target includes the basic requirement of medicines and technologies for implementing cost-effective primary care interventions and for addressing cardiovascular disease, diabetes and asthma (6). The core essential medicines include at least aspirin, a statin, an angiotensin-converting enzyme inhibitor, a thiazide diuretic, a long-acting calcium-channel blocker, a beta-blocker, metformin, insulin, a bronchodilator and a steroid inhalant. The basic technologies include, at least, a blood pressure measurement device, a weighing scale, height measuring equipment, blood sugar and blood cholesterol measurement devices with strips, and urine strips for albumin assay. These are minimum requirements for implementing essential NCD interventions in primary care. Availability is defined as the percentage of public and private primary health-care facilities that have all of these medicines and technologies, indicated above.

Cancer medicines are not included in this indicator because of the difficulty of implementing treatment interventions for cancer in primary care in resource-constrained settings. However, this should not undermine efforts to improve access to essential medicines for treating cancer. Treatment interventions and protocols for cancer should be identified, specifying the level of care at which these cancer medicines can be safely administered.

## Progress achieved

Substantial information exists on availability and affordability of essential medicines, particularly in low- and middle-income countries. A large number of country studies have been conducted using a standard validated methodology developed by

**Fig. 9.1** Median availability of selected lowest-priced generic medicines, in the public and private sector, by World Bank income group, 2007–2012



Source: World Health Organization/Health Action International, using data from medicine price and availability surveys conducted between 2007 and 2012 using the WHO/HAI methodology (<http://www.haiweb.org/medicineprices>). n = number of countries. Baskets of survey medicines differ between countries.

WHO and Health Action International (HAI) (7). The availability and prices of medicines are investigated through visits to public and private-sector facilities in each country, and availability is reported as the percentage of facilities where a product is found on the day of data collection. A summary of the results of medicine-availability studies conducted between 2007 and 2012 using WHO/HAI survey methods is shown in **Fig. 9.1** (8). There is a consistent pattern of lower availability of medicines in public sector facilities compared to the private sector, and lower availability in low-income and lower-middle-income countries. While the basket of medicines surveyed in each country is not the same, the basket of medicines in each case is a mix of medicines used to treat communicable diseases and NCDs, as well as to provide symptomatic and pain relief. Further analysis of these WHO/HAI studies in 40 low- and middle-income countries has compared the availability of 15 medicines used for acute

conditions with 15 medicines for chronic diseases (see **Table 9.1**) (9).

These summary measures across a selection of 15 medicines conceal the extent of some of the problems of availability of specific medicines for the prevention and treatment of NCDs.

An analysis of the availability of selected cardiovascular medicines (atenolol, captopril, losartan and nifedipine) in 36 countries concluded that availability in the public sector was poor (26.3%) compared to the private sector (57.3%) (10).

A survey of the availability of asthma medicines listed on the WHO model list of essential medicines (11) found that, while salbutamol inhalers were available in 82.4% of private pharmacies, 54.8% of national procurement centres and 56.3% of public hospitals, the availability of beclometasone 100 µg puff inhalers, a cornerstone of the management of asthma, was much lower (41.7%, 17.5% and 18.8% respectively) (12).

**Table 9.1** Mean availability of medicines used for acute and chronic conditions in 40 low- and middle-income countries

Sector and product type (number of countries)	Mean availability (%) of medicines		Difference (%) in mean availability (95% CI)	P
	Acute conditions (95% CI)	Chronic conditions (95% CI)		
Public sector Generic products (n = 35)	53.5 (46.2–60.8)	36.0 (27.4–40.6)	17.5 (6.5–28.6)	0.001
Private sector Generic products (n = 40)	66.2 (60.4–72.1)	54.7 (47.6–61.9)	11.5 (2.4–20.6)	0.007

CI: confidence interval.

Source: see reference (9).

Access to insulin is problematic in many countries, complicated by the cost of syringes and diagnostic tools for initial diagnosis and follow-up that are essential for monitoring and adjusting treatment (13). Gaps in availability and affordability of basic technologies and medicines are particularly severe at the primary care level (14) and are major barriers to implementation of essential NCD interventions. The results of these studies demonstrate the lower availability of key NCD medicines in the public sector. The consequence is that patients are forced to obtain medicines in the private sector, where prices are generally higher and may be unaffordable for many. WHO/HAI surveys have also addressed the prices patients must pay for medicines and whether these are affordable (8). The measurement of affordability is not straightforward (15). The approach used in the WHO/HAI surveys is to use the salary of the lowest-paid unskilled government worker to establish the number of days' wages needed to purchase courses of treatment for common conditions. Because chronic diseases need ongoing treatment, the affordability of a 30-day supply of medicines is used to indicate monthly medicine expenditures. Data from WHO/HAI surveys between 2007 and 2012 (8) were used to compare the affordability of two medicines used in managing NCDs – salbutamol inhaler 100 µg per dose for asthma (assuming one inhaler per month) and captopril tablets for hypertension (assuming 25 mg twice daily per month). The results (see **Fig. 9.2**) illustrate wide variability between studies. If one day's salary is

deemed a measure of affordability of a medicine, then, in many cases, medicines are unaffordable. The situation is often worse in countries where a large proportion of the population earns much less than the lowest-paid government worker.

## Monitoring the availability and affordability of basic technologies and essential medicines

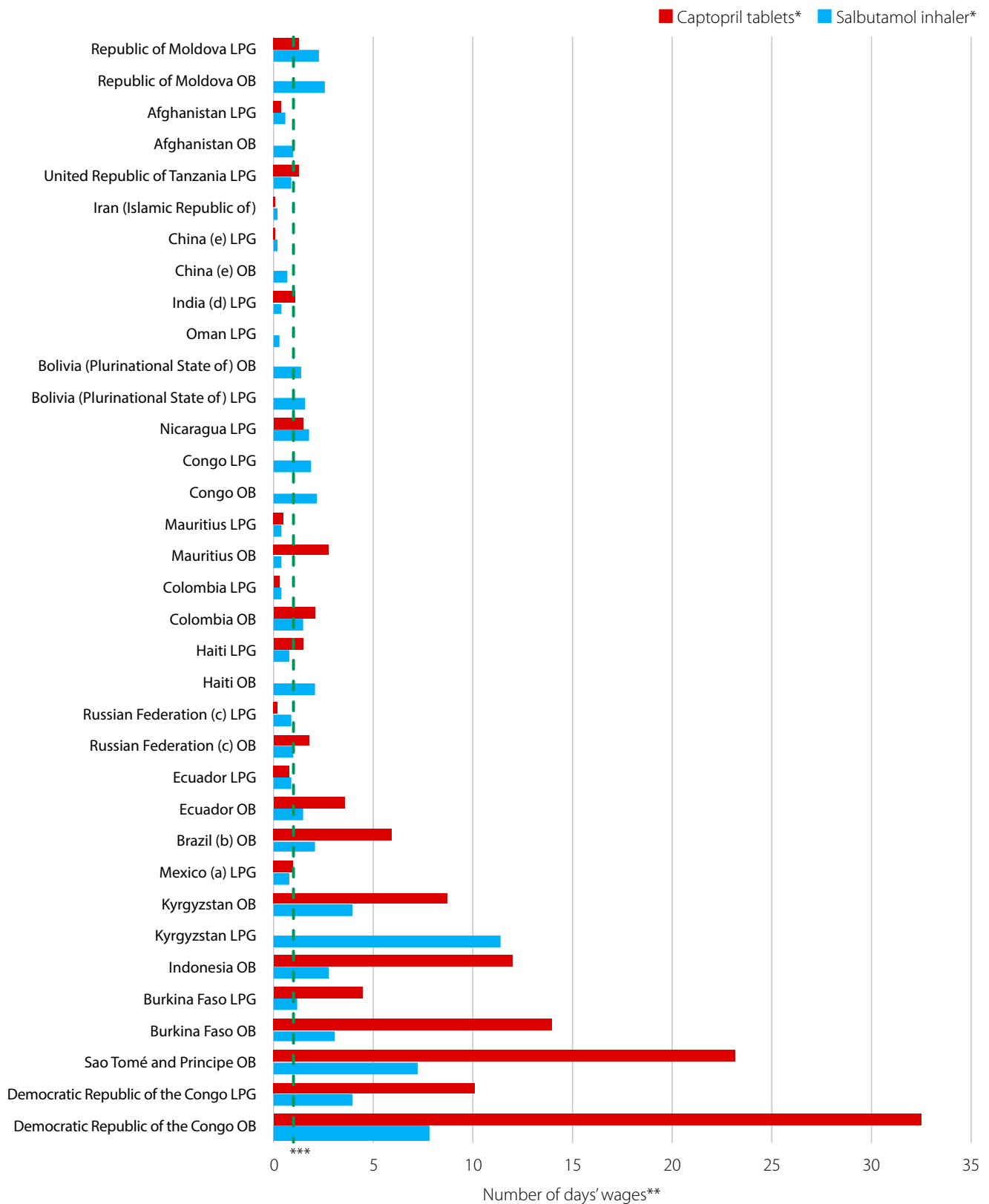
The indicator for monitoring this target in the global monitoring framework (see **Annex 1**) is the availability and affordability of quality safe and efficacious essential noncommunicable disease medicines, including generics and basic technologies in both public and private facilities.

Many countries have already collected ad hoc facility-based information about prices and availability, using the WHO/HAI methodology (8,9). However, assessing progress towards targets requires regular measurement and the collection of valid and reliable data.

Routine monitoring systems should be established, in order to provide regular facility-based assessments of the availability of key medicines and health technologies. These systems need to provide information from the public and private sectors and from urban and rural locations, so that equity of access to these essential commodities can be assessed. For routine monitoring to be feasible, data



**Fig. 9.2** Number of days' wages needed by the lowest-paid unskilled government worker to pay for 30 days' treatment for hypertension and asthma, private sector, 2007–2012



Source: World Health Organization/Health Action International, using data from medicine price and availability surveys conducted between 2007 and 2012 using the WHO/HAI methodology (<http://www.haiweb.org/medicineprices>).

\* Captopril 25mg tab x 2/day; Salbutamol 100 mcg/dose inhaler, 200 doses.

\*\* Number of days' wages needed by the lowest-paid unskilled government worker to pay

\*\*\* If one days' wages of a lowest-paid government worker is deemed as a measure of affordability of medicine, then in many cases medicines are unaffordable.

(a) Rio Grande do Sul State, (b) Tatarstan Province, (c) Delhi (National Capital Territory), (d) Shaanxi Province.

OB=Originator Brand, LPG= Lowest-Priced Generic

collection needs to be simple, focusing on a smaller number of key medicines and adding minimal cost to the health system. This monitoring is important, not only to assess progress towards the target of 80% availability, but also to identify potential problems in procurement and in-country distribution of medicines and to develop interventions to address any system failures identified.

WHO's Service Availability and Readiness Assessment (SARA) is another mechanism for assessing the availability of key medicines and health commodities (16). This extensive survey uses statistically representative samples of country health facilities. Analyses are stratified by location (urban, rural) and facility type (dispensary, clinic, health centre, hospital), allowing detailed assessment of in-country differences in medicines availability. However, the scope of SARAs and the large numbers of health facilities surveyed make these surveys resource intensive and expensive. To date, SARAs have largely been conducted in Africa and, where SARA data exist, they should be used to inform decision-making and to identify areas where interventions are required to improve access to medicines.

Assessing the affordability of medicines requires regular measurement of the prices patients must pay for medicines in both public and private sectors. Affordability can be computed by using the daily wage of the lowest-paid unskilled government worker for each country and the cost of a year's supply of medicines. In measuring affordability, financing arrangements for medicines in each country may need to be considered. Some countries may make medicines freely available in the public sector or have health insurance systems in place. The out-of-pocket costs for NCD medicines should be monitored.

It is also important to consider those who are unable to access care or purchase medicines. Household surveys remain an important tool for understanding the sources of care in the community and the barriers to accessing care and treatments, including essential NCD medicines and health technologies. WHO has standardized methods for conducting household surveys to measure access to and use of medicines (17).

## Actions required to attain this target

Commitment to this target, and regular public reporting of progress – regionally, nationally and globally – will hold governments accountable for meaningful progress in improving access to, and affordability of, essential NCD medicines and health technologies (18).

### Health-care financing

Achieving this target requires adequate and sustainable health-care financing. The ministry of health has a pivotal role in promoting access to quality-assured, affordable essential medicines and should work with the ministry of finance to secure adequate funding for health care in general, and essential NCD medicines and technologies in particular.

### Regulatory systems

Strong regulatory systems are necessary to ensure the availability of quality-assured NCD medicines. Effective regulatory authority performance requires an appropriate legislative framework, commitment to good governance, administrative structures supported by technical capacity, and political commitment to enforce compliance with established norms and standards for manufacture, distribution and supply of medicines and health technologies.

The affordability of NCD medicines for both government and patients depends heavily on the use of generic products. Policies that promote the use of affordable generic medicines are important, as is ensuring the quality of generic medicines in circulation in the country. Quality-assurance systems and educational campaigns promoting the use of generic medicines are needed to reassure prescribers, patients and consumers that low price does not mean inferior medicines.

### Rational selection and use

In addition, there should be rational selection of cost-effective NCD essential medicines and technologies, efficient and effective procurement and distribution systems for quality-assured products,

and implementation of evidence-based guidelines to support rational use of these medicines and technologies at all levels of care. These essential medicines should be available at the primary health-care level. While treatment may be initiated at higher levels of health care, patients need easy access to these medicines if they are to adhere to long-term treatment regimens.

Efforts to improve the availability of quality-assured products in the market should be supported by programmes to promote their use. The evidence-based treatment guidelines and protocols for primary care should be disseminated and implemented (6,19). Relatively little is known of rational use of medicines and adherence of prescribing to national treatment protocols in the private sector, so this is an important area for further research. While attention often focuses on procurement, supply, availability and pricing measures for essential medicines (supply side), rational use of medicines is critical to cost-effective and appropriate use. Health-care professionals and consumers need accurate information on medicines. Setting-specific studies are required to understand why prescribers and consumers choose particular medicines (demand side) and to assess the adherence of prescribing practices to evidence-based treatment guidelines.

### **Procurement systems and pricing policies**

Along with effective and efficient procurement systems, pricing policies can promote affordable access to treatment. Countries need to consider regulation of the mark-ups and fees in the pharmaceutical supply chain, not only for distributors and wholesalers but also for retail outlets. Supported by policies to allow generic substitution, dispensing fees should encourage the use of low-price generic medicines. Tax exemptions or reductions can be considered – particularly for essential medicines and health technologies – to enhance the affordability of medicines for consumers (20).

### **Multi-stakeholder action**

Local stakeholders in the pharmaceutical sector include the pharmaceutical industry, health-care

professionals and civil society. The pharmaceutical industry has the responsibility to produce and supply medicines, including those for NCDs, meeting appropriate standards of quality, promoting use in line with marketing approval, and providing balanced and truthful information to health-care professionals. Health-care professionals have responsibility for the optimal care of patients and for judicious use of scarce resources in managing them. Medicines must be prescribed appropriately, in accordance with evidence-based treatment protocols, and the costs of treatments should be considered. Consumers have a responsibility to use medicines wisely and in accordance with recommendations from health-care professionals.

In some settings, international stakeholders play an important role in supporting the strengthening of country health systems, through strengthening of drug-manufacturing capacities of countries; training and strengthening of procurement and supply systems; monitoring of prices, availability and affordability of medicines; and promoting interventions to improve access. Donations of medicines must be appropriate, targeted and consistent with WHO guidelines. Medicines benefit packages must include essential NCD medicines. Countries may require support to develop sustainable financing mechanisms, including targeted subsidies or health insurance systems that ensure affordable access to NCD medicines and technologies.

## References

1. The World Health Report 2010. Health systems financing: the path to universal coverage. Geneva: World Health Organization; 2010 ([http://www.who.int/whr/2010/whr10\\_en.pdf?ua=1](http://www.who.int/whr/2010/whr10_en.pdf?ua=1), accessed 6 November 2014).
2. The World Health Report 2008. Primary health care – now more than ever. Geneva: World Health Organization; 2008 (<http://www.who.int/whr/2008/en/>, accessed 6 November 2014).
3. The World Health Report 2006. Working together for health. Geneva: World Health Organization; 2006 (<http://www.who.int/whr/2006/en/>, accessed 6 November 2014).
4. Beaglehole R, Bonita R, Horton R, Adams C, Alleyne G, Asaria P et al.; NCD Alliance. Priority actions for the non-communicable disease crisis. *Lancet*. 2011;377(9775):1438–47. doi: 10.1016/S0140-6736(11)60393-0.
5. Hogerzeil HV, Liberman J, Wirtz V, Kishore SP, Selvaraj S, Kiddell-Monroe R et al. Promotion of access to essential medicines for non-communicable diseases: practical implications of the UN political declaration. *Lancet*. 2013;381:680–9. doi:10.1016/S0140-6736(12)62128-X
6. Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2010 ([http://whqlibdoc.who.int/publications/2010/9789241598996\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241598996_eng.pdf), accessed 6 November 2014).
7. Measuring medicine prices, availability, affordability and price components, 2nd ed. Geneva and Amsterdam: World Health Organization and Health Action International; 2008 ([http://www.who.int/medicines/areas/access/OMS\\_Medicine\\_prices.pdf](http://www.who.int/medicines/areas/access/OMS_Medicine_prices.pdf), accessed 6 November 2014).
8. Health Action International. Medicine prices, availability, affordability and price components (<http://www.haiweb.org/medicineprices>, accessed 7 November 2014).
9. Cameron A, Roubos I, Ewen M, Mantel-Teeuwisse AK, Leufkens HGM, Laing RO. Differences in the availability of medicines for chronic and acute conditions in the public and private sectors of developing countries. *Bull World Health Organ*. 2011;89:412–21. doi:10.2471/BLT.10.084327.
10. van Mourik MS, Cameron A, Ewen M, Laing RO. Availability, price and affordability of cardiovascular medicines: a comparison across 36 countries using WHO/HAI data. *BMC Cardiovasc Disord*. 2010;10:25. doi:10.1186/1471-2261-10-25.
11. WHO model list of essential medicines, 18th list. Geneva: World Health Organization; 2013 ([http://www.who.int/medicines/publications/essentialmedicines/18th\\_EML\\_Final\\_web\\_8Jul13.pdf](http://www.who.int/medicines/publications/essentialmedicines/18th_EML_Final_web_8Jul13.pdf), accessed 7 November 2014).
12. Babar ZU, Lessing C, Mace C, Bissell K. The availability, pricing and affordability of three essential asthma medicines in 52 low- and middle-income countries. *Pharmacoeconomics*. 2013;31(11):1063–82. doi:10.1007/s40273-013-0095-9.
13. Beran D, McCabe A, Yudkin JS. Access to medicines versus access to treatment: the case of type 1 diabetes. *Bull World Health Organ*. 2008;86(8) 648–9. doi:10.2471/BLT.07.048710.
14. Mendis S, Al Bashir I, Dissanayake L, Varghese C, Fadhil I, Marhe E et al. Gaps in capacity in primary care in low-resource settings for implementation of essential noncommunicable disease interventions. *Int J Hypertens*. 2012;58:40–1. doi:10.1155/2012/584041.
15. Niens LM, Van de Poel E, Cameron A, Ewen M, Laing R, Brouwer WB. Practical measurement of affordability: an application to medicines. *Bull World Health Organ*. 2012;90(3):219–27. doi:10.2471/BLT.10.084087.
16. O'Neill K, Takane M, Sheffel A, Abou-Zahr C, Boerma T. Monitoring service delivery for universal health coverage: the Service Availability and Readiness Assessment. *Bull World Health Organ*. 2013;91:923–31. doi:<http://dx.doi.org/10.2471/BLT.12.116798>.
17. Manual for the household survey to measure access and use of medicines. Geneva: World Health Organization; 2008 ([http://www.who.int/medicines/areas/coordination/household\\_manual\\_february\\_2008.pdf](http://www.who.int/medicines/areas/coordination/household_manual_february_2008.pdf), accessed 6 November 2014).
18. NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
19. Prevention and control of noncommunicable diseases: guidelines for primary health care in low-resource settings. Geneva: World Health Organization; 2012.
20. WHO guideline on country pharmaceutical pricing policies. Geneva: World Health Organization; 2013 ([http://www.who.int/childmedicines/publications/WHO\\_GPPP.pdf](http://www.who.int/childmedicines/publications/WHO_GPPP.pdf), accessed 6 November 2014).

# Key points

- A national multisectoral NCD action plan with national targets provides the framework for addressing NCDs and their risk factors through a coherent public health approach.  
.....
- Multisectoral action – working together across sectors for the common goal of prevention and control of NCDs – is central to the success of national NCD efforts and attainment of national targets.  
.....
- Strategic planning requires concrete national targets, with estimates of the health impacts of reaching the targets and the financial resources needed to meet them.



# 10

## Development and implementation of national multisectoral action plans to attain national targets

### A national multisectoral NCD action plan with national targets

A national multisectoral action plan with national targets is a necessary framework for addressing NCDs and their risk factors through a public health approach (1–3). Instead of one plan per disease, a comprehensive NCD plan, with a clear budget and an integrated monitoring framework, makes possible the coherent national policy response required to attain national targets. Where external aid plays a significant role, the NCD action plan is key to aligning external and internal financial and technical inputs to achieve national targets for the prevention and control of NCDs (4).

In the outcome document of the July 2014 United Nations General Assembly review of NCDs (5) and the September 2011 political declaration on NCDs (1), countries committed to strengthening multisectoral policies and plans by 2015 and setting national targets for the prevention and control of NCDs by 2016. As of December 2013, only 43 countries had an operational, integrated, multisectoral national plan consistent with the Global NCD Action Plan 2013–2020 (2,6). All countries need to develop, update and implement multisectoral action plans with national targets and prioritize attainment of them by 2025.

### Why are national targets a priority?

National targets, consistent with voluntary global targets, help to focus action on achieving a defined impact in key areas for NCD prevention and control. National targets must be realistic about what is feasible and what can be achieved in a given national context. Setting targets can help to reinforce political commitment and strategic response and to mobilize resources for the prevention and control of NCDs. Factors that require consideration when setting national targets include:

- achievability in the epidemiological context of the country;
- the feasibility of implementing evidence-based interventions to achieve the target;
- the potential to set a baseline and monitor over time;
- the estimated size of the population in need;
- the current baseline levels of exposure to risk;

**Fig. 10.1** Key elements in the development of a national multisectoral NCD action plan



- the current level of services and potential rate of scale-up if there are additional investments in human resources and infrastructure.

Because a combination of preventive and curative interventions is essential to curb the NCD epidemic, targets for both prevention and treatment should be considered. If reliable current data are lacking, countries can use WHO’s comparable estimates of data as a starting point (see **Annexes 3 and 4**). Once national targets are set, the preventive and curative activities discussed in Chapters 1–9 should be prioritized in the national action plan and resourced for implementation.

Countries may adopt all or some of the 25 indicators in the global monitoring framework (7, see **Annex 1**) and may include others, as appropriate, for monitoring the progress of national NCD efforts. In addition, it would be useful to develop a set of national process indicators to identify and address obstacles to scale-up. Process indicators can be based on critical obstacles that need to be overcome in the implementation of national action plans, such as predictable financing, human-resource and system constraints, and participation of non-health sectors.

## What are the key elements of a national multisectoral NCD action plan?

When developing a national action plan, attention should be paid to political, technical and

operational elements that improve the potential for effective implementation (see **Fig. 10.1**) (8). These elements are discussed in turn.

### Inclusive process

National NCD action plans are more likely to be implemented effectively if they are developed in collaboration with a full range of partners, both within and outside the health sector, who can significantly contribute to implementation. These include all non-state actors: communities, grass-roots advocates, professionals, nongovernmental and civil society organizations, academia, the media and the private sector.

### Practicality and reality

National targets are more likely to be attained if the multisectoral NCD action plan:

- is developed with full input by those who will implement it;
- has policies and actions that are compatible with country capacity and resources;
- has concrete measures for strengthening capacity and resources through mobilization of government and partners;
- has policy directions anchored in political and legal commitments that ensure long-term sustained efforts.

### Building on what is ongoing

The multisectoral national NCD action plan should be based on the findings of a situation analysis, with

a special focus on the nine areas of the voluntary global targets. The results of the situation analysis should be shared with stakeholders, to build consensus on both the findings and the approaches to be adopted. The situation analysis can be usefully broadened to encompass areas with a bearing on NCD prevention and control, such as primary health-care reforms, moves towards universal health coverage, multisectoral collaboration and the social determinants of health.

### Prioritize activities

It is difficult to implement policies and interventions to address all NCDs simultaneously, owing to resource constraints. Priority-setting determines which policies and interventions should be addressed first, which may mean that some current activities should be scaled back to allow for higher-priority activities. For instance, policies and activities on the four major NCDs and their modifiable risk factors need to be addressed first, followed by activities relating to common comorbidities and other NCDs. The main consideration in priority-setting is often cost effectiveness, but other valid concerns should also be considered, such as equity, avoiding impoverishment due to catastrophic health-care payments, and the capital investment required. A rational, systematic and transparent approach to prioritization can help ensure that the objectives are met as early as possible and that available resources are used efficiently. Prioritization is needed both at the technical level and geographically.

### Balanced and evidence-based content

The national multisectoral NCD action plan should present, in a balanced and coherent manner appropriate to the country context, the key elements of NCD prevention and control, namely:

- the vision, principles, goals and national targets, consistent with the Global NCD Action Plan 2013–2020 (2) and corresponding regional frameworks;
- policy directions and priority interventions to address: (i) surveillance and monitoring; (ii) prevention, including prevention targets; (iii)

health care, including health-system targets; and (iv) leadership and governance arrangements for implementation, including:

- the roles and responsibilities of institutions and stakeholders;
- accountability (performance monitoring, outcome measurement, continued improvement in the planning process and timely corrective measures);
- implementation research and adaptation to changing circumstances;
- regulatory and legal frameworks to ensure sustainability;
- collaboration with other sectors to ensure that health is taken into consideration in all policies;
- links with the donor community, as appropriate.

### Resource planning

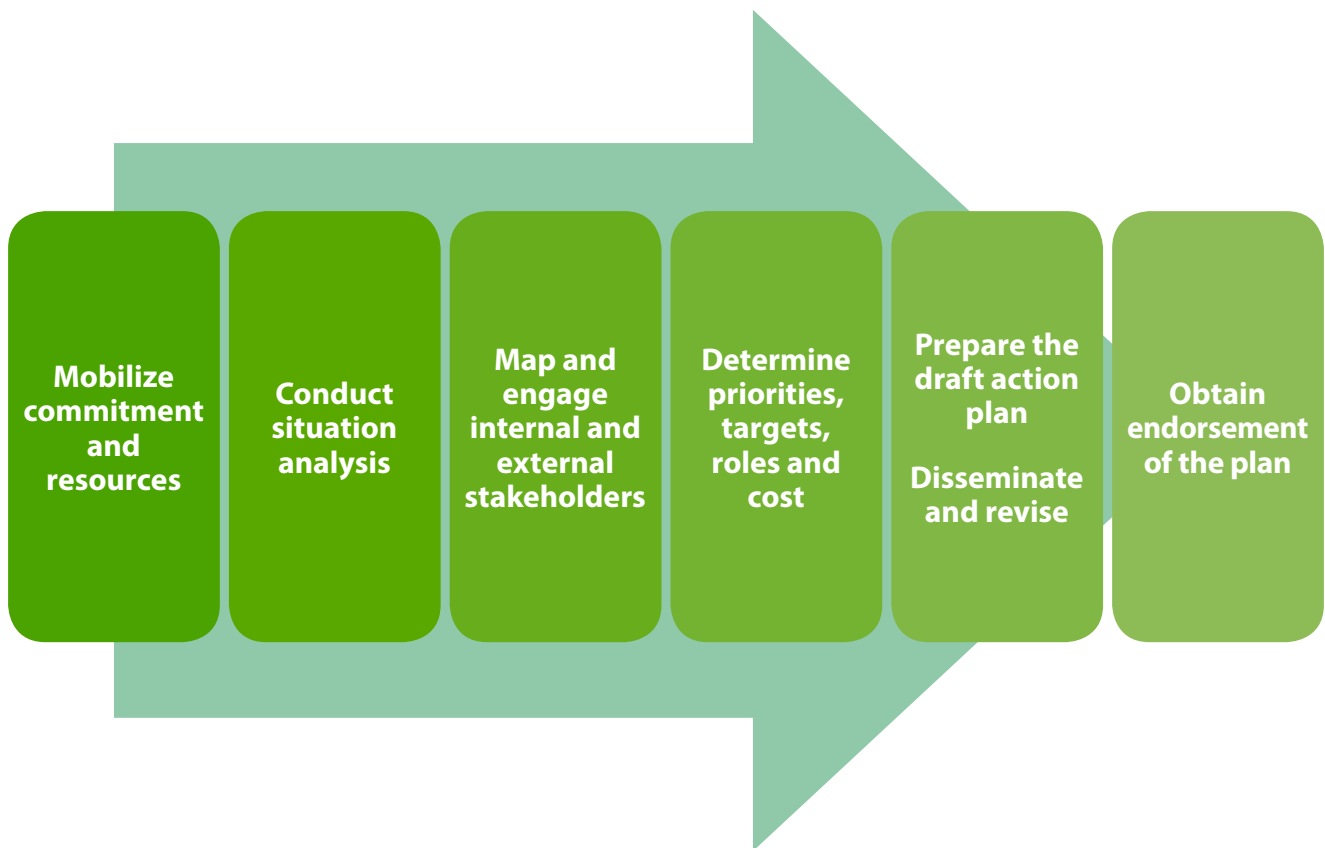
The multisectoral NCD action plan should be linked upstream to the national health plan and broader national strategies for development and poverty alleviation, and downstream to subnational operational plans and budgets. Based on available resources, a feasible path needs to be mapped out to take the country from the current position (defined in the situation analysis) to the desired objectives (defined by priority-setting). This requires setting national NCD targets with estimates of the health impacts of reaching the targets and the financial resources needed to meet them.

The sequence of these elements, and whether they appear in the national NCD action plan or other planning documents, depends on the country context. In principle, the full range of issues should be covered.

## Key steps in development of a national multisectoral NCD action plan

The development of a national multisectoral NCD action plan involves several steps (see Fig. 10.2), as detailed next.

Fig. 10.2 Key steps in development of an NCD action plan



1. Advocate for placing NCD prevention and control high on the political agenda, and obtain explicit government commitment and resources for development and implementation of the action plan.
2. Conduct a situation analysis to assess current and projected NCD burdens, other health challenges, barriers to NCD prevention and control, capacity to respond to current and future demands, social expectations, performance gaps in responding to needs and expectations, and what is ongoing and what has been achieved already.
3. Map and engage internal and external stakeholders, namely: relevant divisions in the ministry of health, ministries outside health (agriculture, communication, education, employment, energy, environment, finance, food, foreign affairs, housing, justice and security, labour, social welfare, social and economic development, sports, tax and revenue, trade and industry, transport, urban planning, youth affairs), the legislature, the media, donors, development partners, civil society and the private sector.
4. Share the results of the situation analysis with stakeholders, and together identify barriers and pragmatic solutions.
5. Conduct consultations, as appropriate, with internal and external stakeholders and expert groups, to identify priority policies and interventions, national targets for 2025 based on the voluntary global targets (2), roles and responsibilities of different stakeholders, the cost of implementation of the action plan, and resource gaps.
6. Prepare a draft national action plan, disseminate it to all stakeholders, obtain input and revise it.
7. Obtain official endorsement of the document action plan.

## Key domains of a national multisectoral NCD action plan

In addition to the elements and steps already described, a technically sound NCD action plan includes several thematic domains. By grouping them into domains – i.e. governance, prevention, health care, and surveillance and monitoring – activities can be organized and rendered coherent and mutually reinforcing. This comprehensive approach is necessary for programmatic, administrative, economic, technical and ethical reasons (1–3,9).

### Governance

Governance mechanisms and structures, with strong leadership, clear reporting lines and full government involvement, are key to coordination of the implementation of the national action plan, in order to build human, financial and regulatory capacity, and to promote multisectoral partnerships and accountability for enforcement strategies, monitoring and evaluation.

Accountability involves budget allocation, assessing the performance of other stakeholders (United Nations agencies, civil society, academia, donors and the corporate sector), tracking resources, measuring results, engaging in transparent review, and taking remedial action as necessary. A menu of policy options for strengthening accountability and capacity for accountability can be found under objective 2 of the Global NCD Action Plan 2013–2020 (2).

Strategic actions include:

- developing a national multisectoral NCD action plan with national targets and a monitoring framework consistent with the Global NCD Action Plan 2013–2020 (2);
- ensuring that the national multisectoral NCD action plan is harmonized with national health and development plans;
- tracking total health expenditure and expenditure on prevention and control of NCDs by financing source;
- establishing a high-level commission/mechanism for engagement, policy coherence and mutual

accountability of different areas of policy-making that have a bearing on prevention and control of NCDs;

- strengthening the capacity of the public health workforce and public health organizations to perform the functions required for accountability;
- systematically enforcing evidence-based legislation, regulations and fiscal policies;
- mobilizing United Nations country teams to strengthen links between NCD strategies and those for universal health coverage, addressing social determinants of health and sustainable development;
- integrating strategies into the design and implementation of the United Nations Development Assistance Framework (10).

### Prevention

The objective of NCD prevention is to reduce exposure of the population to NCD risk factors and underlying social determinants of those risk factors (1,2,9). Supportive environments that protect health and promote healthy behaviour can be created if existing public health policies and tools to address risk factors are implemented within the framework of the national multisectoral action plan.

Appropriate policies are required to reduce exposure to modifiable NCD risk factors includes:

- increase public awareness of behavioural risk factors and their impact on health;
- address affordability, availability and access, through fiscal policies (taxes and price adjustments), production policies (agriculture and manufacture) and access policies;
- denormalize and treat unhealthy behaviours.

Adequate investment and appropriate incentives and disincentives are required to enforce regulation, fiscal measures and laws. Responsibilities for creating environments conducive to health go beyond the traditional health sector to many other sectors, and include local government, municipalities, schools, workplaces and businesses.

A menu of policy options for strengthening population-wide prevention can be found



under objective 3 of the Global NCD Action Plan 2013–2020 (2).

Strategic actions include:

- implementing policy options to reduce exposure to risk factors in order to make progress towards national targets, giving priority to very cost-effective interventions (see **Box 1.1**);
- taking measures to reduce inequalities in the social and physical environment (e.g. access to healthy foods, walking paths and cycle tracks, smoke-free environments, job opportunities and education), in order to reduce behavioural risk factors and other health determinants;
- establishing a multi-stakeholder and intersectoral group, including representatives of the executive, legislative and judiciary authorities, to implement population-wide prevention policies;
- establishing multisectoral partnerships, giving due consideration to non-state actors;
- identifying, publicizing and addressing interference by commercial entities, particularly those associated with tobacco, alcohol, non-alcoholic beverages and unhealthy foods.

### Health care

People need access to a health system that prevents, detects and treats NCDs effectively through primary health care, in the context of universal health coverage.

Health systems require strengthening and should move towards universal health coverage, to ensure that people do not fall into poverty because of the cost of health services. Efficiency should be improved at all levels of care, with a special focus on primary care.

A menu of policy options for strengthening health systems can be found under objective 4 of the Global NCD Action Plan 2013–2020 (2).

Strategic actions include:

- incorporating prevention and control of NCDs in efforts to move towards universal health coverage;
- providing financial support for the phased implementation of a package of cost-effective essential

NCD interventions, with a special focus on vulnerable populations;

- strengthening all components of the health system for screening, early detection, diagnosis, treatment, self-care and palliative care, with an emphasis on primary health care and access to essential medicines and basic technologies;
- increasing domestic investment in health and establishing viable health-financing mechanisms, including innovative financing approaches (e.g. tobacco and alcohol taxation).

### Surveillance and monitoring

Surveillance and monitoring measure progress and provide the basis for accountability of stakeholders, including governments' commitments to their populations. Underinvestment in health information systems has left gaps in data collection, analysis and the use of data for public health decision-making.

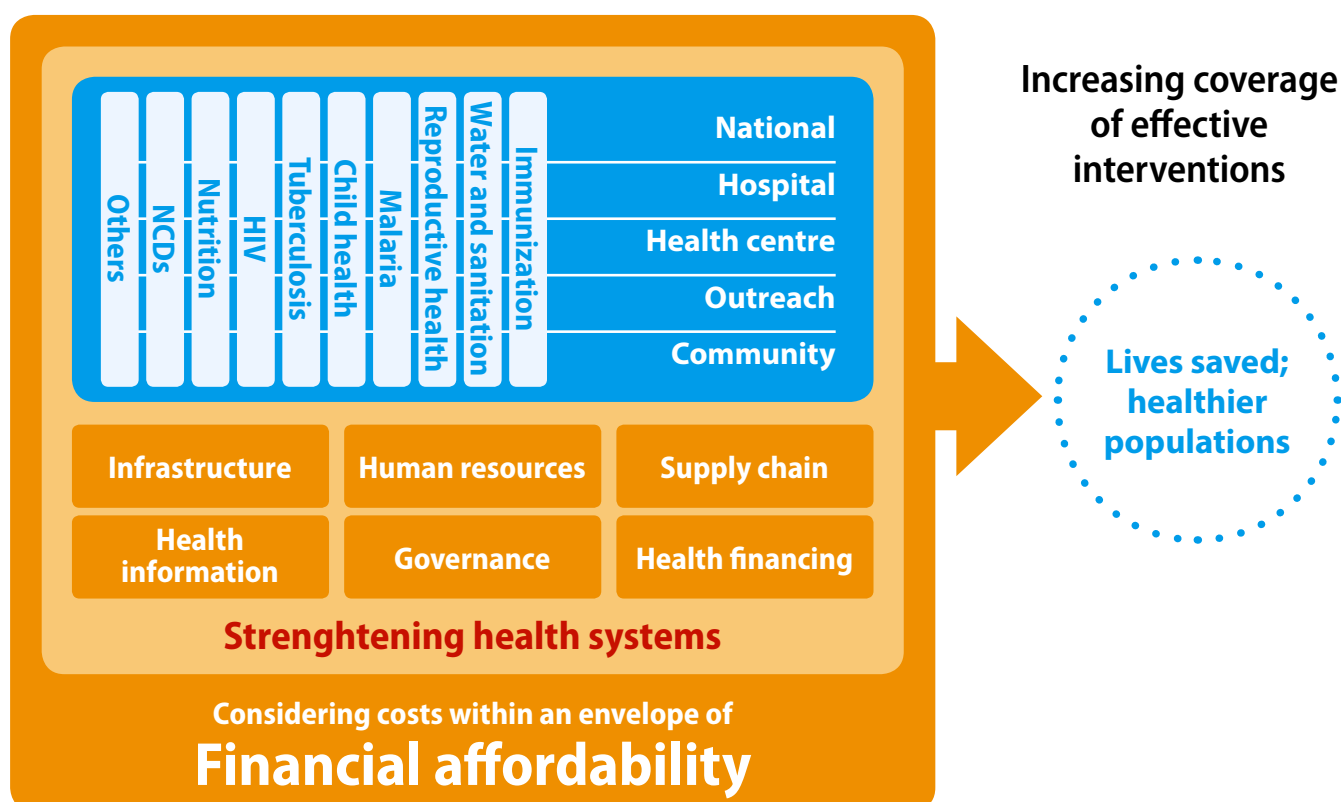
Countries should establish a harmonized system for generating national NCD-relevant health information: vital registration, risk factor and disease surveillance and response, service statistics, and health management and financial information. In addition, assessment of health equity requires measurement of changes over time in disparities in health status, health care, and the physical and social determinants of health.

A menu of policy options for strengthening surveillance and monitoring can be found under objective 6 of the Global NCD Action Plan 2013–2020 (2).

Strategic actions include:

- setting national targets, consistent with global targets, according to national circumstances;
- developing and institutionalizing surveillance, monitoring and health information systems, to track trends in risk factors and assess progress in implementing policies, strategies and interventions;
- using indicators of the global monitoring framework, disaggregated for sex and other equity considerations, to monitor progress towards the 2025 targets;
- strengthening a national civil registration system for registration of births, deaths and causes of death;

Figure 10.3 Schematic representation of the modular structure of the OneHealth Tool (12)



- developing and maintaining disease registries, particularly for cancer;
- undertaking periodic data collection on the key behavioural and metabolic risk factors and other determinants, and contributing data on a routine basis to assist with monitoring the global status of NCDs;
- mobilizing information and communication technologies to support national health information systems;
- strengthening technical and institutional capacity to manage and implement NCD surveillance and monitoring systems integrated into health information systems.
- Human resources and institutions that are capable of designing, implementing, monitoring and evaluating appropriate policies ;
- effective management of public expenditure across all levels of government;
- sufficient implementation capacity;
- strategic planning;
- a sound fiscal policy (to ensure sustainability).

Given the importance of taking local needs, capacities and challenges into account in the development and implementation of the action plan, a blueprint approach is unlikely to help. In most settings, and especially in resource-constrained environments, an incremental approach is required – i.e. starting with priority actions to attain national targets in each domain. The actions chosen should be based on a realistic assessment of current capacities and a clear vision for the future.

There is a solid case for tackling NCDs from the perspective of health and development. However, if governments are to draw more heavily on

## Implementation of the national multisectoral NCD action plan

Implementation of the national NCD action plan requires:

stretched budgets to invest in combating NCDs, the approaches they choose must offer compelling value for money. Low- and middle-income countries will need to increase spending, in order to expand the scope of health services to include, at a minimum, very cost-effective NCD interventions (“best-buys”; see **Box 1.1**). These interventions should be implemented in every setting, as soon as possible, in order to save lives, prevent disease and reduce costs to the health system.

However, cost-effectiveness data alone will not be sufficient to operationalize the national NCD action plan. Countries also need a clear vision, supported by robust strategic planning, in order to evaluate which approaches they should invest in, how much they will cost, and what the health impact of different approaches will be.

WHO has estimated that some US\$ 170 billion is required to bring “best-buy” NCD interventions to scale in all low- and middle-income countries over the period 2011–2025 (equivalent to US\$ 1–3 per capita) (11). What is now required is an understanding of how the costs of scaling up NCD approaches match the realities of country resources and the capacity of health-care systems.

The United Nations’ OneHealth Tool is software designed to cost policy scenarios at country level, to strengthen health-system analysis (see **Fig. 10.3**) (12). The OneHealth Tool is intended to inform the development of national strategic health plans by assessing cost, impact and financial parameters for strengthening health systems and meeting health needs in low- and middle-income countries. The tool encompasses the four building blocks of a national action plan: governance, prevention, treatment and care, and surveillance and monitoring (12).

The purpose of the OneHealth Tool is to enable national planners to make informed decisions about feasible goals over the next 3-, 5- and 10-year periods. The tool explicitly takes account of existing infrastructure, human resources and finances, to help establish realistic scale-up targets and identify bottlenecks. Intervention-specific delivery costs are based on the population served, while health-system costing is based on geographical area or population-level norms.

The key strength of the OneHealth Tool is its ability to pull different programmatic areas together and to generate a consolidated analysis across health-system, health-impact and financial space. At the same time, realistic planning needs to take health-system capacity into account. Scaling up services by a factor of 50%, or even by 10% over the next 5–10 years, may require investments in the medicines supply chain, health worker availability and deployment, and the establishment of management and supervisory processes.

### References

1. Resolution 66/2. Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. In: Sixty-sixth session of the United Nations General Assembly. New York: United Nations; 2011 (A/67/L.36; [http://www.who.int/nmh/events/un\\_ncd\\_summit2011/political\\_declaration\\_en.pdf](http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf), accessed 3 November 2014).
2. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1), accessed 3 November 2014).
3. Global status report on noncommunicable diseases 2010. Geneva: World Health Organization; 2011 ([http://www.who.int/nmh/publications/ncd\\_report\\_full\\_en.pdf](http://www.who.int/nmh/publications/ncd_report_full_en.pdf), accessed 3 November 2014).
4. The Paris Declaration on Aid Effectiveness and the Accra Agenda for Action. Paris: Organisation for Economic Co-operation and Development; 2005/2008 (<http://www.oecd.org/dac/effectiveness/34428351.pdf>, accessed 3 November 2014).
5. Outcome document of the high-level meeting of the General Assembly on the comprehensive review and assessment of the progress achieved in the prevention and control of non-communicable diseases. New York: United Nations; 2014. In: Sixty-eighth session of the United Nations General Assembly, 7 July 2014 (A/68/L.53; [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/68/L.53&L](http://www.un.org/ga/search/view_doc.asp?symbol=A/68/L.53&L), accessed 3 November 2014).
6. Assessing national capacity for the prevention and control of noncommunicable diseases. Report of the 2013 global survey. Geneva: World Health Organization; 2014
7. NCD global monitoring framework indicator definitions and specifications. Geneva: World Health Organization; 2014.
8. Framework for national health policies, strategies and plans. Copenhagen: World Health Organization Regional Office for Europe; 2010 (EUR/RC60/TD.2; [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/120995/RC60\\_etechedoc2.pdf](http://www.euro.who.int/__data/assets/pdf_file/0008/120995/RC60_etechedoc2.pdf), accessed 6 November 2014).
9. Health in all policies (HiAP) framework for country action. Geneva: World Health Organization; 2014 ([http://www.who.int/cardiovascular\\_diseases/140120HPRHiAPFramework.pdf?ua=1](http://www.who.int/cardiovascular_diseases/140120HPRHiAPFramework.pdf?ua=1), accessed 6 November 2014).
10. United Nations Development Group. United Nations Development Assistance Framework (<http://www.undg.org/?P=232>, accessed 9 November 2014).
11. Scaling up action against noncommunicable diseases: how much will it cost? Geneva: World Health Organization; 2011 ([http://whqlibdoc.who.int/publications/2011/9789241502313\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241502313_eng.pdf), accessed 4 November 2014).
12. World Health Organization. OneHealth Tool (<http://www.who.int/choice/onehealthtool/en/>, accessed 6 November 2014).







# 11

## The way forward to attain NCD targets: key messages

The report aims to support countries in fulfilling the time-bound commitments they have made in the outcome document of the United Nations General Assembly NCD review in July 2014 (1). The commitments include setting national targets and developing national multisectoral plans to achieve those targets by 2015, implementing policies and interventions to reduce NCD risk factors and underlying social determinants, and orienting health systems to address NCDs through people-centred primary health care and universal health coverage by 2016. The key messages of the report and proposed actions are to be tailored to each country, according to context.

The preceding chapters discussed cost-effective ways of using available resources to attain the nine global NCD targets, even in limited-resource settings. Guidance is provided on the nine voluntary global targets and on cost-effective interventions required to attain them (see **Chapters 1–9**). The development of national multisectoral action plans to provide integrated public health frameworks for implementing the interventions is discussed in Chapter 10. The report also provides 2010 estimates of country-specific NCD mortality and risk factors, which will be used as the baseline for reporting on progress in attaining the national targets, starting in 2015.

This final chapter highlights the 7 key messages of this report (See **Box 11.1**), and overarching actions and accountability required to make progress in attaining the nine voluntary global targets and national targets by 2025. As part of the

### **Box 11.1 Key messages of the Global Status Report on Noncommunicable diseases 2014**

- Message 1** Noncommunicable diseases act as key barriers to poverty alleviation and sustainable development
- Message 2** While some countries are making progress, the majority are off course to meet the global NCD targets
- Message 3** Countries can move from political commitment to action by prioritizing high-impact, affordable interventions
- Message 4** All countries need to set national NCD targets and be accountable for attaining them
- Message 5** Structures and processes for multisectoral and intersectoral collaboration need to be established
- Message 6** Investment in health systems is critical for improving NCD outcomes
- Message 7** Institutional and human resource capacities and financial resources for NCD prevention and control require strengthening.

**Table 11.1** Status of implementation of the Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (3), based on results of the 2013 NCD country capacity survey (4)

Process indicators	Number of countries
Countries with at least one operational multisectoral national policy, strategy or action plan that integrates several NCD and shared risk factors in conformity with the global and regional NCD action plans 2013–2020	70
Countries that have operational NCD unit(s)/branch(es)/department(s) within the ministry of health or equivalent	167
Countries with an operational policy, strategy or action plan to reduce harmful use of alcohol within the national context	52
Countries with an operational policy, strategy or action plan to reduce physical inactivity and/or promote physical activity	56
Countries with an operational policy, strategy or action plan to reduce the burden of tobacco use in line with the WHO Framework Convention on Tobacco Control	69
Countries with an operational policy, strategy or action plan to reduce unhealthy diet and/or promote healthy diets	60
Countries with evidence-based national guidelines/protocols/standards for management of major NCDs through a primary care approach recognized/approved by government or competent authorities	64
Countries with an operational national policy and plan on NCD-related research, including community-based research and evaluation of the impact of interventions and policies	Data not yet available
Countries with NCD surveillance and monitoring systems that enable reporting against the nine voluntary global NCD targets	42

narrative, the chapter also outlines WHO’s role in supporting these actions, based on the organization’s mandate to support prevention and control of NCDs at global, regional and national levels.

## Message 1: Noncommunicable diseases act as key barriers to poverty alleviation and sustainable development

The data presented in this report show that NCDs affect all countries (see **Chapter 1**). The burden of death and disease is heavily concentrated in the world’s poorest countries. Death and disease due to NCDs matter in their own right, but they also act as important barriers to poverty reduction

and sustainable development. Beyond the direct impact of ill-health on household living standards through out-of-pocket expenditures, the impact of NCDs on adults of productive age indirectly affects national income through reduced productivity and a reduction in the number of hours that people can engage in work. Prevention and control of NCDs contribute to many of the sustainable development goals (2).

### Proposed actions

- Advocate at global, regional and national levels for a strong position to be accorded to NCDs within the sustainable development goals framework.
- Embed indicators of prevention and control of NCDs within the sustainable development goals accountability framework.

- Integrate NCDs into national health plans and national development plans.

## Message 2: While some countries are making progress, the majority are off course to meet the global NCD targets

A certain amount of progress has been made in addressing NCDs since the adoption of the Political Declaration of the High-level Meeting of the [United Nations] General Assembly in 2011 (3). However, progress remains uneven and the response does not match growing needs, particularly in low- and middle-income countries.

As the recent NCD country capacity survey indicates (see **Table 11.1**), there are many missed opportunities to strengthen governance, prevention, health care, and surveillance and monitoring (4). Urgent action is required to address the gaps in these key NCD domains.

### Proposed actions

- Develop or update national multisectoral NCD action plans, consistent with the Global NCD Action Plan (5) and regional NCD frameworks.
- Align international cooperation on NCDs with national multisectoral NCD action plans, in order to strengthen aid effectiveness and the development impact of external resources.

## Message 3: Countries can move from political commitment to action by prioritizing high-impact, affordable interventions

The available cost-effective, high-impact interventions constitute a powerful arsenal for prevention and control of NCDs. As the full benefit of many NCD interventions can be reaped only over decades, the time-lag may make them less popular with politicians who focus on short-term political cycles and

favour rapid unsustainable interventions. Available resources need to be used strategically to improve NCD outcomes by investing in very cost-effective interventions and policy options to reduce population exposure to behavioural risk factors – harmful use of alcohol, physical inactivity, tobacco use and high salt consumption. Similarly, it is essential to invest in very cost-effective individual interventions to reach people at high risk and those with established disease. The coverage of these interventions has to be scaled up to attain targets. Concurrent research and analysis are needed to ensure lessons learnt from implementation are taken into account in decision-making, to enable mid-course corrections.

### Proposed actions

- Intensify efforts to track financial resources for NCD prevention and control.
- Produce high-quality case-studies to better understand why progress has not been made.
- Give priority to implementation of very cost-effective population-wide and individual interventions (“best buys”, see **Box 1.1**), to attain targets
- Support and facilitate research related to implementation and its translation into practice, in order to enhance the knowledge base for country action.

## Message 4: All countries need to set national NCD targets and be accountable for attaining them

The nine voluntary global targets identify priority areas in prevention and control of NCDs. Together with the Global NCD Action Plan 2013–2020 (5), they give a clear indication of where the world should be in 2025 in relation to NCDs. This report presents policy options and interventions to attain the NCD targets in countries at all levels of economic development and at different stages of the NCD epidemic. National targets help to garner political support and facilitate benchmarking and monitoring of results. Because the targets focus on a limited set of key NCD outcomes, monitoring of

progress towards the targets shows what is achievable and where faster progress can be made with limited resources. Furthermore, focusing attention on national progress using disaggregated data collection, as measured by the monitoring framework, helps countries to consider whether the benefits of progress are distributed equitably.

### Proposed actions

- Set national targets, consistent with global targets – as discussed in this report – and monitor progress towards their attainment.
- Contribute information on NCD mortality and risk factors to WHO, for global analyses.

## Message 5: Structures and processes for multisectoral and intersectoral collaboration need to be established

Collaboration across sectors outside health (multisectoral collaboration) and between government and non-state actors (intersectoral collaboration) is key to equitable prevention and control of NCDs and to attaining national targets. Mechanisms for multisectoral and intersectoral collaboration need to be embedded in the planning stage of NCD programmes, and should continue through implementation, enactment of public policies and monitoring and evaluation. A high-level, multisectoral structure may be created, with broad representation or with a specific health focus – such as to curb childhood obesity, encourage healthy urban planning, promote physical activity, or improve access to medicines and technologies. Multisectoral action for prevention and control of NCDs can be facilitated using the key components of the *Health in all policies (HiAP) framework for country action* (6).

### Proposed action

- Establish a high-level commission/mechanism and an accountability framework to strengthen multisectoral and intersectoral collaboration, to support prevention and control of NCDs.

## Message 6: Investment in health systems is critical for improving NCD outcomes

NCDs require continuity of long-term care rather than the episodic treatment of acute incidences that characterizes health care in most low- and middle-income countries. Analysis of health systems shows that key elements of the health system – including health financing, governance, the health workforce, health information, medical products and technologies, and health-service delivery – present obstacles to scale-up of NCD care. As discussed in Chapter 8-10, strategizing to overcome these barriers should be a major focus of investment in scaling up NCDs because rolling out even the most basic of interventions will be hampered if a functioning health system is not in place. Emerging and expanding universal health coverage schemes provide potential levers to prioritize NCDs while balancing other competing health priorities and health-system objectives.

### Proposed actions

- Include NCD interventions in universal health coverage schemes, giving priority to very cost-effective interventions.
- Use transparent processes to prioritize NCD interventions, based on considerations of health impact, cost effectiveness and equity.
- Provide affordable access to essential technologies and medicines for management of NCDs
- Identify and address health-system barriers to NCD care, with a special focus on strengthening patient centered primary health care.

## Message 7: Institutional and human resource capacities and financial resources for NCD prevention and control require strengthening

Attainment of national targets will require institutional and human capacity and adequate financial

resources at country level. Establishing public health institutions could help to deal with the complexity of issues relating to NCD prevention and control – such as interaction with food and agricultural systems, law, trade, urban planning and commercial influence. The competency and capacity of the health workforce will require strengthening to address NCDs, including through incorporation of public health aspects of NCD prevention and control in teaching curricula for medical, nursing and allied health personnel, and provision of in-service training. Policies and legal frameworks will be required to promote the retention of health workers in rural areas, particularly in primary care. Capacity-building is also important for other sectors. For instance, training of food producers, manufacturers and caterers, especially those involved in small and medium-sized businesses, is important for the attainment of targets 4 and 7. Training inspectors to enforce smoke-free and drinking-driving policies is a strategic component of interventions to attain targets related to tobacco use and harmful use of alcohol.

### Proposed action

- Implement policy options to strengthen national capacity and the competence of human resources for the prevention and control of NCDs proposed in the Global NCD Action Plan (5).
- Allocate adequate financial resources for NCD prevention and control and, track total health expenditure and expenditure on prevention and control of NCDs by financing source.
- Prioritize allocation of financial resources for implementation of 'best buy' interventions and policies to attain national NCD targets.

## WHO's role in prevention and control of noncommunicable diseases

As the principal international agency for health, WHO will continue to play a key role in prevention and control of NCDs. It will continue its efforts to implement the Global NCD Action Plan 2013–2020

(5), operating at global, regional and country levels, including through the United Nations Interagency Task Force and the innovative global mechanism that has been set up to improve coordination (7,8). WHO's regional committees for Africa, the Americas, South East Asia, Europe, Eastern Mediterranean and the Western Pacific have adopted regional policy frameworks (9–14) consistent with the Global NCD Action Plan (5), to further advance ongoing work (see **Box 11.2**). Key areas of continuing action include setting norms and standards, providing technical support to Member States to strengthen national capacity, strategic planning and resource tracking, and global coordination and monitoring. Arrangements to meet country needs and support national efforts through bilateral and multilateral channels will be strengthened further. As NCDs are one of the leadership priorities within the programmatic reform of WHO, the organization will need to continue to strengthen its support for NCD prevention and control, in order to obtain maximum impact with the limited resources available.

## Accountability is key for attainment of targets

The highest level of political engagement will be required to develop a country framework for accountability. This implies the development of transparent processes for monitoring, review and action. At national level, a functioning health information system that collects, analyses and reports on expenditure and health data, including on indicators of the global monitoring framework, is essential for monitoring progress. Reviews need to be based on evidence gathered through monitoring, and should provide feedback on progress as the basis for mutual accountability between governments and other stakeholders.

WHO already has an accountability framework. In 2013, the Sixty-sixth World Health Assembly (in Resolution WHA66.10) requested the Director-General of WHO to report on progress in attaining the nine voluntary global targets to the Health Assemblies in 2016, 2021 and 2026 (15). WHO will invite Member States to contribute data



**Box 11.2 Progress in prevention and control of NCDs in WHO regions since 2011: key milestones, activities and achievements (number of countries/territories are shown in parentheses)**

**African Region**

- National NCD reporting systems were integrated into health management information systems ( $n=33$ ).
- WHO PEN was piloted ( $n=5$ ).
- Pilot studies on cancer screening were carried out.
- STEPS surveys ( $n=7$ ), global school-based health surveys ( $n=3$ ) and adult tobacco surveys ( $n=4$ ) were carried out.
- Legislation was enacted to ban smoking in public places and to ban tobacco advertisement, promotion and sponsorship ( $n=10$ ); laws were passed requiring health warnings on tobacco packages ( $n=8$ ); tax changes on tobacco products were implemented ( $n=5$ ).
- South Africa passed legislation for phased reduction of salt in targeted processed-food items.
- Mauritius imposed tax on sugar contained in manufactured sugar-sweetened drinks.

**Region of the Americas**

- Country cooperation strategies were developed (20); global school-based student health surveys were implemented ( $n=14$ ); PanAm STEP was finalized ( $n=5$ ); national plans were developed and national targets were established ( $n=4$ ). A virtual course on NCDs was developed and implemented.
- In line with the WHO FCTC, smoke-free legislation was adopted ( $n=3$ ); bans on advertisement, promotion and sponsorship were adopted ( $n=6$ ); and at least one Global Tobacco Surveillance System component was completed ( $n=8$ ).
- National policies were developed on healthy diet, school food programmes and physical activity ( $n=9$ ); Mexico approved a tax on sugary drinks and energy-dense snacks; laws were passed regulating marketing/labelling of sugar, salt and fat in snacks and beverages ( $n=4$ ); bicycle use for transportation was promoted ( $n=9$ ).
- The Pan American Forum on NCDs was launched, as a platform to promote collaboration between multiple actors.

**Eastern Mediterranean Region**

- High priority was given to NCDs in national development plans and health strategies ( $n=15$ ). Lebanon, Morocco, Sudan and Yemen have been supported to develop national multisectoral NCD action plans.
- Countries are now implementing health-warning measures on tobacco use ( $n=11$ ). Countries of the Gulf Cooperation Council initiated a process of adopting a unified regulation for implementing pictorial health warnings on tobacco products.
- WHO PEN and nationally approved guidelines have been implemented, and the degree of integration of NCD in primary health care assessed ( $n=7$ ).
- STEPS surveys were conducted ( $n=4$ ) and more planning is under way ( $n=3$ ). Comprehensive review and assessment of national cancer control programmes has been carried out ( $n=8$ ).

**European Region**

- Health information systems were strengthened, through implementation of STEPS in Kyrgyzstan, Republic of Moldova, Turkmenistan and Uzbekistan.
- NCD strategies and plans were developed/strengthened in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kyrgyzstan, Lithuania, Republic of Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.
- Country assessments of health-system challenges and opportunities for better NCD outcomes were implemented in Belarus, Estonia, Hungary, Kyrgyzstan, Republic of Moldova, Tajikistan and Turkey.
- Primary care was strengthened to address NCDs through implementation of WHO PEN in Moldova, Tajikistan and Uzbekistan.

### South-East Asia Region

- NCDs were recognized as a major priority in all 11 countries.
- National targets were set in Bangladesh, Democratic People's Republic of Korea, India, Maldives, Myanmar, Nepal, Sri Lanka and Timor Leste, and multisectoral action plans are being developed.
- The WHO PEN package has been introduced into primary health-care systems in Bhutan, Democratic People's Republic of Korea, Indonesia, Myanmar and Sri Lanka.
- Pictorial warnings covering a significant area on tobacco product packages have been implemented in Bangladesh (50%), India (40%), Indonesia (40%), Thailand (85%) and Nepal (75%).
- At least one round of an NCD risk factor survey was completed in all countries.
- In addition to the nine voluntary global targets, the South-East Asia Region has adopted an additional target on reducing household air pollution.

### Western Pacific Region

- National multisectoral action plans were developed in Brunei Darussalam, Cambodia, Lao People's Democratic Republic, China, Malaysia, Mongolia and all Pacific Island countries.
- STEPS surveys were conducted ( $n=7$ ), as were global school-based student health surveys ( $n=11$ ).
- National targets aligned to the global targets were established in all Pacific Island countries, with the addition of the Tobacco Free Pacific target (5% reduction in tobacco use by 2025). Tobacco control has already yielded results, with 70% of Pacific Island countries meeting the target of a 10% reduction in tobacco prevalence in adults.
- Salt reduction was initiated in 10 countries. Mongolia has demonstrated a 10% reduction in salt content in bread in a year, and Fiji has shown a 15% reduction in salt for a common brand of noodles.
- WHO PEN was introduced in Cambodia, Lao People's Democratic Republic, Mongolia, Philippines, Viet Nam and Pacific Island countries.

Fig. 11.1 WHO accountability framework of on NCD prevention and control

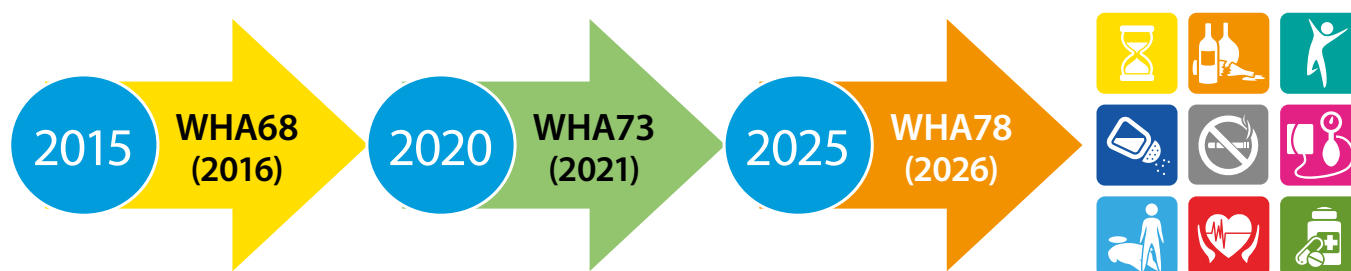
#### a. Progress in implementation of the Global NCD Action Plan

WHO to report to the World Health Assembly (WHA), based on country reporting using the 9 process indicators adopted by the WHA



#### b. Progress in attaining the global targets using 2010 baseline

WHO to report to the World Health Assembly (WHA), based on country reporting using the global monitoring framework indicators



and information on trends in 2015, 2020 and 2025, in respect of the 25 indicators and progress towards the nine targets, using the 2010 data in this report as the baseline (see **Fig. 11.1**).

All the elements required for mutual accountability for NCD prevention and control at global and national levels are not in place yet. There are time-bound assignments for WHO and commitments by governments on NCD prevention and control. However, there are no commitments as yet by other key stakeholders. Work is in progress to develop an approach that can be used to register and publish contributions of the private sector, philanthropic entities and civil society to the achievement of the voluntary global targets by 2015. Recognizing the need to continue to strengthen international cooperation in the prevention and control of NCDs, Ministers committed themselves in the 2014 Outcome Document (1), to invite the Development Assistance Committee of the Organization for Economic Cooperation and Development to consider developing a purpose code for NCDs in order to improve tracking of official development assistance in support of national efforts for the prevention and control of NCDs. Accountability of all stakeholders will be central for the attainment of global and national NCD targets.

## References

1. Outcome document of the high-level meeting of the General Assembly on the comprehensive review and assessment of the progress achieved in the prevention and control of non-communicable diseases. New York: United Nations; 2014. In: Sixty-eighth session of the United Nations General Assembly, 7 July 2014 (A/68/L.53; [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/68/L.53&L](http://www.un.org/ga/search/view_doc.asp?symbol=A/68/L.53&L), accessed 3 November 2014).
2. Sustainable development goals. United Nations sustainable development knowledge platform <http://sustainabledevelopment.un.org/?menu=1300>
3. United Nations General Assembly Resolution A/RES/66/2. Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. New York (NY): United Nations; 2012 (<http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/458/94/PDF/N1145894.pdf?OpenElement>, accessed 24 October 2014).
4. Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2013 global survey. Geneva: World Health Organization; 2014.
5. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf), accessed 24 October 2014).
6. Health in all policies (HiAP) framework for country action. Geneva: World Health Organization; 2014 ([http://www.who.int/cardiovascular\\_diseases/140120HPRHiAPFramework.pdf?ua=1](http://www.who.int/cardiovascular_diseases/140120HPRHiAPFramework.pdf?ua=1), accessed 24 October 2014).
7. United Nations Economic and Social Council Document E/2013/L.23. United Nations Interagency Task Force on the Prevention and Control of Non-communicable Diseases. Geneva: United Nations; 2013 ([http://www.who.int/nmh/events/2013/E.2013.L.23\\_tobacco.pdf](http://www.who.int/nmh/events/2013/E.2013.L.23_tobacco.pdf), accessed 3 November 2014).
8. Provisional agenda item 13.1. Prevention and control of noncommunicable diseases. Terms of reference for the global coordination mechanism on the prevention and control of noncommunicable diseases. In: Sixty-seventh World Health Assembly, 19–24 May 2014. Geneva: World Health Organization; 2014 (A67/14 Add.1; [http://apps.who.int/gb/ebwha/pdf\\_files/WHA67/A67\\_14Add1-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_14Add1-en.pdf), accessed 3 November 2014).

9. WHO Regional Committee for Africa. Resolution AFR/RC62/R7. Consideration and endorsement of the Brazzaville Declaration on Noncommunicable Diseases. Brazzaville: WHO Regional Office for Africa; 2012 (<http://apps.who.int/iris/bitstream/10665/80117/1/AFR-RC62-R7-e.pdf>, accessed 22 October 2014).
10. 28th Pan American Sanitary Conference; 64th Session of the Regional Committee. Resolution CSP28.R13. Strategy for the Prevention and Control of Noncommunicable Diseases. Washington (DC): Pan American Health Organization; 2012 ([http://www.paho.org/hq/index.php?option=com\\_docman&task=doc\\_view&gid=19265&Itemid=721](http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=19265&Itemid=721), accessed 27 May 2014).
11. Regional Committee for the Eastern Mediterranean. Resolution EMR/RC59/R2. The Political Declaration of the United Nations General Assembly on the Prevention and Control of Non-Communicable Diseases: commitments of Member States and the way forward. Cairo: WHO Regional Office for the Eastern Mediterranean; 2012 ([http://applications.emro.who.int/docs/RC\\_Resolutions\\_2012\\_2\\_14692\\_EN.pdf?ua=1](http://applications.emro.who.int/docs/RC_Resolutions_2012_2_14692_EN.pdf?ua=1), accessed 27 May 2014).
12. WHO Regional Committee for Europe. Resolution EUR/RC61/12. Action plan for implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012–2016. Copenhagen: WHO Regional Office for Europe; 2011 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/147729/wd12E\\_NCDs\\_111360\\_revision.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0003/147729/wd12E_NCDs_111360_revision.pdf?ua=1), accessed 22 October 2014).
13. WHO Regional Committee for South-East Asia. Resolution SEA/RC65/R5. Noncommunicable diseases, mental health and neurological disorders. Delhi: WHO Regional Office for South-East Asia; 2012 ([http://www.searo.who.int/entity/noncommunicable\\_diseases/events/regional\\_consultation\\_ncd/documents/8\\_3\\_resolution.pdf](http://www.searo.who.int/entity/noncommunicable_diseases/events/regional_consultation_ncd/documents/8_3_resolution.pdf), accessed 22 October 2014).
14. WHO Regional Committee for the Western Pacific. Resolution WPR/RC62.R2. Expanding and intensifying noncommunicable disease prevention and control. Manila: WHO Regional Office for the Western Pacific; 2011 (<http://www2.wpro.who.int/NR/rdonlyres/D80E593C-E7E6-4A4F-B9DF-07B76B284E5A/0/R2Noncommunicablediseasepreventionandcontrol201112.pdf>, accessed 22 October 2014).
15. Resoution 66.10. Follow-up to the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. In: Sixty-sixth session of the United Nations General Assembly. New York: United Nations; 2011 (WHA66.10; [http://apps.who.int/gb/ebwha/pdf\\_files/WHA66/A66\\_R10-en.pdfA/67/L.36](http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdfA/67/L.36), accessed 10 November 2014).











# Annexes

## Annex 1. Comprehensive global monitoring framework, including 25 indicators, and a set of 9 voluntary global targets for the prevention and control of noncommunicable diseases

Framework element	Target	Indicator
<b>Mortality and morbidity</b>		
Premature mortality from noncommunicable disease	 (1) A 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	(1) Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Additional indicator		(2) Cancer incidence, by type of cancer, per 100 000 population
<b>Risk factors</b>		
<b>Behavioural risk factors</b>		
Harmful use of alcohol <sup>1</sup>	 (2) At least 10% relative reduction in the harmful use of alcohol <sup>2</sup> , as appropriate, within the national context	(3) Total (recorded and unrecorded) alcohol per capita (aged 15 + years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context (4) Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context (5) Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context
Physical inactivity	 (3) A 10% relative reduction in prevalence of insufficient physical activity	(6) Prevalence of insufficiently physically active adolescents defined as less than 60 minutes of moderate to vigorous intensity activity daily (7) Age-standardized prevalence of insufficiently physically active persons aged 18 + years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
Salt/sodium intake	 (4) A 30% relative reduction in mean population intake of salt/sodium intake <sup>3</sup>	(8) Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18 + years
Tobacco use	 (5) A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	(9) Prevalence of current tobacco use among adolescents (10) Age-standardized prevalence of current tobacco use among persons aged 18+ years
<b>Biological risk factors</b>		
Raised blood pressure (6)	 (6) A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	(11) Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure $\geq 140$ mmHg and/or diastolic blood pressure $\geq 90$ mmHg) and mean systolic blood pressure

Framework element	Target	Indicator
Diabetes and obesity <sup>4</sup>	 (7) Halt the rise in diabetes and obesity	(12) Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose) (13) Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex) (14) Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index $\geq 25$ kg/m <sup>2</sup> for overweight and body mass index $\geq 30$ kg/m <sup>2</sup> for obesity)
Additional indicators		(15) Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years <sup>5</sup> (16) Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day (17) Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol $\geq 5.0$ mmol/l or 190 mg/dl); and mean total cholesterol concentration
<b>National systems response</b>		
Drug therapy to prevent heart attacks and strokes	 (8) At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	18) Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk $\geq 30\%$ , including those with existing cardiovascular disease) receiving drug therapy and counseling (including glycaemic control) to prevent heart attacks and strokes
Essential noncommunicable disease medicines and basic technologies to treat major noncommunicable diseases	 (9) An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities	(19) Availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities
Additional indicators		(20) Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer (21) Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programmes (22) Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programmes and policies (23) Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt (24) Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants (25) Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies

1. Countries will select indicator(s) of harmful use as appropriate to national context and in line with WHO's global strategy to reduce the harmful use of alcohol and that may include prevalence of heavy episodic drinking, total alcohol per capita consumption, and alcohol-related morbidity and mortality among others.
2. In WHO's global strategy to reduce the harmful use of alcohol the concept of the harmful use of alcohol encompasses the drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes.
3. WHO's recommendation is less than 5 grams of salt or 2 grams of sodium per person per day.
4. Countries will select indicator(s) appropriate to national context.
5. Individual fatty acids within the broad classification of saturated fatty acids have unique biological properties and health effects that can have relevance in developing dietary recommendations.





## Annex 2.

# Methods used for estimating the NCD mortality and risk factor data

The mortality and risk factor data presented in this report were estimated by WHO and collaborating partners using standard methods to maximize cross-country comparability. They are not necessarily the official statistics of Member States.

## Mortality

Age- and sex-specific all-cause mortality rates were estimated for 2000-2012 from revised life tables, published in World Health Statistics 2014 (1). Total number of deaths by age and sex were estimated for each country by applying these death rates to the estimated resident populations prepared by the United Nations Population Division in its 2012 revision (2).

Causes of death were estimated for 2000-2012 using data sources and methods that were specific for each cause of death (3). Vital registration systems which record deaths with sufficient completeness and quality of cause of death information were used as the preferred data source. Mortality by cause was estimated for all Member States with a population greater than 250,000. These NCD mortality estimates are based on a combination of country life tables, cause of death models, regional cause of death patterns, and WHO and UNAIDS programme estimates for some major causes of death (not including NCDs). Detailed information on methods for mortality and causes of death estimates were published previously (3).

Age-standardized death rates for cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes were calculated using the WHO standard population (4). Proportional mortality (% of total deaths, all ages, and of both sexes) for communicable, maternal, perinatal and nutritional conditions; injuries; cardiovascular disease; cancer; chronic respiratory disease; diabetes; and other NCDs is reported for 2012 (5).

The 2012 probability of dying between ages 30 and 70 years from the four main NCDs was estimated using age-specific death rates (in 5-year age groups, e.g. 30-34... 65-69, for those between 30 and 70) of the combined four main NCD categories, for each Member State (5). Using the life table method, the risk of death between the exact ages of 30 and 70, from any of the four causes and in the absence of other causes of death, was calculated using the equation below. The ICD codes used are: Cardiovascular disease: I00-I99, Cancer: C00-C97, Diabetes: E10-E14, and Chronic respiratory disease: J30-J98. Five-year death rates ( ${}^*_5M_x$ ) were first calculated:

$${}^*_5M_x = \frac{\text{Total deaths from four NCD causes between exact age } x \text{ and exact age } x+5}{\text{Total population between exact age } x \text{ and exact age } x+5}$$

For each five-year age group, the probability of death from the four NCDs ( ${}^*_5q_x$ ) was calculated using the following formula:

$${}^*_5q_x = \frac{{}^*_5M_x * 5}{1 + {}^*_5M_x * 2.5}$$

The unconditional probability of death, for the 30-70 age range, was calculated last:

$${}^*_40q_{30} = 1 - \prod_{x=30}^{65} (1 - {}^*_5q_x)$$

## Metabolic/biological risk factors

Estimates for metabolic/biological risk factors (BMI, overweight and obesity, blood glucose/diabetes and blood pressure) were produced for the standard year 2010 to serve as baselines for reporting against the NCD global voluntary targets, and for the year 2014. The crude adjusted estimates in **Annex 4** are based on aggregated data provided to WHO and Global

Burden of Metabolic Risk Factors of Chronic Diseases Collaborating Group and obtained through a review of published and unpublished literature. The inclusion criteria for estimation analysis included data that had come from a random sample of the general population, with clearly indicated survey methods (including sample sizes) and risk factor definitions. Using regression modeling techniques, adjustments were made for the following factors so that the same indicator could be reported for a standard year (in this case 2010 and 2014) in all countries: standard risk factor definition, standard set of age groups for reporting; standard reporting year, and representativeness of population. Crude adjusted rates and age-standardized comparable estimates were produced. This was done by adjusting the crude age-specific estimates to the WHO Standard Population (4) that reflects the global age and sex structure. This adjusts for the differences in age/sex structure between countries. Uncertainty in estimates was analysed by taking into account sampling error and uncertainty due to statistical modeling. The estimates included in the WHO Regional groupings and World Bank Income groupings are the age-standardized comparable estimates. Data reported as of October 2014 were included in the estimation process. Further detailed information on the methods and data sources used to produce these estimates is available from WHO.

The following risk factor indicators, with definitions, were included:

- Prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure  $\geq 140$  mmHg and/or diastolic blood pressure  $\geq 90$  mmHg)
- Prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration  $\geq 7.0$  mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes)
- Mean Body Mass Index (BMI).
- Prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index  $\geq 25$  kg/m<sup>2</sup>)

- Prevalence of obesity in persons aged 18+ years (defined as body mass index  $\geq 30$  kg/m<sup>2</sup>)

## Physical inactivity

Estimates for adult prevalence of insufficient physical activity were produced by WHO for the standard year 2010. Insufficient physical activity was defined as the percentage of adults aged 18+ years not meeting the WHO recommendations on Physical Activity for Health (6), which is, doing less than 150 minutes of moderate physical activity per week, or equivalent. Prevalence of insufficient physical activity was estimated from population-based surveys meeting the following criteria: (i) provide survey data for the definition of doing less than 150 minutes of moderate physical activity per week (or equivalent), or doing less than 5 times 30 minutes of moderate physical activity per week (or equivalent); (ii) survey data cover all domains of life, including work/household, transport and leisure time; (iii) include randomly selected participants of the general population who were representative of the national or a defined subnational population; (iv) present prevalence by age and sex, with a sample size of each sex-age group of at least a sample size of 50 participants. Countries with no surveys were excluded from the analysis. Regression models were applied to adjust for the definition (for those countries where only the definition of doing less than 5 times 30 minutes of moderate physical activity per week (or equivalent) was available), for survey coverage (for those countries where only urban data was available), and to estimate missing age groups (for those countries where data did not cover the full age range). To further enable comparison among countries, age-standardized comparable estimates of insufficient physical activity were produced. This was done by adjusting the crude estimates to the WHO Standard Population (4) that closely reflects the age and sex structure of most low and middle income countries. This corrects for the differences in age/sex structure between countries. Uncertainty in estimates was analysed by taking into account sampling error and uncertainty due to statistical modeling. The estimates included in the WHO Regional groupings and World Bank Income

groupings are the age-standardized comparable estimates. Data reported as of October 2014 were included in the estimation process. Further detailed information on the methods and data sources used to produce these estimates is available from WHO.

The following risk factor indicator, with definition, was included:

- Prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)

## Tobacco smoking

A statistical model based on a negative binomial regression was used to estimate the prevalence of tobacco smoking using information from country surveys available in WHO. Tobacco smoking includes cigarettes, cigars, pipes, hookah, shisha, water-pipe and any other form of smoked tobacco. National surveys that report tobacco prevalence and were completed in countries from 1990 up to 30 June 2014 were used for the estimation.

An important limitation of the data is that information on tobacco use in a country may be collected from various surveys that may have different primary uses and at times different methods of collecting the information. The model applies several adjustments to try to overcome these limitations. Where survey data are missing for any age group, the model uses data from the country's other surveys to estimate the age pattern of tobacco use. For ages that the country has never surveyed, the average age pattern seen in countries in the same geographical region is applied to the country's data. The model adjusts for differing definitions of tobacco use (for example, current versus daily use, or tobacco smoking versus cigarette smoking) using available data from the country's other surveys to gauge the relationship between indicators of tobacco use by age and sex and over time and derives likely values for the missing indicators. For tobacco use indicators that the country has never reported, the average relationships seen in countries in the same geographical region are applied to the country's data.

Despite best efforts to generate estimates for countries, this is not always possible and there are some countries with insufficient survey data (whether no surveys, or too few or too old) to calculate a contemporary time point estimate.

The outputs from the model are tobacco smoking prevalence estimates with 95% confidence intervals, as well as age-specific rates by sex. The 2012 age-specific rates were applied to the World Standard population to produce age-standardised smoking rates for WHO Regions and World Bank grouping of countries into High, Middle and Low income countries.<sup>1</sup> The WHO Standard Population is a fictitious population whose age distribution is largely reflective of the global population age structure. The age-standardized rates are hypothetical numbers which are only meaningful when comparing standardized rates from one country with standardized rates from another country. Further detailed information on the methods and data sources used to produce these estimates is available from WHO.

## Harmful use of alcohol

### Total alcohol per capita (15+ years) consumption, in litres of pure alcohol, 2010 [95% CI]

The recorded three-year average APC for 2008–2010 and the unrecorded consumption for 2010 were added to arrive at the total consumption in litres of pure alcohol (7). The comparison of this total with the weighted average of the total consumption for each region is shown in the country profile. For male and female per capita consumption, we used proportion of alcohol consumed by men versus women plus the demographics for 2010.

1. Geographic regions as defined by UN sub-regions ; please refer to pages ix to xiii of *World Population Prospects: The 2010 Revision* published by the UN Department of Economic and Social Affairs in 2011 at [http://esa.un.org/wpp/Documentation/pdf/WPP2010\\_Volume-I\\_Comprehensive-Tables.pdf](http://esa.un.org/wpp/Documentation/pdf/WPP2010_Volume-I_Comprehensive-Tables.pdf). Please note that, for the purposes of this analysis, the Eastern Africa subregion was divided into two regions: Eastern Africa Islands and Remainder of Eastern Africa; and the Melanesia, Micronesia and Polynesia subregions were combined into one subregion.

**Recorded APC (three-year average):** Using the recorded APC data from 2008, 2009 and 2010, three-year averages were computed. Tourist consumption was removed to provide a better estimate for APC in countries with at least as many tourists as inhabitants. The tourist consumption estimates are based on the following assumptions: i) Tourists/visitors consume alcohol as they do at home (i.e. with the same average alcohol per capita consumption); ii) The average length of stay by tourists/visitors was 14 days (except for Estonia, Luxembourg, and the Republic of Moldova, where there is a lot of cross-border shopping with shorter average length of stay).

Recorded APC is defined as the recorded amount of alcohol consumed per capita (15+ years) over a calendar year in a country, in litres of pure alcohol. The indicator only takes into account the consumption which is recorded from production, import, export, and sales data often via taxation. Recorded APC is calculated as the sum of beverage-specific alcohol consumption of pure alcohol (beer, wine, spirits, other). The “other alcoholic beverages” category consists of such types as fortified wine, fermented beverages, sorghum, maize, and ready-to-drink. The first priority in data sources is given to government statistics; second are country-specific alcohol industry statistics (Canadean, IWSR-International Wine and Spirit Research, OIV-International Organisation of Vine and Wine, Wine Institute, historically World Drink Trends) in the public domain if based on interviews in countries; third is the Food and Agriculture Organization of the United Nations’ statistical database (FAOSTAT); and fourth is economic operators if desk review. In order to make the conversion into litres of pure alcohol, the alcohol content (% alcohol by volume) is considered to be as follows: Beer (barley beer 5%), Wine (grape wine 12%; must of grape 9%, vermouth 16%), Spirits (distilled spirits 40%; spirit-like 30%), and Other (sorghum, millet, maize beers 5%; cider 5%; fortified wine 17% and 18%; fermented wheat and fermented rice 9%; other fermented beverages 9%).

**Unrecorded APC:** Unrecorded APC in litres of pure alcohol in 2010 was based on empirical

investigations and the judgement of experts. A special exercise to collect in-depth information on unrecorded alcohol from all venues (i.e., cross-border shopping, surrogate alcohol use, illegal and legal home production, smuggling) was conducted to improve the accuracy of unrecorded data.

### **Total alcohol per capita (15+ years) consumption, in litres of pure alcohol, projected estimates for 2012 [95% CI]**

Projected estimates for total alcohol consumption data for 2012 took into account data that were available for that year for some countries. For other countries, they were derived using fractional polynomial regression models with year as independent variable. As data on per capita consumption change rapidly over time, the regression model for each country was chosen based on the results of regression models that used data from 2005 onward, 2000 onward, 1990 onward, and 1960 onward. Models were chosen based on a sensitivity analysis that assessed the ability of these models to predict data from 2005 onward when these data were excluded (models were adjusted to use data from 2000 onward, 1995 onward, 1985 onward, and 1960 onward respectively for the sensitivity analyses).

### **Age-standardized heavy episodic drinking (15+ years, population), past 30 days (%), 2010 [95% CI]**

The number of males in the population multiplied by the percentage of heavy drinkers in the population. The number of male heavy drinkers divided by the number of male drinkers equals the percentage of male heavy episodic drinkers among male drinkers. Similar calculations are done for HED among females and the total population. Surveys carried out in the time period 2006–2010. HED is defined as having consumed at least 60 grams or more of pure alcohol on at least one occasion in the past 30 days. Values for countries with no available surveys were imputed via multiple regression based on region, year of survey, per capita consumption, pattern of drinking score, demographic indicators (including religion) and economic wealth (GDP-PPP) as predictors.



### Age-standardized alcohol use disorders (15+ years), 12 month prevalence (%), 2010 [95% CI]

Data on the prevalence of people with AUD (including harmful use and alcohol dependence), were modelled using regression models. Where available, the original survey data on the previously-mentioned measures of interest were used instead of the predicted estimates. The regression models used data collected through a systematic search of all survey data on the previously-mentioned measures of interest (from 2000 onward) and took into account per capita consumption, population structure, the size of Muslim population within the country, the region of the country, and the year from which the survey data were obtained. Data on gross domestic product (adjusted for purchase power parity) were obtained from the World Bank (World Bank, 2013). The validity of the predicted estimates was assessed by comparing predicted estimates to the survey data.

### References:

1. World Health Organization. World Health Statistics 2014. Geneva: WHO; 2014.
2. United Nations Population Division. World population prospects - the 2012 revision. 2013. New York, United Nations.
3. WHO methods and data sources for country-level causes of death 2000-2012. World Health Organization, Geneva 2014.
4. Ahmad OB et al. Age Standardization of Rates: A New WHO Standard (Technical Report). GPE Discussion Paper Series: No.31. Geneva, World Health Organization, 2001.
5. WHO. Global Health Estimates: Deaths by Cause, Age, Sex and Country, 2000-2012. Geneva, World Health Organization, 2014.
6. WHO Global Recommendations on Physical Activity for Health. Geneva, World Health Organization, 2010. Available at: [http://www.who.int/dietphysicalactivity/factsheet\\_recommendations/en/](http://www.who.int/dietphysicalactivity/factsheet_recommendations/en/)
7. Global status report on alcohol and health 2014. Geneva: World Health Organization; 2014 ([http://www.who.int/substance\\_abuse/publications/global\\_alcohol\\_report/msb\\_gsr\\_2014\\_1.pdf?ua=1](http://www.who.int/substance_abuse/publications/global_alcohol_report/msb_gsr_2014_1.pdf?ua=1), accessed 4 November 2014).



## Annex 3.

### List of countries by WHO regions

Africa	The Americas	Eastern mediterranean
Algeria	Antigua and Barbuda	Afghanistan
Angola	Argentina	Bahrain
Benin	Bahamas	Djibouti
Botswana	Barbados	Egypt
Burkina Faso	Belize	Iran (Islamic Republic of)
Burundi	Bolivia (Plurinational State of)	Iraq
Cabo Verde	Brazil	Jordan
Cameroon	Canada	Kuwait
Central African Republic	Chile	Lebanon
Chad	Colombia	Libya
Comoros	Costa Rica	Morocco
Congo	Cuba	Oman
Côte d'Ivoire	Dominica	Pakistan
Democratic Republic of the Congo	Dominican Republic	Qatar
Equatorial Guinea	Ecuador	Saudi Arabia
Eritrea	El Salvador	Somalia
Ethiopia	Grenada	Sudan
Gabon	Guatemala	Syrian Arab Republic
Gambia	Guyana	Tunisia
Ghana	Haiti	United Arab Emirates
Guinea	Honduras	Yemen
Guinea-Bissau	Jamaica	
Kenya	Mexico	
Lesotho	Nicaragua	
Liberia	Panama	
Madagascar	Paraguay	
Malawi	Peru	
Mali	Saint Kitts and Nevis	
Mauritania	Saint Lucia	
Mauritius	Saint Vincent and the Grenadines	
Mozambique	Suriname	
Namibia	Trinidad and Tobago	
Niger	United States of America	
Nigeria	Uruguay	
Rwanda	Venezuela (Bolivarian Republic of)	
Sao Tome and Principe		
Senegal		
Seychelles		
Sierra Leone		
South Africa		
South Sudan		
Swaziland		
Togo		
Uganda		
United Republic of Tanzania		
Zambia		
Zimbabwe		

Europe	South-East Asia	Western Pacific
Albania	Bangladesh	Australia
Andorra	Bhutan	Brunei Darussalam
Armenia	Democratic People's Republic of Korea	Cambodia
Austria	India	China
Azerbaijan	Indonesia	Cook Islands
Belarus	Maldives	Fiji
Belgium	Myanmar	Japan
Bosnia and Herzegovina	Nepal	Kiribati
Bulgaria	Sri Lanka	Lao People's Democratic Republic
Croatia	Thailand	Malaysia
Cyprus	Timor-Leste	Marshall Islands
Czech Republic		Micronesia (Federated States of)
Denmark		Mongolia
Estonia		Nauru
Finland		New Zealand
France		Niue
Georgia		Palau
Germany		Papua New Guinea
Greece		Philippines
Hungary		Republic of Korea
Iceland		Samoa
Ireland		Singapore
Israel		Solomon Islands
Italy		Tonga
Kazakhstan		Tuvalu
Kyrgyzstan		Vanuatu
Latvia		Viet Nam
Lithuania		
Luxembourg		
Malta		
Monaco		
Montenegro		
Netherlands		
Norway		
Poland		
Portugal		
Republic of Moldova		
Romania		
Russian Federation		
San Marino		
Serbia		
Slovakia		
Slovenia		
Spain		
Sweden		
Switzerland		
Tajikistan		
the former Yugoslav Republic of Macedonia		
Turkey		
Turkmenistan		
Ukraine		
United Kingdom of Great Britain and Northern Ireland		
Uzbekistan		

## List of countries by World Bank Income Groups (2013)

Country	ISO 3 code	WHO region, 2013	World Bank Income Group Classification, 2013
Afghanistan	AFG	EMR	Low-income
Albania	ALB	EUR	Upper-middle-income
Algeria	DZA	AFR	Upper-middle-income
Andorra	AND	EUR	High-income
Angola	AGO	AFR	Upper-middle-income
Antigua and Barbuda	ATG	AMR	High-income
Argentina	ARG	AMR	Upper-middle-income
Armenia	ARM	EUR	Lower-middle-income
Australia	AUS	WPR	High-income
Austria	AUT	EUR	High-income
Azerbaijan	AZE	EUR	Upper-middle-income
Bahamas	BHS	AMR	High-income
Bahrain	BHR	EMR	High-income
Bangladesh	BGD	SEAR	Low-income
Barbados	BRB	AMR	High-income
Belarus	BLR	EUR	Upper-middle-income
Belgium	BEL	EUR	High-income
Belize	BLZ	AMR	Upper-middle-income
Benin	BEN	AFR	Low-income
Bhutan	BTN	SEAR	Lower-middle-income
Bolivia (Plurinational State of)	BOL	AMR	Lower-middle-income
Bosnia and Herzegovina	BIH	EUR	Upper-middle-income
Botswana	BWA	AFR	Upper-middle-income
Brazil	BRA	AMR	Upper-middle-income
Brunei Darussalam	BRN	WPR	High-income
Bulgaria	BGR	EUR	Upper-middle-income
Burkina Faso	BFA	AFR	Low-income
Burundi	BDI	AFR	Low-income
Cabo Verde	CPV	AFR	Lower-middle-income
Cambodia	KHM	WPR	Low-income
Cameroon	CMR	AFR	Lower-middle-income
Canada	CAN	AMR	High-income
Central African Republic	CAF	AFR	Low-income
Chad	TCD	AFR	Low-income
Chile	CHL	AMR	High-income
China	CHN	WPR	Upper-middle-income
Colombia	COL	AMR	Upper-middle-income
Comoros	COM	AFR	Low-income
Congo	COG	AFR	Lower-middle-income
Cook Islands	COK	WPR	Upper-middle-income
Costa Rica	CRI	AMR	Upper-middle-income
Côte d'Ivoire	CIV	AFR	Lower-middle-income
Croatia	HRV	EUR	High-income
Cuba	CUB	AMR	Upper-middle-income
Cyprus	CYP	EUR	High-income
Czech Republic	CZE	EUR	High-income
Democratic People's Republic of Korea	PRK	SEAR	Low-income

Country	ISO 3 code	WHO region, 2013	World Bank Income Group Classification, 2013
Democratic Republic of the Congo	COD	AFR	Low-income
Denmark	DNK	EUR	High-income
Djibouti	DJI	EMR	Lower-middle-income
Dominica	DMA	AMR	Upper-middle-income
Dominican Republic	DOM	AMR	Upper-middle-income
Ecuador	ECU	AMR	Upper-middle-income
Egypt	EGY	EMR	Lower-middle-income
El Salvador	SLV	AMR	Lower-middle-income
Equatorial Guinea	GNQ	AFR	High-income
Eritrea	ERI	AFR	Low-income
Estonia	EST	EUR	High-income
Ethiopia	ETH	AFR	Low-income
Fiji	FJI	WPR	Upper-middle-income
Finland	FIN	EUR	High-income
France	FRA	EUR	High-income
Gabon	GAB	AFR	Upper-middle-income
Gambia	GMB	AFR	Low-income
Georgia	GEO	EUR	Lower-middle-income
Germany	DEU	EUR	High-income
Ghana	GHA	AFR	Lower-middle-income
Greece	GRC	EUR	High-income
Grenada	GRD	AMR	Upper-middle-income
Guatemala	GTM	AMR	Lower-middle-income
Guinea	GIN	AFR	Low-income
Guinea-Bissau	GNB	AFR	Low-income
Guyana	GUY	AMR	Lower-middle-income
Haiti	HTI	AMR	Low-income
Honduras	HND	AMR	Lower-middle-income
Hungary	HUN	EUR	Upper-middle-income
Iceland	ISL	EUR	High-income
India	IND	SEAR	Lower-middle-income
Indonesia	IDN	SEAR	Lower-middle-income
Iran (Islamic Republic of)	IRN	EMR	Upper-middle-income
Iraq	IRQ	EMR	Upper-middle-income
Ireland	IRL	EUR	High-income
Israel	ISR	EUR	High-income
Italy	ITA	EUR	High-income
Jamaica	JAM	AMR	Upper-middle-income
Japan	JPN	WPR	High-income
Jordan	JOR	EMR	Upper-middle-income
Kazakhstan	KAZ	EUR	Upper-middle-income
Kenya	KEN	AFR	Low-income
Kiribati	KIR	WPR	Lower-middle-income
Kuwait	KWT	EMR	High-income
Kyrgyzstan	KGZ	EUR	Lower-middle-income
Lao People's Democratic Republic	LAO	WPR	Lower-middle-income
Latvia	LVA	EUR	High-income
Lebanon	LBN	EMR	Upper-middle-income
Lesotho	LSO	AFR	Lower-middle-income

## Global status report on NCDs 2014

Country	ISO 3 code	WHO region, 2013	World Bank Income Group Classification, 2013
Liberia	LBR	AFR	Low-income
Libya	LBY	EMR	Upper-middle-income
Lithuania	LTU	EUR	High-income
Luxembourg	LUX	EUR	High-income
Madagascar	MDG	AFR	Low-income
Malawi	MWI	AFR	Low-income
Malaysia	MYS	WPR	Upper-middle-income
Maldives	MDV	SEAR	Upper-middle-income
Mali	MLI	AFR	Low-income
Malta	MLT	EUR	High-income
Marshall Islands	MHL	WPR	Upper-middle-income
Mauritania	MRT	AFR	Lower-middle-income
Mauritius	MUS	AFR	Upper-middle-income
Mexico	MEX	AMR	Upper-middle-income
Micronesia (Federated States of)	FSM	WPR	Lower-middle-income
Monaco	MCO	EUR	High-income
Mongolia	MNG	WPR	Lower-middle-income
Montenegro	MNE	EUR	Upper-middle-income
Morocco	MAR	EMR	Lower-middle-income
Mozambique	MOZ	AFR	Low-income
Myanmar	MMR	SEAR	Low-income
Namibia	NAM	AFR	Upper-middle-income
Nauru	NRU	WPR	Upper-middle-income
Nepal	NPL	SEAR	Low-income
Netherlands	NLD	EUR	High-income
New Zealand	NZL	WPR	High-income
Nicaragua	NIC	AMR	Lower-middle-income
Niger	NER	AFR	Low-income
Nigeria	NGA	AFR	Lower-middle-income
Niue	NIU	WPR	Upper-middle-income
Norway	NOR	EUR	High-income
Oman	OMN	EMR	High-income
Pakistan	PAK	EMR	Lower-middle-income
Palau	PLW	WPR	Upper-middle-income
Panama	PAN	AMR	Upper-middle-income
Papua New Guinea	PNG	WPR	Lower-middle-income
Paraguay	PRY	AMR	Lower-middle-income
Peru	PER	AMR	Upper-middle-income
Philippines	PHL	WPR	Lower-middle-income
Poland	POL	EUR	High-income
Portugal	PRT	EUR	High-income
Qatar	QAT	EMR	High-income
Republic of Korea	KOR	WPR	High-income
Republic of Moldova	MDA	EUR	Lower-middle-income
Romania	ROU	EUR	Upper-middle-income
Russian Federation	RUS	EUR	High-income
Rwanda	RWA	AFR	Low-income
Saint Kitts and Nevis	KNA	AMR	High-income
Saint Lucia	LCA	AMR	Upper-middle-income



Country	ISO 3 code	WHO region, 2013	World Bank Income Group Classification, 2013
Saint Vincent and the Grenadines	VCT	AMR	Upper-middle-income
Samoa	WSM	WPR	Lower-middle-income
San Marino	SMR	EUR	High-income
Sao Tome and Principe	STP	AFR	Lower-middle-income
Saudi Arabia	SAU	EMR	High-income
Senegal	SEN	AFR	Lower-middle-income
Serbia	SRB	EUR	Upper-middle-income
Seychelles	SYC	AFR	Upper-middle-income
Sierra Leone	SLE	AFR	Low-income
Singapore	SGP	WPR	High-income
Slovakia	SVK	EUR	High-income
Slovenia	SVN	EUR	High-income
Solomon Islands	SLB	WPR	Lower-middle-income
Somalia	SOM	EMR	Low-income
South Africa	ZAF	AFR	Upper-middle-income
South Sudan	SSD	AFR	Lower-middle-income
Spain	ESP	EUR	High-income
Sri Lanka	LKA	SEAR	Lower-middle-income
Sudan	SDN	EMR	Lower-middle-income
Suriname	SUR	AMR	Upper-middle-income
Swaziland	SWZ	AFR	Lower-middle-income
Sweden	SWE	EUR	High-income
Switzerland	CHE	EUR	High-income
Syrian Arab Republic	SYR	EMR	Lower-middle-income
Tajikistan	TJK	EUR	Low-income
Thailand	THA	SEAR	Upper-middle-income
the former Yugoslav Republic of Macedonia	MKD	EUR	Upper-middle-income
Timor-Leste	TLS	SEAR	Lower-middle-income
Togo	TGO	AFR	Low-income
Tonga	TON	WPR	Upper-middle-income
Trinidad and Tobago	TTO	AMR	High-income
Tunisia	TUN	EMR	Upper-middle-income
Turkey	TUR	EUR	Upper-middle-income
Turkmenistan	TKM	EUR	Upper-middle-income
Tuvalu	TUV	WPR	Upper-middle-income
Uganda	UGA	AFR	Low-income
Ukraine	UKR	EUR	Lower-middle-income
United Arab Emirates	ARE	EMR	High-income
United Kingdom of Great Britain and Northern Ireland	GBR	EUR	High-income
United Republic of Tanzania	TZA	AFR	Low-income
United States of America	USA	AMR	High-income
Uruguay	URY	AMR	High-income
Uzbekistan	UZB	EUR	Lower-middle-income
Vanuatu	VUT	WPR	Lower-middle-income
Venezuela (Bolivarian Republic of)	VEN	AMR	Upper-middle-income
Viet Nam	VNM	WPR	Lower-middle-income
Yemen	YEM	EMR	Lower-middle-income
Zambia	ZMB	AFR	Lower-middle-income
Zimbabwe	ZWE	AFR	Low-income



**Annex 4.**  
**Country estimates of noncommunicable  
diseases mortality and selected risk factors,  
2010 (baseline) and latest available data**

#### 4.1 Premature NCD mortality - Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease, 2010 and 2012

Country name	Region	2010	2012
Afghanistan	EMR	31.3%	30.5%
Albania	EUR	19.3%	18.8%
Algeria	AFR	22.4%	22.1%
Andorra	EUR	...	...
Angola	AFR	24.7%	24.2%
Antigua and Barbuda	AMR	...	...
Argentina	AMR	17.8%	17.5%
Armenia	EUR	30.6%	29.7%
Australia	WPR	9.9%	9.4%
Austria	EUR	12.4%	12.0%
Azerbaijan	EUR	25.2%	23.3%
Bahamas	AMR	13.3%	13.8%
Bahrain	EMR	14.3%	13.3%
Bangladesh	SEAR	18.0%	17.5%
Barbados	AMR	14.7%	13.8%
Belarus	EUR	28.9%	26.2%
Belgium	EUR	12.7%	12.2%
Belize	AMR	15.1%	14.4%
Benin	AFR	22.1%	22.1%
Bhutan	SEAR	21.0%	20.5%
Bolivia (Plurinational State of)	AMR	18.6%	18.3%
Bosnia and Herzegovina	EUR	18.1%	17.5%
Botswana	AFR	20.4%	20.9%
Brazil	AMR	19.8%	19.4%
Brunei Darussalam	WPR	16.7%	16.8%
Bulgaria	EUR	25.0%	24.0%
Burkina Faso	AFR	23.4%	23.8%
Burundi	AFR	24.4%	24.3%
Cabo Verde	AFR	15.7%	15.1%
Cambodia	WPR	17.6%	17.7%
Cameroon	AFR	20.2%	19.9%
Canada	AMR	11.2%	10.7%
Central African Republic	AFR	18.7%	18.5%
Chad	AFR	23.8%	23.2%
Chile	AMR	12.4%	11.9%
China	WPR	19.5%	19.4%
Colombia	AMR	13.3%	12.4%
Comoros	AFR	24.0%	23.5%
Congo	AFR	19.7%	19.8%
Cook Islands	WPR	...	...
Costa Rica	AMR	12.6%	12.2%
Côte d'Ivoire	AFR	23.2%	23.3%
Croatia	EUR	18.2%	17.7%
Cuba	AMR	17.2%	16.5%
Cyprus	EUR	10.3%	9.5%

## Annex 4.1: Premature NCD mortality

... Indicates no data were available

Country name	Region	2010	2012
Czech Republic	EUR	17.8%	17.0%
Democratic People's Republic of Korea	SEAR	28.0%	27.1%
Democratic Republic of the Congo	AFR	23.7%	23.6%
Denmark	EUR	13.7%	13.3%
Djibouti	EMR	19.2%	18.8%
Dominica	AMR	...	...
Dominican Republic	AMR	16.9%	14.8%
Ecuador	AMR	12.2%	11.9%
Egypt	EMR	25.1%	24.5%
El Salvador	AMR	17.3%	16.9%
Equatorial Guinea	AFR	24.1%	23.4%
Eritrea	AFR	25.4%	24.2%
Estonia	EUR	20.4%	18.8%
Ethiopia	AFR	15.9%	15.2%
Fiji	WPR	31.4%	30.8%
Finland	EUR	11.8%	11.2%
France	EUR	11.5%	11.4%
Gabon	AFR	14.6%	15.0%
Gambia	AFR	19.3%	19.1%
Georgia	EUR	21.8%	21.6%
Germany	EUR	13.0%	12.3%
Ghana	AFR	19.9%	20.3%
Greece	EUR	12.3%	12.9%
Grenada	AMR	...	...
Guatemala	AMR	13.9%	13.5%
Guinea	AFR	21.0%	20.9%
Guinea-Bissau	AFR	22.3%	22.4%
Guyana	AMR	37.1%	37.2%
Haiti	AMR	24.0%	23.9%
Honduras	AMR	16.1%	15.7%
Hungary	EUR	24.5%	24.0%
Iceland	EUR	9.5%	10.2%
India	SEAR	26.1%	26.2%
Indonesia	SEAR	23.8%	23.1%
Iran (Islamic Republic of)	EMR	18.1%	17.3%
Iraq	EMR	23.3%	23.7%
Ireland	EUR	11.5%	11.1%
Israel	EUR	10.4%	9.5%
Italy	EUR	10.4%	9.8%
Jamaica	AMR	17.4%	17.0%
Japan	WPR	9.6%	9.3%
Jordan	EMR	20.2%	19.8%
Kazakhstan	EUR	34.4%	33.9%
Kenya	AFR	18.4%	18.1%
Kiribati	WPR	...	...
Kuwait	EMR	12.0%	11.8%
Kyrgyzstan	EUR	28.8%	28.5%
Lao People's Democratic Republic	WPR	25.7%	24.2%
Latvia	EUR	25.3%	24.1%
Lebanon	EMR	13.3%	12.4%



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010	2012
Lesotho	AFR	24.5%	23.9%
Liberia	AFR	21.3%	21.2%
Libya	EMR	18.5%	17.6%
Lithuania	EUR	23.1%	22.4%
Luxembourg	EUR	12.0%	11.4%
Madagascar	AFR	24.3%	23.4%
Malawi	AFR	18.2%	18.7%
Malaysia	WPR	20.1%	19.6%
Maldives	SEAR	17.6%	15.9%
Mali	AFR	25.9%	25.6%
Malta	EUR	11.7%	11.6%
Marshall Islands	WPR	...	...
Mauritania	AFR	...	...
Mauritius	AFR	24.7%	24.0%
Mexico	AMR	16.8%	15.7%
Micronesia (Federated States of)	WPR	...	...
Monaco	EUR	...	...
Mongolia	WPR	32.5%	32.0%
Montenegro	EUR	22.7%	22.2%
Morocco	EMR	23.4%	22.8%
Mozambique	AFR	17.9%	17.3%
Myanmar	SEAR	24.3%	24.3%
Namibia	AFR	21.5%	20.0%
Nauru	WPR	...	...
Nepal	SEAR	22.3%	21.6%
Netherlands	EUR	12.6%	12.2%
New Zealand	WPR	11.6%	10.7%
Nicaragua	AMR	19.1%	19.4%
Niger	AFR	19.9%	19.6%
Nigeria	AFR	19.8%	19.8%
Niue	WPR	...	...
Norway	EUR	11.3%	10.7%
Oman	EMR	18.8%	17.8%
Pakistan	EMR	20.5%	20.5%
Palau	WPR	...	...
Panama	AMR	12.9%	12.5%
Papua New Guinea	WPR	26.3%	26.4%
Paraguay	AMR	19.0%	18.5%
Peru	AMR	13.0%	11.2%
Philippines	WPR	27.6%	27.9%
Poland	EUR	20.5%	20.0%
Portugal	EUR	12.4%	11.9%
Qatar	EMR	14.1%	14.2%
Republic of Korea	WPR	10.5%	9.3%
Republic of Moldova	EUR	30.2%	26.5%
Romania	EUR	23.2%	22.6%
Russian Federation	EUR	30.2%	29.9%
Rwanda	AFR	19.5%	19.1%
Saint Kitts and Nevis	AMR	...	...
Saint Lucia	AMR	...	...

## Annex 4.1: Premature NCD mortality

... Indicates no data were available

Country name	Region	2010	2012
Saint Vincent and the Grenadines	AMR	...	...
Samoa	WPR	...	...
San Marino	EUR	...	...
Sao Tome and Principe	AFR	...	...
Saudi Arabia	EMR	17.1%	16.7%
Senegal	AFR	16.8%	16.7%
Serbia	EUR	24.7%	24.5%
Seychelles	AFR	...	...
Sierra Leone	AFR	27.2%	27.5%
Singapore	WPR	10.9%	10.5%
Slovakia	EUR	20.6%	19.4%
Slovenia	EUR	13.5%	12.6%
Solomon Islands	WPR	24.2%	24.1%
Somalia	EMR	19.6%	19.1%
South Africa	AFR	27.7%	26.8%
South Sudan	AFR	20.3%	19.8%
Spain	EUR	10.9%	10.8%
Sri Lanka	SEAR	18.3%	17.6%
Sudan	EMR	17.5%	17.4%
Suriname	AMR	13.6%	13.6%
Swaziland	AFR	24.1%	21.4%
Sweden	EUR	10.4%	9.9%
Switzerland	EUR	9.7%	9.1%
Syrian Arab Republic	EMR	19.3%	19.1%
Tajikistan	EUR	29.1%	28.8%
Thailand	SEAR	16.7%	16.2%
the former Yugoslav Republic of Macedonia	EUR	22.8%	22.1%
Timor-Leste	SEAR	25.6%	23.7%
Togo	AFR	19.9%	20.2%
Tonga	WPR	...	...
Trinidad and Tobago	AMR	26.7%	26.2%
Tunisia	EMR	17.6%	17.2%
Turkey	EUR	19.4%	18.4%
Turkmenistan	EUR	40.6%	40.8%
Tuvalu	WPR	...	...
Uganda	AFR	21.3%	21.2%
Ukraine	EUR	28.3%	28.2%
United Arab Emirates	EMR	19.8%	18.9%
United Kingdom	EUR	12.4%	12.0%
United Republic of Tanzania	AFR	16.6%	16.1%
United States of America	AMR	14.7%	14.3%
Uruguay	AMR	17.7%	17.1%
Uzbekistan	EUR	31.3%	31.0%
Vanuatu	WPR	...	...
Venezuela (Bolivarian Republic of)	AMR	16.0%	15.7%
Viet Nam	WPR	17.5%	17.4%
Yemen	EMR	23.3%	23.1%
Zambia	AFR	18.6%	18.1%
Zimbabwe	AFR	20.2%	19.3%

4.2 NCD mortality - Comparable estimates of NCD mortality (total NCD deaths in 000s; % of NCD deaths occurring under the age of 70; and age-standardized death rate for NCDs per 100 000), 2012

Country name	Region	Total NCD deaths ('000s)		NCD deaths under age 70 (% of all NCD deaths)	
		Males	Females	Males	Females
Afghanistan	EMR	43.0	48.3	72.4%	68.8%
Albania	EUR	12.8	13.6	33.6%	23.4%
Algeria	AFR	89.6	79.3	51.5%	44.2%
Andorra	EUR	...	...	...	...
Angola	AFR	35.7	36.7	77.3%	72.6%
Antigua and Barbuda	AMR	...	...	...	...
Argentina	AMR	128.0	127.4	42.1%	27.3%
Armenia	EUR	18.0	15.9	36.9%	21.5%
Australia	WPR	67.0	66.0	28.4%	18.9%
Austria	EUR	33.6	38.6	31.4%	15.6%
Azerbaijan	EUR	25.3	23.3	50.7%	34.2%
Bahamas	AMR	0.8	0.8	44.2%	29.8%
Bahrain	EMR	1.3	0.9	56.6%	45.3%
Bangladesh	SEAR	277.5	244.8	49.0%	49.6%
Barbados	AMR	0.8	0.7	44.6%	32.4%
Belarus	EUR	53.0	55.5	50.5%	21.5%
Belgium	EUR	46.7	47.5	29.1%	16.9%
Belize	AMR	0.4	0.4	42.3%	41.6%
Benin	AFR	15.7	16.7	71.5%	62.6%
Bhutan	SEAR	1.5	1.3	57.5%	59.6%
Bolivia (Plurinational State of)	AMR	21.1	21.4	58.1%	52.0%
Bosnia and Herzegovina	EUR	16.3	16.0	37.9%	22.5%
Botswana	AFR	2.4	3.6	63.1%	45.3%
Brazil	AMR	518.3	459.9	50.7%	41.4%
Brunei Darussalam	WPR	0.6	0.5	58.4%	51.4%
Bulgaria	EUR	50.8	48.7	40.1%	21.0%
Burkina Faso	AFR	23.9	27.6	75.0%	66.8%
Burundi	AFR	17.4	14.8	75.4%	67.9%
Cabo Verde	AFR	0.9	0.9	35.8%	26.1%
Cambodia	WPR	21.4	22.5	62.6%	56.8%
Cameroon	AFR	37.0	37.1	70.7%	64.9%
Canada	AMR	109.3	110.2	31.9%	22.1%
Central African Republic	AFR	6.5	6.7	63.7%	56.3%
Chad	AFR	19.0	17.6	74.0%	68.3%
Chile	AMR	40.9	38.2	41.6%	29.5%
China	WPR	4568.7	4008.3	39.7%	31.9%
Colombia	AMR	71.5	71.8	48.4%	43.2%
Comoros	AFR	1.1	1.1	69.4%	63.0%
Congo	AFR	6.8	6.7	63.5%	56.9%
Cook Islands	WPR	...	...	...	...
Costa Rica	AMR	9.2	8.4	43.2%	35.1%
Côte d'Ivoire	AFR	42.7	34.8	74.0%	74.5%
Croatia	EUR	23.1	23.2	37.2%	17.3%
Cuba	AMR	40.2	35.7	38.8%	29.9%
Cyprus	EUR	2.8	2.8	32.6%	17.1%



... Indicates no data were available

Age-standardized death rate per 100 000 (Males)					Age-standardized death rate per 100 000 (Females)				
All NCDs	Cancers	Chronic respiratory diseases	Cardio-vascular disease	Diabetes	All NCDs	Cancers	Chronic respiratory diseases	Cardio-vascular disease	Diabetes
869.2	142.2	74.0	498.0	33.5	829.4	110.6	59.6	520.9	39.0
714.2	142.5	42.4	447.4	6.4	625.1	105.3	27.8	417.6	7.4
779.8	83.9	34.7	434.6	76.3	645.2	78.0	22.9	359.9	58.7
...	...	...	...	...	...	...	...	...	...
812.4	97.9	95.3	376.4	39.5	732.0	86.1	58.6	369.8	44.4
...	...	...	...	...	...	...	...	...	...
599.4	166.5	51.3	247.8	21.7	370.9	109.1	24.7	148.4	14.4
1091.3	277.1	64.7	606.9	35.7	653.5	175.3	26.5	367.7	31.9
359.9	135.9	27.8	110.6	11.6	253.0	90.6	18.0	75.6	7.7
447.6	152.3	21.9	177.8	16.7	288.4	99.7	10.6	119.0	10.8
800.8	145.0	30.1	523.5	13.9	556.9	88.5	16.5	377.6	14.9
602.8	131.8	12.1	292.5	45.4	370.9	88.1	4.4	169.6	38.9
536.8	80.4	49.3	195.9	96.9	473.1	65.4	36.5	176.1	84.3
564.1	94.9	119.6	178.7	30.8	531.9	79.9	92.7	152.6	28.7
499.3	179.3	13.9	159.8	43.3	334.2	117.7	5.3	102.6	41.2
1015.8	182.2	37.1	674.4	2.0	481.4	79.0	5.2	339.6	1.7
449.3	167.5	38.9	140.3	7.7	283.1	102.0	16.6	86.9	5.7
542.9	114.4	46.4	201.6	63.1	410.5	57.3	8.9	180.8	73.4
816.0	104.8	58.2	367.4	47.3	718.3	82.6	31.6	371.1	48.1
558.7	80.8	120.5	187.1	32.2	592.7	79.8	84.9	203.4	36.0
696.9	106.0	46.7	308.7	40.4	586.3	109.9	33.9	236.9	48.5
612.0	146.8	36.4	352.1	13.1	430.3	80.8	20.7	273.2	17.6
577.3	110.5	40.5	277.5	40.6	627.7	70.6	24.2	349.5	73.0
617.7	142.9	49.2	258.9	39.0	429.4	100.2	29.9	177.7	38.9
521.2	94.1	62.9	232.8	59.7	433.6	80.3	36.5	189.8	65.9
813.3	175.7	48.0	498.6	14.2	499.2	99.2	20.5	331.8	11.5
842.5	95.7	60.2	395.6	44.7	743.1	92.4	40.5	355.6	69.7
807.4	130.2	52.2	329.0	42.8	658.7	142.4	38.8	292.1	35.1
637.6	68.2	85.9	330.4	26.8	379.0	62.0	26.3	195.2	19.9
442.6	111.7	40.0	202.5	11.9	355.8	92.7	29.1	170.4	15.6
709.1	75.2	46.8	283.9	48.1	644.8	73.9	29.9	284.8	55.5
378.6	138.9	28.0	112.2	12.3	268.0	104.0	18.6	68.1	7.5
602.6	91.8	98.4	249.8	22.8	509.8	76.2	65.9	237.8	24.0
778.6	90.5	54.0	310.2	45.6	653.9	88.6	48.4	300.4	43.7
453.3	139.3	34.5	145.2	18.3	298.6	99.0	19.8	90.4	12.5
650.6	193.3	89.6	313.8	11.9	508.5	98.0	66.7	286.1	17.7
432.2	100.2	45.9	178.2	16.0	335.2	85.0	29.1	128.0	16.8
766.9	101.6	51.1	356.2	49.5	636.0	105.0	40.0	303.9	41.4
674.2	82.7	74.3	337.6	31.2	595.3	62.2	38.8	329.3	36.2
...	...	...	...	...	...	...	...	...	...
442.3	127.4	31.1	163.0	18.6	346.2	97.3	25.9	118.4	19.5
830.5	123.1	55.4	332.3	49.0	753.1	100.5	36.5	338.8	59.0
655.6	222.8	29.4	291.7	16.7	375.7	112.8	9.8	193.6	10.8
491.1	161.4	22.4	214.4	13.7	359.1	109.1	15.3	157.2	17.7
389.8	115.8	25.4	155.2	24.8	278.6	74.7	14.5	117.9	21.1

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Total NCD deaths ('000s)		NCD deaths under age 70 (% of all NCD deaths)	
		Males	Females	Males	Females
Czech Republic	EUR	47.7	48.4	41.1%	21.3%
Democratic People's Republic of Korea	SEAR	91.4	89.0	58.5%	35.3%
Democratic Republic of the Congo	AFR	105.3	110.4	73.9%	67.1%
Denmark	EUR	23.7	24.3	33.9%	21.9%
Djibouti	EMR	1.5	1.4	64.1%	58.5%
Dominica	AMR	...	...	...	...
Dominican Republic	AMR	16.6	17.9	45.6%	38.7%
Ecuador	AMR	28.1	26.5	41.7%	38.3%
Egypt	EMR	232.1	211.4	57.0%	42.1%
El Salvador	AMR	12.7	13.7	46.6%	42.4%
Equatorial Guinea	AFR	1.5	1.2	71.6%	65.4%
Eritrea	AFR	7.7	7.2	77.9%	68.3%
Estonia	EUR	6.5	7.1	43.4%	18.3%
Ethiopia	AFR	118.6	91.9	63.8%	61.8%
Fiji	WPR	2.8	2.0	67.4%	58.1%
Finland	EUR	22.6	24.1	34.3%	16.5%
France	EUR	238.7	244.7	32.5%	16.2%
Gabon	AFR	2.6	2.9	50.4%	41.2%
Gambia	AFR	2.5	2.3	73.4%	71.4%
Georgia	EUR	22.7	24.0	35.8%	19.2%
Germany	EUR	375.9	414.6	28.8%	14.7%
Ghana	AFR	40.7	46.6	68.5%	57.1%
Greece	EUR	52.7	48.5	26.9%	14.1%
Grenada	AMR	...	...	...	...
Guatemala	AMR	19.2	18.4	52.7%	50.4%
Guinea	AFR	18.4	18.3	71.9%	67.2%
Guinea-Bissau	AFR	2.9	2.9	71.4%	65.3%
Guyana	AMR	2.1	2.1	72.2%	58.2%
Haiti	AMR	20.6	22.3	57.6%	52.7%
Honduras	AMR	11.3	10.5	49.4%	45.8%
Hungary	EUR	58.6	61.4	45.4%	23.7%
Iceland	EUR	0.8	1.0	28.2%	18.4%
India	SEAR	3270.8	2598.0	62.0%	52.2%
Indonesia	SEAR	578.2	527.6	54.0%	43.0%
Iran (Islamic Republic of)	EMR	164.0	138.0	41.8%	38.8%
Iraq	EMR	57.2	45.7	57.0%	42.5%
Ireland	EUR	12.1	11.7	31.9%	22.7%
Israel	EUR	17.1	18.0	29.7%	18.7%
Italy	EUR	253.6	274.7	23.1%	12.8%
Jamaica	AMR	7.7	7.7	37.3%	27.1%
Japan	WPR	506.6	441.0	27.2%	14.7%
Jordan	EMR	10.8	8.8	54.5%	51.6%
Kazakhstan	EUR	66.1	66.2	60.3%	36.1%
Kenya	AFR	50.6	47.8	67.8%	63.4%
Kiribati	WPR	...	...	...	...
Kuwait	EMR	2.8	1.7	49.7%	51.0%
Kyrgyzstan	EUR	15.5	13.7	59.6%	40.2%
Lao People's Democratic Republic	WPR	11.4	10.9	57.5%	48.2%
Latvia	EUR	12.4	14.7	42.9%	19.1%
Lebanon	EMR	10.5	7.0	33.3%	27.7%
Lesotho	AFR	3.3	4.4	55.1%	47.3%



## Annex 4.2: NCD mortality

Age-standardized death rate per 100 000 (Males)					Age-standardized death rate per 100 000 (Females)				
All NCDs	Cancers	Chronic respiratory diseases	Cardiovascular disease	Diabetes	All NCDs	Cancers	Chronic respiratory diseases	Cardiovascular disease	Diabetes
589.8	188.2	23.1	299.3	12.9	362.0	109.2	10.0	191.9	9.5
1061.9	196.6	229.5	480.5	17.1	587.5	122.3	92.2	277.8	15.3
762.5	120.5	82.0	350.8	30.3	693.0	103.4	46.2	361.5	35.6
481.1	179.9	40.4	134.6	16.9	342.3	137.8	32.9	85.5	8.5
678.5	75.4	40.6	298.5	47.6	589.4	91.3	32.9	256.9	40.6
...	...	...	...	...	...	...	...	...	...
396.5	111.5	14.7	187.0	18.2	394.4	81.6	14.7	208.7	30.9
455.3	111.7	29.3	170.3	24.5	369.9	106.0	18.5	130.3	27.4
928.0	145.9	54.5	515.9	13.5	665.4	100.5	31.5	387.7	12.7
533.9	107.9	29.6	191.9	34.1	430.4	112.0	29.8	155.0	44.0
798.8	78.7	97.2	382.1	42.2	657.7	70.3	57.1	329.6	37.3
809.7	83.8	56.8	388.1	55.1	579.2	97.5	33.7	282.2	36.8
752.3	216.2	20.2	387.4	6.8	358.4	103.6	3.8	199.5	4.3
556.1	63.5	103.0	183.9	24.7	404.2	107.2	11.6	141.1	24.2
973.1	76.0	75.0	494.1	170.1	654.5	119.0	29.9	264.0	134.7
467.9	124.5	19.8	197.3	5.6	285.2	86.9	8.1	104.1	3.0
412.7	179.8	18.7	111.8	9.0	234.8	95.5	8.1	65.0	5.6
530.5	57.1	67.6	248.5	26.8	483.0	53.3	38.9	234.4	32.3
650.5	73.3	49.3	306.2	41.3	608.4	56.6	28.1	292.0	55.7
808.7	134.4	39.3	545.3	9.7	481.4	76.9	15.7	349.3	7.4
447.8	152.3	27.1	171.6	11.9	295.1	98.9	14.1	116.2	8.6
688.5	93.3	36.4	320.0	41.9	652.8	72.6	29.6	350.0	37.3
459.3	157.0	34.2	210.2	6.6	284.9	82.8	22.5	145.2	4.7
...	...	...	...	...	...	...	...	...	...
453.8	108.9	26.9	139.2	39.6	371.3	110.0	19.5	108.6	45.6
717.7	119.7	50.2	288.1	41.4	649.1	74.2	36.4	332.0	44.9
794.9	95.0	61.1	355.1	47.3	736.5	83.5	37.1	379.7	54.2
1337.2	230.4	35.1	709.7	129.5	863.7	134.8	15.2	451.0	142.1
758.6	112.4	23.5	394.1	61.8	695.9	96.7	14.2	374.8	87.8
497.4	106.8	50.4	240.1	16.4	392.6	104.6	30.8	164.4	15.2
807.5	253.0	42.0	383.7	14.2	459.1	137.8	18.4	229.4	10.8
337.2	127.4	25.1	118.8	4.9	287.8	112.9	20.1	87.2	5.0
785.0	79.0	188.5	348.9	30.2	586.6	66.3	124.9	264.6	22.7
774.6	132.6	85.4	407.5	48.9	600.2	94.8	34.2	337.0	71.9
609.0	112.6	33.3	371.0	15.1	529.5	81.4	24.3	329.6	18.9
876.6	116.5	44.8	523.8	51.0	584.6	102.6	27.6	336.7	38.3
414.6	149.2	33.0	147.5	8.9	286.5	107.3	20.1	93.5	4.7
367.2	129.1	24.1	105.0	23.3	265.3	95.7	14.4	70.1	17.6
382.1	150.8	23.5	129.7	13.1	242.5	90.2	10.0	85.4	9.5
604.0	156.8	26.4	265.5	60.2	448.1	96.3	9.3	204.3	79.7
333.3	144.9	26.2	108.0	5.4	173.5	73.2	8.9	58.9	2.5
715.2	132.8	44.2	358.9	60.8	568.1	93.8	20.7	293.5	60.1
1245.3	217.1	70.7	808.1	10.6	754.4	122.5	24.8	515.2	10.1
558.7	148.4	21.9	219.6	42.6	476.8	136.8	17.5	191.2	28.1
...	...	...	...	...	...	...	...	...	...
399.8	73.4	10.0	243.7	21.3	419.1	78.4	17.0	233.5	33.6
1033.5	118.9	69.9	660.4	8.6	680.8	86.0	35.0	462.3	10.3
762.7	174.3	84.6	368.7	24.3	611.5	105.6	77.4	326.6	33.8
895.7	238.1	17.8	512.4	24.6	459.4	115.7	3.7	266.5	19.1
472.4	105.7	23.8	267.5	24.7	301.4	91.8	14.4	160.4	9.2
713.9	88.1	133.2	301.9	53.7	644.9	63.8	65.4	309.9	87.3

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Total NCD deaths ('000s)		NCD deaths under age 70 (% of all NCD deaths)	
		Males	Females	Males	Females
Liberia	AFR	5.9	5.8	67.9%	64.0%
Libya	EMR	10.6	9.4	44.9%	38.2%
Lithuania	EUR	14.6	16.5	52.9%	21.9%
Luxembourg	EUR	1.5	1.6	33.0%	19.9%
Madagascar	AFR	32.7	30.2	65.0%	59.5%
Malawi	AFR	19.8	22.1	60.1%	54.6%
Malaysia	WPR	60.5	46.3	52.0%	48.1%
Maldives	SEAR	0.6	0.4	38.2%	37.0%
Mali	AFR	24.1	28.8	66.1%	64.4%
Malta	EUR	1.4	1.3	35.2%	23.7%
Marshall Islands	WPR	...	...	...	...
Mauritania	AFR	4.4	5.1	66.1%	57.0%
Mauritius	AFR	4.3	3.4	60.2%	44.8%
Mexico	AMR	236.4	231.7	51.7%	42.7%
Micronesia (Federated States of)	WPR	...	...	...	...
Monaco	EUR	...	...	...	...
Mongolia	WPR	8.5	6.4	67.4%	50.8%
Montenegro	EUR	2.7	2.7	42.5%	25.6%
Morocco	EMR	75.4	80.0	53.9%	42.8%
Mozambique	AFR	35.3	37.3	68.7%	61.8%
Myanmar	SEAR	123.7	135.1	58.7%	50.6%
Namibia	AFR	2.6	3.5	56.9%	49.0%
Nauru	WPR	...	...	...	...
Nepal	SEAR	56.4	54.4	52.1%	48.9%
Netherlands	EUR	60.3	64.5	30.5%	21.0%
New Zealand	WPR	12.1	12.8	31.2%	23.0%
Nicaragua	AMR	11.4	9.9	56.6%	50.0%
Niger	AFR	22.4	22.2	73.5%	66.8%
Nigeria	AFR	257.4	246.2	76.7%	74.6%
Niue	WPR	...	...	...	...
Norway	EUR	17.4	18.9	28.2%	16.9%
Oman	EMR	3.9	2.5	53.0%	45.4%
Pakistan	EMR	339.6	332.9	52.1%	53.0%
Palau	WPR	...	...	...	...
Panama	AMR	7.2	6.2	41.0%	37.7%
Papua New Guinea	WPR	12.5	11.0	76.5%	70.2%
Paraguay	AMR	12.8	10.2	53.5%	45.6%
Peru	AMR	44.9	42.8	46.1%	44.5%
Philippines	WPR	217.2	166.3	70.3%	57.3%
Poland	EUR	173.6	163.5	45.8%	24.5%
Portugal	EUR	43.7	39.3	30.7%	16.8%
Qatar	EMR	1.4	0.5	75.9%	58.6%
Republic of Korea	WPR	113.6	97.2	40.2%	19.9%
Republic of Moldova	EUR	18.7	19.6	52.2%	29.3%
Romania	EUR	121.6	112.4	42.4%	22.8%
Russian Federation	EUR	875.8	925.7	51.9%	24.3%
Rwanda	AFR	14.2	13.5	67.5%	62.2%
Saint Kitts and Nevis	AMR	...	...	...	...
Saint Lucia	AMR	...	...	...	...
Saint Vincent and the Grenadines	AMR	...	...	...	...
Samoa	WPR	...	...	...	...

## Annex 4.2: NCD mortality

Age-standardized death rate per 100 000 (Males)					Age-standardized death rate per 100 000 (Females)				
All NCDs	Cancers	Chronic respiratory diseases	Cardio-vascular disease	Diabetes	All NCDs	Cancers	Chronic respiratory diseases	Cardio-vascular disease	Diabetes
698.5	103.9	142.0	236.6	34.1	621.1	82.8	111.7	256.4	39.0
630.7	109.2	40.1	368.1	37.9	479.3	71.8	23.9	277.8	39.5
848.2	221.1	26.4	448.2	5.5	411.4	100.7	4.8	241.6	3.8
388.6	153.7	24.7	131.5	7.0	262.2	102.9	17.5	88.2	6.1
694.8	151.0	48.3	349.4	25.0	606.6	105.9	38.6	354.6	20.4
665.4	91.1	54.4	296.4	37.8	645.9	115.8	28.5	366.7	23.9
618.9	103.8	72.3	324.9	23.1	509.4	93.2	36.1	268.8	26.5
523.8	79.8	52.9	279.0	12.0	451.0	59.5	69.7	208.0	14.1
852.6	78.5	145.8	334.9	50.3	879.1	113.8	65.7	447.6	58.4
434.8	141.7	23.6	184.0	11.3	306.7	103.8	9.4	124.8	7.6
...	...	...	...	...	...	...	...	...	...
549.7	67.1	39.9	252.1	33.2	557.2	67.5	26.2	267.7	44.9
735.9	99.0	56.5	269.3	201.9	449.2	72.1	23.2	157.3	144.1
539.5	77.9	42.5	170.1	95.8	410.9	68.7	27.6	130.3	86.0
...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...
1216.9	244.1	59.5	723.3	8.9	773.2	154.6	31.8	483.2	5.0
661.2	190.7	5.7	405.8	11.6	491.3	117.2	1.9	329.7	12.1
778.0	123.1	62.0	347.2	106.2	651.1	77.5	29.7	314.0	122.0
647.0	85.4	46.3	224.8	40.2	553.3	108.3	43.3	203.6	28.4
767.3	147.4	107.8	324.9	32.2	662.5	103.7	119.7	311.1	45.1
594.2	81.3	84.3	279.6	45.3	572.0	50.2	49.4	318.3	67.4
...	...	...	...	...	...	...	...	...	...
719.9	77.7	171.6	288.5	34.9	639.2	75.3	135.6	252.4	30.5
424.2	178.3	30.1	128.8	9.1	301.7	124.2	18.0	84.9	6.6
355.9	128.0	27.7	122.3	13.4	276.3	100.8	21.4	86.2	8.3
630.6	98.0	41.4	262.0	41.4	473.9	90.2	29.1	197.8	47.7
653.0	57.5	49.1	285.3	38.9	643.0	56.0	40.1	344.5	44.0
712.8	120.9	40.1	258.9	41.9	638.4	97.0	34.0	271.8	51.4
...	...	...	...	...	...	...	...	...	...
403.6	145.5	30.0	139.2	9.2	281.8	104.9	21.5	87.2	5.4
543.5	72.3	15.6	275.8	90.0	405.4	56.7	10.2	209.8	67.9
658.2	84.6	138.2	256.4	35.7	681.3	91.8	41.3	293.6	49.8
...	...	...	...	...	...	...	...	...	...
424.0	105.3	27.4	179.4	26.7	326.7	81.9	19.6	125.3	28.2
815.5	158.3	155.7	167.4	105.3	601.5	139.3	70.2	131.1	102.5
568.4	121.6	35.1	261.7	42.7	409.0	95.5	15.5	179.7	49.4
409.7	114.2	28.4	143.3	13.8	327.0	108.9	22.5	105.3	11.9
899.2	114.2	97.1	463.6	65.7	578.4	85.4	34.8	305.4	60.7
667.6	203.9	35.6	333.5	11.3	367.2	113.8	11.3	192.1	7.8
456.3	184.0	32.9	140.3	20.3	255.4	88.2	14.5	91.5	15.3
394.7	97.3	10.6	151.2	55.9	420.8	76.2	12.5	159.7	78.7
415.0	174.8	33.3	112.6	20.5	221.4	74.8	11.7	76.2	12.4
1006.9	181.1	40.3	622.6	7.9	633.5	91.8	11.7	429.0	7.6
786.3	198.4	31.6	443.9	7.1	472.6	102.2	10.4	299.7	5.6
1155.6	223.1	36.6	760.9	3.9	573.8	105.7	7.1	394.7	4.7
641.4	133.1	30.6	272.3	37.8	537.9	118.1	21.5	252.1	31.8
...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Total NCD deaths ('000s)		NCD deaths under age 70 (% of all NCD deaths)	
		Males	Females	Males	Females
San Marino	EUR	...	...	...	...
Sao Tome and Principe	AFR	...	...	...	...
Saudi Arabia	EMR	40.6	29.8	50.2%	40.0%
Senegal	AFR	16.0	17.6	65.3%	61.6%
Serbia	EUR	52.2	54.9	43.4%	23.7%
Seychelles	AFR	...	...	...	...
Sierra Leone	AFR	12.5	14.0	80.4%	79.2%
Singapore	WPR	9.7	8.2	46.5%	35.0%
Slovakia	EUR	23.3	22.5	48.4%	24.0%
Slovenia	EUR	8.1	8.2	37.3%	17.5%
Solomon Islands	WPR	1.0	0.8	59.8%	60.0%
Somalia	EMR	13.7	13.0	74.4%	68.8%
South Africa	AFR	130.9	133.1	62.1%	47.8%
South Sudan	AFR	17.6	15.7	68.5%	63.3%
Spain	EUR	188.2	177.2	26.9%	13.4%
Sri Lanka	SEAR	60.3	43.5	48.8%	35.8%
Sudan	EMR	53.8	46.9	68.5%	62.9%
Suriname	AMR	0.9	0.8	53.3%	44.1%
Swaziland	AFR	1.5	2.5	59.2%	58.4%
Sweden	EUR	38.7	43.3	23.4%	14.7%
Switzerland	EUR	26.9	28.9	26.6%	15.2%
Syrian Arab Republic	EMR	36.1	25.8	48.2%	44.8%
Tajikistan	EUR	13.9	16.1	57.7%	48.6%
Thailand	SEAR	198.7	155.7	45.5%	38.7%
the former Yugoslav Republic of Macedonia	EUR	9.6	9.1	41.1%	25.7%
Timor-Leste	SEAR	1.5	1.5	62.6%	56.6%
Togo	AFR	9.5	9.8	74.3%	70.0%
Tonga	WPR	...	...	...	...
Trinidad and Tobago	AMR	5.5	4.6	52.7%	41.1%
Tunisia	EMR	26.3	23.1	46.4%	33.3%
Turkey	EUR	198.8	163.7	45.6%	33.8%
Turkmenistan	EUR	18.0	16.4	73.0%	52.6%
Tuvalu	WPR	...	...	...	...
Uganda	AFR	50.4	45.5	69.5%	64.0%
Ukraine	EUR	283.8	330.6	45.4%	21.3%
United Arab Emirates	EMR	4.6	1.8	84.5%	73.3%
United Kingdom	EUR	243.7	253.7	29.1%	19.2%
United Republic of Tanzania	AFR	64.3	58.7	65.4%	58.3%
United States of America	AMR	1142.9	1191.2	37.2%	25.1%
Uruguay	AMR	13.2	13.0	35.8%	22.1%
Uzbekistan	EUR	73.0	73.0	56.8%	42.6%
Vanuatu	WPR	...	...	...	...
Venezuela (Bolivarian Republic of)	AMR	51.9	44.1	54.7%	46.1%
Viet Nam	WPR	203.3	175.7	54.3%	30.0%
Yemen	EMR	34.6	29.1	68.5%	66.1%
Zambia	AFR	16.3	16.9	65.0%	59.1%
Zimbabwe	AFR	19.5	22.7	51.1%	45.3%

Age-standardized death rate per 100 000 (Males)					Age-standardized death rate per 100 000 (Females)				
All NCDs	Cancers	Chronic respiratory diseases	Cardio-vascular disease	Diabetes	All NCDs	Cancers	Chronic respiratory diseases	Cardio-vascular disease	Diabetes
...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...
622.4	66.9	28.6	382.4	42.8	472.2	62.7	20.5	287.5	26.8
599.8	76.0	61.1	197.1	54.1	526.1	73.4	32.7	198.2	58.0
775.5	218.1	39.1	400.8	23.6	553.9	132.9	18.8	318.9	22.1
...	...	...	...	...	...	...	...	...	...
921.0	93.6	69.2	386.9	54.2	1005.4	77.6	53.1	485.3	83.6
326.2	127.2	19.5	137.4	3.9	214.5	86.0	5.8	82.1	3.6
713.4	196.8	22.5	394.5	7.8	401.9	100.7	7.6	241.5	5.6
487.9	208.1	18.1	174.2	4.2	277.1	110.2	6.8	113.6	3.1
780.4	90.7	104.8	314.6	93.3	636.2	116.3	60.0	196.9	108.2
587.6	108.5	37.9	226.2	31.2	517.8	127.9	43.3	200.7	27.6
902.8	143.0	84.9	354.2	98.5	587.4	89.6	33.4	259.8	91.0
691.7	121.1	63.2	259.4	39.7	564.3	108.8	28.4	240.0	35.6
426.3	169.3	42.4	121.4	9.3	239.6	80.8	15.5	75.6	7.0
634.5	68.8	74.0	345.1	59.7	388.7	61.4	37.9	209.0	38.8
610.1	96.0	56.0	231.5	35.6	497.3	76.2	25.9	219.2	33.0
442.6	108.7	14.9	169.1	47.5	322.9	64.8	7.7	143.2	32.7
627.4	101.1	100.6	248.2	43.3	763.6	75.7	83.3	330.8	98.2
390.3	124.9	17.3	162.8	10.6	286.3	100.5	13.8	105.7	6.1
360.0	131.1	18.3	122.0	8.1	237.7	83.9	9.3	77.9	5.0
682.2	125.4	30.6	455.0	10.3	467.7	99.0	17.2	299.2	9.6
743.9	103.0	44.8	490.9	16.9	756.9	80.0	45.7	523.2	21.1
559.6	127.8	87.7	215.8	23.5	358.3	82.6	29.1	156.9	27.9
738.8	189.5	28.6	448.3	24.5	546.1	110.1	16.8	366.1	27.6
709.9	185.4	73.6	336.6	22.3	634.7	122.3	55.0	351.7	33.9
711.3	109.0	48.0	295.1	40.9	651.6	93.9	28.7	315.3	44.9
...	...	...	...	...	...	...	...	...	...
879.3	172.8	42.6	346.5	155.0	570.6	115.2	18.1	220.7	105.1
582.2	96.6	37.7	347.7	29.1	442.8	52.9	25.9	271.2	30.9
726.3	198.5	77.3	384.2	12.8	430.8	86.9	38.8	256.0	13.4
1193.8	137.9	61.6	820.6	22.0	881.4	94.6	42.4	618.2	21.9
...	...	...	...	...	...	...	...	...	...
728.2	150.0	42.4	276.7	46.1	608.3	122.3	34.4	250.7	40.2
1025.3	173.1	31.9	707.7	3.2	572.2	86.2	7.0	427.8	3.1
571.5	103.6	33.7	315.6	35.1	504.7	94.1	33.2	264.2	39.4
425.9	153.9	37.2	140.6	5.0	302.2	112.5	25.7	86.7	3.6
635.2	104.4	32.1	214.7	49.3	514.9	90.9	23.9	191.1	49.5
488.9	143.6	43.1	169.5	16.3	350.1	104.2	32.8	107.8	10.9
594.4	211.5	53.3	197.3	13.9	342.0	115.9	23.5	110.1	10.6
921.9	86.2	37.3	656.7	22.7	716.3	69.7	24.0	509.5	22.8
...	...	...	...	...	...	...	...	...	...
476.9	100.8	22.7	226.3	43.5	352.3	86.8	18.6	152.1	41.6
604.3	163.4	56.7	262.3	17.2	314.9	74.2	27.7	145.0	15.4
703.7	79.7	47.4	431.1	31.7	556.2	66.0	51.4	327.1	31.1
620.4	98.8	22.4	299.4	35.0	558.2	113.5	24.8	245.8	42.5
624.1	223.5	65.3	186.7	19.7	578.9	226.6	44.9	202.7	25.6



### 4.3 Alcohol

#### Comparable estimates, per capita consumption, heavy episodic drinking and prevalence of alcohol use disorders, (population aged 15+ years), 2010 and 2012

Country name	Region	2010 Per capita consumption of pure alcohol (litres)						2012 per capita consumption of pure alcohol (litres)	
		Crude adjusted estimates						Crude adjusted projected estimates	
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	1.2	[0.8–1.6]	0.1	[0.1–0.2]	0.7	[0.5–0.9]	0.7	[0.3–1.1]
Albania	EUR	10.6	[9.2–12.1]	3.4	[2.9–3.8]	7.0	[6.0–7.9]	6.8	[4.7–8.8]
Algeria	AFR	1.6	[1.4–1.8]	0.4	[0.4–0.5]	1.0	[0.9–1.1]	0.6	[0.1–1.2]
Andorra	EUR	19.5	[17.8–21.2]	8.2	[7.5–9.0]	13.8	[12.6–15.0]	11.8	[8.6–14.9]
Angola	AFR	12.0	[10.7–13.4]	3.0	[2.7–3.4]	7.5	[6.6–8.3]	9.0	[6.9–11.2]
Antigua and Barbuda	AMR	7.7	[7.1–8.3]	3.1	[2.8–3.3]	5.4	[4.9–5.8]	4.7	[2.8–6.6]
Argentina	AMR	13.6	[12.4–14.8]	5.2	[4.8–5.7]	9.3	[8.5–10.1]	9.4	[6.7–12.1]
Armenia	EUR	8.0	[7.0–9.1]	2.6	[2.2–2.9]	5.3	[4.6–6.0]	5.3	[3.5–7.1]
Australia	WPR	17.3	[15.6–19.1]	7.2	[6.5–7.9]	12.2	[11.0–13.4]	11.9	[8.8–15.1]
Austria	EUR	15.4	[14.2–16.6]	6.3	[5.8–6.8]	10.3	[9.9–11.5]	8.4	[5.8–11.1]
Azerbaijan	EUR	3.6	[3.0–4.2]	1.1	[0.9–1.3]	2.3	[1.9–2.7]	2.4	[1.2–3.6]
Bahamas	AMR	10.1	[9.3–10.9]	3.9	[3.6–4.2]	6.9	[6.3–7.4]	6.1	[3.9–8.3]
Bahrain	EMR	2.7	[2.5–2.9]	1.0	[0.9–1.1]	2.1	[1.9–2.2]	1.5	[0.6–2.3]
Bangladesh	SEAR	0.3	[0.2–0.4]	0.0	[0.0–0.0]	0.2	[0.1–0.2]	0.2	[0.1–0.3]
Barbados	AMR	9.8	[9.0–10.6]	4.0	[3.6–4.3]	6.8	[6.3–7.4]	7.4	[5.0–9.8]
Belarus	EUR	27.5	[24.6–30.5]	9.1	[8.1–10.1]	17.5	[15.6–19.4]	17.8	[14.2–21.4]
Belgium	EUR	15.0	[13.7–16.3]	6.3	[5.7–6.8]	11.0	[9.6–11.4]	10.7	[7.8–13.7]
Belize	AMR	14.5	[12.9–16.2]	2.5	[2.3–2.8]	8.5	[7.6–9.4]	8.2	[6.5–9.9]
Benin	AFR	3.4	[2.8–4.0]	0.9	[0.7–1.0]	2.1	[1.8–2.5]	2.1	[1.1–3.2]
Bhutan	SEAR	1.2	[1.0–1.4]	0.1	[0.1–0.1]	0.7	[0.6–0.8]	0.5	[0.2–0.7]
Bolivia (Plurinational State of)	AMR	9.1	[7.7–10.4]	2.7	[2.3–3.1]	5.9	[5.0–6.7]	6.2	[4.3–8.1]
Bosnia and Herzegovina	EUR	13.1	[11.2–15.1]	1.4	[1.2–1.6]	7.1	[6.0–8.1]	6.8	[5.6–8.0]
Botswana	AFR	14.3	[12.1–16.4]	2.5	[2.1–2.9]	8.4	[7.1–9.7]	7.5	[5.9–9.1]
Brazil	AMR	13.6	[12.1–15.0]	4.2	[3.7–4.6]	8.7	[7.8–9.7]	8.9	[6.6–11.3]
Brunei Darussalam	WPR	1.6	[1.4–1.8]	0.1	[0.1–0.1]	0.9	[0.8–1.0]	1.0	[0.6–1.4]
Bulgaria	EUR	17.9	[16.4–19.5]	5.3	[4.9–5.8]	11.4	[10.4–12.4]	11.2	[8.6–13.8]
Burkina Faso	AFR	11.2	[9.5–12.9]	2.8	[2.3–3.2]	6.8	[5.8–7.9]	6.8	[5.0–8.7]
Burundi	AFR	13.9	[11.9–15.9]	4.8	[4.1–5.5]	9.3	[8.0–10.6]	9.0	[6.5–11.5]
Cabo Verde	AFR	11.2	[9.3–13.1]	2.7	[2.3–3.2]	6.9	[5.8–8.0]	5.8	[4.2–7.5]
Cambodia	WPR	9.6	[7.6–11.7]	1.7	[1.3–2.0]	5.5	[4.3–6.6]	5.7	[4.3–7.1]
Cameroon	AFR	13.3	[11.5–15.2]	3.5	[3.0–3.9]	8.4	[7.2–9.5]	8.6	[6.5–10.6]
Canada	AMR	15.1	[13.4–16.7]	5.5	[4.9–6.1]	10.2	[9.1–11.3]	10.1	[7.4–12.8]
Central African Republic	AFR	5.7	[4.6–6.8]	1.9	[1.6–2.3]	3.8	[3.0–4.5]	3.7	[2.1–5.3]
Chad	AFR	7.1	[5.1–9.1]	1.8	[1.3–2.4]	4.4	[3.2–5.7]	4.5	[3.0–6.0]
Chile	AMR	13.9	[12.3–15.5]	5.5	[4.9–6.1]	9.6	[8.5–10.7]	10.3	[7.5–13.2]
China	WPR	10.9	[9.5–12.3]	2.2	[1.9–2.5]	6.7	[5.8–7.5]	8.8	[7.0–10.7]



... Indicates no data were available

2010 Heavy episodic drinking, past 30 days (%)						2010 Alcohol use disorders, 12 month prevalence (%)					
Age-standardized						Age-standardized					
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
0.1	[0.0–0.5]	0.0	[0.0–0.1]	0.1	[0.0–0.3]	0.5	[0.0–1.3]	0.1	[0.0–0.5]	0.3	[0.0–0.8]
11.7	[8.3–15.0]	1.0	[0.0–2.1]	6.4	[4.6–8.2]	8.7	[5.7–11.7]	2.0	[0.5–3.4]	5.3	[3.6–7.0]
0.7	[0.0–1.7]	0.1	[0.0–0.4]	0.4	[0.0–0.9]	1.4	[0.1–2.7]	0.0	[0.0–0.2]	0.7	[0.1–1.4]
7.5	[4.7–10.3]	0.7	[0.0–1.6]	4.2	[2.6–5.7]	9.1	[6–12.1]	2.2	[0.6–3.7]	5.7	[3.9–7.4]
7.5	[4.7–10.3]	0.6	[0.0–1.4]	4.0	[2.5–5.4]	8.3	[5.3–11.2]	1.3	[0.1–2.6]	4.7	[3.1–6.3]
11.3	[7.9–14.6]	1.5	[0.2–2.8]	6.4	[4.5–8.2]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.6	[3.8–7.3]
24.1	[19.6–28.7]	0.8	[0.0–1.8]	12.0	[9.6–14.5]	9.1	[6.0–12.2]	2.6	[0.9–4.4]	5.8	[4.1–7.6]
38.3	[33.2–43.4]	2.2	[0.6–3.8]	20.3	[17.3–23.3]	8.6	[5.6–11.6]	2.0	[0.5–3.5]	5.4	[3.7–7.1]
17.5	[13.4–21.5]	2.7	[1.0–4.3]	10.1	[7.8–12.4]	5.2	[2.8–7.6]	2.3	[0.7–3.9]	3.7	[2.3–5.2]
53.5	[48.1–58.8]	23.6	[19.2–28.0]	38.5	[34.8–42.1]	15.0	[11.2–18.8]	5.3	[2.9–7.8]	10.2	[7.9–12.5]
19.9	[15.7–24.1]	1.2	[0.0–2.3]	10.3	[8.0–12.5]	8.3	[5.4–11.3]	1.9	[0.4–3.3]	5.0	[3.4–6.7]
9.5	[6.4–12.6]	0.9	[0.0–1.8]	5.1	[3.4–6.8]	7.8	[5–10.7]	3.1	[1.3–5.0]	5.4	[3.7–7.1]
0.1	[0.0–0.4]	0.0	[0.0–0.2]	0.1	[0.0–0.3]	1.6	[0.3–3.0]	0.3	[0–0.8]	1.1	[0.3–2.0]
0.1	[0.0–0.3]	0.0	[0.0–0.0]	0.0	[0.0–0.2]	1.3	[0.1–2.5]	0.2	[0.0–0.8]	0.8	[0.1–1.5]
24.3	[19.8–28.9]	3.8	[1.8–5.9]	14.2	[11.6–16.9]	8.2	[5.3–11.2]	3.2	[1.3–5.1]	5.8	[4.0–7.5]
47.6	[42.3–52.9]	7.2	[4.5–10.0]	26.5	[23.2–29.9]	29.8	[25.0–34.6]	6.0	[3.5–8.5]	17.5	[14.6–20.4]
49.6	[44.3–55.0]	17.6	[13.6–21.6]	33.7	[30.1–37.2]	9.4	[6.3–12.5]	3.4	[1.5–5.3]	6.4	[4.6–8.3]
4.3	[2.2–6.5]	0.1	[0.0–0.4]	2.2	[1.1–3.3]	10.0	[6.8–13.1]	1.9	[0.5–3.4]	5.9	[4.1–7.7]
35.4	[30.4–40.3]	9.8	[6.7–13.0]	22.4	[19.3–25.6]	8.4	[5.5–11.4]	1.7	[0.3–3.1]	5.0	[3.4–6.7]
1.2	[0.0–2.4]	0.0	[0.0–0.2]	0.7	[0.1–1.3]	2.6	[0.9–4.3]	0.5	[0.0–1.3]	1.7	[0.7–2.6]
7.5	[4.7–10.3]	0.4	[0.0–1.1]	3.9	[2.5–5.4]	7.9	[5.0–10.7]	3.1	[1.2–4.9]	5.4	[3.7–7.2]
12.4	[8.9–15.9]	0.7	[0.0–1.7]	6.5	[4.7–8.4]	9.0	[5.9–12.1]	2.1	[0.6–3.6]	5.5	[3.8–7.3]
11.6	[8.2–15.0]	1.2	[0.0–2.3]	6.4	[4.6–8.3]	9.6	[6.5–12.8]	1.5	[0.2–2.8]	5.6	[3.8–7.3]
20.0	[15.8–24.3]	4.5	[2.3–6.7]	12.2	[9.7–14.6]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.5	[3.8–7.3]
0.9	[0.0–1.9]	0.1	[0.0–0.4]	0.5	[0.0–1.1]	2.9	[1.1–4.7]	0.5	[0.0–1.3]	1.7	[0.7–2.7]
28.0	[23.2–32.8]	9.6	[6.5–12.7]	18.9	[16.0–21.9]	12.8	[9.2–16.4]	2.6	[0.9–4.3]	7.7	[5.7–9.7]
29.6	[24.8–34.4]	8.7	[5.7–11.7]	18.4	[15.5–21.3]	2.7	[1.0–4.5]	0.2	[0.0–0.7]	1.4	[0.5–2.3]
6.7	[4.0–9.3]	0.1	[0.0–0.4]	3.3	[2.0–4.7]	9.0	[6.0–12.1]	1.8	[0.4–3.2]	5.4	[3.7–7.1]
8.8	[5.8–11.8]	2.0	[0.5–3.4]	5.2	[3.6–6.9]	8.5	[5.6–11.5]	1.7	[0.3–3.1]	5.1	[3.4–6.7]
2.4	[0.7–4.0]	0.2	[0.0–0.6]	1.2	[0.4–2.1]	7.5	[4.7–10.3]	1.4	[0.1–2.7]	4.3	[2.7–5.8]
17.8	[13.7–21.9]	6.8	[4.1–9.5]	12.3	[9.8–14.8]	9.3	[6.2–12.4]	1.9	[0.4–3.3]	5.6	[3.8–7.3]
26.7	[22.0–31.3]	7.6	[4.8–10.4]	17.2	[14.4–20.1]	10.6	[7.3–13.9]	3.8	[1.8–5.9]	7.2	[5.3–9.2]
3.2	[1.3–5.1]	0.2	[0.0–0.6]	1.7	[0.7–2.6]	5.4	[3.0–7.8]	0.7	[0.0–1.6]	3.0	[1.7–4.3]
1.6	[0.3–3.0]	0.1	[0.0–0.6]	0.9	[0.2–1.6]	1.4	[0.1–2.6]	0.0	[0.0–0.2]	0.7	[0.1–1.3]
9.7	[6.5–12.8]	0.1	[0.0–0.3]	4.8	[3.2–6.5]	8.4	[5.5–11.4]	1.6	[0.2–2.9]	5.0	[3.3–6.6]
13.9	[10.2–17.6]	0.7	[0.0–1.6]	7.5	[5.5–9.5]	9.1	[6.0–12.2]	0.2	[0.0–0.7]	4.8	[3.2–6.4]

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Per capita consumption of pure alcohol (litres)						2012 per capita consumption of pure alcohol (litres)	
		Crude adjusted estimates						Crude adjusted projected estimates	
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Both sexes	[95% CI]
Colombia	AMR	9.1	[7.8–10.4]	3.5	[3.0–4.0]	6.2	[5.3–7.1]	6.2	[4.0–8.4]
Comoros	AFR	0.4	[0.3–0.4]	0.1	[0.1–0.1]	0.2	[0.2–0.3]	0.2	[0.1–0.6]
Congo	AFR	6.2	[5.0–7.5]	1.6	[1.3–1.9]	3.9	[3.1–4.7]	4.2	[2.7–5.6]
Cook Islands	WPR	10.5	[9.7–11.4]	2.1	[1.9–2.2]	6.4	[5.8–6.9]	9.4	[7.5–11.2]
Costa Rica	AMR	7.5	[6.7–8.3]	3.2	[2.8–3.5]	5.4	[4.8–6.0]	5.0	[3.0–7.1]
Côte d'Ivoire	AFR	9.8	[8.4–11.3]	1.9	[1.6–2.1]	6.0	[5.1–6.8]	5.8	[4.4–7.2]
Croatia	EUR	17.7	[15.9–19.6]	7.1	[6.4–7.8]	12.2	[10.9–13.4]	13.0	[9.7–16.3]
Cuba	AMR	8.8	[7.8–9.8]	1.6	[1.4–1.7]	5.2	[4.6–5.8]	5.1	[3.8–6.4]
Cyprus	EUR	12.5	[11.4–13.6]	5.7	[5.2–6.2]	9.2	[8.4–10.0]	8.8	[6.1–11.6]
Czech Republic	EUR	18.6	[17.0–20.1]	7.8	[7.1–8.4]	13.0	[11.9–14.1]	14.0	[10.6–17.4]
Democratic People's Republic of Korea	SEAR	7.4	[6.7–8.1]	0.4	[0.4–0.5]	3.7	[3.4–4.1]	3.8	[3.1–4.4]
Democratic Republic of the Congo	AFR	5.8	[4.9–6.7]	1.5	[1.3–1.7]	3.6	[3.1–4.2]	4.3	[2.8–5.8]
Denmark	EUR	16.1	[14.8–17.5]	6.9	[6.3–7.4]	11.4	[10.5–12.4]	9.9	[7.0–12.8]
Djibouti	EMR	2.4	[2.2–2.6]	0.3	[0.3–0.3]	1.3	[1.2–1.5]	1.3	[0.8–1.9]
Dominica	AMR	10.2	[9.4–11.0]	4.1	[3.7–4.4]	7.1	[6.5–7.6]	6.3	[4.1–8.6]
Dominican Republic	AMR	9.8	[8.9–10.6]	4.0	[3.6–4.3]	6.9	[6.3–7.5]	6.6	[4.3–8.9]
Ecuador	AMR	11.1	[9.2–12.9]	3.4	[2.8–3.9]	7.2	[6.0–8.4]	7.5	[5.4–9.6]
Egypt	EMR	0.7	[0.6–0.9]	0.0	[0.0–0.0]	0.4	[0.3–0.5]	0.3	[0.2–0.5]
El Salvador	AMR	5.0	[4.3–5.7]	1.7	[1.5–2.0]	3.2	[2.8–3.7]	3.2	[1.6–4.7]
Equatorial Guinea	AFR	10.1	[9.2–11.0]	2.9	[2.6–3.1]	6.6	[6.0–7.2]	5.0	[3.4–6.7]
Eritrea	AFR	1.8	[1.5–2.2]	0.3	[0.2–0.4]	1.1	[0.8–1.3]	1.0	[0.4–1.6]
Estonia	EUR	16.2	[14.9–17.5]	5.3	[4.9–5.7]	10.3	[9.4–11.1]	10.1	[7.4–12.8]
Ethiopia	AFR	6.2	[4.5–7.9]	2.2	[1.6–2.8]	4.2	[3.0–5.3]	4.2	[2.5–5.9]
Fiji	WPR	5.5	[4.7–6.3]	0.5	[0.4–0.5]	3.0	[2.6–3.5]	3.0	[2.3–3.7]
Finland	EUR	17.5	[15.6–19.4]	7.3	[6.5–8.1]	12.3	[10.9–13.6]	11.7	[8.6–14.9]
France	EUR	17.8	[16.5–19.0]	7.1	[6.6–7.6]	12.2	[11.4–13.1]	12.3	[9.1–15.5]
Gabon	AFR	17.3	[15.4–19.1]	4.6	[4.1–5.0]	10.9	[9.7–12.1]	11.3	[8.9–13.7]
Gambia	AFR	5.5	[4.8–6.3]	1.4	[1.2–1.6]	3.4	[2.9–3.8]	3.5	[2.2–4.8]
Georgia	EUR	12.6	[10.9–14.3]	3.4	[3.0–3.9]	7.7	[6.6–8.7]	8.1	[5.9–10.2]
Germany	EUR	16.8	[15.6–18.0]	7.0	[6.5–7.5]	11.8	[10.9–12.6]	11.5	[8.4–14.5]
Ghana	AFR	7.8	[6.1–9.5]	1.9	[1.5–2.4]	4.8	[3.8–5.8]	4.9	[3.3–6.5]
Greece	EUR	14.6	[13.0–16.2]	6.2	[5.5–6.8]	10.3	[9.2–11.4]	9.2	[6.4–12.0]
Grenada	AMR	17.9	[16.6–19.3]	7.3	[6.7–7.8]	12.5	[11.6–13.5]	10.3	[7.4–13.1]
Guatemala	AMR	7.5	[6.2–8.7]	0.5	[0.5–0.6]	3.8	[3.2–4.5]	3.7	[2.9–4.4]
Guinea	AFR	1.4	[1.1–1.7]	0.1	[0.1–0.1]	0.7	[0.6–0.9]	0.8	[0.5–1.0]
Guinea-Bissau	AFR	6.4	[5.4–7.4]	1.7	[1.4–1.9]	4.0	[3.4–4.6]	3.3	[2.0–4.6]
Guyana	AMR	11.7	[10.6–12.8]	4.7	[4.2–5.1]	8.1	[7.4–8.9]	8.1	[5.6–10.7]
Haiti	AMR	10.1	[9.3–11.0]	2.9	[2.7–3.2]	6.4	[5.9–7.0]	5.9	[4.1–7.8]
Honduras	AMR	5.7	[5.0–6.4]	2.3	[2.0–2.6]	4.0	[3.5–4.5]	3.8	[2.1–5.6]
Hungary	EUR	20.4	[18.3–22.4]	7.1	[6.4–7.8]	13.3	[12.0–14.6]	12.4	[9.4–15.4]

2010 Heavy episodic drinking, past 30 days (%)						2010 Alcohol use disorders, 12 month prevalence (%)					
Age-standardized						Age-standardized					
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
8.2	[5.2–11.1]	0.1	[0.0–0.6]	4.0	[2.5–5.5]	8.4	[5.5–11.4]	3.2	[1.3–5.1]	5.7	[4.0–7.5]
1.7	[0.3–3.0]	0.1	[0.0–0.4]	0.9	[0.2–1.5]	1.4	[0.1–2.6]	0.0	[0.0–0.2]	0.7	[0.1–1.3]
6.0	[3.5–8.6]	0.3	[0.0–0.8]	3.1	[1.8–4.4]	3.0	[1.2–4.8]	0.4	[0.0–1.0]	1.7	[0.7–2.6]
...	...	...	...	...	...	7.6	[4.8–10.5]	1.4	[0.2–2.7]	4.6	[3.0–6.2]
12.2	[8.7–15.7]	1.5	[0.2–2.8]	6.9	[5.4–8.5]	8.4	[5.5–11.4]	2.8	[1.0–4.6]	5.7	[3.9–7.4]
4.9	[2.6–7.2]	0.3	[0.0–0.8]	2.7	[1.5–3.9]	12.2	[8.7–15.7]	3.3	[1.4–5.2]	7.9	[5.9–10.0]
22.3	[17.9–26.7]	1.5	[0.2–2.8]	11.9	[9.4–14.3]	9.0	[6.0–12.1]	2.2	[0.6–3.8]	5.6	[3.9–7.4]
11.3	[7.9–14.7]	1.3	[0.1–2.5]	6.4	[4.5–8.2]	8.1	[5.2–11.0]	3.2	[1.3–5.1]	5.7	[3.9–7.4]
42.4	[37.2–47.5]	7.1	[4.3–9.8]	25.4	[22.1–28.6]	8.9	[5.9–12.0]	2.8	[1.0–4.5]	6.0	[4.2–7.7]
54.5	[49.2–59.8]	18.1	[14.1–22.0]	36.5	[32.9–40.2]	8.7	[5.7–11.7]	1.5	[0.2–2.7]	5.1	[3.5–6.8]
8.8	[5.7–11.8]	0.1	[0.0–0.3]	4.3	[2.8–5.8]	4.9	[2.6–7.3]	0.9	[0.0–1.9]	2.9	[1.6–4.2]
5.7	[3.2–8.1]	0.2	[0.0–0.8]	2.9	[1.6–4.2]	7.1	[4.4–9.9]	0.8	[0.0–1.8]	3.9	[2.5–5.4]
41.9	[36.9–47.0]	15.8	[11.9–19.6]	29.1	[25.7–32.5]	8.6	[5.6–11.6]	3.4	[1.4–5.3]	6.0	[4.2–7.8]
0.2	[0.0–0.7]	0.0	[0.0–0.0]	0.1	[0.0–0.3]	1.1	[0.0–2.2]	0.2	[0.0–0.6]	0.6	[0.0–1.2]
41.3	[36.3–46.4]	9.7	[6.6–12.8]	25.4	[22.2–28.7]	8.1	[5.2–11.0]	3.2	[1.3–5.0]	5.6	[3.9–7.3]
24.0	[19.5–28.5]	5.3	[2.9–7.6]	14.6	[11.9–17.3]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.6	[3.8–7.3]
7.0	[4.3–9.7]	0.3	[0.0–1.0]	3.6	[2.2–5.1]	7.9	[5.0–10.8]	3.1	[1.2–5.0]	5.5	[3.8–7.2]
0.1	[0.0–0.3]	0.0	[0.0–0.1]	0.0	[0.0–0.2]	0.4	[0.0–1.1]	0.0	[0.0–0.2]	0.2	[0.0–0.6]
16.3	[12.4–20.2]	2.9	[1.2–4.7]	8.9	[6.8–11.1]	7.8	[4.9–10.6]	3.1	[1.2–5.0]	5.2	[3.5–6.9]
8.2	[5.3–11.1]	0.9	[0.0–1.8]	4.7	[3.1–6.3]	8.6	[5.6–11.6]	1.6	[0.2–2.9]	5.2	[3.5–6.9]
1.0	[0.0–2.1]	0.0	[0.0–0.1]	0.5	[0.0–1.0]	3.2	[1.3–5.0]	0.3	[0–0.9]	1.7	[0.7–2.7]
41.4	[36.2–46.6]	9.1	[6.0–12.2]	24.8	[21.5–28.0]	19.3	[15.1–23.5]	3.7	[1.7–5.7]	11.3	[8.9–13.7]
1.2	[0.0–2.3]	0.0	[0.0–0.1]	0.6	[0.0–1.2]	3.6	[1.6–5.6]	0.6	[0.0–1.5]	2.1	[1.0–3.2]
16.7	[12.8–20.7]	2.9	[1.1–4.7]	10.0	[7.7–12.2]	7.5	[4.7–10.4]	1.4	[0.1–2.7]	4.5	[3.0–6.1]
53.6	[48.3–58.9]	17.9	[13.9–22.0]	35.9	[32.3–39.6]	12.1	[8.7–15.6]	3.2	[1.3–5.1]	7.7	[5.7–9.7]
45.4	[40.2–50.6]	14.4	[10.7–18.1]	29.8	[26.4–33.3]	9.4	[6.3–12.5]	2.8	[1.0–4.5]	6.0	[4.2–7.8]
8.9	[5.8–11.9]	1.0	[0.0–2.1]	5.0	[3.3–6.6]	9.1	[6.0–12.2]	1.8	[0.4–3.2]	5.5	[3.7–7.2]
1.3	[0.1–2.5]	0.1	[0.0–0.4]	0.7	[0.1–1.3]	1.7	[0.3–3.1]	0.1	[0.0–0.4]	0.9	[0.2–1.6]
19.1	[15.0–23.3]	0.6	[0.0–1.4]	9.3	[7.1–11.5]	7.7	[4.8–10.5]	0.9	[0.0–1.9]	4.1	[2.6–5.6]
21.3	[17.0–25.6]	5.0	[2.7–7.3]	13.3	[10.7–15.8]	9.7	[6.6–12.9]	2.4	[0.8–4.1]	6.1	[4.3–7.9]
4.3	[2.2–6.5]	0.5	[0.0–1.2]	2.3	[1.2–3.5]	5.7	[3.2–8.2]	0.8	[0.0–1.7]	3.2	[1.9–4.5]
48.2	[42.9–53.5]	18.8	[14.7–22.9]	33.6	[30.0–37.1]	8.6	[5.6–11.6]	2.8	[1.0–4.6]	5.7	[4.0–7.5]
7.6	[4.8–10.5]	0.7	[0.0–1.6]	4.2	[2.7–5.7]	7.8	[4.9–10.7]	3.1	[1.2–5.0]	5.5	[3.7–7.2]
13.3	[9.6–16.9]	2.8	[1.0–4.5]	7.6	[5.6–9.6]	7.8	[4.9–10.6]	3.1	[1.2–4.9]	5.3	[3.6–7.0]
3.3	[1.4–5.2]	0.6	[0.0–1.5]	1.9	[0.9–2.9]	1.4	[0.1–2.6]	0.0	[0.0–0.2]	0.7	[0.1–1.3]
7.5	[4.7–10.3]	0.7	[0.0–1.5]	4.0	[2.5–5.5]	1.7	[0.3–3.1]	0.1	[0.0–0.4]	0.9	[0.2–1.6]
9.9	[6.7–13.0]	1.1	[0.0–2.1]	5.5	[3.8–7.2]	8.1	[5.2–11.0]	3.2	[1.3–5.0]	5.6	[3.9–7.4]
9.4	[6.3–12.5]	0.9	[0.0–1.9]	5.0	[3.4–6.7]	8.2	[5.3–11.2]	3.1	[1.3–5.0]	5.6	[3.9–7.3]
8.1	[5.2–11.0]	0.1	[0.0–0.5]	4.1	[2.6–5.6]	7.8	[4.9–10.7]	3.1	[1.2–4.9]	5.4	[3.7–7.1]
44.4	[39.0–49.7]	7.6	[4.8–10.4]	25.4	[22.1–28.7]	32.2	[27.3–37.1]	6.8	[4.1–9.5]	19.3	[16.4–22.3]

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Per capita consumption of pure alcohol (litres)						2012 per capita consumption of pure alcohol (litres)	
		Crude adjusted estimates						Crude adjusted projected estimates	
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Both sexes	[95% CI]
Iceland	EUR	9.8	[9.0–10.6]	4.3	[4.0–4.7]	7.1	[6.5–7.6]	5.9	[3.7–8.2]
India	SEAR	8.0	[6.5–9.4]	0.5	[0.4–0.6]	4.3	[3.5–5.1]	5.2	[4.4–6.0]
Indonesia	SEAR	1.1	[0.8–1.4]	0.1	[0.1–0.1]	0.6	[0.4–0.7]	0.6	[0.3–0.9]
Iran (Islamic Republic of)	EMR	1.7	[1.2–2.2]	0.3	[0.2–0.4]	1.0	[0.7–1.3]	1.0	[0.4–1.7]
Iraq	EMR	0.9	[0.7–1.1]	0.1	[0.1–0.1]	0.5	[0.4–0.6]	0.6	[0.3–0.9]
Ireland	EUR	16.8	[15.6–18.0]	7.1	[6.6–7.7]	11.9	[11.0–12.8]	10.1	[7.2–13.0]
Israel	EUR	4.0	[4.2–4.9]	1.7	[.]	2.8	[2.6–3.0]	3.1	[1.8–4.3]
Italy	EUR	9.7	[9.0–10.4]	3.9	[3.7–4.2]	6.7	[6.2–7.2]	5.7	[3.5–7.9]
Jamaica	AMR	7.1	[6.1–8.0]	2.8	[2.4–3.1]	4.9	[4.2–5.5]	4.8	[2.9–6.7]
Japan	WPR	10.4	[9.7–11.2]	4.2	[3.9–4.4]	7.2	[6.7–7.7]	6.6	[4.3–8.9]
Jordan	EMR	1.2	[1.0–1.3]	0.2	[0.2–0.3]	0.7	[0.6–0.8]	0.8	[0.2–1.3]
Kazakhstan	EUR	15.7	[13.4–18.0]	5.5	[4.7–6.3]	10.3	[8.8–11.8]	9.8	[7.1–12.5]
Kenya	AFR	7.4	[5.8–8.9]	1.3	[1.0–1.5]	4.3	[3.4–5.2]	4.3	[3.1–5.5]
Kiribati	WPR	5.5	[4.2–6.7]	0.4	[0.3–0.6]	3.0	[2.3–3.7]	2.8	[2.1–3.5]
Kuwait	EMR	0.2	[0.1–0.2]	0.0	[0.0–0.0]	0.1	[0.1–0.2]	0.1	[0.0–0.3]
Kyrgyzstan	EUR	6.7	[5.5–7.8]	2.0	[1.7–2.4]	4.3	[3.6–5.0]	4.2	[2.6–5.8]
Lao People's Democratic Republic	WPR	12.5	[11.2–13.7]	2.3	[2.1–2.5]	7.3	[6.5–8.0]	7.7	[6.1–9.4]
Latvia	EUR	19.7	[17.7–21.6]	6.3	[5.7–6.9]	12.3	[11.1–13.5]	12.0	[9.1–15.0]
Lebanon	EMR	3.9	[3.5–4.4]	0.8	[0.7–0.9]	2.4	[2.1–2.7]	2.6	[1.6–3.5]
Lesotho	AFR	10.8	[8.6–12.9]	2.5	[2.0–3.0]	6.5	[5.2–7.8]	6.7	[5.0–8.5]
Liberia	AFR	7.5	[6.4–8.6]	2.0	[1.7–2.3]	4.7	[4.0–5.4]	4.5	[3.0–6.0]
Libya	EMR	0.1	[0.1–0.1]	0.0	[0.0–0.0]	0.1	[0.0–0.1]	0.1	[0.1–0.2]
Lithuania	EUR	24.4	[21.9–26.9]	7.9	[7.1–8.7]	15.4	[13.8–17.0]	16.9	[13.4–20.4]
Luxembourg	EUR	16.8	[15.6–18.0]	7.2	[6.7–7.7]	11.9	[11.0–12.7]	11.9	[8.7–15.1]
Madagascar	AFR	2.9	[2.3–3.4]	0.7	[0.6–0.8]	1.8	[1.4–2.1]	2.0	[1.1–3.0]
Malawi	AFR	4.5	[3.8–5.2]	0.5	[0.4–0.6]	2.5	[2.1–2.9]	2.3	[1.6–3.0]
Malaysia	WPR	2.5	[1.9–3.1]	0.2	[0.1–0.2]	1.3	[1.0–1.6]	1.4	[0.9–1.8]
Maldives	SEAR	2.3	[1.9–2.7]	0.1	[0.1–0.2]	1.2	[1.0–1.4]	1.3	[0.9–1.7]
Mali	AFR	2.2	[1.8–2.6]	0.0	[0.0–0.1]	1.1	[0.9–1.3]	1.2	[0.9–1.4]
Malta	EUR	9.7	[9.0–10.5]	4.2	[3.9–4.5]	7.0	[6.4–7.5]	7.2	[4.8–9.7]
Marshall Islands	WPR	...	...	...	...	...	...	...	...
Mauritania	AFR	0.2	[0.1–0.3]	0.0	[0.0–0.0]	0.1	[0.1–0.1]	0.1	[0.0–0.3]
Mauritius	AFR	5.9	[5.1–6.7]	1.4	[1.2–1.6]	3.6	[3.2–4.1]	3.7	[2.4–5.0]
Mexico	AMR	12.4	[10.9–13.9]	2.6	[2.3–3.0]	7.2	[6.3–8.1]	7.2	[5.4–9.0]
Micronesia (Federated States of)	WPR	6.0	[5.2–6.8]	0.5	[0.4–0.6]	3.3	[2.8–3.8]	3.1	[2.4–3.8]
Monaco	EUR	...	...	...	...	...	...	...	...
Mongolia	WPR	11.7	[10.2–13.3]	2.2	[1.9–2.5]	6.9	[6.0–7.8]	9.9	[8.0–11.7]
Montenegro	EUR	13.5	[11.2–15.9]	4.1	[3.4–4.8]	8.7	[7.2–10.2]	...	...
Morocco	EMR	1.9	[1.5–2.2]	0.1	[0.1–0.1]	0.9	[0.8–1.1]	0.9	[0.6–1.2]
Mozambique	AFR	3.5	[2.9–4.1]	1.1	[0.9–1.3]	2.3	[1.9–2.6]	2.0	[0.8–3.1]



2010 Heavy episodic drinking, past 30 days (%)						2010 Alcohol use disorders, 12 month prevalence (%)					
Age-standardized						Age-standardized					
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
34.3	[29.3–39.2]	11.0	[7.7–14.4]	22.9	[19.7–26.1]	5.8	[3.3–8.3]	1.8	[0.4–3.2]	3.8	[2.4–5.3]
3.2	[1.3–5.0]	0.0	[0.0–0.2]	1.6	[0.7–2.6]	4.4	[2.2–6.6]	0.5	[0.0–1.3]	2.5	[1.3–3.7]
4.6	[2.3–6.8]	0.2	[0.0–0.7]	2.4	[1.2–3.6]	1.3	[0.1–2.5]	0.2	[0.0–0.8]	0.8	[0.1–1.4]
0.0	[0.0–0.2]	0.0	[0.0–0.0]	0.0	[0.0–0.1]	0.4	[0.0–1.2]	0.1	[0.0–0.4]	0.3	[0.0–0.7]
0.0	[0.00–0.3]	0.0	[0.0–0.1]	0.0	[0.0–0.1]	0.5	[0.0–1.3]	0.1	[0.0–0.5]	0.3	[0.0–0.8]
53.8	[48.5–59.1]	19.3	[15.2–23.5]	36.5	[32.8–40.1]	11.1	[7.7–14.4]	3.5	[1.6–5.5]	7.3	[5.3–9.3]
12.6	[9.1–16.2]	2.4	[0.8–4.1]	7.5	[5.5–9.5]	8.6	[5.6–11.6]	2.0	[0.5–3.5]	5.3	[3.6–7.0]
8.8	[5.7–11.8]	0.6	[0.0–1.4]	4.7	[3.1–6.3]	1.4	[0.2–2.7]	0.9	[0.0–1.9]	1.2	[0.3–2.0]
11.8	[8.4–15.3]	1.4	[0.1–2.7]	6.5	[4.6–8.4]	6.5	[3.9–9.1]	1.8	[0.4–3.3]	4.1	[2.6–5.6]
30.0	[25.1–34.8]	6.6	[3.9–9.2]	18.4	[15.4–21.3]	5.3	[2.9–7.7]	1.2	[0.1–2.4]	3.3	[1.9–4.6]
0.0	[0.0–0.2]	0.0	[0.0–0.1]	0.0	[0.0–0.1]	0.6	[0.0–1.4]	0.1	[0.0–0.5]	0.4	[0.0–0.8]
14.7	[10.9–18.5]	1.3	[0.1–2.6]	7.7	[5.7–9.7]	8.5	[5.5–11.5]	1.9	[0.4–3.4]	5.1	[3.4–6.7]
2.8	[1.0–4.5]	0.0	[0.0–0.1]	1.4	[0.5–2.3]	5.5	[3.1–8.0]	0.7	[0.0–1.7]	3.1	[1.8–4.4]
4.4	[2.2–6.6]	0.3	[0.0–0.8]	2.4	[1.2–3.5]	7.6	[4.7–10.4]	1.4	[0.1–2.7]	4.5	[2.9–6.1]
0.5	[0.0–1.3]	0.1	[0.0–0.3]	0.4	[0.0–0.8]	0.5	[0.0–1.2]	0.1	[0.0–0.4]	0.3	[0.0–0.8]
14.5	[10.8–18.3]	1.1	[0.0–2.3]	7.6	[5.6–9.6]	8.2	[5.2–11.1]	1.8	[0.4–3.3]	4.9	[3.3–6.6]
23.5	[19.1–27.9]	5.2	[2.8–7.5]	14.1	[11.4–16.7]	7.4	[4.6–10.2]	1.4	[0.1–2.7]	4.3	[2.8–5.9]
31.0	[26.1–36.0]	12.9	[9.3–16.5]	21.6	[18.5–24.7]	14.9	[11.1–18.6]	2.9	[1.1–4.7]	8.6	[6.5–10.8]
0.1	[0.0–0.5]	0.0	[0.0–0.2]	0.1	[0.0–0.3]	1.4	[0.1–2.7]	0.1	[0.0–0.5]	0.8	[0.1–1.5]
6.5	[3.8–9.1]	0.6	[0.0–1.4]	3.4	[2.0–4.8]	7.3	[4.5–10.1]	1.1	[0.0–2.2]	4.0	[2.5–5.5]
18.9	[14.8–23.1]	4.7	[2.5–7.0]	11.7	[9.3–14.2]	7.2	[4.4–9.9]	1.0	[0.0–2.1]	4.1	[2.6–5.6]
1.2	[0.1–2.4]	0.4	[0.0–1.2]	0.9	[0.2–1.6]	0.4	[0.0–1.2]	0.1	[0.0–0.4]	0.3	[0.0–0.7]
50.4	[45.2–55.7]	24.3	[19.7–28.9]	36.7	[33.1–40.4]	17.0	[13–21]	3.4	[1.5–5.3]	9.9	[7.7–12.2]
38.3	[33.1–43.4]	9.0	[6.0–12.1]	23.8	[20.5–27.0]	9.1	[6.0–12.2]	2.5	[0.8–4.1]	5.8	[4.0–7.6]
15.5	[11.6–19.3]	2.4	[0.8–4.0]	8.8	[6.7–11.0]	3.7	[1.7–5.7]	0.4	[0.0–1.1]	2.0	[1.0–3.1]
15.6	[11.8–19.4]	1.1	[0.0–2.3]	8.2	[6.2–10.3]	4.9	[2.6–7.3]	0.6	[0.0–1.4]	2.7	[1.5–4.0]
0.6	[0.0–1.4]	0.0	[0.0–0.2]	0.3	[0.0–0.7]	4.0	[1.9–6.1]	0.8	[0.0–1.7]	2.3	[1.2–3.5]
0.7	[0.0–1.6]	0.0	[0.0–0.2]	0.4	[0.0–0.8]	3.2	[1.3–5.1]	0.6	[0.0–1.5]	1.9	[0.9–2.9]
0.2	[0.0–0.7]	0.0	[0.0–0.1]	0.1	[0.0–0.3]	1.4	[0.1–2.7]	0.0	[0.0–0.2]	0.7	[0.1–1.4]
40.1	[35.0–45.2]	12.3	[8.9–15.8]	26.5	[23.2–29.8]	4.9	[2.6–7.2]	1.4	[0.2–2.7]	3.2	[1.8–4.5]
...	...	...	...	...	...	...	...	...	...	...	...
0.0	[0.0–0.3]	0.0	[0.0–0.1]	0.0	[0.0–0.1]	0.5	[0.0–1.3]	0.1	[0.0–0.4]	0.3	[0.0–0.7]
20.4	[16.2–24.7]	3.7	[1.7–5.7]	12.0	[9.5–14.4]	7.7	[4.9–10.6]	1.1	[0.0–2.3]	4.4	[2.9–6.0]
19.6	[15.4–23.8]	3.3	[1.4–5.2]	10.9	[8.6–13.3]	5.1	[2.8–7.5]	0.5	[0.0–1.2]	2.7	[1.4–3.9]
19.5	[15.3–23.7]	3.1	[1.2–4.9]	11.4	[9.0–13.8]	7.3	[4.5–10.0]	1.4	[0.1–2.7]	4.4	[2.8–5.9]
...	...	...	...	...	...	...	...	...	...	...	...
40.2	[35.0–45.3]	13.6	[9.9–17.2]	26.6	[23.2–29.9]	10.3	[7.1–13.6]	2.0	[0.5–3.5]	6.1	[4.3–7.9]
13.8	[10.1–17.4]	1.1	[0.0–2.2]	7.4	[5.4–9.4]	8.8	[5.8–11.9]	2.0	[0.5–3.6]	5.4	[3.7–7.1]
0.0	[0.0–0.3]	0.0	[0.0–0.1]	0.0	[0.0–0.1]	0.6	[0.0–1.5]	0.1	[0.0–0.5]	0.4	[0.0–0.8]
2.0	[0.5–3.4]	0.0	[0.0–0.1]	0.9	[0.2–1.6]	4.6	[2.4–6.9]	0.6	[0.0–1.4]	2.5	[1.3–3.7]

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Per capita consumption of pure alcohol (litres)						2012 per capita consumption of pure alcohol (litres)	
		Crude adjusted estimates						Crude adjusted projected estimates	
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Both sexes	[95% CI]
Myanmar	SEAR	1.4	[1.0–1.8]	0.0	[0.0–0.1]	0.7	[0.5–0.9]	0.7	[0.5–0.9]
Namibia	AFR	16.7	[14.2–19.3]	5.4	[4.6–6.3]	10.8	[9.1–12.5]	12.2	[9.4–15.1]
Nauru	WPR	5.9	[4.5–7.3]	1.1	[0.9–1.4]	3.5	[2.7–4.3]	3.6	[2.4–4.7]
Nepal	SEAR	4.4	[3.1–5.6]	0.2	[0.2–0.3]	2.2	[1.6–2.8]	2.2	[1.7–2.7]
Netherlands	EUR	14.0	[13.0–15.0]	6.0	[5.5–6.4]	9.9	[9.2–10.7]	9.6	[6.8–12.4]
New Zealand	WPR	15.7	[14.2–17.3]	6.3	[5.7–6.9]	10.9	[9.8–12.0]	10.6	[7.7–13.5]
Nicaragua	AMR	8.7	[7.5–9.8]	1.5	[1.3–1.6]	5.0	[4.3–5.6]	4.7	[3.5–6.0]
Niger	AFR	0.5	[0.4–0.6]	0.1	[0.1–0.1]	0.3	[0.2–0.4]	0.3	[0.0–0.6]
Nigeria	AFR	14.9	[13.6–16.2]	5.1	[4.6–5.5]	10.1	[9.2–10.9]	9.5	[7.0–12.0]
Niue	WPR	13.3	[12.0–14.5]	2.6	[2.4–2.9]	8.0	[7.3–8.8]	7.8	[6.1–9.5]
Norway	EUR	10.8	[9.8–11.8]	4.7	[4.2–5.1]	7.7	[7.0–8.4]	7.2	[4.7–9.7]
Oman	EMR	1.2	[1.1–1.4]	0.4	[0.4–0.4]	0.9	[0.8–1.0]	1.0	[0.3–1.6]
Pakistan	EMR	0.1	[0.1–0.1]	0.0	[0.0–0.0]	0.1	[0.0–0.1]	0.0	[0.0–0.1]
Palau	WPR	13.2	[12.0–14.5]	2.6	[2.3–2.8]	7.9	[7.2–8.7]	...	...
Panama	AMR	11.2	[10.3–12.2]	4.7	[4.3–5.1]	8.0	[7.3–8.7]	8.5	[5.9–11.1]
Papua New Guinea	WPR	5.1	[4.1–6.0]	1.0	[0.8–1.2]	3.0	[2.5–3.6]	3.0	[2.0–4.1]
Paraguay	AMR	12.4	[11.1–13.7]	5.2	[4.6–5.7]	8.8	[7.9–9.7]	8.8	[6.2–11.5]
Peru	AMR	12.4	[10.9–14.0]	3.8	[3.3–4.3]	8.1	[7.1–9.1]	10.2	[7.7–12.6]
Philippines	WPR	9.2	[8.3–10.1]	1.7	[1.6–1.9]	5.4	[4.9–6.0]	6.0	[4.5–7.5]
Poland	EUR	19.8	[18.0–21.7]	5.8	[5.3–6.3]	12.5	[11.3–13.7]	11.6	[9.0–14.2]
Portugal	EUR	18.7	[16.9–20.5]	7.6	[6.8–8.3]	12.9	[11.6–14.2]	12.2	[9.0–15.4]
Qatar	EMR	1.8	[1.5–2.1]	0.4	[0.3–0.4]	1.5	[1.3–1.8]	2.1	[1.5–2.7]
Republic of Korea	WPR	21.0	[18.6–23.3]	3.9	[3.5–4.3]	12.3	[10.9–13.7]	10.5	[8.5–12.4]
Republic of Moldova	EUR	25.9	[20.3–31.5]	8.9	[7.0–10.9]	16.8	[13.2–20.5]	16.1	[12.7–19.5]
Romania	EUR	22.6	[19.7–25.6]	6.8	[5.9–7.6]	14.4	[12.5–16.3]	13.2	[10.3–16.0]
Russian Federation	EUR	23.9	[21.1–26.8]	7.8	[6.9–8.7]	15.1	[13.3–16.9]	14.8	[11.5–18.1]
Rwanda	AFR	15.1	[13.0–17.2]	5.0	[4.3–5.7]	9.8	[8.5–11.2]	10.1	[7.5–12.7]
Saint Kitts and Nevis	AMR	11.8	[10.9–12.8]	4.7	[4.3–5.1]	8.2	[7.6–8.8]	5.9	[3.7–8.0]
Saint Lucia	AMR	15.1	[14.1–16.1]	5.9	[5.5–6.3]	10.4	[9.7–11.1]	8.4	[5.9–11]
Saint Vincent and the Grenadines	AMR	9.2	[8.5–9.9]	3.9	[3.6–4.2]	6.6	[6.1–7.1]	7.3	[4.9–9.7]
Samoa	WPR	6.6	[5.7–7.4]	0.6	[0.5–0.6]	3.6	[3.2–4.1]	...	...
San Marino	EUR	...	...	...	...	...	...	...	...
Sao Tome and Principe	AFR	11.5	[9.6–13.4]	2.9	[2.4–3.3]	7.1	[5.9–8.2]	6.4	[4.6–8.2]
Saudi Arabia	EMR	0.3	[0.3–0.4]	0.1	[0.1–0.1]	0.2	[0.2–0.3]	0.2	[0.1–0.6]
Senegal	AFR	1.1	[0.8–1.3]	0.1	[0.1–0.1]	0.6	[0.5–0.7]	0.5	[0.2–0.8]
Serbia	EUR	19.7	[17.3–22.0]	5.9	[5.2–6.6]	12.6	[11.1–14.1]	12.3	[9.6–15.1]
Seychelles	AFR	8.7	[7.6–9.8]	2.4	[2.1–2.7]	5.6	[4.9–6.3]	3.3	[2.0–4.6]
Sierra Leone	AFR	14.0	[12.3–15.6]	3.6	[3.2–4.0]	8.7	[7.7–9.8]	8.9	[6.8–11.0]
Singapore	WPR	2.8	[2.8–3.6]	1.2	[0.7–0.9]	2.0	[1.7–2.2]	3.6	[2.3–4.9]
Slovakia	EUR	20.5	[18.6–22.5]	6.1	[5.5–6.7]	13.0	[11.8–14.3]	12.5	[9.7–15.2]

2010 Heavy episodic drinking, past 30 days (%)						2010 Alcohol use disorders, 12 month prevalence (%)					
Age-standardized						Age-standardized					
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
0.2	[0.0–0.6]	0.0	[0.0–0.1]	0.1	[0.0–0.3]	2.5	[0.9–4.2]	0.5	[0.0–1.2]	1.5	[0.6–2.4]
20.9	[16.6–25.2]	5.4	[3.0–7.8]	12.8	[10.3–15.3]	8.5	[5.5–11.5]	1.7	[0.3–3.1]	4.9	[3.3–6.5]
...	...	...	...	...	...	7.6	[4.7–10.4]	1.4	[0.1–2.7]	4.5	[2.9–6.1]
0.8	[0.0–1.8]	0.0	[0.0–0.2]	0.4	[0.0–0.9]	2.5	[0.8–4.1]	0.5	[0.0–1.2]	1.4	[0.5–2.3]
11.5	[8.1–14.9]	1.1	[0.0–2.2]	6.3	[4.5–8.2]	1.8	[0.4–3.2]	0.8	[0.0–1.8]	1.3	[0.4–2.2]
7.8	[4.9–10.7]	0.9	[0.0–1.9]	4.3	[2.8–5.9]	4.7	[2.4–6.9]	2.1	[0.6–3.7]	3.4	[2.0–4.7]
23.3	[18.8–27.8]	1.6	[0.2–2.9]	12.1	[9.7–14.6]	7.9	[5.0–10.7]	3.1	[1.2–4.9]	5.4	[3.7–7.1]
0.3	[0.0–1.0]	0.0	[0.0–0.1]	0.2	[0.0–0.5]	1.4	[0.1–2.6]	0.0	[0.0–0.2]	0.7	[0.1–1.4]
12.0	[8.5–15.5]	1.9	[0.4–3.4]	7.0	[0.1–8.9]	3.7	[1.7–5.7]	0.4	[0.0–1.1]	2.1	[1.0–3.1]
...	...	...	...	...	...	7.6	[4.8–10.5]	1.4	[0.2–2.7]	4.6	[3.0–6.2]
19.5	[15.4–23.7]	5.2	[2.8–7.6]	12.6	[10.1–15.1]	18.5	[14.4–22.6]	6.0	[3.5–8.6]	12.4	[9.9–14.9]
0.0	[0.0–0.3]	0.0	[0.0–0.1]	0.0	[0.0–0.2]	0.5	[0.0–1.2]	0.1	[0.0–0.5]	0.3	[0.0–0.8]
0.2	[0.0–0.6]	0.0	[0.0–0.1]	0.1	[0.0–0.3]	0.5	[0.0–1.3]	0.1	[0.0–0.5]	0.3	[0.0–0.7]
...	...	...	...	...	...	7.6	[4.7–10.4]	1.4	[0.1–2.7]	4.5	[2.9–6.1]
11.2	[7.8–14.5]	0.2	[0.0–0.8]	5.7	[4.0–7.5]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.6	[3.9–7.4]
15.9	[12.0–19.8]	1.2	[0.0–2.4]	8.7	[6.5–10.8]	7.4	[4.6–10.2]	1.4	[0.1–2.6]	4.4	[2.9–6.0]
43.0	[37.9–48.1]	17.3	[13.3–21.4]	30.3	[26.9–33.8]	8.1	[5.2–11.1]	3.1	[1.3–5.0]	5.7	[3.9–7.4]
22.1	[17.8–26.4]	2.2	[0.7–3.8]	12.2	[9.8–14.7]	12.0	[8.5–15.4]	3.3	[1.4–5.2]	7.6	[5.6–9.6]
3.1	[1.2–4.9]	0.2	[0.0–0.7]	1.6	[0.7–2.6]	7.4	[4.6–10.2]	1.4	[0.1–2.6]	4.4	[2.8–5.9]
10.3	[7.0–13.5]	0.6	[0.0–1.5]	5.4	[3.7–7.1]	14.6	[10.9–18.4]	2.9	[1.1–4.6]	8.7	[6.6–10.8]
30.0	[25.1–34.9]	9.4	[6.3–12.5]	19.4	[16.4–22.4]	9.9	[6.7–13.1]	3.0	[1.2–4.8]	6.4	[4.6–8.3]
0.0	[0.0–0.2]	0.0	[0.0–0.1]	0.0	[0.0–0.2]	0.3	[0.0–0.9]	0.1	[0.0–0.3]	0.2	[0.0–0.6]
12.0	[8.5–15.5]	0.1	[0.0–0.4]	6.0	[4.2–7.8]	10.2	[6.9–13.4]	2.3	[0.7–3.9]	6.3	[4.4–8.1]
49.1	[43.9–54.4]	16.5	[12.5–20.5]	32.2	[28.7–35.8]	8.8	[5.8–11.8]	2.0	[0.5–3.5]	5.3	[3.6–7.0]
14.5	[10.7–18.2]	1.2	[0.0–2.4]	7.9	[5.8–9.9]	3.9	[1.8–5.9]	1.2	[0.1–2.4]	2.6	[1.4–3.8]
29.6	[24.7–34.5]	9.9	[6.7–13.1]	19.3	[16.3–22.3]	30.8	[25.9–35.6]	6.7	[4.1–9.4]	18.2	[15.3–21.1]
30.0	[25.2–34.8]	8.8	[5.8–11.7]	18.9	[15.9–21.8]	9.4	[6.3–12.6]	1.9	[0.5–3.4]	5.5	[3.8–7.2]
...	...	...	...	...	...	8.0	[5.1–10.8]	3.1	[1.3–5.0]	5.5	[3.8–7.2]
8.5	[5.5–11.5]	0.8	[0.0–1.8]	4.6	[3.0–6.2]	7.8	[4.9–10.7]	3.1	[1.3–5.0]	5.4	[3.7–7.1]
9.6	[6.5–12.8]	0.9	[0.0–1.9]	5.3	[3.6–7.0]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.6	[3.9–7.4]
27.9	[23.1–32.6]	2.7	[0.9–4.4]	15.8	[13.0–18.5]	7.6	[4.7–10.4]	1.4	[0.2–2.7]	4.6	[3.0–6.2]
...	...	...	...	...	...	...	...	...	...	...	...
9.3	[6.2–12.4]	1.8	[0.4–3.2]	5.3	[3.6–7.0]	8.7	[5.7–11.7]	1.6	[0.2–2.9]	5.0	[3.3–6.6]
0.0	[0.0–0.2]	0.0	[0.0–0.1]	0.0	[0.0–0.1]	0.4	[0.0–1.1]	0.1	[0.0–0.4]	0.3	[0.0–0.7]
0.5	[0.0–1.2]	0.0	[0.0–0.1]	0.2	[0.0–0.6]	1.4	[0.1–2.7]	0.0	[0.0–0.2]	0.7	[0.1–1.3]
14.0	[10.3–17.7]	1.1	[0.0–2.2]	7.6	[5.6–9.6]	8.9	[5.9–11.9]	2.1	[0.5–3.6]	5.5	[3.7–7.2]
37.2	[32.2–42.2]	5.9	[3.5–8.4]	22.3	[19.1–25.4]	9.4	[6.3–12.5]	1.9	[0.4–3.4]	5.8	[4.0–7.6]
13.1	[9.5–16.8]	4.6	[2.3–6.8]	8.8	[6.6–10.9]	4.7	[2.4–7.0]	0.5	[0.0–1.2]	2.6	[1.4–3.8]
8.1	[5.2–11.0]	0.3	[0.0–1.0]	4.2	[2.7–5.7]	1.4	[0.1–2.6]	0.4	[0.0–1.1]	0.9	[0.2–1.6]
41.4	[36.1–46.7]	11.7	[8.4–15.1]	26.2	[22.9–29.6]	19.1	[15.0–23.3]	2.2	[0.6–3.8]	10.6	[8.3–13]

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Per capita consumption of pure alcohol (litres)						2012 per capita consumption of pure alcohol (litres)	
		Crude adjusted estimates						Crude adjusted projected estimates	
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Both sexes	[95% CI]
Slovenia	EUR	16.3	[15.0–17.7]	7.0	[6.4–7.6]	11.6	[10.6–12.6]	11.1	[8.0–14.2]
Solomon Islands	WPR	3.1	[2.7–3.5]	0.3	[0.2–0.3]	1.7	[1.5–1.9]	2.0	[1.4–2.5]
Somalia	EMR	0.9	[0.6–1.2]	0.1	[0.1–0.1]	0.5	[0.3–0.7]	0.5	[0.2–0.8]
South Africa	AFR	18.4	[16.1–20.8]	4.2	[3.7–4.7]	11.0	[9.6–12.4]	11.0	[8.7–13.2]
South Sudan	AFR	...	...	...	...	...	...	...	...
Spain	EUR	15.9	[14.5–17.3]	6.7	[6.1–7.3]	11.2	[10.2–12.2]	9.7	[6.9–12.6]
Sri Lanka	SEAR	7.3	[6.1–8.5]	0.3	[0.2–0.3]	3.7	[3.1–4.3]	4.0	[3.4–4.5]
Sudan	EMR	4.8	[4.1–5.5]	0.6	[0.5–0.6]	2.7	[2.3–3.1]	2.8	[2.0–3.6]
Suriname	AMR	9.4	[8.5–10.4]	3.9	[3.5–4.2]	6.6	[6.0–7.3]	7.0	[4.7–9.4]
Swaziland	AFR	10.6	[9.5–11.7]	1.1	[1.0–1.2]	5.7	[5.1–6.3]	5.6	[4.6–6.7]
Sweden	EUR	12.9	[11.4–14.4]	5.5	[4.9–6.2]	9.2	[8.1–10.2]	9.7	[6.8–12.5]
Switzerland	EUR	15.2	[14.1–16.3]	6.4	[5.9–6.9]	10.7	[9.9–11.5]	10.8	[7.8–13.7]
Syrian Arab Republic	EMR	2.3	[2.0–2.5]	0.1	[0.1–0.1]	1.2	[1.1–1.4]	1.2	[0.8–1.5]
Tajikistan	EUR	4.3	[3.1–5.5]	1.4	[1.0–1.7]	2.8	[2.0–3.6]	2.7	[1.4–4.0]
Thailand	SEAR	13.8	[12.6–14.9]	0.8	[0.7–0.9]	7.1	[6.5–7.7]	6.5	[5.6–7.4]
the former Yugoslav Republic of Macedonia	EUR	10.2	[8.5–11.9]	3.2	[2.7–3.8]	6.7	[5.6–7.8]	7.4	[5.2–9.5]
Timor–Leste	SEAR	1.0	[0.7–1.3]	0.1	[0.1–0.1]	0.6	[0.4–0.7]	0.6	[0.3–0.9]
Togo	AFR	3.8	[3.1–4.4]	0.9	[0.8–1.1]	2.3	[1.9–2.7]	2.2	[1.1–3.2]
Tonga	WPR	3.0	[2.6–3.4]	0.2	[0.2–0.3]	1.6	[1.4–1.8]	1.6	[1.1–2.1]
Trinidad and Tobago	AMR	9.7	[9.0–10.4]	3.9	[3.6–4.2]	6.7	[6.2–7.2]	6.7	[4.4–9.0]
Tunisia	EMR	3.0	[2.7–3.3]	0.0	[0.0–0.0]	1.5	[1.3–1.6]	1.4	[1.3–1.6]
Turkey	EUR	4.4	[3.7–5.2]	0.5	[0.4–0.5]	2.0	[2.0–2.8]	2.5	[1.8–3.2]
Turkmenistan	EUR	7.6	[6.1–9.0]	1.3	[1.0–1.5]	4.3	[3.5–5.1]	4.4	[3.2–5.6]
Tuvalu	WPR	2.5	[2.1–2.8]	0.5	[0.4–0.6]	1.5	[1.3–1.7]	1.5	[0.7–2.2]
Uganda	AFR	14.4	[13.0–15.9]	5.2	[4.6–5.7]	9.8	[8.8–10.8]	9.5	[6.9–12.1]
Ukraine	EUR	22.0	[18.7–25.4]	7.2	[6.1–8.3]	13.9	[11.8–16.0]	14.0	[10.8–17.2]
United Arab Emirates	EMR	5.5	[4.7–6.3]	0.8	[0.7–0.9]	4.3	[3.6–4.9]	4.7	[3.9–5.5]
United Kingdom	EUR	16.5	[15.0–17.9]	6.9	[6.3–7.5]	11.6	[10.6–12.6]	11.4	[8.3–14.4]
United Republic of Tanzania	AFR	11.4	[10.0–12.9]	4.0	[3.5–4.6]	7.7	[6.7–8.7]	7.7	[5.4–10.0]
United States of America	AMR	13.6	[12.6–14.7]	4.9	[4.5–5.3]	9.2	[8.5–9.8]	9.1	[6.5–11.7]
Uruguay	AMR	11.3	[10.2–12.3]	4.2	[3.8–4.6]	7.6	[6.8–8.3]	7.2	[4.8–9.5]
Uzbekistan	EUR	7.9	[6.5–9.2]	1.3	[1.1–1.6]	4.6	[3.7–5.4]	5.9	[4.5–7.4]
Vanuatu	WPR	2.5	[2.1–2.9]	0.2	[0.2–0.2]	1.4	[1.1–1.6]	1.2	[0.8–1.7]
Venezuela (Bolivarian Republic of)	AMR	12.7	[11.4–13.9]	5.2	[4.7–5.7]	8.9	[8.1–9.8]	7.6	[5.2–10.1]
Viet Nam	WPR	12.1	[10.1–16.4]	0.2	[0.2–0.3]	6.6	[5.0–8.1]	7.2	[6.7–7.7]
Yemen	EMR	0.4	[0.3–0.6]	0.1	[0.0–0.1]	0.3	[0.2–0.3]	0.3	[0.0–0.5]
Zambia	AFR	6.5	[5.5–7.5]	1.6	[1.4–1.9]	4.0	[3.4–4.7]	4.3	[2.9–5.7]
Zimbabwe	AFR	10.8	[9.7–12.0]	0.8	[0.7–0.9]	5.7	[5.1–6.3]	4.9	[4.1–5.8]

2010 Heavy episodic drinking, past 30 days (%)						2010 Alcohol use disorders, 12 month prevalence (%)					
Age-standardized						Age-standardized					
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
14.0	[10.3–17.7]	1.2	[0.0–2.4]	7.8	[5.8–9.9]	20.5	[16.2–24.8]	4.3	[2.1–6.4]	12.6	[10.1–15.1]
24.9	[20.4–29.4]	3.5	[1.5–5.5]	14.2	[11.6–16.8]	7.5	[4.7–10.3]	1.4	[0.1–2.6]	4.4	[2.9–6.0]
0.2	[0.0–0.7]	0.0	[0.0–0.0]	0.1	[0.0–0.4]	0.5	[0.0–1.3]	0.1	[0.0–0.5]	0.3	[0.0–0.7]
17.5	[13.4–21.5]	2.9	[1.1–4.7]	9.8	[7.6–12.1]	9.6	[6.5–12.8]	1.5	[0.2–2.8]	5.4	[3.7–7.1]
...	...	...	...	...	...	...	...	...	...	...	...
20.3	[16.0–24.6]	5.9	[3.4–8.4]	13.2	[10.6–15.7]	2.4	[0.8–4.0]	0.4	[0.0–1.1]	1.4	[0.5–2.3]
0.8	[0.0–1.8]	0.0	[0.0–0.2]	0.4	[0.0–0.9]	5.5	[3.1–7.9]	0.6	[0.0–1.5]	3.0	[1.7–4.3]
0.6	[0.0–1.4]	0.0	[0.0–0.1]	0.3	[0.0–0.7]	1.7	[0.3–3.1]	0.3	[0.0–0.8]	1.0	[0.2–1.7]
8.2	[5.3–11.2]	0.8	[0.0–1.8]	4.6	[3.0–6.1]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.6	[3.8–7.3]
10.8	[7.5–14.2]	1.9	[0.4–3.3]	6.2	[4.4–8.0]	9.5	[6.3–12.6]	1.9	[0.4–3.4]	5.5	[3.8–7.2]
36.3	[31.2–41.3]	11.8	[8.4–15.3]	24.3	[21.1–27.6]	13.7	[10–17.3]	6.0	[3.5–8.5]	9.9	[7.6–12.1]
28.4	[23.6–33.1]	9.7	[6.5–12.8]	19.1	[16.2–22.1]	14.3	[10.6–18.1]	2.9	[1.1–4.8]	8.7	[6.5–10.8]
0.1	[0.0–0.4]	0.0	[0.0–0.1]	0.0	[0.0–0.2]	0.8	[0.0–1.8]	0.1	[0.0–0.4]	0.4	[0.0–0.9]
1.9	[0.4–3.3]	0.1	[0.0–0.3]	1.0	[0.2–1.7]	1.3	[0.1–2.5]	0.2	[0.0–0.8]	0.8	[0.1–1.4]
2.3	[0.7–3.8]	0.1	[0.0–0.3]	1.1	[0.3–1.9]	9.0	[5.9–12.1]	1.0	[0.0–2.1]	4.9	[3.3–6.6]
12.3	[8.8–15.8]	0.7	[0.0–1.6]	6.6	[4.7–8.4]	8.7	[5.7–11.8]	2.0	[0.5–3.5]	5.4	[3.7–7.1]
0.1	[0.0–0.5]	0.0	[0.0–0.0]	0.1	[0.0–0.3]	2.4	[0.7–4.0]	0.5	[0.0–1.2]	1.4	[0.5–2.3]
36.1	[31.1–41.1]	13.8	[10.2–17.5]	24.4	[21.2–27.7]	11.8	[8.4–15.3]	3.2	[1.3–5.1]	7.4	[5.4–9.3]
11.0	[7.7–14.3]	1.5	[0.2–2.8]	6.2	[4.4–8.0]	7.6	[4.8–10.5]	1.5	[0.2–2.7]	4.5	[2.9–6.1]
30.7	[25.9–35.6]	6.7	[4.0–9.3]	18.7	[15.8–21.7]	8.0	[5.1–10.9]	3.2	[1.3–5.0]	5.6	[3.8–7.3]
0.1	[0.0–0.3]	0.0	[0–0.1]	0.0	[0.0–0.2]	0.9	[0.0–1.9]	0.2	[0.0–0.6]	0.5	[0.0–1.0]
0.3	[0.0–1.0]	0.0	[0–0.2]	0.2	[0.0–0.5]	4.4	[2.2–6.6]	0.9	[0.0–2.0]	2.6	[1.4–3.9]
23.5	[19.0–28.0]	0.4	[0.0–1.0]	11.6	[9.2–14.0]	8.1	[5.2–11.1]	1.8	[0.4–3.2]	4.9	[3.3–6.5]
...	...	...	...	...	...	7.6	[4.8–10.5]	1.4	[0.2–2.7]	4.6	[3.0–6.2]
7.6	[4.8–10.4]	0.1	[0.0–0.3]	3.8	[2.4–5.3]	9.8	[6.6–13.0]	1.5	[0.2–2.8]	5.6	[3.9–7.4]
35.6	[30.5–40.7]	11.8	[8.3–15.2]	23.2	[20.0–26.4]	9.5	[6.4–12.7]	1.3	[0.1–2.5]	5.2	[3.6–6.9]
0.2	[0.0–0.7]	0.0	[0.0–0.1]	0.2	[0.0–0.5]	0.6	[0.0–1.5]	0.1	[0.0–0.5]	0.5	[0.0–1.0]
37.2	[32.1–42.4]	16.8	[12.8–20.7]	27.1	[23.7–30.4]	17.5	[13.4–21.5]	6.7	[4.0–9.4]	12.1	[9.6–14.6]
22.3	[17.9–26.6]	6.1	[3.6–8.6]	14.1	[11.5–16.7]	9.0	[6.0–12.1]	1.8	[0.4–3.2]	5.4	[3.7–7.1]
24.7	[20.2–29.3]	7.5	[4.7–10.3]	16.2	[13.4–19.0]	11.0	[7.7–14.4]	4.5	[2.3–6.8]	7.8	[5.7–9.8]
14.8	[11.0–18.6]	4.6	[2.3–6.8]	9.5	[7.3–11.7]	8.2	[5.2–11.1]	3.2	[1.3–5.1]	5.7	[3.9–7.4]
20.4	[16.1–24.7]	0.4	[0.0–1.0]	10.2	[7.9–12.5]	8.2	[5.2–11.1]	1.8	[0.4–3.3]	5.0	[3.3–6.6]
10.5	[7.3–13.8]	2.4	[0.8–4.0]	6.5	[4.6–8.3]	7.5	[4.7–10.3]	1.4	[0.1–2.7]	4.4	[2.9–6.0]
37.8	[32.7–42.9]	6.5	[3.9–9.1]	22.1	[19.0–25.3]	8.0	[5.1–10.9]	3.1	[1.3–5.0]	5.6	[3.8–7.3]
2.4	[0.8–4.1]	0.2	[0.0–0.6]	1.3	[0.4–2.1]	8.3	[5.4–11.3]	0.9	[0.0–1.9]	4.6	[3.0–6.1]
0.0	[0.0–0.2]	0.0	[0.0–0.1]	0.0	[0.0–0.1]	0.5	[0.0–1.3]	0.1	[0.0–0.5]	0.3	[0.0–0.7]
5.0	[2.7–7.4]	0.0	[0.0–0.2]	2.5	[1.3–3.7]	7.7	[4.9–10.6]	1.0	[0.0–2.0]	4.4	[2.8–5.9]
19.7	[15.4–23.9]	4.7	[2.4–7.0]	12.0	[9.5–14.5]	8.8	[5.8–11.9]	1.6	[0.3–3.0]	5.1	[3.4–6.8]



### 4.4a Insufficient physical activity

#### Comparable estimates of prevalence of insufficient physical activity (adults 18+ years), 2010

Country name	Region	Prevalence of insufficient physical activity Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	...	...	...	...	...	...
Albania	EUR	...	...	...	...	...	...
Algeria	AFR	25.8	[20.4–31.7]	39.4	[33.9–45.1]	32.5	[28.6–36.6]
Andorra	EUR	27.2	[8.9–65.3]	34.7	[10.2–69.8]	30.9	[15.6–72.6]
Angola	AFR	...	...	...	...	...	...
Antigua and Barbuda	AMR	...	...	...	...	...	...
Argentina	AMR	35.7	[13.2–76]	44.1	[15.6–79.3]	40.1	[13.9–77]
Armenia	EUR	...	...	...	...	...	...
Australia	WPR	21.5	[6.4–57.5]	29.9	[8.3–65.1]	25.8	[7.1–60.8]
Austria	EUR	21.1	[6–56.3]	31.3	[8.7–66.5]	26.4	[7–61]
Azerbaijan	EUR	...	...	...	...	...	...
Bahamas	AMR	28.5	[19.9–38.2]	56.5	[47.4–65.4]	43.0	[36.5–49.6]
Bahrain	EMR	...	...	...	...	...	...
Bangladesh	SEAR	9.2	[8.4–10.4]	41.3	[39.8–43.1]	25.1	[24.2–26.1]
Barbados	AMR	30.0	[23.7–36.7]	47.2	[42–52.4]	38.7	[34.7–42.8]
Belarus	EUR	...	...	...	...	...	...
Belgium	EUR	31.5	[11.1–70.6]	42.9	[15.1–77.6]	37.4	[12.6–73.6]
Belize	AMR	...	...	...	...	...	...
Benin	AFR	4.3	[2.7–6.3]	6.6	[4.3–9.5]	5.4	[4–7.1]
Bhutan	SEAR	4.8	[3.4–6.5]	10.9	[8.9–13.4]	7.5	[6.3–9]
Bolivia (Plurinational State of)	AMR	...	...	...	...	...	...
Bosnia and Herzegovina	EUR	17.0	[4.6–47.8]	24.0	[6.5–54.3]	20.6	[5.7–51.8]
Botswana	AFR	18.0	[8.9–30.2]	31.0	[19.6–44.3]	24.5	[16.9–33.3]
Brazil	AMR	24.9	[7.8–63.6]	29.4	[8.3–65.1]	27.2	[7.8–63.3]
Brunei Darussalam	WPR	...	...	...	...	...	...
Bulgaria	EUR	19.0	[5.1–54.6]	26.7	[6.8–60.6]	23.0	[5.7–56.7]
Burkina Faso	AFR	13.5	[10.4–17.1]	19.1	[15.5–23.1]	16.4	[14–19]
Burundi	AFR	...	...	...	...	...	...
Cabo Verde	AFR	11.7	[6–20]	25.0	[11.6–44]	18.5	[12.3–26.2]
Cambodia	WPR	8.7	[6.9–10.9]	10.6	[9.3–11.9]	9.7	[8.7–10.8]
Cameroon	AFR	20.9	[5.1–46.7]	37.7	[10–64.9]	29.3	[7.4–57.3]
Canada	AMR	22.2	[6.5–57.9]	29.4	[7.9–63.2]	25.9	[6.9–59.6]
Central African Republic	AFR	8.9	[1.5–19.9]	12.0	[1.9–23.6]	10.5	[1.6–20.9]
Chad	AFR	19.2	[5.3–54.5]	24.8	[6.3–59.1]	22.0	[5.5–55.6]
Chile	AMR	17.6	[13.8–21.9]	25.5	[21.3–30.1]	21.6	[18.7–24.7]
China	WPR	22.2	[18.9–25.8]	25.4	[22.2–29]	23.8	[21.5–26.3]
Colombia	AMR	53.4	[45.6–61.1]	72.9	[65.7–79.3]	63.5	[58.2–68.6]
Comoros	AFR	6.7	[4.8–9]	18.4	[16.9–19.9]	12.5	[11.4–13.7]
Congo	AFR	18.6	[5.3–53.6]	26.1	[7.1–60.1]	22.4	[5.9–56]
Cook Islands	WPR	63.3	[55.5–70.6]	67.7	[61.8–73.2]	65.5	[60.9–69.9]
Costa Rica	AMR	...	...	...	...	...	...
Côte d'Ivoire	AFR	16.0	[4.3–48.5]	25.1	[6.5–60.9]	20.4	[5.2–54.1]
Croatia	EUR	16.8	[4.5–48]	22.5	[5.6–51.3]	19.8	[4.9–48.3]
Cuba	AMR	...	...	...	...	...	...
Cyprus	EUR	29.3	[9.6–68.6]	41.5	[13.6–77.3]	35.3	[11–72.5]



... Indicates no data were available

Prevalence of insufficient physical activity Age-standardized						Latest year with data	Latest year with national data	Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]			
...	...	...	...	...	...			Afghanistan
...	...	...	...	...	...			Albania
27.7	[22.3–33.6]	41.2	[35.7–46.9]	34.4	[30.5–38.5]	2003		Algeria
22.4	[6.9–60.3]	29.7	[8.3–66.1]	26.1	[11.6–66.5]	2004	2004	Andorra
...	...	...	...	...	...			Angola
...	...	...	...	...	...			Antigua and Barbuda
35.8	[13.2–76.1]	42.7	[14.7–78.5]	39.2	[13.5–76.6]	2013	2013	Argentina
...	...	...	...	...	...			Armenia
20.1	[5.9–55.8]	27.6	[7.5–63.2]	23.8	[6.4–58.9]	2003	2003	Australia
19.2	[5.4–53.4]	28.5	[7.8–63.6]	23.8	[6.3–58.1]	2005	2005	Austria
...	...	...	...	...	...			Azerbaijan
29.6	[21–39.3]	56.3	[47.3–65.2]	43.0	[36.5–49.6]	2011	2011	Bahamas
...	...	...	...	...	...			Bahrain
10.2	[9.4–11.4]	43.4	[41.9–45.3]	26.8	[25.9–27.8]	2009	2009	Bangladesh
29.3	[23–36]	45.9	[40.7–51.1]	37.6	[33.6–41.7]	2007	2007	Barbados
...	...	...	...	...	...			Belarus
28.3	[9.6–67.6]	38.2	[12.4–74.5]	33.2	[10.6]	2008	2008	Belgium
...	...	...	...	...	...			Belize
5.7	[4.2–7.8]	8.1	[5.9–11]	6.9	[5.6–8.6]	2008	2008	Benin
5.7	[4.3–7.4]	11.8	[9.7–14.2]	8.7	[7.5–10.2]	2014	2014	Bhutan
...	...	...	...	...	...			Bolivia (Plurinational State of)
15.8	[4.3–45.9]	20.4	[5.2–49.9]	18.1	[4.8–48.5]	2003	2003	Bosnia and Herzegovina
21.7	[12.6–33.9]	32.6	[21.3–46]	27.2	[19.6–36]	2007	2007	Botswana
25.9	[8.2–64.6]	29.7	[8.4–65.4]	27.8	[8–63.9]	2003	2003	Brazil
...	...	...	...	...	...			Brunei Darussalam
18.2	[4.9–53.5]	23.8	[6–57]	21.0	[5.2–54.3]	2005	2005	Bulgaria
15.9	[12.8–19.5]	20.9	[17.4–25]	18.4	[16.1–21.1]	2013	2013	Burkina Faso
...	...	...	...	...	...			Burundi
13.5	[7.8–21.8]	25.7	[12.3–44.6]	19.6	[13.5–27.4]	2007	2007	Cabo Verde
9.7	[7.9–11.9]	10.9	[9.7–12.3]	10.3	[9.3–11.4]	2010	2010	Cambodia
22.8	[5.9–49.8]	38.7	[11–66.2]	30.7	[8.3–59]	2003		Cameroon
20.3	[5.9–55.6]	26.2	[6.9–60.4]	23.2	[6.1–57]	2003	2003	Canada
10.8	[2–23.9]	13.3	[2.2–26.3]	12.0	[2–24.2]	2010		Central African Republic
21.7	[6.3–58.1]	27.4	[7.2–61.9]	24.6	[6.3–58.8]	2003	2003	Chad
17.8	[14–22.1]	24.9	[20.7–29.5]	21.3	[18.4–24.4]	2009	2009	Chile
22.5	[19.2–26.1]	25.6	[22.3–29.1]	24.1	[21.7–26.5]	2008		China
54.3	[46.6–62]	72.9	[65.8–79.3]	63.6	[58.3–68.7]	2010		Colombia
8.5	[6.6–10.8]	20.0	[18.6–21.5]	14.2	[13.1–15.4]	2011	2011	Comoros
21.2	[6.1–56.8]	29.6	[8.3–63.7]	25.4	[6.8–59.4]	2003		Congo
62.7	[54.9–70]	67.3	[61.4–72.8]	65.0	[60.4–69.4]	2003	2003	Cook Islands
...	...	...	...	...	...			Costa Rica
18.0	[4.9–51.1]	27.1	[7.1–62.2]	22.6	[6–56.3]	2003	2003	Côte d'Ivoire
15.0	[3.9–45.1]	17.4	[4.1–44.2]	16.2	[3.8–43]			Croatia
...	...	...	...	...	...	2005	2005	Cuba
28.9	[9.4–68.3]	40.4	[13.1–76.6]	34.7	[10.7–71.9]	2011	2011	Cyprus

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Prevalence of insufficient physical activity Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Czech Republic	EUR	24.1	[17.4–32]	28.2	[20.3–37.3]	26.2	[21–32.1]
Democratic People's Republic of Korea	SEAR	...	...	...	...	...	...
Democratic Republic of the Congo	AFR	21.8	[14.4–30.6]	28.1	[20.8–36.3]	25.0	[19.7–30.9]
Denmark	EUR	24.3	[7.2–62]	28.9	[7.7–63.7]	26.6	[7.1–61.7]
Djibouti	EMR	...	...	...	...	...	...
Dominica	AMR	17.9	[14.5–22.2]	34.6	[30.5–39]	26.2	[23.4–29.3]
Dominican Republic	AMR	30.5	[10.5–70.9]	39.4	[13.1–76.1]	35.0	[11.1–72.6]
Ecuador	AMR	18.9	[5.3–54.3]	29.9	[8.4–65.7]	24.5	[6.5–59.4]
Egypt	EMR	23.4	[16.7–31.3]	38.6	[32.9–44.5]	31.0	[26.7–35.7]
El Salvador	AMR	...	...	...	...	...	...
Equatorial Guinea	AFR	...	...	...	...	...	...
Eritrea	AFR	4.2	[3–5.6]	13.5	[10.5–16.9]	9.0	[7.5–10.6]
Estonia	EUR	12.0	[3–35.4]	17.9	[4.1–41.2]	15.2	[3.5–39.2]
Ethiopia	AFR	12.6	[3.1–40.7]	21.5	[5.3–53.3]	17.1	[4.2–47]
Fiji	WPR	9.5	[7.1–12.4]	22.0	[18.3–26.1]	15.7	[13.4–18.1]
Finland	EUR	24.2	[7.2–61.1]	28.1	[7.3–62.9]	26.2	[6.9–60.9]
France	EUR	21.2	[16.2–26.9]	31.2	[25.5–37.5]	26.4	[22.6–30.6]
Gabon	AFR	15.5	[2.5–27.6]	33.5	[6–50.9]	24.5	[4.2–41.4]
Gambia	AFR	14.2	[8.4–21.9]	22.9	[15.6–31.7]	18.7	[13.9–24.3]
Georgia	EUR	21.1	[17.4–25.1]	23.7	[21.8–25.7]	22.5	[20.8–24.3]
Germany	EUR	20.1	[5.5–56.2]	26.5	[6.7–60.6]	23.4	[5.8–57.3]
Ghana	AFR	11.9	[8.8–15.5]	17.0	[13.5–21]	14.6	[12.2–17.2]
Greece	EUR	12.4	[3.2–34.6]	18.2	[4.1–46.6]	15.4	[3.5–41.3]
Grenada	AMR	22.9	[16.4–30.6]	37.4	[32.2–42.9]	30.2	[26.1–34.6]
Guatemala	AMR	10.5	[2.5–35.5]	14.1	[3–40]	12.4	[2.6–37.2]
Guinea	AFR	5.4	[1–13.5]	11.0	[1.8–23.2]	8.2	[1.3–17.6]
Guinea-Bissau	AFR	...	...	...	...	...	...
Guyana	AMR	...	...	...	...	...	...
Haiti	AMR	...	...	...	...	...	...
Honduras	AMR	...	...	...	...	...	...
Hungary	EUR	18.5	[5.2–52.1]	23.0	[5.7–53.3]	20.9	[5.2–51.7]
Iceland	EUR	...	...	...	...	...	...
India	SEAR	9.2	[7.3–11.2]	15.1	[13.4–17]	12.1	[10.8–13.4]
Indonesia	SEAR	24.4	[17.5–32.4]	21.1	[14.8–28.9]	22.8	[18–28.1]
Iran (Islamic Republic of)	EMR	22.3	[20.7–24]	41.6	[39.4–43.9]	31.9	[30.5–33.3]
Iraq	EMR	49.6	[44–55.3]	43.1	[37.6–48.6]	46.3	[42.4–50.3]
Ireland	EUR	30.6	[10–70.7]	41.2	[13.7–76.8]	36.0	[11.3–73]
Israel	EUR	...	...	...	...	...	...
Italy	EUR	30.0	[9.6–69.7]	41.3	[13.4–76.8]	35.9	[10.9–72.5]
Jamaica	AMR	23.7	[7.3–62.4]	32.2	[9.2–68.3]	28.1	[7.9–64.7]
Japan	WPR	35.1	[13.7–75.2]	42.0	[14.7–77.6]	38.7	[13.6–75.8]
Jordan	EMR	12.7	[10.9–14.7]	11.4	[9.6–13.4]	12.1	[10.8–13.5]
Kazakhstan	EUR	18.8	[5.4–54.3]	21.0	[5.1–52.7]	20.0	[5–52.4]
Kenya	AFR	14.9	[3.9–46.1]	18.9	[4.4–49.4]	16.9	[3.9–46.5]
Kiribati	WPR	31.9	[23–41.6]	46.9	[37.5–56.5]	39.6	[33–46.4]
Kuwait	EMR	48.3	[44.1–52.5]	62.8	[60.2–65.4]	53.6	[51.4–55.8]
Kyrgyzstan	EUR	9.1	[6.4–12.5]	15.3	[13.3–17.6]	12.3	[10.7–14.1]
Lao People's Democratic Republic	WPR	3.1	[2.1–4.5]	14.6	[10.9–19.1]	9.0	[7.4–10.8]
Latvia	EUR	19.3	[5.3–54.4]	27.3	[7–62.7]	23.8	[5.9–58.3]
Lebanon	EMR	43.7	[35.6–52.2]	34.2	[26.4–42.7]	39.1	[33.5–45]

## Annex 4.4a: Insufficient physical activity

Prevalence of insufficient physical activity Age-standardized						Latest year with data	Latest year with national data	Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]			
22.7	[16–30.6]	24.8	[16.9–33.9]	23.8	[18.5–29.6]	2003		Czech Republic
...	...	...	...	...	...			Democratic People's Republic of Korea
23.1	[15.8–32]	29.0	[21.7–37.3]	26.0	[20.7–32]	2005		Democratic Republic of the Congo
22.4	[6.5–59.7]	26.2	[6.9–60.7]	24.3	[6.4–58.9]	2005	2005	Denmark
...	...	...	...	...	...			Djibouti
13.3	[9.9–17.6]	30.2	[26–34.6]	21.8	[18.9–24.8]	2007	2007	Dominica
31.5	[10.9–71.8]	40.3	[13.5–76.7]	35.9	[11.6–73.3]	2003	2003	Dominican Republic
19.6	[5.5–55.1]	30.8	[8.7–66.6]	25.2	[6.8–60.4]	2003	2003	Ecuador
25.1	[18.5–33.1]	39.4	[33.8–45.4]	32.3	[28–36.9]	2011	2011	Egypt
...	...	...	...	...	...			El Salvador
...	...	...	...	...	...			Equatorial Guinea
5.7	[4.5–7.1]	15.6	[12.6–19.1]	10.7	[9.2–12.2]	2010	2010	Eritrea
11.2	[2.8–34.5]	12.6	[2.7–33.3]	11.9	[2.7–35.1]	2003	2003	Estonia
14.0	[3.6–42.9]	23.9	[6.2–56.2]	18.9	[4.9–50.1]	2003	2003	Ethiopia
10.7	[8.3–13.6]	23.2	[19.5–27.3]	17.0	[14.7–19.4]	2011	2011	Fiji
21.7	[6.3–57.8]	25.3	[6.5–59.7]	23.5	[6.1–57.6]	2005	2005	Finland
19.1	[14.1–24.8]	28.5	[22.8–34.8]	23.8	[19.9–28]	2008	2008	France
17.7	[2.9–31.3]	34.4	[6.3–52.4]	26.0	[4.5–43.4]	2009		Gabon
16.9	[11.1–24.5]	26.1	[18.8–34.9]	21.5	[16.7–27.1]	2010	2010	Gambia
20.2	[16.6–24.3]	21.0	[19.1–23.1]	20.6	[18.9–22.4]	2010	2010	Georgia
18.7	[5.1–54.2]	23.5	[5.9–56.8]	21.1	[5.2–54.4]	2005	2005	Germany
13.1	[10.1–16.7]	18.0	[14.5–22]	15.6	[13.2–18.2]	2009	2009	Ghana
10.1	[2.6–28.9]	15.7	[3.4–42.1]	12.9	[2.9–36.5]	2005	2005	Greece
23.9	[17.3–31.6]	37.2	[31.9–42.7]	30.5	[26.4–34.9]	2011	2011	Grenada
11.5	[2.8–37.3]	15.0	[3.2–41.5]	13.3	[2.8–38.8]	2003	2003	Guatemala
7.1	[1.4–17.2]	12.7	[2.3–26.3]	9.9	[1.7–20.9]	2009		Guinea
...	...	...	...	...	...			Guinea-Bissau
...	...	...	...	...	...			Guyana
...	...	...	...	...	...			Haiti
...	...	...	...	...	...			Honduras
17.2	[4.8–50.1]	19.0	[4.5–48.8]	18.1	[4.4–48.5]	2003	2003	Hungary
...	...	...	...	...	...			Iceland
10.8	[9–12.9]	16.1	[14.3–17.9]	13.4	[12.2–14.8]	2008		India
25.5	[18.6–33.5]	22.0	[15.7–29.7]	23.7	[19–29.1]	2006		Indonesia
24.1	[22.5–25.8]	42.9	[40.6–45.1]	33.5	[32.1–34.9]	2011	2011	Iran (Islamic Republic of)
52.8	[47.2–58.5]	45.8	[40.4–51.4]	49.3	[45.4–53.2]	2006	2006	Iraq
30.0	[9.8–70.1]	40.1	[13.2–76]	35.1	[10.9–72.3]	2005	2005	Ireland
...	...	...	...	...	...			Israel
28.2	[8.9–68.1]	38.1	[12–74.5]	33.2	[9.9–70.4]	2005	2005	Italy
23.9	[7.4–62.6]	31.8	[9.1–68.2]	27.9	[7.9–64.7]	2007	2007	Jamaica
31.1	[11.3–70.8]	36.5	[11.8–73.4]	33.8	[11.1–71.6]	2003		Japan
15.6	[13.8–17.6]	15.6	[13.7–17.6]	15.6	[14.3–17]	2007	2007	Jordan
20.2	[5.9–55.9]	21.0	[5.1–52.7]	20.6	[5.2–53.2]	2003	2003	Kazakhstan
17.3	[4.7–49.9]	21.1	[5–52.1]	19.2	[4.5–49.7]	2004	2004	Kenya
33.9	[25.1–43.7]	48.2	[38.9–57.8]	41.1	[34.5–47.9]	2004	2004	Kiribati
49.2	[45.1–53.4]	63.9	[61.2–66.5]	56.6	[54.3–58.8]	2006	2006	Kuwait
10.4	[7.7–13.8]	16.1	[14.1–18.4]	13.3	[11.7–15]	2013	2013	Kyrgyzstan
4.7	[3.6–6]	16.0	[12.2–20.5]	10.3	[8.7–12.1]	2013	2013	Lao People's Democratic Republic
18.3	[5–52.9]	25.6	[6.5–60.9]	22.0	[5.5–56.6]	2005	2005	Latvia
43.9	[35.7–52.3]	33.8	[25.9–42.3]	38.8	[33.1–44.7]	2008	2008	Lebanon

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Prevalence of insufficient physical activity Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Lesotho	AFR	5.8	[3.8–8.9]	6.3	[4.9–8]	6.1	[4.9–7.5]
Liberia	AFR	22.4	[16.7–29]	29.3	[24.1–34.9]	25.9	[22–30]
Libya	EMR	31.0	[27–35.1]	42.3	[36.8–47.9]	36.6	[33.3–39.9]
Lithuania	EUR	16.6	[9.3–26.5]	23.1	[13.9–34.7]	20.2	[14.1–27.4]
Luxembourg	EUR	28.2	[9–66.8]	31.7	[8.8–68.1]	30.0	[8.5–66.5]
Madagascar	AFR	11.7	[8.4–15.8]	20.1	[15.5–25.4]	16.0	[13.1–19.2]
Malawi	AFR	4.3	[3–6.1]	8.0	[6.9–9.4]	6.2	[5.3–7.2]
Malaysia	WPR	45.6	[38–53.4]	57.2	[50–64.3]	51.6	[46.3–56.8]
Maldives	SEAR	24.2	[5.3–48.4]	36.3	[8.1–60.7]	30.3	[6.2–53.8]
Mali	AFR	16.2	[4.3–49.2]	26.0	[7–60.5]	21.2	[5.5–54.6]
Malta	EUR	40.3	[15–79.6]	49.9	[18.6–83.2]	45.2	[16–80.7]
Marshall Islands	WPR	41.2	[34.1–48.8]	53.9	[46.8–61.1]	47.6	[42.5–52.8]
Mauritania	AFR	35.3	[12.8–76.4]	49.7	[19.2–84]	42.5	[15–79.7]
Mauritius	AFR	22.7	[6.9–60.2]	27.9	[7.7–62.6]	25.4	[7–60.3]
Mexico	AMR	18.9	[11.8–27.8]	31.2	[23.1–39.9]	25.4	[19.9–31.5]
Micronesia (Federated States of)	WPR	32.0	[27.5–36.8]	41.4	[37.3–45.6]	36.6	[33.6–39.7]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	17.5	[13.8–21.7]	21.7	[17.4–26.6]	19.6	[16.8–22.8]
Montenegro	EUR	...	...	...	...	...	...
Morocco	EMR	...	...	...	...	...	...
Mozambique	AFR	4.3	[2.2–7.9]	5.2	[3–8.7]	4.8	[3.1–7.1]
Myanmar	SEAR	7.2	[5.1–9.8]	10.7	[8.4–13.5]	9.0	[7.4–10.9]
Namibia	AFR	23.9	[7.4–63.2]	34.8	[10.7–72.2]	29.7	[8.7–67.3]
Nauru	WPR	40.5	[37.2–44.1]	47.9	[44.4–51.4]	44.2	[41.8–46.7]
Nepal	SEAR	3.9	[2.7–5.7]	2.8	[2.4–3.2]	3.3	[2.9–3.8]
Netherlands	EUR	16.0	[4.2–46.3]	19.7	[4.5–48.9]	17.9	[4.1–46.4]
New Zealand	WPR	36.8	[33.9–39.8]	44.4	[41–47.9]	40.7	[38.5–43]
Nicaragua	AMR	...	...	...	...	...	...
Niger	AFR	21.2	[15.7–27.5]	24.8	[18.1–32.6]	23.0	[18.8–27.8]
Nigeria	AFR	17.7	[7.9–64.3]	21.9	[7.8–65.3]	19.8	[7.5–63.9]
Niue	WPR	8.1	[6.2–10.8]	6.1	[3.9–8.9]	7.1	[5.6–9]
Norway	EUR	25.0	[7.9–62.5]	32.5	[9.4–67.4]	28.8	[8.1–63.7]
Oman	EMR	...	...	...	...	...	...
Pakistan	EMR	18.5	[5.3–54]	29.7	[8.4–66.4]	24.0	[6.5–60]
Palau	WPR	...	...	...	...	...	...
Panama	AMR	...	...	...	...	...	...
Papua New Guinea	WPR	9.2	[6.6–12.3]	14.8	[12.8–17.2]	12.0	[10.4–13.8]
Paraguay	AMR	20.8	[6.1–57.9]	25.9	[6.9–61.1]	23.3	[6.2–58.3]
Peru	AMR	...	...	...	...	...	...
Philippines	WPR	11.5	[2.9–38.9]	17.3	[4–47.1]	14.4	[3.3–42.2]
Poland	EUR	14.4	[3.6–44.1]	26.0	[6.7–59.7]	20.5	[5.1–52.7]
Portugal	EUR	33.5	[11.6–72.7]	40.8	[13–76.6]	37.3	[11.7–73.9]
Qatar	EMR	29.9	[25.3–34.8]	46.9	[41.8–52]	33.3	[29.8–36.8]
Republic of Korea	WPR	29.4	[9.6–69.7]	39.7	[13–75.9]	34.7	[10.7–71.9]
Republic of Moldova	EUR	12.8	[10.3–15.6]	13.2	[11.7–14.8]	13.0	[11.7–14.4]
Romania	EUR	19.1	[5.2–55.3]	33.3	[9.5–69.5]	26.5	[7–62.6]
Russian Federation	EUR	10.1	[6.6–14.7]	12.0	[8–16.9]	11.1	[8.4–14.4]
Rwanda	AFR	10.0	[8.2–12]	17.0	[15.2–18.9]	13.6	[12.4–15]
Saint Kitts and Nevis	AMR	28.0	[19.5–38.5]	46.6	[37.5–56.3]	37.3	[30.8–44.4]
Saint Lucia	AMR	27.8	[22.8–33.1]	54.5	[40.3–68.3]	41.5	[36.5–46.8]



## Annex 4.4a: Insufficient physical activity

Prevalence of insufficient physical activity Age-standardized						Latest year with data	Latest year with national data	Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]			
7.5	[5.4–10.5]	7.0	[5.6–8.7]	7.2	[6–8.6]	2012	2012	Lesotho
24.5	[18.7–31]	30.6	[25.5–36.2]	27.5	[23.7–31.7]	2011	2011	Liberia
32.8	[28.9–37]	43.3	[37.8–48.9]	38.0	[34.8–41.4]	2009	2009	Libya
16.1	[8.8–26]	20.6	[11.4–32.2]	18.4	[12.3–25.6]	2010	2010	Lithuania
26.6	[8.4–65.2]	30.4	[8.4–66.9]	28.5	[8–65]	2005	2005	Luxembourg
13.7	[10.4–17.8]	22.2	[17.6–27.5]	17.9	[15.1–21.2]	2005		Madagascar
5.6	[4.3–7.4]	9.4	[8.2–10.7]	7.5	[6.6–8.5]	2009	2009	Malawi
46.7	[39.1–54.4]	58.0	[50.7–65]	52.3	[47.1–57.6]	2005	2005	Malaysia
25.8	[5.9–51.1]	35.5	[8.1–60.2]	30.7	[6.5–54.6]	2011		Maldives
18.2	[5.1–52]	29.1	[8.3–64]	23.7	[6.7–58.2]	2003	2003	Mali
38.6	[14.2–78.6]	47.2	[17.1–81.8]	42.9	[14.9–79.4]	2005	2005	Malta
38.0	[30.8–45.6]	51.1	[43.9–58.3]	44.5	[39.4–49.7]	2002	2002	Marshall Islands
38.0	[14.2–78.2]	52.1	[20.8–85.1]	45.1	[16.5–81.1]	2003	2003	Mauritania
23.1	[7–60.4]	27.3	[7.5–61.9]	25.2	[7–60]	2003	2003	Mauritius
20.3	[13.1–29.1]	31.8	[23.7–40.5]	26.0	[20.5–32.1]	2008	2008	Mexico
31.1	[26.6–35.9]	40.9	[36.8–45.1]	36.0	[33–39.1]	2008	2008	Micronesia (Federated States of)
...	...	...	...	...	...			Monaco
19.6	[15.8–23.8]	23.2	[18.8–28.1]	21.4	[18.5–24.5]	2013	2013	Mongolia
...	...	...	...	...	...			Montenegro
...	...	...	...	...	...			Morocco
5.5	[3.3–9]	6.2	[4–9.7]	5.8	[4.2–8.1]	2005	2005	Mozambique
8.3	[6.2–10.9]	11.6	[9.2–14.3]	9.9	[8.3–11.8]	2009	2009	Myanmar
26.4	[8.4–65.8]	37.1	[11.7–73.8]	31.8	[9.7–69.5]	2003	2003	Namibia
36.4	[33–39.9]	45.0	[41.5–48.5]	40.7	[38.2–43.2]	2004	2004	Nauru
4.5	[3.3–6.3]	3.7	[3.3–4.2]	4.1	[3.7–4.6]	2013	2013	Nepal
14.0	[3.6–42.2]	17.0	[3.8–44.3]	15.5	[3.5–42.1]	2005	2005	Netherlands
35.8	[32.9–38.8]	43.7	[40.3–47.2]	39.8	[37.5–42]	2012	2012	New Zealand
...	...	...	...	...	...			Nicaragua
23.3	[17.8–29.5]	27.0	[20.3–34.7]	25.1	[20.8–29.9]	2007		Niger
20.6	[9.3–67.4]	24.0	[8.4–66.7]	22.3	[8.5–66.3]	2011		Nigeria
6.7	[4.8–9.4]	4.6	[2.4–7.3]	5.6	[4.1–7.5]	2011	2011	Niue
22.9	[7–59.9]	28.8	[8–64.5]	25.8	[7–61]	2003	2003	Norway
...	...	...	...	...	...			Oman
20.2	[5.9–56.3]	31.7	[9.2–68]	26.0	[7.2–62]	2003	2003	Pakistan
...	...	...	...	...	...			Palau
...	...	...	...	...	...			Panama
11.8	[9.3–15]	17.5	[15.4–19.8]	14.7	[13–16.4]	2007		Papua New Guinea
22.1	[6.6–59.4]	27.0	[7.2–62.2]	24.6	[6.6–59.6]	2003	2003	Paraguay
...	...	...	...	...	...			Peru
13.1	[3.4–41.3]	18.6	[4.3–48.7]	15.8	[3.6–44.2]	2003	2003	Philippines
13.6	[3.4–42.5]	23.8	[6–57]	18.7	[4.7–50.4]	2005	2005	Poland
31.4	[10.7–70.8]	38.5	[12.1–75.1]	34.9	[10.8–72]	2005	2005	Portugal
33.4	[28.9–38.3]	49.7	[44.6–54.8]	41.6	[38.1–45.1]	2012	2012	Qatar
28.9	[9.5–69.2]	37.9	[12.1–74.5]	33.4	[10.2–71]	2012	2012	Republic of Korea
12.9	[10.4–15.8]	11.7	[10.2–13.3]	12.3	[11–13.7]	2013	2013	Republic of Moldova
18.9	[5.1–55]	31.8	[9–68.2]	25.3	[6.8–61.7]	2005	2005	Romania
10.2	[6.8–14.8]	8.8	[4.8–13.8]	9.5	[6.8–12.8]	2008	2008	Russian Federation
12.0	[10.3–14]	18.6	[16.8–20.5]	15.3	[14–16.7]	2012	2012	Rwanda
22.7	[14.2–33.2]	42.0	[32.9–51.7]	32.4	[25.9–39.4]	2007		Saint Kitts and Nevis
27.9	[23–33.2]	54.5	[40.2–68.2]	41.2	[36.1–46.4]	2012	2012	Saint Lucia

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Prevalence of insufficient physical activity Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Saint Vincent and the Grenadines	AMR	...	...	...	...	...	...
Samoa	WPR	9.8	[7.3–12.8]	21.2	[17.8–25]	15.3	[13.2–17.8]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	8.1	[4.8–12.8]	18.3	[16.1–20.8]	13.4	[11.6–15.4]
Saudi Arabia	EMR	52.1	[46.9–57.3]	67.7	[62.1–73]	58.5	[54.6–62.2]
Senegal	AFR	18.0	[5.1–52.9]	25.8	[6.9–60.5]	22.1	[6–56.3]
Serbia	EUR	35.3	[13.2–74.9]	47.1	[17.9–81.1]	41.4	[14.7–77.4]
Seychelles	AFR	18.2	[14.7–22.2]	23.0	[20.2–26]	20.6	[18.4–22.9]
Sierra Leone	AFR	8.0	[5.1–11.8]	15.0	[9.4–22.3]	11.6	[8.7–15]
Singapore	WPR	31.6	[28.5–34.9]	35.7	[32.1–39.5]	33.7	[31.3–36.1]
Slovakia	EUR	16.8	[4.6–49.2]	21.4	[5.1–51.3]	19.2	[5.4–51.6]
Slovenia	EUR	18.8	[5.3–52.8]	29.2	[7.9–62.8]	24.1	[5.8–55.6]
Solomon Islands	WPR	29.0	[22.6–36]	39.0	[32.1–46.3]	34.0	[29.2–39]
Somalia	EMR	...	...	...	...	...	...
South Africa	AFR	40.5	[34.7–46.6]	53.1	[47.2–59.1]	47.1	[42.9–51.3]
South Sudan	AFR	...	...	...	...	...	...
Spain	EUR	29.2	[9.8–69.1]	37.4	[11.6–73]	33.4	[10.3–70.3]
Sri Lanka	SEAR	16.9	[14.6–19.4]	30.2	[27–33.6]	23.7	[21.8–25.8]
Sudan	EMR	...	...	...	...	...	...
Suriname	AMR	...	...	...	...	...	...
Swaziland	AFR	29.4	[9.9–70.4]	38.6	[12.5–76]	34.2	[10.7–72.6]
Sweden	EUR	26.2	[8–64.8]	35.8	[10.6–71.6]	31.1	[8.9–67.5]
Switzerland	EUR	...	...	...	...	...	...
Syrian Arab Republic	EMR	...	...	...	...	...	...
Tajikistan	EUR	...	...	...	...	...	...
Thailand	SEAR	12.8	[11.2–14.5]	16.4	[14.5–18.5]	14.6	[13.4–16]
the former Yugoslav Republic of Macedonia	EUR	...	...	...	...	...	...
Timor–Leste	SEAR	...	...	...	...	...	...
Togo	AFR	7.6	[5.8–9.7]	9.8	[7.6–12.4]	8.7	[7.3–10.4]
Tonga	WPR	12.8	[10.3–15.7]	29.9	[26.5–33.6]	21.6	[19.4–23.9]
Trinidad and Tobago	AMR	29.9	[25.9–34.1]	53.1	[49.1–57.1]	41.7	[38.8–44.7]
Tunisia	EMR	18.6	[5.4–52.9]	26.6	[7.4–61.3]	22.6	[6.1–56.4]
Turkey	EUR	27.1	[8.8–67.1]	37.1	[11.8–73.5]	32.3	[9.9–69.5]
Turkmenistan	EUR	...	...	...	...	...	...
Tuvalu	WPR	...	...	...	...	...	...
Uganda	AFR	...	...	...	...	...	...
Ukraine	EUR	12.2	[3–38]	16.2	[3.5–39.8]	14.4	[3.2–38.2]
United Arab Emirates	EMR	27.0	[8.8–68.5]	39.4	[12.9–77.4]	30.2	[9.6–70.9]
United Kingdom	EUR	35.4	[33.5–37.3]	44.3	[42.2–46.5]	40.0	[38.6–41.4]
United Republic of Tanzania	AFR	4.6	[3.4–5.9]	6.4	[4.8–8.3]	5.5	[4.6–6.5]
United States of America	AMR	27.6	[24.3–31]	42.1	[38.3–46]	35.0	[32.5–37.6]
Uruguay	AMR	27.4	[19.6–36.6]	40.3	[32.9–48.1]	34.2	[28.7–40.1]
Uzbekistan	EUR	11.8	[8.9–15.3]	24.1	[20.9–27.5]	18.1	[15.9–20.5]
Vanuatu	WPR	6.0	[4.9–7.4]	8.1	[6.7–9.7]	7.1	[6.2–8.1]
Venezuela (Bolivarian Republic of)	AMR	...	...	...	...	...	...
Viet Nam	WPR	21.0	[11.2–34.5]	26.0	[15.7–39]	23.6	[16.2–32.5]
Yemen	EMR	...	...	...	...	...	...
Zambia	AFR	14.7	[3.9–46.4]	20.6	[5.1–52.9]	17.7	[4.3–48.7]
Zimbabwe	AFR	15.3	[4.1–45.5]	23.8	[6.1–57.1]	19.7	[4.9–51]

## Annex 4.4a: Insufficient physical activity

Prevalence of insufficient physical activity Age-standardized						Latest year with data	Latest year with national data	Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]			
...	...	...	...	...	...			Saint Vincent and the Grenadines
10.9	[8.4–14]	21.5	[18.1–25.3]	16.2	[14.1–18.6]	2013	2013	Samoa
...	...	...	...	...	...			San Marino
10.3	[7–15]	20.9	[18.7–23.4]	15.6	[13.8–17.6]	2009	2009	Sao Tome and Principe
53.2	[48–58.4]	68.7	[63.1–74]	61.0	[57.1–64.7]	2005	2005	Saudi Arabia
21.0	[6.1–56.8]	29.0	[8–63.6]	25.0	[7.2–60.2]	2003	2003	Senegal
33.5	[12.3–73.6]	43.8	[15.7–79.3]	38.7	[13.2–75.8]	2006	2006	Serbia
19.3	[15.8–23.3]	22.3	[19.5–25.3]	20.8	[18.6–23.1]	2013	2013	Seychelles
10.5	[7.6–14.3]	17.9	[12.3–25.2]	14.2	[11.3–17.7]	2009	2009	Sierra Leone
30.9	[27.8–34.2]	35.3	[31.7–39.1]	33.1	[30.7–35.5]	2013	2013	Singapore
16.6	[4.6–48.7]	19.1	[4.5–48.7]	17.8	[4.9–49.7]	2003	2003	Slovakia
17.4	[4.9–50.6]	25.1	[6.5–59.2]	21.3	[5.1–53.2]	2003	2003	Slovenia
30.2	[23.8–37.3]	39.9	[33–47.2]	35.1	[30.3–40.1]	2005		Solomon Islands
...	...	...	...	...	...			Somalia
42.2	[36.4–48.3]	51.6	[45.7–57.5]	46.9	[42.7–51.1]	2009	2009	South Africa
...	...	...	...	...	...			South Sudan
27.2	[8.9–67.3]	33.7	[10–70.4]	30.5	[9.1–68]	2011	2011	Spain
17.3	[15–19.8]	30.3	[27.1–33.7]	23.8	[21.8–25.9]	2006	2006	Sri Lanka
...	...	...	...	...	...			Sudan
...	...	...	...	...	...			Suriname
32.8	[11.4–73.2]	40.8	[13.4–77.1]	36.8	[11.8–74.4]	2003	2003	Swaziland
24.4	[7.3–62.8]	33.0	[9.6–69.2]	28.7	[8.1–65.2]	2005	2005	Sweden
...	...	...	...	...	...			Switzerland
...	...	...	...	...	...			Syrian Arab Republic
...	...	...	...	...	...			Tajikistan
12.9	[11.3–14.7]	16.7	[14.7–18.8]	14.8	[13.5–16.1]	2008	2008	Thailand
...	...	...	...	...	...			the former Yugoslav Republic of Macedonia
...	...	...	...	...	...			Timor–Leste
9.9	[8.1–12]	11.0	[8.8–13.6]	10.4	[9–12]	2011	2011	Togo
13.3	[10.8–16.2]	30.0	[26.5–33.6]	21.6	[19.4–24]	2011	2011	Tonga
30.1	[26.2–34.4]	52.9	[48.9–56.9]	41.5	[38.6–44.5]	2011	2011	Trinidad and Tobago
19.7	[5.9–54.3]	27.3	[7.7–62]	23.5	[6.5–57.4]	2003	2003	Tunisia
28.1	[9.2–68]	37.5	[12–73.8]	32.8	[10.3–70.1]	2003	2003	Turkey
...	...	...	...	...	...			Turkmenistan
...	...	...	...	...	...			Tuvalu
...	...	...	...	...	...			Uganda
11.6	[2.9–36.9]	12.7	[2.7–35.1]	12.2	[2.7–35.1]	2003	2003	Ukraine
32.2	[11.3–72.9]	44.6	[15.7–80.4]	38.4	[11.9–74.6]	2003	2003	United Arab Emirates
32.3	[30.4–34.2]	42.4	[40.3–44.6]	37.3	[35.9–38.8]	2012	2012	United Kingdom
6.1	[5–7.4]	7.6	[6.1–9.6]	6.9	[5.9–7.9]	2011	2011	United Republic of Tanzania
25.4	[22.2–28.8]	39.3	[35.5–43.3]	32.4	[29.8–35]	2011	2011	United States of America
26.2	[18.4–35.4]	37.3	[29.9–45.1]	31.7	[26.2–37.6]	2006	2006	Uruguay
13.6	[10.7–17.1]	24.9	[21.7–28.3]	19.2	[17–21.6]	2014	2014	Uzbekistan
7.4	[6.3–8.7]	9.4	[8–10.9]	8.4	[7.5–9.4]	2011	2011	Vanuatu
...	...	...	...	...	...			Venezuela (Bolivarian Republic of)
22.1	[12.3–35.6]	25.8	[15.5–38.8]	23.9	[16.6–32.9]	2009	2009	Viet Nam
...	...	...	...	...	...			Yemen
17.3	[4.8–50.4]	23.7	[6.1–56.6]	20.5	[5.2–52.6]	2003	2003	Zambia
18.7	[5.3–51.6]	26.1	[6.8–59.6]	22.4	[5.8–54.9]	2003	2003	Zimbabwe

## 4.4b Insufficient physical activity

### Comparable estimates of prevalence of insufficient physical activity (adolescents 11-17 years), 2010



Country name	Region	Prevalence of insufficient physical activity						Latest year with data	Latest year with national data
		Boys	[95% CI]	Girls	[95% CI]	Both sexes	[95% CI]		
Afghanistan	EMR	...	...	...	...	...	...	...	...
Albania	EUR	...	...	...	...	...	...	...	...
Algeria	AFR	75.9	[73.1–78.6]	92.4	[91.0–93.7]	84.6	[83.1–85.9]	2011	2011
Andorra	EUR	...	...	...	...	...	...	...	...
Angola	AFR	...	...	...	...	...	...	...	...
Antigua and Barbuda	AMR	72.4	[65.3–78.7]	83.3	[77.8–87.9]	78.3	[73.9–82.2]	2009	2009
Argentina	AMR	78.0	[75.0–80.8]	87.7	[86.0–89.2]	83.1	[81.6–84.6]	2012	2012
Armenia	EUR	73.0	[68.7–76.9]	79.8	[76.3–83.1]	76.6	[73.9–79.1]	2010	2010
Australia	WPR	78.0	[76.2–79.7]	91.5	[90.2–92.6]	83.9	[82.8–85.0]	2009	2009
Austria	EUR	65.6	[62.3–68.8]	84.9	[82.5–87.1]	75.4	[73.4–77.4]	2010	2010
Azerbaijan	EUR	...	...	...	...	...	...	...	...
Bahamas	AMR	81.0	[74.7–86.3]	87.9	[85.1–90.4]	84.8	[82.1–87.2]	2013	2013
Bahrain	EMR	...	...	...	...	...	...	...	...
Bangladesh	SEAR	...	...	...	...	...	...	...	...
Barbados	AMR	75.3	[71.1–79.3]	86.7	[83.6–89.5]	81.8	[79.2–84.2]	2011	2011
Belarus	EUR	...	...	...	...	...	...	...	...
Belgium	EUR	77.5	[75.3–79.7]	87.5	[85.7–89.1]	82.5	[81.1–83.9]	2010	2010
Belize	AMR	75.1	[72.6–77.6]	82.2	[79.8–84.4]	78.9	[77.1–80.5]	2011	2011
Benin	AFR	72.8	[70.1–75.4]	76.8	[72.3–80.8]	74.1	[71.9–76.3]	2009	2009
Bhutan	SEAR	...	...	...	...	...	...	...	...
Bolivia (Plurinational State of)	AMR	83.2	[80.8–85.4]	88.8	[86.4–90.8]	85.9	[84.3–87.5]	2012	2012
Bosnia and Herzegovina	EUR	...	...	...	...	...	...	...	...
Botswana	AFR	87.3	[84.5–89.8]	88.7	[87.2–90.1]	88.1	[86.7–89.3]	2005	2005
Brazil	AMR	82.0	[81.3–82.6]	91.4	[90.9–91.9]	86.7	[86.3–87.1]	2012	2012
Brunei Darussalam	WPR	80.6	[78.3–82.7]	94.6	[93.1–95.8]	88.1	[86.7–89.3]	2014	2014
Bulgaria	EUR	68.3	[65.1–71.4]	79.9	[77.1–82.4]	74.1	[72.0–76.2]	2005	2005
Burkina Faso	AFR	...	...	...	...	...	...	...	...
Burundi	AFR	...	...	...	...	...	...	...	...
Cabo Verde	AFR	...	...	...	...	...	...	...	...
Cambodia	WPR	91.6	[89.7–93.3]	94.8	[92.4–96.6]	93.4	[92.0–94.6]	2013	2013
Cameroon	AFR	...	...	...	...	...	...	...	...
Canada	AMR	73.0	[71.3–74.7]	81.4	[79.9–82.8]	77.3	[76.2–78.4]	2010	2010
Central African Republic	AFR	...	...	...	...	...	...	...	...
Chad	AFR	...	...	...	...	...	...	...	...
Chile	AMR	79.6	[72.4–85.6]	90.6	[85.1–94.5]	85.2	[80.8–88.8]	2013	2013
China	WPR	79.4	[72.4–88.7]	87.9	[81.6–92.9]	83.8	[77.3–91.1]	2003	...
Colombia	AMR	83.4	[77.7–91.3]	86.7	[81.5–92.9]	85.2	[80.1–92.3]	2007	...
Comoros	AFR	...	...	...	...	...	...	...	...
Congo	AFR	...	...	...	...	...	...	...	...
Cook Islands	WPR	76.4	[72.5–80.0]	84.6	[81.6–87.3]	80.8	[78.4–83.0]	2011	2011
Costa Rica	AMR	75.3	[73.3–77.3]	88.1	[85.5–90.3]	81.9	[80.4–83.4]	2009	2009
Côte d'Ivoire	AFR	72.6	[69.8–75.3]	85.4	[83.3–87.4]	79.3	[77.5–80.9]	2010	2010
Croatia	EUR	...	...	...	...	...	...	...	...
Cuba	AMR	...	...	...	...	...	...	...	...
Cyprus	EUR	72.9	[69.5–76.0]	80.6	[77.8–83.2]	76.9	[74.7–78.9]	2010	2010

## Annex 4.4b: Insufficient physical activity

... Indicates no data were available

Country name	Region	Prevalence of insufficient physical activity						Latest year with data	Latest year with national data
		Boys	[95% CI]	Girls	[95% CI]	Both sexes	[95% CI]		
Czech Republic	EUR	...	...	...	...	...	...	...	...
Democratic People's Republic of Korea	SEAR	...	...	...	...	...	...	...	...
Democratic Republic of the Congo	AFR	...	...	...	...	...	...	...	...
Denmark	EUR	87.1	[84.3–89.5]	89.4	[87.0–91.4]	88.3	[86.5–89.9]	2010	2010
Djibouti	EMR	81.3	[78.0–84.3]	89.1	[86.8–91.2]	84.6	[82.6–86.5]	2007	2007
Dominica	AMR	82.9	[78.5–86.7]	84.7	[81.9–87.2]	83.9	[81.6–86.0]	2009	2009
Dominican Republic	AMR	...	...	...	...	...	...	...	...
Ecuador	AMR	85.9	[80.8–92.8]	93.4	[89.3–96.3]	89.8	[85.5–94.7]	2007	...
Egypt	EMR	80.6	[71.4–87.9]	92.9	[88.9–95.8]	87.3	[83.2–90.7]	2011	2011
El Salvador	AMR	83.7	[80.5–86.5]	90.1	[87.3–92.4]	86.6	[84.5–88.4]	2013	2013
Equatorial Guinea	AFR	...	...	...	...	...	...	...	...
Eritrea	AFR	...	...	...	...	...	...	...	...
Estonia	EUR	82.7	[79.7–85.4]	89.0	[86.7–91.1]	86.0	[84.1–87.7]	2010	2010
Ethiopia	AFR	...	...	...	...	...	...	...	...
Fiji	WPR	84.2	[82.2–86.0]	89.4	[87.3–91.2]	86.6	[85.3–88.0]	2010	2010
Finland	EUR	68.2	[65.3–70.9]	85.3	[83.2–87.2]	77.0	[75.3–78.7]	2010	2010
France	EUR	84.4	[82.1–86.5]	91.7	[90.0–93.2]	88.1	[86.6–89.4]	2010	2010
Gabon	AFR	...	...	...	...	...	...	...	...
Gambia	AFR	...	...	...	...	...	...	...	...
Georgia	EUR	...	...	...	...	...	...	...	...
Germany	EUR	77.9	[75.0–80.7]	88.1	[85.9–90.1]	83.1	[81.3–84.9]	2010	2010
Ghana	AFR	87.5	[84.8–89.9]	88.3	[84.3–91.6]	87.9	[85.7–89.9]	2012	2012
Greece	EUR	81.9	[79.2–84.5]	89.7	[87.5–91.5]	85.9	[84.2–87.5]	2010	2010
Grenada	AMR	82.6	[78.6–86.1]	86.7	[83.9–89.2]	84.9	[82.6–87.0]	2008	2008
Guatemala	AMR	80.9	[78.0–83.6]	88.0	[84.1–91.2]	84.8	[82.5–86.9]	2009	2009
Guinea	AFR	...	...	...	...	...	...	...	...
Guinea–Bissau	AFR	...	...	...	...	...	...	...	...
Guyana	AMR	81.9	[77.0–86.1]	86.5	[83.6–89.1]	84.5	[81.9–86.8]	2010	2010
Haiti	AMR	...	...	...	...	...	...	...	...
Honduras	AMR	80.3	[77.8–82.7]	87.3	[84.4–89.9]	83.9	[82.1–85.7]	2012	2012
Hungary	EUR	74.4	[71.2–77.5]	86.5	[84.1–88.6]	80.8	[78.9–82.6]	2010	2010
Iceland	EUR	79.4	[77.5–81.1]	88.3	[86.8–89.7]	83.8	[82.6–84.9]	2010	2010
India	SEAR	69.6	[66.5–72.7]	71.6	[67.4–75.5]	70.5	[68.0–72.9]	2007	2007
Indonesia	SEAR	84.3	[81.5–86.8]	83.1	[79.0–86.7]	83.7	[81.4–85.7]	2007	2007
Iran (Islamic Republic of)	EMR	...	...	...	...	...	...	...	...
Iraq	EMR	80.3	[77.8–82.6]	91.4	[87.4–94.4]	85.1	[83.1–87.0]	2012	2012
Ireland	EUR	64.6	[61.4–67.8]	79.6	[76.7–82.3]	71.6	[69.4–73.8]	2010	2010
Israel	EUR	77.8	[74.7–80.6]	89.5	[87.6–91.2]	84.6	[82.9–86.2]	2005	2005
Italy	EUR	91.0	[88.9–92.9]	92.6	[90.6–94.2]	91.8	[90.4–93.0]	2010	2010
Jamaica	AMR	...	...	...	...	...	...	...	...
Japan	WPR	...	...	...	...	...	...	...	...
Jordan	EMR	82.3	[78.5–85.6]	88.9	[86.5–91.0]	85.2	[83.1–87.1]	2007	2007
Kazakhstan	EUR	...	...	...	...	...	...	...	...
Kenya	AFR	85.7	[83.5–87.7]	88.9	[86.4–91.1]	87.4	[85.8–88.9]	2003	2003
Kiribati	WPR	78.0	[74.0–81.6]	85.5	[83.0–87.8]	82.2	[80.1–84.2]	2011	2011
Kuwait	EMR	77.0	[72.4–81.2]	92.9	[90.9–94.5]	84.9	[82.8–86.9]	2011	2011
Kyrgyzstan	EUR	...	...	...	...	...	...	...	...
Lao People's Democratic Republic	WPR	...	...	...	...	...	...	...	...
Latvia	EUR	77.0	[73.7–80.0]	82.3	[79.5–84.8]	79.7	[77.6–81.7]	2010	2010
Lebanon	EMR	69.4	[64.9–73.6]	83.2	[81.0–85.1]	76.7	[74.6–78.6]	2011	2011



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Prevalence of insufficient physical activity						Latest year with data	Latest year with national data
		Boys	[95% CI]	Girls	[95% CI]	Both sexes	[95% CI]		
Lesotho	AFR	...	...	...	...	...	...	...	...
Liberia	AFR	...	...	...	...	...	...	...	...
Libya	EMR	78.2	[74.0–82.0]	88.2	[86.2–90.0]	84.0	[82.0–85.8]	2007	2007
Lithuania	EUR	80.6	[78.0–83.1]	86.4	[84.0–88.5]	83.4	[81.7–85.1]	2010	2010
Luxembourg	EUR	73.4	[70.0–76.7]	81.8	[78.8–84.5]	77.6	[75.4–79.7]	2010	2010
Madagascar	AFR	...	...	...	...	...	...	...	...
Malawi	AFR	...	...	...	...	...	...	...	...
Malaysia	WPR	80.1	[78.7–81.5]	91.5	[90.6–92.4]	85.8	[85.0–86.6]	2012	2012
Maldives	SEAR	76.7	[73.2–79.9]	82.6	[79.2–85.7]	80.0	[77.6–82.2]	2009	2009
Mali	AFR	...	...	...	...	...	...	...	...
Malta	EUR	78.2	[72.4–83.2]	84.5	[79.5–88.7]	81.4	[77.7–84.7]	2005	2005
Marshall Islands	WPR	...	...	...	...	...	...	...	...
Mauritania	AFR	83.1	[77.4–87.8]	92.3	[90.1–94.2]	88.0	[85.7–90.1]	2010	2010
Mauritius	AFR	74.2	[70.1–77.9]	86.8	[83.8–89.4]	81.1	[78.6–83.4]	2011	2011
Mexico	AMR	...	...	...	...	...	...	...	...
Micronesia (Federated States of)	WPR	...	...	...	...	...	...	...	...
Monaco	EUR	...	...	...	...	...	...	...	...
Mongolia	WPR	69.4	[67.3–71.5]	79.4	[77.4–81.3]	74.7	[73.3–76.1]	2013	2013
Montenegro	EUR	...	...	...	...	...	...	...	...
Morocco	EMR	84.2	[82.3–85.9]	89.4	[86.3–92.0]	86.6	[85.1–88.1]	2010	2010
Mozambique	AFR	...	...	...	...	...	...	...	...
Myanmar	SEAR	81.1	[78.2–83.7]	86.4	[83.2–89.2]	83.8	[81.7–85.7]	2007	2007
Namibia	AFR	85.0	[81.9–87.8]	86.8	[84.2–89.0]	86.0	[84.1–87.8]	2014	2014
Nauru	WPR	83.0	[67.5–92.7]	90.8	[83.6–95.4]	88.6	[82.0–93.4]	2011	2011
Nepal	SEAR	...	...	...	...	...	...	...	...
Netherlands	EUR	77.8	[74.7–80.7]	84.3	[81.7–86.6]	81.1	[79.1–83.0]	2010	2010
New Zealand	WPR	...	...	...	...	...	...	...	...
Nicaragua	AMR	...	...	...	...	...	...	...	...
Niger	AFR	...	...	...	...	...	...	...	...
Nigeria	AFR	...	...	...	...	...	...	...	...
Niue	WPR	89.3	[71.8–97.7]	88.6	[66.5–99.8]	89.0	[77.0–95.8]	2010	2010
Norway	EUR	78.9	[75.8–81.7]	91.2	[89.1–93.1]	85.0	[83.2–86.8]	2010	2010
Oman	EMR	77.9	[72.9–82.4]	90.2	[87.4–92.5]	84.7	[82.0–87.0]	2010	2010
Pakistan	EMR	87.3	[80.6–92.4]	91.1	[75.4–98.5]	88.2	[82.4–92.6]	2009	2009
Palau	WPR	74.1	[62.6–83.8]	78.2	[68.0–86.6]	76.3	[69.0–82.8]	2011	2011
Panama	AMR	...	...	...	...	...	...	...	...
Papua New Guinea	WPR	...	...	...	...	...	...	...	...
Paraguay	AMR	...	...	...	...	...	...	...	...
Peru	AMR	83.8	[81.4–86.1]	85.9	[84.0–87.7]	84.9	[83.4–86.3]	2010	2010
Philippines	WPR	89.6	[85.8–92.7]	91.7	[89.0–94.0]	90.8	[88.7–92.7]	2011	2011
Poland	EUR	74.7	[71.3–77.8]	84.2	[81.5–86.7]	79.6	[77.5–81.6]	2010	2010
Portugal	EUR	81.5	[78.3–84.4]	91.2	[89.1–93.1]	86.7	[84.8–88.4]	2010	2010
Qatar	EMR	88.3	[83.8–91.8]	91.6	[87.0–94.9]	90.1	[87.1–92.6]	2011	2011
Republic of Korea	WPR	91.9	[91.5–92.4]	97.8	[97.5–98.0]	94.8	[94.6–95.1]	2013	2013
Republic of Moldova	EUR	...	...	...	...	...	...	...	...
Romania	EUR	73.2	[70.2–76.0]	88.1	[85.9–90.0]	80.7	[78.9–82.5]	2010	2010
Russian Federation	EUR	84.1	[81.6–86.5]	90.7	[88.7–92.5]	87.5	[85.9–88.9]	2010	2010
Rwanda	AFR	...	...	...	...	...	...	...	...
Saint Kitts and Nevis	AMR	78.0	[74.4–81.3]	85.5	[83.1–87.6]	82.2	[80.2–84.1]	2011	2011
Saint Lucia	AMR	83.8	[80.0–87.1]	85.5	[82.2–88.3]	84.8	[82.4–87.0]	2007	2007

## Annex 4.4b: Insufficient physical activity

... Indicates no data were available

Country name	Region	Prevalence of insufficient physical activity						Latest year with data	Latest year with national data
		Boys	[95% CI]	Girls	[95% CI]	Both sexes	[95% CI]		
Saint Vincent and the Grenadines	AMR	84.4	[81.0–87.5]	88.6	[85.2–91.5]	86.6	[84.3–88.7]	2007	2007
Samoa	WPR	89.3	[86.2–91.9]	86.7	[84.1–89.1]	87.8	[85.8–89.5]	2011	2011
San Marino	EUR	...	...	...	...	...	...	...	...
Sao Tome and Principe	AFR	...	...	...	...	...	...	...	...
Saudi Arabia	EMR	...	...	...	...	...	...	...	...
Senegal	AFR	85.6	[79.0–90.8]	93.6	[90.9–95.7]	89.2	[86.4–91.7]	2005	2005
Serbia	EUR	...	...	...	...	...	...	...	...
Seychelles	AFR	76.6	[70.3–82.2]	86.8	[82.0–90.8]	82.1	[78.3–85.5]	2007	2007
Sierra Leone	AFR	...	...	...	...	...	...	...	...
Singapore	WPR	87.9	[85.2–90.3]	91.9	[89.7–93.9]	89.9	[88.2–91.5]	2012	2012
Slovakia	EUR	72.9	[69.9–75.8]	81.6	[79.1–83.9]	77.4	[75.4–79.2]	2010	2010
Slovenia	EUR	74.7	[71.8–77.4]	85.0	[82.7–87.2]	79.8	[77.9–81.5]	2010	2010
Solomon Islands	WPR	81.6	[76.9–85.8]	85.0	[81.0–88.4]	83.2	[80.3–85.9]	2011	2011
Somalia	EMR	...	...	...	...	...	...	...	...
South Africa	AFR	...	...	...	...	...	...	...	...
South Sudan	AFR	...	...	...	...	...	...	...	...
Spain	EUR	69.7	[66.5–72.8]	84.3	[81.8–86.5]	77.2	[75.2–79.1]	2010	2010
Sri Lanka	SEAR	82.6	[79.2–85.6]	88.4	[86.4–90.1]	85.9	[84.1–87.5]	2008	2008
Sudan	EMR	91.2	[86.7–94.6]	92.3	[89.7–94.4]	91.9	[89.7–93.7]	2012	2012
Suriname	AMR	77.9	[73.7–81.8]	83.9	[81.7–85.9]	80.9	[78.9–82.8]	2009	2009
Swaziland	AFR	...	...	...	...	...	...	...	...
Sweden	EUR	83.3	[81.0–85.4]	88.9	[87.0–90.6]	86.1	[84.7–87.5]	2010	2010
Switzerland	EUR	84.8	[82.6–86.8]	91.2	[89.4–92.7]	88.0	[86.6–89.2]	2010	2010
Syrian Arab Republic	EMR	85.5	[81.6–88.9]	92.3	[90.3–94.0]	89.6	[87.8–91.3]	2010	2010
Tajikistan	EUR	...	...	...	...	...	...	...	...
Thailand	SEAR	78.3	[76.0–80.4]	90.2	[88.1–92.1]	84.4	[82.8–85.8]	2008	2008
the former Yugoslav Republic of Macedonia	EUR	70.9	[67.4–74.3]	83.3	[80.4–86.0]	77.1	[74.8–79.3]	2010	2010
Timor-Leste	SEAR	...	...	...	...	...	...	...	...
Togo	AFR	...	...	...	...	...	...	...	...
Tonga	WPR	88.6	[85.9–90.9]	84.2	[81.2–86.9]	86.1	[84.2–87.9]	2010	2010
Trinidad and Tobago	AMR	78.2	[73.6–82.3]	85.1	[81.2–88.5]	81.5	[78.5–84.2]	2011	2011
Tunisia	EMR	74.1	[71.3–76.7]	88.2	[86.1–90.1]	81.4	[79.6–83.0]	2008	2008
Turkey	EUR	77.1	[74.2–79.7]	86.9	[84.7–88.8]	82.2	[80.5–83.8]	2010	2010
Turkmenistan	EUR	...	...	...	...	...	...	...	...
Tuvalu	WPR	86.6	[79.9–91.7]	89.9	[84.3–94.0]	88.3	[84.2–91.6]	2012	2012
Uganda	AFR	84.7	[81.7–87.4]	86.6	[84.3–88.7]	85.6	[83.8–87.3]	2003	2003
Ukraine	EUR	70.4	[67.5–73.3]	83.4	[81.2–85.6]	77.2	[75.4–79.0]	2010	2010
United Arab Emirates	EMR	77.5	[72.6–82.0]	86.0	[81.7–89.6]	82.6	[79.4–85.4]	2010	2010
United Kingdom	EUR	72.7	[71.0–74.4]	84.9	[83.5–86.1]	79.0	[77.9–80.0]	2010	2010
United Republic of Tanzania	AFR	75.5	[66.6–85.9]	84.9	[76.6–90.7]	80.4	[72.2–88.8]	2006	...
United States of America	AMR	63.1	[61.1–65.0]	82.2	[80.6–83.7]	72.6	[71.4–73.9]	2013	2013
Uruguay	AMR	76.6	[73.9–79.1]	90.8	[89.2–92.2]	84.2	[82.7–85.6]	2012	2012
Uzbekistan	EUR	...	...	...	...	...	...	...	...
Vanuatu	WPR	88.3	[81.8–93.0]	89.9	[85.7–93.2]	89.2	[85.7–92.0]	2011	2011
Venezuela (Bolivarian Republic of)	AMR	87.1	[82.6–93.6]	95.5	[92.7–97.8]	91.8	[88.2–95.9]	2003	...
Viet Nam	WPR	82.1	[79.8–84.3]	90.8	[89.0–92.3]	86.7	[85.3–88.0]	2013	2013
Yemen	EMR	82.5	[77.7–86.6]	87.7	[83.3–91.3]	84.3	[81.0–87.2]	2008	2008
Zambia	AFR	91.5	[88.8–93.8]	88.8	[86.2–91.1]	90.1	[88.3–91.8]	2004	2004
Zimbabwe	AFR	85.5	[83.0–87.6]	88.6	[86.8–90.3]	87.2	[85.8–88.6]	2003	...

## 4.5 Tobacco

Comparable estimates of prevalence of current tobacco smoking  
(population aged 15+ years), 2010

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	...	...	...	...	...	...
Albania	EUR	51.6	[ 40.8 - 61.5]	9.3	[ 6.6 - 11.9]	30.6	[ 23.8 - 36.8]
Algeria	AFR	...	...	...	...	...	...
Andorra	EUR	37.5	[ 28.1 - 48.1]	25.1	[ 18.6 - 33.0]	31.3	[ 23.3 - 40.6]
Angola	AFR	...	...	...	...	...	...
Antigua and Barbuda	AMR	...	...	...	...	...	...
Argentina	AMR	33.3	[ 27.6 - 40.1]	21.6	[ 17.6 - 25.4]	27.6	[ 22.8 - 33.0]
Armenia	EUR	...	...	...	...	...	...
Australia	WPR	19.2	[ 16.1 - 22.9]	15.1	[ 12.4 - 17.6]	17.2	[ 14.3 - 20.3]
Austria	EUR	...	...	...	...	...	...
Azerbaijan	EUR	...	...	...	...	...	...
Bahamas	AMR	...	...	...	...	...	...
Bahrain	EMR	33.4	[ 25.5 - 40.9]	6.4	[ 4.1 - 8.8]	15.8	[ 11.5 - 19.9]
Bangladesh	SEAR	46.3	[ 37.8 - 54.9]	1.4	[ 1.0 - 1.9]	23.6	[ 19.2 - 28.0]
Barbados	AMR	13.4	[ 8.8 - 18.4]	1.1	[ 0.6 - 1.8]	7.3	[ 4.7 - 10.2]
Belarus	EUR	51.9	[ 42.5 - 62.3]	10.0	[ 8.1 - 12.0]	32.8	[ 26.8 - 39.3]
Belgium	EUR	28.7	[ 20.4 - 38.4]	21.3	[ 14.0 - 29.5]	25.1	[ 17.3 - 34.1]
Belize	AMR	...	...	...	...	...	...
Benin	AFR	...	...	...	...	...	...
Bhutan	SEAR	...	...	...	...	...	...
Bolivia (Plurinational State of)	AMR	38.6	[ 21.1 - 58.7]	19.9	[ 12.2 - 29.5]	29.4	[ 16.7 - 44.3]
Bosnia and Herzegovina	EUR	49.7	[ 37.8 - 62.0]	31.0	[ 23.1 - 39.3]	40.7	[ 30.7 - 51.0]
Botswana	AFR	...	...	...	...	...	...
Brazil	AMR	22.1	[ 17.7 - 26.7]	13.4	[ 10.9 - 16.1]	17.8	[ 14.4 - 21.5]
Brunei Darussalam	WPR	28.4	[ 14.6 - 47.9]	3.2	[ 1.4 - 5.3]	15.7	[ 7.9 - 26.4]
Bulgaria	EUR	45.2	[ 36.4 - 53.7]	26.4	[ 20.6 - 32.3]	36.1	[ 28.8 - 43.4]
Burkina Faso	AFR	31.7	[ 22.1 - 41.8]	5.0	[ 2.7 - 7.6]	18.7	[ 12.7 - 25.2]
Burundi	AFR	...	...	...	...	...	...
Cabo Verde	AFR	...	...	...	...	...	...
Cambodia	WPR	41.3	[ 30.8 - 52.3]	3.6	[ 2.9 - 4.4]	23.4	[ 17.5 - 29.5]
Cameroon	AFR	25.5	[ 16.4 - 36.5]	0.9	[ 0.3 - 1.6]	13.3	[ 8.4 - 19.2]
Canada	AMR	20.6	[ 17.1 - 24.1]	15.3	[ 13.0 - 17.7]	18.0	[ 15.1 - 21.0]
Central African Republic	AFR	...	...	...	...	...	...
Chad	AFR	...	...	...	...	...	...
Chile	AMR	41.7	[ 30.9 - 52.4]	36.1	[ 26.2 - 45.0]	39.0	[ 28.6 - 48.8]
China	WPR	50.8	[ 40.8 - 60.1]	2.3	[ 1.9 - 2.8]	25.9	[ 20.8 - 30.7]
Colombia	AMR	...	...	...	...	...	...
Comoros	AFR	...	...	...	...	...	...
Congo	AFR	...	...	...	...	...	...
Cook Islands	WPR	...	...	...	...	...	...
Costa Rica	AMR	21.0	[ 12.4 - 28.9]	9.7	[ 5.3 - 15.2]	15.3	[ 8.8 - 22.0]
Côte d'Ivoire	AFR	...	...	...	...	...	...
Croatia	EUR	37.4	[ 30.3 - 45.9]	26.1	[ 20.3 - 31.5]	32.0	[ 25.5 - 39.1]
Cuba	AMR	...	...	...	...	...	...
Cyprus	EUR	...	...	...	...	...	...
Czech Republic	EUR	36.4	[ 30.3 - 43.0]	26.1	[ 21.2 - 30.4]	31.4	[ 25.9 - 36.9]



... Indicates no data were available

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
...	...	...	...	...	...	Afghanistan
51.9	[ 42.1 - 62.5]	9.1	[ 6.6 - 11.7]	30.6	[ 24.4 - 37.2]	Albania
...	...	...	...	...	...	Algeria
39.0	[ 29.3 - 50.4]	28.6	[ 20.0 - 36.8]	33.8	[ 24.6 - 43.6]	Andorra
...	...	...	...	...	...	Angola
...	...	...	...	...	...	Antigua and Barbuda
33.5	[ 27.7 - 40.3]	22.6	[ 18.4 - 26.6]	28.2	[ 23.2 - 33.7]	Argentina
...	...	...	...	...	...	Armenia
19.6	[ 16.4 - 23.4]	15.8	[ 13.0 - 18.5]	17.7	[ 14.7 - 21.0]	Australia
...	...	...	...	...	...	Austria
...	...	...	...	...	...	Azerbaijan
...	...	...	...	...	...	Bahamas
32.9	[ 24.9 - 39.8]	7.2	[ 4.8 - 10.0]	16.2	[ 11.8 - 20.4]	Bahrain
47.1	[ 38.6 - 55.6]	1.6	[ 1.2 - 2.1]	24.0	[ 19.6 - 28.5]	Bangladesh
13.5	[ 8.7 - 18.5]	1.2	[ 0.6 - 1.8]	7.4	[ 4.7 - 10.3]	Barbados
51.6	[ 42.4 - 61.9]	11.4	[ 9.3 - 13.7]	33.3	[ 27.3 - 39.9]	Belarus
29.8	[ 20.7 - 39.8]	22.8	[ 14.9 - 31.7]	26.4	[ 17.9 - 35.9]	Belgium
...	...	...	...	...	...	Belize
...	...	...	...	...	...	Benin
...	...	...	...	...	...	Bhutan
38.1	[ 21.0 - 56.7]	19.7	[ 12.6 - 29.8]	29.1	[ 16.9 - 43.5]	Bolivia (Plurinational State of)
50.2	[ 37.9 - 62.3]	31.9	[ 24.2 - 40.7]	41.3	[ 31.3 - 51.9]	Bosnia and Herzegovina
...	...	...	...	...	...	Botswana
22.2	[ 17.9 - 26.8]	13.3	[ 10.8 - 16.0]	17.9	[ 14.4 - 21.6]	Brazil
28.5	[ 14.6 - 47.5]	3.3	[ 1.5 - 5.5]	15.8	[ 8.0 - 26.3]	Brunei Darussalam
47.3	[ 38.3 - 56.7]	32.2	[ 25.0 - 40.2]	40.0	[ 31.9 - 48.7]	Bulgaria
31.6	[ 22.0 - 41.1]	5.5	[ 3.0 - 8.2]	19.0	[ 12.8 - 25.2]	Burkina Faso
...	...	...	...	...	...	Burundi
...	...	...	...	...	...	Cabo Verde
46.7	[ 34.6 - 58.2]	4.0	[ 3.2 - 4.8]	26.4	[ 19.7 - 32.8]	Cambodia
27.4	[ 17.1 - 37.8]	0.9	[ 0.3 - 1.7]	14.2	[ 8.8 - 19.9]	Cameroon
21.1	[ 17.5 - 24.6]	16.0	[ 13.6 - 18.4]	18.6	[ 15.5 - 21.6]	Canada
...	...	...	...	...	...	Central African Republic
...	...	...	...	...	...	Chad
41.7	[ 30.8 - 52.3]	36.9	[ 27.1 - 46.5]	39.3	[ 29.0 - 49.5]	Chile
49.9	[ 40.1 - 58.9]	2.2	[ 1.8 - 2.7]	25.4	[ 20.4 - 30.1]	China
...	...	...	...	...	...	Colombia
...	...	...	...	...	...	Comoros
...	...	...	...	...	...	Congo
...	...	...	...	...	...	Cook Islands
21.1	[ 12.7 - 29.2]	9.7	[ 5.6 - 15.6]	15.3	[ 9.1 - 22.3]	Costa Rica
...	...	...	...	...	...	Côte d'Ivoire
39.2	[ 31.8 - 48.4]	30.3	[ 23.5 - 36.6]	35.0	[ 27.9 - 42.8]	Croatia
...	...	...	...	...	...	Cuba
...	...	...	...	...	...	Cyprus
37.5	[ 30.8 - 43.9]	28.8	[ 23.6 - 33.9]	33.3	[ 27.3 - 39.0]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	...	...	...	...	...	...
Democratic Republic of the Congo	AFR	...	...	...	...	...	...
Denmark	EUR	24.4	[ 19.9 - 29.3]	21.2	[ 17.3 - 25.8]	22.8	[ 18.6 - 27.6]
Djibouti	EMR	...	...	...	...	...	...
Dominica	AMR	...	...	...	...	...	...
Dominican Republic	AMR	18.5	[ 13.8 - 23.7]	10.7	[ 7.7 - 13.7]	14.6	[ 10.8 - 18.7]
Ecuador	AMR	15.8	[ 11.0 - 21.4]	3.7	[ 2.2 - 5.9]	9.8	[ 6.6 - 13.7]
Egypt	EMR	41.2	[ 32.7 - 49.8]	0.5	[ 0.3 - 0.6]	20.9	[ 16.6 - 25.3]
El Salvador	AMR	...	...	...	...	...	...
Equatorial Guinea	AFR	...	...	...	...	...	...
Eritrea	AFR	...	...	...	...	...	...
Estonia	EUR	44.3	[ 36.6 - 53.2]	22.6	[ 19.0 - 27.1]	34.5	[ 28.6 - 41.3]
Ethiopia	AFR	7.9	[ 5.7 - 10.1]	0.5	[ 0.3 - 0.8]	4.2	[ 3.0 - 5.5]
Fiji	WPR	...	...	...	...	...	...
Finland	EUR	25.0	[ 21.1 - 29.0]	17.7	[ 14.8 - 21.1]	21.5	[ 18.0 - 25.1]
France	EUR	32.1	[ 23.2 - 40.5]	23.3	[ 18.3 - 29.6]	27.9	[ 20.9 - 35.3]
Gabon	AFR	...	...	...	...	...	...
Gambia	AFR	...	...	...	...	...	...
Georgia	EUR	57.0	[ 45.9 - 70.0]	5.6	[ 4.3 - 6.9]	33.4	[ 26.8 - 41.1]
Germany	EUR	32.6	[ 27.3 - 38.3]	25.5	[ 21.6 - 30.3]	29.1	[ 24.5 - 34.4]
Ghana	AFR	...	...	...	...	...	...
Greece	EUR	56.5	[ 41.2 - 72.1]	34.7	[ 19.9 - 49.7]	45.8	[ 30.8 - 61.1]
Grenada	AMR	...	...	...	...	...	...
Guatemala	AMR	...	...	...	...	...	...
Guinea	AFR	...	...	...	...	...	...
Guinea-Bissau	AFR	...	...	...	...	...	...
Guyana	AMR	...	...	...	...	...	...
Haiti	AMR	19.2	[ 12.5 - 26.3]	2.9	[ 1.7 - 4.3]	11.3	[ 7.2 - 15.6]
Honduras	AMR	40.2	[ 28.5 - 54.4]	2.5	[ 1.5 - 3.8]	21.6	[ 15.2 - 29.4]
Hungary	EUR	34.8	[ 27.9 - 42.4]	25.0	[ 19.6 - 30.2]	30.2	[ 24.0 - 36.7]
Iceland	EUR	20.5	[ 14.1 - 27.1]	18.1	[ 12.9 - 22.8]	19.3	[ 13.5 - 24.9]
India	SEAR	24.0	[ 19.0 - 28.7]	2.5	[ 2.0 - 3.1]	12.9	[ 10.2 - 15.5]
Indonesia	SEAR	67.7	[ 54.0 - 80.4]	3.8	[ 3.0 - 4.6]	35.9	[ 28.6 - 42.6]
Iran (Islamic Republic of)	EMR	...	...	...	...	...	...
Iraq	EMR	...	...	...	...	...	...
Ireland*	EUR	24.8	[ 19.3 - 30.4]	23.3	[ 18.5 - 29.0]	24.1	[ 18.9 - 29.7]
Israel	EUR	40.7	[ 31.6 - 52.6]	20.3	[ 15.0 - 26.5]	30.8	[ 23.5 - 39.9]
Italy	EUR	28.8	[ 24.3 - 33.6]	18.2	[ 15.1 - 21.1]	23.7	[ 19.9 - 27.6]
Jamaica	AMR	29.7	[ 17.3 - 42.3]	6.8	[ 4.0 - 10.2]	18.5	[ 10.8 - 26.7]
Japan	WPR	...	...	...	...	...	...
Jordan	EMR	...	...	...	...	...	...
Kazakhstan	EUR	47.4	[ 38.0 - 56.4]	10.1	[ 7.6 - 12.5]	29.8	[ 23.7 - 35.7]
Kenya	AFR	24.8	[ 18.3 - 31.6]	2.2	[ 1.5 - 3.1]	13.6	[ 10.0 - 17.5]
Kiribati	WPR	...	...	...	...	...	...
Kuwait	EMR	...	...	...	...	...	...
Kyrgyzstan	EUR	48.2	[ 38.8 - 58.0]	4.0	[ 2.8 - 5.3]	26.7	[ 21.3 - 32.4]
Lao People's Democratic Republic	WPR	...	...	...	...	...	...
Latvia	EUR	49.7	[ 40.1 - 58.8]	20.9	[ 17.3 - 25.7]	36.8	[ 29.9 - 44.0]
Lebanon	EMR	41.9	[ 31.9 - 52.6]	28.1	[ 20.8 - 35.3]	34.8	[ 26.2 - 43.7]
Lesotho	AFR	46.7	[ 34.0 - 60.9]	0.5	[ 0.2 - 0.8]	24.4	[ 17.6 - 31.9]

\* Cigarette smoking only



Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
...	...	...	...	...	...	Democratic People's Republic of Korea
...	...	...	...	...	...	Democratic Republic of the Congo
24.0	[ 19.7 - 29.2]	21.1	[ 17.3 - 25.8]	22.6	[ 18.5 - 27.5]	Denmark
...	...	...	...	...	...	Djibouti
...	...	...	...	...	...	Dominica
19.8	[ 14.9 - 25.4]	11.4	[ 8.3 - 14.7]	15.6	[ 11.6 - 20.1]	Dominican Republic
16.1	[ 11.2 - 21.7]	3.8	[ 2.0 - 5.7]	10.0	[ 6.7 - 13.8]	Ecuador
42.4	[ 33.6 - 51.0]	0.5	[ 0.3 - 0.6]	21.5	[ 17.0 - 25.9]	Egypt
...	...	...	...	...	...	El Salvador
...	...	...	...	...	...	Equatorial Guinea
...	...	...	...	...	...	Eritrea
45.0	[ 36.4 - 53.1]	25.9	[ 21.7 - 30.8]	36.3	[ 29.7 - 43.0]	Estonia
8.8	[ 6.6 - 11.3]	0.5	[ 0.3 - 0.8]	4.7	[ 3.5 - 6.1]	Ethiopia
...	...	...	...	...	...	Fiji
26.2	[ 22.2 - 30.6]	20.6	[ 16.9 - 24.3]	23.5	[ 19.6 - 27.5]	Finland
33.9	[ 24.6 - 42.7]	26.9	[ 20.9 - 34.4]	30.6	[ 22.8 - 38.7]	France
...	...	...	...	...	...	Gabon
...	...	...	...	...	...	Gambia
58.3	[ 47.0 - 72.0]	5.9	[ 4.5 - 7.4]	34.3	[ 27.5 - 42.3]	Georgia
35.3	[ 29.3 - 41.5]	30.4	[ 25.7 - 36.3]	32.9	[ 27.6 - 39.0]	Germany
...	...	...	...	...	...	Ghana
56.5	[ 42.2 - 74.6]	36.6	[ 23.1 - 55.0]	46.8	[ 32.9 - 65.0]	Greece
...	...	...	...	...	...	Grenada
...	...	...	...	...	...	Guatemala
...	...	...	...	...	...	Guinea
...	...	...	...	...	...	Guinea-Bissau
...	...	...	...	...	...	Guyana
20.4	[ 14.0 - 28.4]	3.0	[ 1.7 - 4.4]	12.0	[ 8.0 - 16.7]	Haiti
40.4	[ 27.5 - 53.5]	2.6	[ 1.5 - 3.9]	21.7	[ 14.7 - 29.0]	Honduras
36.2	[ 28.3 - 43.5]	28.6	[ 22.3 - 34.8]	32.6	[ 25.5 - 39.5]	Hungary
20.7	[ 14.2 - 27.4]	18.5	[ 13.7 - 24.1]	19.6	[ 14.0 - 25.7]	Iceland
25.0	[ 20.2 - 30.3]	3.0	[ 2.3 - 3.6]	13.7	[ 11.0 - 16.6]	India
68.1	[ 55.0 - 81.7]	4.3	[ 3.4 - 5.2]	36.3	[ 29.2 - 43.6]	Indonesia
...	...	...	...	...	...	Iran (Islamic Republic of)
...	...	...	...	...	...	Iraq
25.2	[ 19.5 - 31.1]	23.9	[ 18.6 - 29.6]	24.5	[ 19.1 - 30.4]	Ireland*
41.0	[ 30.5 - 51.7]	20.5	[ 15.3 - 27.0]	31.0	[ 23.1 - 39.7]	Israel
29.5	[ 25.0 - 34.5]	19.9	[ 16.8 - 23.4]	24.9	[ 21.1 - 29.2]	Italy
30.0	[ 17.6 - 43.0]	6.8	[ 4.0 - 10.2]	18.7	[ 11.0 - 27.1]	Jamaica
...	...	...	...	...	...	Japan
...	...	...	...	...	...	Jordan
47.3	[ 37.7 - 55.9]	10.1	[ 7.8 - 12.7]	29.7	[ 23.6 - 35.5]	Kazakhstan
26.0	[ 19.6 - 33.2]	2.5	[ 1.7 - 3.4]	14.3	[ 10.7 - 18.4]	Kenya
...	...	...	...	...	...	Kiribati
...	...	...	...	...	...	Kuwait
49.5	[ 40.0 - 58.9]	3.9	[ 2.8 - 5.2]	27.4	[ 21.9 - 32.8]	Kyrgyzstan
...	...	...	...	...	...	Lao People's Democratic Republic
50.2	[ 40.4 - 59.0]	24.2	[ 19.4 - 29.2]	38.6	[ 31.0 - 45.7]	Latvia
42.0	[ 32.0 - 52.8]	29.0	[ 21.4 - 36.3]	35.3	[ 26.5 - 44.3]	Lebanon
47.7	[ 35.3 - 63.2]	0.5	[ 0.2 - 0.8]	24.9	[ 18.3 - 33.0]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	...	...	...	...	...	...
Libya	EMR	...	...	...	...	...	...
Lithuania	EUR	41.7	[ 33.0 - 50.6]	18.8	[ 15.0 - 23.0]	31.3	[ 24.9 - 38.1]
Luxembourg	EUR	...	...	...	...	...	...
Madagascar	AFR	...	...	...	...	...	...
Malawi	AFR	23.5	[ 18.8 - 28.9]	6.2	[ 3.9 - 9.0]	14.9	[ 11.4 - 19.0]
Malaysia	WPR	48.1	[ 35.0 - 60.0]	1.8	[ 1.3 - 2.4]	25.6	[ 18.6 - 32.0]
Maldives	SEAR	40.7	[ 30.3 - 51.8]	4.6	[ 3.1 - 6.3]	22.6	[ 16.7 - 29.1]
Mali	AFR	30.6	[ 22.5 - 39.5]	3.2	[ 1.7 - 4.9]	16.9	[ 12.1 - 22.2]
Malta	EUR	31.5	[ 25.0 - 39.2]	20.3	[ 15.8 - 25.1]	25.9	[ 20.4 - 32.2]
Marshall Islands	WPR	...	...	...	...	...	...
Mauritania	AFR	36.7	[ 27.5 - 47.3]	4.5	[ 2.9 - 5.9]	20.6	[ 15.2 - 26.6]
Mauritius	AFR	42.6	[ 33.9 - 52.2]	3.6	[ 2.8 - 4.5]	23.4	[ 18.6 - 28.7]
Mexico	AMR	26.1	[ 21.3 - 30.4]	8.6	[ 7.0 - 10.0]	17.8	[ 14.6 - 20.8]
Micronesia (Federated States of)	WPR	...	...	...	...	...	...
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	49.8	[ 40.7 - 60.0]	6.2	[ 4.9 - 7.8]	28.3	[ 23.1 - 34.3]
Montenegro	EUR	...	...	...	...	...	...
Morocco	EMR	...	...	...	...	...	...
Mozambique	AFR	32.5	[ 21.4 - 44.4]	6.0	[ 2.7 - 9.7]	19.9	[ 12.5 - 27.9]
Myanmar	SEAR	40.0	[ 30.9 - 51.2]	8.7	[ 5.5 - 12.9]	25.0	[ 18.7 - 32.9]
Namibia	AFR	32.8	[ 22.5 - 42.1]	10.9	[ 7.8 - 13.7]	22.4	[ 15.5 - 28.6]
Nauru	WPR	...	...	...	...	...	...
Nepal	SEAR	...	...	...	...	...	...
Netherlands	EUR	30.9	[ 24.8 - 36.6]	26.5	[ 21.8 - 31.0]	28.7	[ 23.3 - 33.9]
New Zealand	WPR	20.0	[ 16.8 - 23.4]	18.2	[ 15.2 - 21.1]	19.1	[ 16.0 - 22.3]
Nicaragua	AMR	...	...	...	...	...	...
Niger	AFR	14.9	[ 10.7 - 18.6]	0.2	[ 0.1 - 0.4]	7.6	[ 5.4 - 9.6]
Nigeria	AFR	...	...	...	...	...	...
Niue	WPR	23.2	[ 15.8 - 31.8]	12.7	[ 8.4 - 17.4]	18.0	[ 12.1 - 24.6]
Norway	EUR	28.1	[ 23.8 - 33.0]	26.9	[ 21.9 - 31.2]	27.5	[ 22.9 - 32.1]
Oman	EMR	17.5	[ 11.1 - 23.7]	1.0	[ 0.4 - 1.7]	7.3	[ 4.5 - 10.2]
Pakistan	EMR	37.5	[ 27.6 - 47.4]	3.6	[ 2.7 - 4.8]	20.2	[ 14.9 - 25.7]
Palau	WPR	41.4	[ 14.1 - 75.8]	13.2	[ 6.1 - 22.9]	27.3	[ 10.1 - 49.4]
Panama	AMR	14.4	[ 11.2 - 17.7]	3.2	[ 2.5 - 4.0]	8.8	[ 6.8 - 10.8]
Papua New Guinea	WPR	...	...	...	...	...	...
Paraguay	AMR	32.1	[ 23.9 - 41.9]	9.7	[ 7.1 - 13.0]	20.8	[ 15.4 - 27.4]
Peru	AMR	...	...	6.8	[ 5.2 - 8.5]	...	...
Philippines	WPR	48.2	[ 39.5 - 57.3]	8.4	[ 6.8 - 9.9]	28.5	[ 23.3 - 33.8]
Poland	EUR	36.2	[ 30.4 - 43.8]	25.8	[ 21.2 - 31.6]	31.2	[ 26.0 - 38.0]
Portugal	EUR	30.3	[ 23.8 - 37.3]	12.3	[ 8.9 - 15.9]	21.7	[ 16.7 - 27.0]
Qatar	EMR	...	...	...	...	...	...
Republic of Korea	WPR	...	...	...	...	...	...
Republic of Moldova	EUR	43.3	[ 35.2 - 52.2]	5.0	[ 3.8 - 6.0]	25.4	[ 20.5 - 30.6]
Romania	EUR	41.3	[ 33.1 - 49.0]	22.5	[ 18.5 - 26.9]	32.3	[ 26.1 - 38.3]
Russian Federation	EUR	61.1	[ 51.3 - 74.0]	19.1	[ 15.7 - 23.1]	42.1	[ 35.2 - 50.9]
Rwanda	AFR	20.6	[ 15.6 - 26.1]	5.1	[ 2.9 - 7.3]	13.2	[ 9.5 - 17.1]
Saint Kitts and Nevis	AMR	...	...	...	...	...	...
Saint Lucia	AMR	...	...	...	...	...	...
Saint Vincent and the Grenadines	AMR	...	...	...	...	...	...

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
...	...	...	...	...	...	Liberia
...	...	...	...	...	...	Libya
42.1	[ 33.3 - 51.2]	21.5	[ 17.3 - 26.2]	32.8	[ 26.1 - 39.9]	Lithuania
...	...	...	...	...	...	Luxembourg
...	...	...	...	...	...	Madagascar
27.6	[ 21.7 - 33.9]	7.3	[ 4.8 - 10.5]	17.5	[ 13.4 - 22.3]	Malawi
47.4	[ 35.7 - 59.9]	1.9	[ 1.3 - 2.6]	25.3	[ 19.0 - 32.1]	Malaysia
40.2	[ 30.0 - 50.9]	5.1	[ 3.4 - 6.9]	22.6	[ 16.7 - 28.9]	Maldives
29.4	[ 21.9 - 37.1]	3.4	[ 1.8 - 5.0]	16.4	[ 11.9 - 21.1]	Mali
32.4	[ 25.3 - 40.4]	22.5	[ 17.1 - 27.8]	27.5	[ 21.2 - 34.2]	Malta
...	...	...	...	...	...	Marshall Islands
34.0	[ 25.4 - 43.3]	4.2	[ 2.8 - 5.5]	19.1	[ 14.1 - 24.4]	Mauritania
42.5	[ 33.8 - 52.1]	3.7	[ 2.8 - 4.6]	23.4	[ 18.5 - 28.7]	Mauritius
25.7	[ 21.1 - 30.0]	8.5	[ 6.9 - 9.9]	17.6	[ 14.4 - 20.5]	Mexico
...	...	...	...	...	...	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
50.7	[ 41.6 - 60.9]	6.5	[ 5.2 - 8.3]	28.9	[ 23.7 - 35.0]	Mongolia
...	...	...	...	...	...	Montenegro
...	...	...	...	...	...	Morocco
34.3	[ 22.8 - 47.2]	6.3	[ 2.8 - 10.1]	21.0	[ 13.3 - 29.5]	Mozambique
40.6	[ 31.1 - 52.0]	9.1	[ 5.8 - 13.5]	25.5	[ 19.0 - 33.6]	Myanmar
34.5	[ 23.9 - 44.0]	12.2	[ 8.9 - 15.5]	23.9	[ 16.8 - 30.5]	Namibia
...	...	...	...	...	...	Nauru
...	...	...	...	...	...	Nepal
31.1	[ 25.3 - 37.3]	27.9	[ 23.1 - 33.0]	29.5	[ 24.2 - 35.2]	Netherlands
21.0	[ 17.6 - 24.5]	19.4	[ 16.3 - 22.6]	20.2	[ 17.0 - 23.6]	New Zealand
...	...	...	...	...	...	Nicaragua
14.6	[ 10.6 - 18.2]	0.2	[ 0.1 - 0.4]	7.5	[ 5.4 - 9.4]	Niger
...	...	...	...	...	...	Nigeria
23.2	[ 16.2 - 31.6]	12.8	[ 8.7 - 17.5]	18.0	[ 12.5 - 24.5]	Niue
28.3	[ 23.9 - 33.3]	27.9	[ 23.0 - 32.4]	28.1	[ 23.4 - 32.8]	Norway
17.2	[ 11.2 - 23.2]	1.1	[ 0.5 - 1.8]	7.3	[ 4.6 - 10.0]	Oman
39.7	[ 29.9 - 50.7]	4.1	[ 2.9 - 5.3]	21.5	[ 16.1 - 27.5]	Pakistan
41.2	[ 15.8 - 77.3]	13.2	[ 6.2 - 22.7]	27.2	[ 11.0 - 50.0]	Palau
14.4	[ 11.2 - 17.5]	3.2	[ 2.5 - 4.0]	8.8	[ 6.8 - 10.7]	Panama
...	...	...	...	...	...	Papua New Guinea
32.7	[ 24.4 - 42.1]	10.1	[ 7.2 - 13.2]	21.3	[ 15.8 - 27.6]	Paraguay
...	...	6.9	[ 5.3 - 8.8]	...	...	Peru
48.1	[ 39.5 - 56.7]	9.5	[ 7.7 - 11.2]	29.0	[ 23.8 - 34.2]	Philippines
36.1	[ 30.0 - 43.4]	27.8	[ 22.6 - 33.8]	32.1	[ 26.5 - 38.8]	Poland
32.5	[ 24.9 - 40.1]	14.3	[ 10.0 - 18.6]	23.8	[ 17.8 - 29.8]	Portugal
...	...	...	...	...	...	Qatar
...	...	...	...	...	...	Republic of Korea
43.6	[ 35.5 - 52.6]	5.4	[ 4.2 - 6.5]	25.7	[ 20.8 - 31.1]	Republic of Moldova
41.9	[ 33.3 - 49.5]	24.5	[ 19.8 - 28.8]	33.5	[ 26.8 - 39.5]	Romania
61.0	[ 51.3 - 74.3]	22.1	[ 17.9 - 26.7]	43.3	[ 36.2 - 52.7]	Russian Federation
23.7	[ 17.6 - 30.0]	5.8	[ 3.7 - 8.5]	15.1	[ 11.0 - 19.7]	Rwanda
...	...	...	...	...	...	Saint Kitts and Nevis
...	...	...	...	...	...	Saint Lucia
...	...	...	...	...	...	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	47.4	[ 34.4 - 59.8]	20.9	[ 15.4 - 27.3]	33.8	[ 24.6 - 43.1]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	10.3	[ 6.4 - 14.3]	1.8	[ 0.9 - 2.7]	6.1	[ 3.8 - 8.7]
Saudi Arabia	EMR	...	...	...	...	...	...
Senegal	AFR	...	...	...	...	...	...
Serbia	EUR	...	...	...	...	...	...
Seychelles	AFR	43.8	[ 31.8 - 57.0]	8.9	[ 5.9 - 12.1]	26.0	[ 18.6 - 34.1]
Sierra Leone	AFR	49.4	[ 37.4 - 62.0]	14.6	[ 8.8 - 21.4]	32.2	[ 23.3 - 41.9]
Singapore	WPR	27.4	[ 21.8 - 33.2]	4.5	[ 3.5 - 5.5]	16.2	[ 12.9 - 19.6]
Slovakia	EUR	39.1	[ 26.9 - 52.0]	17.9	[ 10.2 - 25.5]	28.9	[ 18.9 - 39.2]
Slovenia	EUR	23.5	[ 19.4 - 29.0]	17.0	[ 13.7 - 20.8]	20.3	[ 16.6 - 24.9]
Solomon Islands	WPR	...	...	...	...	...	...
Somalia	EMR	...	...	...	...	...	...
South Africa	AFR	...	...	...	...	...	...
South Sudan	AFR	...	...	...	...	...	...
Spain	EUR	34.3	[ 28.3 - 40.8]	24.6	[ 19.4 - 29.0]	29.5	[ 24.0 - 35.0]
Sri Lanka	SEAR	29.2	[ 22.0 - 36.7]	0.7	[ 0.4 - 0.9]	15.4	[ 11.5 - 19.3]
Sudan	EMR	...	...	...	...	...	...
Suriname	AMR	57.2	[ 28.4 - 94.5]	11.9	[ 5.5 - 19.9]	34.6	[ 17.0 - 57.3]
Swaziland	AFR	16.4	[ 12.3 - 21.0]	2.3	[ 1.5 - 3.3]	9.6	[ 7.1 - 12.4]
Sweden	EUR	23.7	[ 19.5 - 27.7]	23.3	[ 19.3 - 27.7]	23.5	[ 19.4 - 27.7]
Switzerland	EUR	30.4	[ 25.6 - 35.7]	22.3	[ 18.8 - 26.5]	26.5	[ 22.3 - 31.2]
Syrian Arab Republic	EMR	...	...	...	...	...	...
Tajikistan	EUR	...	...	...	...	...	...
Thailand	SEAR	...	...	...	...	...	...
the former Yugoslav Republic of Macedonia	EUR	...	...	...	...	...	...
Timor-Leste	SEAR	...	...	...	...	...	...
Togo	AFR	...	...	...	...	...	...
Tonga	WPR	48.3	[ 38.5 - 60.4]	13.6	[ 10.0 - 16.7]	31.3	[ 24.6 - 39.0]
Trinidad and Tobago	AMR	...	...	...	...	...	...
Tunisia	EMR	...	...	...	...	...	...
Turkey	EUR	46.1	[ 38.6 - 56.0]	14.7	[ 12.3 - 17.4]	30.9	[ 25.8 - 37.3]
Turkmenistan	EUR	...	...	...	...	...	...
Tuvalu	WPR	...	...	...	...	...	...
Uganda	AFR	18.2	[ 12.4 - 24.2]	2.8	[ 2.0 - 3.7]	10.5	[ 7.2 - 14.0]
Ukraine	EUR	52.3	[ 43.7 - 61.8]	11.6	[ 9.6 - 13.6]	33.8	[ 28.2 - 40.0]
United Arab Emirates	EMR	...	...	...	...	...	...
United Kingdom*	EUR	22.3	[ 18.3 - 26.3]	19.8	[ 16.5 - 23.5]	21.1	[ 17.4 - 24.9]
United Republic of Tanzania	AFR	29.3	[ 22.3 - 38.2]	3.7	[ 2.1 - 5.6]	16.6	[ 12.3 - 22.0]
United States of America*	AMR	21.5	[ 18.2 - 25.4]	16.6	[ 13.6 - 19.4]	19.1	[ 15.9 - 22.5]
Uruguay	AMR	31.7	[ 25.7 - 38.0]	21.9	[ 17.6 - 26.2]	27.1	[ 21.8 - 32.4]
Uzbekistan	EUR	25.0	[ 16.8 - 33.6]	1.4	[ 0.8 - 2.0]	13.3	[ 8.9 - 18.0]
Vanuatu	WPR	...	...	...	...	...	...
Venezuela (Bolivarian Republic of)	AMR	...	...	...	...	...	...
Viet Nam	WPR	48.5	[ 39.8 - 58.7]	1.3	[ 1.1 - 1.6]	25.6	[ 21.0 - 31.0]
Yemen	EMR	...	...	...	...	...	...
Zambia	AFR	24.9	[ 18.4 - 32.2]	4.0	[ 2.3 - 5.6]	14.5	[ 10.4 - 19.0]
Zimbabwe	AFR	...	...	...	...	...	...

\* Cigarette smoking only

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
48.2	[ 36.1 - 61.3]	21.2	[ 15.5 - 27.6]	34.3	[ 25.5 - 44.0]	Samoa
...	...	...	...	...	...	San Marino
11.4	[ 7.4 - 15.5]	1.8	[ 1.0 - 2.8]	6.8	[ 4.3 - 9.3]	Sao Tome and Principe
...	...	...	...	...	...	Saudi Arabia
...	...	...	...	...	...	Senegal
...	...	...	...	...	...	Serbia
43.9	[ 31.8 - 57.1]	8.9	[ 5.9 - 12.1]	26.1	[ 18.6 - 34.2]	Seychelles
51.6	[ 39.2 - 64.0]	14.6	[ 9.2 - 21.3]	33.3	[ 24.4 - 42.9]	Sierra Leone
27.2	[ 21.8 - 33.0]	5.0	[ 3.9 - 6.2]	16.3	[ 13.1 - 19.9]	Singapore
39.6	[ 27.6 - 53.4]	18.7	[ 10.8 - 27.6]	29.5	[ 19.5 - 41.0]	Slovakia
24.6	[ 20.0 - 30.4]	19.3	[ 15.6 - 24.1]	22.0	[ 17.8 - 27.3]	Slovenia
...	...	...	...	...	...	Solomon Islands
...	...	...	...	...	...	Somalia
...	...	...	...	...	...	South Africa
...	...	...	...	...	...	South Sudan
35.4	[ 29.3 - 42.4]	28.7	[ 22.6 - 33.9]	32.1	[ 26.0 - 38.2]	Spain
29.1	[ 21.8 - 36.4]	0.7	[ 0.5 - 0.9]	15.3	[ 11.4 - 19.2]	Sri Lanka
...	...	...	...	...	...	Sudan
57.2	[ 34.0 - 100.0]	11.9	[ 5.5 - 20.0]	34.6	[ 19.8 - 60.2]	Suriname
17.5	[ 13.3 - 22.1]	2.5	[ 1.7 - 3.6]	10.3	[ 7.7 - 13.1]	Swaziland
23.7	[ 19.5 - 27.7]	24.5	[ 20.3 - 29.2]	24.1	[ 19.9 - 28.4]	Sweden
31.9	[ 26.8 - 37.4]	24.6	[ 20.6 - 28.9]	28.3	[ 23.7 - 33.2]	Switzerland
...	...	...	...	...	...	Syrian Arab Republic
...	...	...	...	...	...	Tajikistan
...	...	...	...	...	...	Thailand
...	...	...	...	...	...	the former Yugoslav Republic of Macedonia
...	...	...	...	...	...	Timor-Leste
...	...	...	...	...	...	Togo
48.7	[ 38.4 - 59.9]	13.5	[ 10.0 - 16.6]	31.5	[ 24.5 - 38.7]	Tonga
...	...	...	...	...	...	Trinidad and Tobago
...	...	...	...	...	...	Tunisia
45.2	[ 37.3 - 54.3]	14.5	[ 11.9 - 16.9]	30.3	[ 25.0 - 36.2]	Turkey
...	...	...	...	...	...	Turkmenistan
...	...	...	...	...	...	Tuvalu
19.9	[ 13.8 - 26.0]	3.4	[ 2.4 - 4.5]	11.6	[ 8.1 - 15.3]	Uganda
52.5	[ 43.9 - 62.4]	14.4	[ 11.9 - 17.0]	35.2	[ 29.4 - 41.8]	Ukraine
...	...	...	...	...	...	United Arab Emirates
23.4	[ 19.4 - 27.7]	21.3	[ 18.0 - 25.6]	22.3	[ 18.7 - 26.7]	United Kingdom*
30.9	[ 23.2 - 39.4]	4.1	[ 2.2 - 5.9]	17.6	[ 12.8 - 22.8]	United Republic of Tanzania
21.9	[ 18.4 - 25.8]	17.3	[ 14.3 - 20.4]	19.7	[ 16.4 - 23.1]	United States of America*
32.5	[ 26.4 - 39.1]	24.1	[ 19.1 - 28.8]	28.5	[ 23.0 - 34.2]	Uruguay
26.1	[ 17.9 - 35.2]	1.4	[ 0.8 - 2.1]	13.9	[ 9.5 - 18.9]	Uzbekistan
...	...	...	...	...	...	Vanuatu
...	...	...	...	...	...	Venezuela (Bolivarian Republic of)
48.8	[ 39.1 - 58.0]	1.4	[ 1.1 - 1.7]	25.8	[ 20.7 - 30.6]	Viet Nam
...	...	...	...	...	...	Yemen
27.5	[ 20.4 - 35.0]	4.9	[ 3.2 - 6.9]	16.3	[ 11.8 - 21.0]	Zambia
...	...	...	...	...	...	Zimbabwe



**4.5 Tobacco (continued)**  
**Comparable estimates of prevalence of current tobacco smoking**  
**(population aged 15+ years), 2012**

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	...	...	...	...	...	...
Albania	EUR	50.7	[40.1–62.1]	9.0	[6.4–11.9]	29.7	[23.1–36.8]
Algeria	AFR	...	...	...	...	...	...
Andorra	EUR	36.5	[27.1–47.9]	24.4	[17.6–32.2]	30.4	[22.4–40.1]
Angola	AFR	...	...	...	...	...	...
Antigua and Barbuda	AMR	...	...	...	...	...	...
Argentina	AMR	31.4	[25.7–37.2]	20.0	[15.9–23.6]	25.5	[20.7–30.2]
Armenia	EUR	...	...	...	...	...	...
Australia	WPR	17.9	[14.5–21.1]	13.9	[11.5–16.7]	15.9	[13.0–18.9]
Austria	EUR	...	...	...	...	...	...
Azerbaijan	EUR	...	...	...	...	...	...
Bahamas	AMR	...	...	...	...	...	...
Bahrain	EMR	37.1	[28.5–47.2]	7.1	[4.6–9.9]	26.6	[20.2–34.2]
Bangladesh	SEAR	44.2	[36.0–53.7]	1.1	[0.8–1.5]	22.8	[18.6–27.8]
Barbados	AMR	13.4	[8.6–18.4]	1.1	[0.5–1.7]	7.2	[4.5–10.0]
Belarus	EUR	49.7	[41.0–59.7]	9.8	[7.6–11.6]	28.0	[22.8–33.5]
Belgium	EUR	28.4	[19.3–37.0]	21.2	[13.4–28.8]	24.7	[16.2–32.8]
Belize	AMR	...	...	...	...	...	...
Benin	AFR	...	...	...	...	...	...
Bhutan	SEAR	...	...	...	...	...	...
Bolivia (Plurinational State of)	AMR	36.3	[19.7–56.3]	18.8	[11.1–28.2]	27.5	[15.3–42.1]
Bosnia and Herzegovina	EUR	48.2	[35.0–60.5]	30.2	[23.1–39.9]	38.9	[28.8–49.9]
Botswana	AFR	...	...	...	...	...	...
Brazil	AMR	20.9	[16.4–25.5]	12.6	[10.1–15.5]	16.6	[13.2–20.4]
Brunei Darussalam	WPR	28.4	[12.1–47.7]	3.0	[1.3–5.2]	15.8	[6.7–26.6]
Bulgaria	EUR	43.2	[34.8–52.1]	25.2	[20.0–32.4]	33.9	[27.1–41.9]
Burkina Faso	AFR	33.6	[23.1–44.9]	4.6	[2.4–7.2]	18.7	[12.4–25.5]
Burundi	AFR	...	...	...	...	...	...
Cabo Verde	AFR	...	...	...	...	...	...
Cambodia	WPR	41.1	[30.7–53.2]	3.3	[2.6–4.0]	21.3	[16.0–27.5]
Cameroon	AFR	30.4	[18.7–43.6]	0.9	[0.3–1.7]	15.6	[9.4–22.5]
Canada	AMR	19.2	[16.1–22.2]	13.9	[11.6–16.2]	16.5	[13.8–19.2]
Central African Republic	AFR	...	...	...	...	...	...
Chad	AFR	...	...	...	...	...	...
Chile	AMR	40.0	[28.7–50.5]	34.5	[25.6–43.8]	37.2	[27.1–47.1]
China	WPR	50.1	[41.6–62.0]	2.3	[1.7–2.7]	26.8	[22.2–33.2]
Colombia	AMR	...	...	...	...	...	...
Comoros	AFR	...	...	...	...	...	...
Congo	AFR	...	...	...	...	...	...
Cook Islands	WPR	...	...	...	...	...	...
Costa Rica	AMR	19.9	[11.8–27.9]	9.1	[4.9–14.3]	14.6	[8.4–21.2]
Côte d'Ivoire	AFR	...	...	...	...	...	...
Croatia	EUR	37.0	[29.0–46.1]	26.0	[20.3–32.2]	31.3	[24.4–38.8]
Cuba	AMR	...	...	...	...	...	...
Cyprus	EUR	...	...	...	...	...	...
Czech Republic	EUR	35.2	[29.0–43.1]	25.6	[20.4–30.5]	30.2	[24.6–36.6]



... Indicates no data were available

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
...	...	...	...	...	...	Afghanistan
50.9	[40.2–61.8]	8.7	[6.4–11.6]	29.6	[23.2–36.5]	Albania
...	...	...	...	...	...	Algeria
38.0	[27.8–49.6]	28.2	[20.0–36.8]	33.1	[23.9–43.2]	Andorra
...	...	...	...	...	...	Angola
...	...	...	...	...	...	Antigua and Barbuda
31.6	[25.9–37.4]	21.0	[16.7–24.8]	26.1	[21.2–30.9]	Argentina
...	...	...	...	...	...	Armenia
18.3	[14.5–21.3]	14.7	[12.2–17.6]	16.5	[13.3–19.4]	Australia
...	...	...	...	...	...	Austria
...	...	...	...	...	...	Azerbaijan
...	...	...	...	...	...	Bahamas
36.6	[27.5–46.1]	7.9	[5.0–10.8]	26.6	[19.7–33.8]	Bahrain
44.7	[35.4–53.0]	1.3	[0.9–1.7]	23.2	[18.3–27.6]	Bangladesh
13.6	[8.9–19.2]	1.1	[0.5–1.7]	7.3	[4.7–10.4]	Barbados
49.3	[40.6–59.1]	11.2	[9.1–13.7]	28.6	[23.4–34.4]	Belarus
29.5	[21.2–40.0]	22.8	[14.4–31.0]	26.1	[17.7–35.4]	Belgium
...	...	...	...	...	...	Belize
...	...	...	...	...	...	Benin
...	...	...	...	...	...	Bhutan
35.9	[20.1–55.6]	18.7	[10.9–27.8]	27.2	[15.4–41.5]	Bolivia (Plurinational State of)
48.7	[36.0–62.2]	31.2	[23.6–41.1]	39.7	[29.6–51.3]	Bosnia and Herzegovina
...	...	...	...	...	...	Botswana
20.9	[16.4–25.4]	12.5	[10.0–15.4]	16.6	[13.1–20.3]	Brazil
28.4	[12.2–47.5]	3.1	[1.3–5.2]	15.9	[6.8–26.5]	Brunei Darussalam
45.3	[36.3–54.6]	31.0	[23.7–40.0]	37.9	[29.8–47.0]	Bulgaria
33.6	[24.0–44.9]	5.1	[2.6–7.8]	18.9	[13.0–25.9]	Burkina Faso
...	...	...	...	...	...	Burundi
...	...	...	...	...	...	Cabo Verde
46.0	[33.8–58.5]	3.6	[2.8–4.4]	23.8	[17.6–30.2]	Cambodia
32.6	[20.4–46.3]	0.9	[0.3–1.7]	16.6	[10.3–23.9]	Cameroon
19.7	[16.5–22.8]	14.6	[12.2–17.0]	17.1	[14.3–19.9]	Canada
...	...	...	...	...	...	Central African Republic
...	...	...	...	...	...	Chad
40.2	[28.7–50.7]	35.4	[26.4–45.2]	37.7	[27.5–47.9]	Chile
48.9	[40.2–60.3]	2.1	[1.6–2.6]	26.1	[21.5–32.2]	China
...	...	...	...	...	...	Colombia
...	...	...	...	...	...	Comoros
...	...	...	...	...	...	Congo
...	...	...	...	...	...	Cook Islands
19.9	[11.6–27.7]	9.0	[5.0–14.4]	14.6	[8.4–21.1]	Costa Rica
...	...	...	...	...	...	Côte d'Ivoire
38.9	[30.2–48.2]	30.5	[23.4–37.3]	34.5	[26.6–42.5]	Croatia
...	...	...	...	...	...	Cuba
...	...	...	...	...	...	Cyprus
36.4	[29.5–44.1]	28.3	[22.6–33.7]	32.3	[26.0–38.8]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	...	...	...	...	...	...
Democratic Republic of the Congo	AFR	...	...	...	...	...	...
Denmark	EUR	22.2	[17.5–27.2]	19.4	[15.8–24.2]	20.8	[16.6–25.7]
Djibouti	EMR	...	...	...	...	...	...
Dominica	AMR	...	...	...	...	...	...
Dominican Republic	AMR	18.4	[13.4–23.8]	10.3	[7.1–13.4]	14.3	[10.2–18.6]
Ecuador	AMR	14.9	[10.1–20.9]	3.5	[2.0–5.4]	9.2	[6.0–13.1]
Egypt	EMR	42.2	[34.4–51.4]	0.5	[0.3–0.6]	21.3	[17.3–25.9]
El Salvador	AMR	...	...	...	...	...	...
Equatorial Guinea	AFR	...	...	...	...	...	...
Eritrea	AFR	...	...	...	...	...	...
Estonia	EUR	42.7	[35.1–51.6]	22.2	[18.4–26.6]	31.5	[26.0–37.9]
Ethiopia	AFR	7.8	[5.5–10.1]	0.5	[0.3–0.8]	4.1	[2.9–5.4]
Fiji	WPR	...	...	...	...	...	...
Finland	EUR	23.7	[20.0–28.1]	16.9	[14.2–19.9]	20.2	[17.0–23.9]
France	EUR	31.7	[23.4–40.4]	23.5	[17.5–29.3]	27.4	[20.3–34.6]
Gabon	AFR	...	...	...	...	...	...
Gambia	AFR	...	...	...	...	...	...
Georgia	EUR	55.6	[44.8–70.2]	5.4	[4.1–6.8]	28.4	[22.8–35.8]
Germany	EUR	32.1	[25.6–37.0]	25.7	[21.2–30.9]	28.8	[23.4–33.9]
Ghana	AFR	...	...	...	...	...	...
Greece	EUR	54.8	[39.8–70.6]	33.7	[21.0–50.2]	44.1	[30.2–60.2]
Grenada	AMR	...	...	...	...	...	...
Guatemala	AMR	...	...	...	...	...	...
Guinea	AFR	...	...	...	...	...	...
Guinea-Bissau	AFR	...	...	...	...	...	...
Guyana	AMR	...	...	...	...	...	...
Haiti	AMR	19.6	[13.1–27.7]	2.7	[1.6–4.1]	10.9	[7.2–15.6]
Honduras	AMR	37.8	[27.0–49.5]	2.3	[1.4–3.5]	19.9	[14.1–26.3]
Hungary	EUR	33.0	[25.6–41.7]	24.0	[18.7–29.7]	28.2	[22.0–35.3]
Iceland	EUR	19.1	[12.7–25.2]	17.0	[12.7–21.8]	18.0	[12.7–23.5]
India	SEAR	22.7	[17.6–27.6]	2.1	[1.7–2.6]	12.7	[9.8–15.4]
Indonesia	SEAR	69.7	[57.0–86.3]	3.6	[2.9–4.5]	36.5	[29.9–45.3]
Iran (Islamic Republic of)	EMR	...	...	...	...	...	...
Iraq	EMR	...	...	...	...	...	...
Ireland*	EUR	23.3	[17.9–29.1]	22.0	[16.7–27.5]	22.7	[17.3–28.3]
Israel	EUR	39.9	[28.1–51.0]	20.0	[14.3–26.3]	29.7	[21.0–38.3]
Italy	EUR	27.8	[23.0–32.3]	17.9	[14.9–21.0]	22.7	[18.8–26.5]
Jamaica	AMR	30.4	[17.2–46.5]	6.5	[3.6–10.0]	18.1	[10.2–27.8]
Japan	WPR	...	...	...	...	...	...
Jordan	EMR	...	...	...	...	...	...
Kazakhstan	EUR	45.7	[35.9–56.0]	9.8	[7.3–12.5]	26.7	[20.8–33.0]
Kenya	AFR	24.3	[17.8–31.4]	2.1	[1.4–2.9]	13.1	[9.5–17.0]
Kiribati	WPR	...	...	...	...	...	...
Kuwait	EMR	...	...	...	...	...	...
Kyrgyzstan	EUR	48.0	[38.8–58.9]	3.8	[2.7–5.2]	25.3	[20.2–31.3]
Lao People's Democratic Republic	WPR	...	...	...	...	...	...
Latvia	EUR	48.6	[39.0–59.2]	20.6	[16.4–25.1]	33.1	[26.5–40.4]
Lebanon	EMR	43.8	[34.3–56.0]	29.9	[22.6–38.9]	37.0	[28.6–47.6]
Lesotho	AFR	48.9	[34.6–63.0]	0.5	[0.2–0.8]	24.0	[16.9–31.0]

\* Cigarette smoking only

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
...	...	...	...	...	...	Democratic People's Republic of Korea
...	...	...	...	...	...	Democratic Republic of the Congo
22.0	[17.3–27.0]	19.4	[15.7–23.9]	20.7	[16.5–25.4]	Denmark
...	...	...	...	...	...	Djibouti
...	...	...	...	...	...	Dominica
19.5	[14.2–25.3]	10.9	[7.5–14.3]	15.2	[10.8–19.7]	Dominican Republic
15.2	[10.3–21.0]	3.6	[2.0–5.5]	9.3	[6.2–13.2]	Ecuador
43.2	[35.2–52.3]	0.5	[0.3–0.6]	21.8	[17.7–26.4]	Egypt
...	...	...	...	...	...	El Salvador
...	...	...	...	...	...	Equatorial Guinea
...	...	...	...	...	...	Eritrea
43.4	[35.9–52.7]	25.6	[21.2–30.6]	33.6	[27.9–40.6]	Estonia
8.6	[6.1–11.1]	0.5	[0.3–0.8]	4.5	[3.2–5.9]	Ethiopia
...	...	...	...	...	...	Fiji
25.0	[21.0–29.8]	19.9	[16.5–23.2]	22.4	[18.7–26.4]	Finland
33.6	[24.8–42.6]	27.4	[21.1–34.9]	30.3	[22.8–38.6]	France
...	...	...	...	...	...	Gabon
...	...	...	...	...	...	Gambia
57.1	[45.1–71.5]	5.8	[4.4–7.2]	29.3	[23.1–36.7]	Georgia
35.1	[28.1–40.8]	30.9	[24.8–36.5]	32.9	[26.4–38.6]	Germany
...	...	...	...	...	...	Ghana
54.8	[40.2–71.6]	35.7	[20.3–51.9]	45.1	[30.0–61.6]	Greece
...	...	...	...	...	...	Grenada
...	...	...	...	...	...	Guatemala
...	...	...	...	...	...	Guinea
...	...	...	...	...	...	Guinea–Bissau
...	...	...	...	...	...	Guyana
20.8	[13.4–28.9]	2.8	[1.7–4.3]	11.6	[7.4–16.2]	Haiti
37.9	[26.7–50.0]	2.4	[1.4–3.6]	19.9	[13.9–26.6]	Honduras
34.4	[26.0–42.8]	27.6	[21.3–34.2]	30.8	[23.5–38.2]	Hungary
19.3	[13.7–26.5]	17.4	[12.9–22.4]	18.3	[13.3–24.5]	Iceland
23.6	[18.3–28.5]	2.5	[1.9–3.0]	13.3	[10.3–16.1]	India
70.0	[56.5–85.8]	4.0	[3.3–5.0]	36.9	[29.8–45.3]	Indonesia
...	...	...	...	...	...	Iran (Islamic Republic of)
...	...	...	...	...	...	Iraq
23.8	[18.4–29.9]	22.6	[17.0–28.3]	23.2	[17.7–29.1]	Ireland*
40.2	[28.4–51.6]	20.2	[14.0–26.3]	30.0	[21.0–38.6]	Israel
28.7	[24.2–33.9]	19.8	[16.4–23.2]	24.0	[20.1–28.4]	Italy
30.7	[18.8–48.5]	6.6	[3.6–10.0]	18.3	[11.0–28.7]	Jamaica
...	...	...	...	...	...	Japan
...	...	...	...	...	...	Jordan
45.4	[35.5–55.2]	9.8	[7.3–12.5]	26.6	[20.6–32.6]	Kazakhstan
25.4	[18.6–32.4]	2.4	[1.6–3.3]	13.8	[10.0–17.8]	Kenya
...	...	...	...	...	...	Kiribati
...	...	...	...	...	...	Kuwait
49.1	[40.1–60.3]	3.8	[2.6–5.1]	25.8	[20.8–31.9]	Kyrgyzstan
...	...	...	...	...	...	Lao People's Democratic Republic
49.1	[39.7–60.1]	24.1	[19.5–29.7]	35.3	[28.5–43.3]	Latvia
43.9	[34.9–56.6]	30.9	[23.7–40.2]	37.6	[29.4–48.6]	Lebanon
50.0	[35.6–65.1]	0.5	[0.2–0.8]	24.5	[17.4–32.1]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	...	...	...	...	...	...
Libya	EMR	...	...	...	...	...	...
Lithuania	EUR	39.7	[31.8–49.1]	18.8	[14.4–23.2]	28.3	[22.3–34.9]
Luxembourg	EUR	...	...	...	...	...	...
Madagascar	AFR	...	...	...	...	...	...
Malawi	AFR	22.8	[17.3–28.0]	5.9	[3.7–8.6]	14.3	[10.5–18.2]
Malaysia	WPR	47.0	[34.4–61.1]	1.7	[1.1–2.3]	23.6	[17.2–30.7]
Maldives	SEAR	39.3	[29.8–51.5]	3.9	[2.7–5.4]	21.6	[16.2–28.5]
Mali	AFR	32.8	[23.9–42.4]	3.0	[1.5–4.6]	17.9	[12.7–23.4]
Malta	EUR	30.3	[23.3–38.6]	19.7	[14.3–24.7]	24.9	[18.8–31.6]
Marshall Islands	WPR	...	...	...	...	...	...
Mauritania	AFR	39.2	[26.8–51.0]	4.2	[2.6–5.6]	21.7	[14.7–28.3]
Mauritius	AFR	41.9	[33.6–53.2]	3.4	[2.4–4.2]	22.3	[17.7–28.3]
Mexico	AMR	24.4	[20.1–29.6]	7.9	[6.2–9.4]	15.7	[12.8–19.0]
Micronesia (Federated States of)	WPR	...	...	...	...	...	...
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	49.1	[40.8–60.6]	6.1	[4.7–7.5]	27.2	[22.4–33.6]
Montenegro	EUR	...	...	...	...	...	...
Morocco	EMR	...	...	...	...	...	...
Mozambique	AFR	31.4	[21.3–43.5]	5.8	[2.7–9.6]	18.0	[11.6–25.8]
Myanmar	SEAR	38.4	[27.5–49.1]	8.0	[4.6–11.8]	22.6	[15.6–29.7]
Namibia	AFR	33.6	[23.1–44.7]	10.5	[7.7–13.8]	21.5	[15.0–28.5]
Nauru	WPR	...	...	...	...	...	...
Nepal	SEAR	...	...	...	...	...	...
Netherlands	EUR	30.0	[23.6–36.3]	26.2	[21.3–31.4]	28.1	[22.5–33.8]
New Zealand	WPR	18.8	[15.8–22.5]	16.8	[14.1–19.7]	17.8	[14.9–21.1]
Nicaragua	AMR	...	...	...	...	...	...
Niger	AFR	16.1	[12.1–20.5]	0.2	[0.1–0.3]	8.1	[6.0–10.4]
Nigeria	AFR	...	...	...	...	...	...
Niue	WPR	22.2	[15.4–31.1]	12.4	[8.3–17.1]	17.3	[11.8–24.1]
Norway	EUR	26.2	[22.1–31.1]	25.2	[20.7–29.7]	25.7	[21.4–30.4]
Oman	EMR	18.5	[11.1–25.9]	1.0	[0.4–1.8]	12.5	[7.4–17.6]
Pakistan	EMR	38.0	[27.6–47.9]	3.2	[2.2–4.3]	21.0	[15.2–26.6]
Palau	WPR	39.9	[13.9–75.3]	12.9	[5.7–22.1]	26.4	[9.8–48.7]
Panama	AMR	13.2	[10.4–16.5]	3.0	[2.3–3.7]	8.1	[6.3–10.1]
Papua New Guinea	WPR	...	...	...	...	...	...
Paraguay	AMR	30.4	[20.5–39.0]	9.0	[6.5–12.2]	19.8	[13.5–25.7]
Peru	AMR	...	...	6.4	[5.0–8.0]	...	...
Philippines	WPR	46.4	[36.7–55.3]	8.0	[6.6–9.7]	27.0	[21.5–32.3]
Poland	EUR	34.3	[28.2–41.5]	24.5	[19.8–29.2]	29.2	[23.9–35.1]
Portugal	EUR	29.2	[23.0–36.2]	11.9	[8.8–16.0]	20.2	[15.6–25.6]
Qatar	EMR	...	...	...	...	...	...
Republic of Korea	WPR	...	...	...	...	...	...
Republic of Moldova	EUR	43.6	[34.4–52.4]	4.9	[3.9–6.1]	23.0	[18.1–27.7]
Romania	EUR	39.3	[30.9–46.6]	22.0	[17.7–27.1]	30.4	[24.1–36.5]
Russian Federation	EUR	59.5	[48.3–70.7]	18.9	[15.6–23.3]	37.2	[30.4–44.7]
Rwanda	AFR	20.0	[14.5–25.7]	5.0	[3.0–7.1]	12.2	[8.5–16.0]
Saint Kitts and Nevis	AMR	...	...	...	...	...	...
Saint Lucia	AMR	...	...	...	...	...	...
Saint Vincent and the Grenadines	AMR	...	...	...	...	...	...



## Annex 4.5: Tobacco (continued)

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
...	...	...	...	...	...	Liberia
...	...	...	...	...	...	Libya
40.3	[32.5–50.1]	21.7	[16.9–27.0]	30.1	[24.0–37.4]	Lithuania
...	...	...	...	...	...	Luxembourg
...	...	...	...	...	...	Madagascar
26.7	[20.5–32.9]	7.0	[4.3–10.0]	16.8	[12.4–21.4]	Malawi
46.4	[34.2–59.9]	1.8	[1.2–2.4]	23.3	[17.1–30.2]	Malaysia
38.8	[29.4–50.3]	4.2	[2.9–5.7]	21.5	[16.1–28.0]	Maldives
31.5	[23.6–40.4]	3.2	[1.7–4.8]	17.3	[12.6–22.5]	Mali
31.2	[23.8–40.0]	22.0	[16.4–28.2]	26.6	[20.1–34.1]	Malta
...	...	...	...	...	...	Marshall Islands
36.4	[25.2–46.8]	3.9	[2.5–5.3]	20.2	[13.9–26.0]	Mauritania
41.9	[33.2–52.8]	3.5	[2.5–4.4]	22.3	[17.6–28.1]	Mauritius
24.1	[19.4–28.8]	7.8	[6.1–9.3]	15.5	[12.4–18.5]	Mexico
...	...	...	...	...	...	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
49.7	[40.4–60.4]	6.3	[5.0–8.0]	27.6	[22.4–33.8]	Mongolia
...	...	...	...	...	...	Montenegro
...	...	...	...	...	...	Morocco
33.1	[21.8–45.6]	6.1	[2.8–10.1]	19.0	[11.9–27.0]	Mozambique
38.9	[27.7–49.4]	8.3	[4.7–12.1]	23.0	[15.7–30.0]	Myanmar
35.3	[24.4–46.2]	11.8	[8.7–15.6]	23.0	[16.2–30.1]	Namibia
...	...	...	...	...	...	Nauru
...	...	...	...	...	...	Nepal
30.4	[24.0–36.9]	27.7	[22.4–33.0]	29.0	[23.2–34.9]	Netherlands
19.7	[16.3–23.4]	18.1	[15.2–21.2]	18.9	[15.7–22.3]	New Zealand
...	...	...	...	...	...	Nicaragua
15.8	[11.8–20.0]	0.2	[0.1–0.4]	7.9	[5.9–10.1]	Niger
...	...	...	...	...	...	Nigeria
22.2	[15.0–30.5]	12.4	[8.2–16.9]	17.3	[11.6–23.7]	Niue
26.5	[22.3–31.3]	26.2	[22.1–31.5]	26.4	[22.2–31.4]	Norway
18.3	[11.2–25.2]	1.1	[0.5–1.9]	12.4	[7.5–17.2]	Oman
40.2	[29.1–50.4]	3.5	[2.3–4.6]	22.2	[16.0–28.0]	Pakistan
39.7	[14.1–74.4]	12.8	[5.5–21.6]	26.3	[9.8–48.0]	Palau
13.1	[10.4–16.4]	3.0	[2.3–3.8]	8.1	[6.4–10.1]	Panama
...	...	...	...	...	...	Papua New Guinea
30.9	[22.3–40.7]	9.4	[6.6–12.4]	20.2	[14.5–26.6]	Paraguay
...	...	6.5	[4.9–8.0]	...	...	Peru
46.3	[37.2–55.5]	8.9	[7.3–10.8]	27.4	[22.1–32.9]	Philippines
34.2	[28.2–41.7]	26.5	[21.3–31.7]	30.1	[24.6–36.4]	Poland
31.6	[24.7–39.2]	14.0	[9.7–18.3]	22.4	[16.9–28.3]	Portugal
...	...	...	...	...	...	Qatar
...	...	...	...	...	...	Republic of Korea
43.8	[34.6–52.6]	5.3	[4.3–6.7]	23.3	[18.4–28.1]	Republic of Moldova
39.9	[31.5–47.7]	24.0	[19.2–29.6]	31.7	[25.1–38.3]	Romania
59.3	[48.2–70.4]	22.0	[17.8–27.0]	38.8	[31.6–46.7]	Russian Federation
23.0	[16.9–29.8]	5.6	[3.5–7.9]	14.0	[9.9–18.4]	Rwanda
...	...	...	...	...	...	Saint Kitts and Nevis
...	...	...	...	...	...	Saint Lucia
...	...	...	...	...	...	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Current tobacco smoking Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	44.9	[33.9–58.3]	20.4	[15.0–26.3]	33.0	[24.7–42.7]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	12.1	[8.3–17.4]	1.8	[1.1–2.9]	6.8	[4.6–10.0]
Saudi Arabia	EMR	...	...	...	...	...	...
Senegal	AFR	...	...	...	...	...	...
Serbia	EUR	...	...	...	...	...	...
Seychelles	AFR	43.5	[32.3–57.2]	8.6	[5.8–11.9]	26.4	[19.3–35.0]
Sierra Leone	AFR	52.4	[40.5–66.3]	13.6	[8.1–19.9]	32.8	[24.1–42.8]
Singapore	WPR	27.3	[22.3–34.4]	4.3	[3.2–5.3]	15.6	[12.6–19.6]
Slovakia	EUR	37.9	[25.6–53.0]	17.5	[10.1–26.0]	27.3	[17.6–39.0]
Slovenia	EUR	22.5	[17.9–27.3]	16.5	[13.2–20.0]	19.5	[15.5–23.6]
Solomon Islands	WPR	...	...	...	...	...	...
Somalia	EMR	...	...	...	...	...	...
South Africa	AFR	...	...	...	...	...	...
South Sudan	AFR	...	...	...	...	...	...
Spain	EUR	32.6	[26.9–38.7]	23.9	[19.9–29.0]	28.2	[23.3–33.7]
Sri Lanka	SEAR	29.0	[21.6–38.3]	0.6	[0.3–0.8]	14.3	[10.6–18.9]
Sudan	EMR	...	...	...	...	...	...
Suriname	AMR	54.4	[27.8–91.7]	11.1	[5.1–18.8]	32.7	[16.3–55.0]
Swaziland	AFR	16.8	[12.3–21.6]	2.2	[1.4–3.1]	9.3	[6.7–12.1]
Sweden	EUR	22.1	[18.4–26.1]	21.7	[17.7–25.8]	21.9	[18.1–25.9]
Switzerland	EUR	30.5	[25.0–35.4]	22.7	[18.3–26.3]	26.5	[21.6–30.7]
Syrian Arab Republic	EMR	...	...	...	...	...	...
Tajikistan	EUR	...	...	...	...	...	...
Thailand	SEAR	...	...	...	...	...	...
the former Yugoslav Republic of Macedonia	EUR	...	...	...	...	...	...
Timor–Leste	SEAR	...	...	...	...	...	...
Togo	AFR	...	...	...	...	...	...
Tonga	WPR	46.7	[36.1–58.2]	13.3	[9.8–16.8]	29.6	[22.7–37.1]
Trinidad and Tobago	AMR	...	...	...	...	...	...
Tunisia	EMR	...	...	...	...	...	...
Turkey	EUR	44.1	[35.5–51.7]	14.0	[11.3–16.8]	28.5	[23.0–33.7]
Turkmenistan	EUR	...	...	...	...	...	...
Tuvalu	WPR	...	...	...	...	...	...
Uganda	AFR	17.2	[12.0–23.2]	2.6	[1.9–3.6]	9.9	[6.9–13.4]
Ukraine	EUR	50.8	[40.9–59.8]	11.2	[9.2–13.3]	29.1	[23.5–34.3]
United Arab Emirates	EMR	...	...	...	...	...	...
United Kingdom*	EUR	21.0	[17.0–24.6]	18.8	[15.4–22.5]	19.9	[16.2–23.5]
United Republic of Tanzania	AFR	28.4	[20.7–36.5]	3.6	[2.0–5.5]	15.9	[11.3–20.9]
United States of America*	AMR	20.5	[17.1–24.0]	15.7	[12.8–18.3]	18.0	[14.9–21.1]
Uruguay	AMR	29.4	[23.0–35.1]	20.2	[16.2–24.7]	24.6	[19.4–29.6]
Uzbekistan	EUR	24.2	[15.5–32.1]	1.3	[0.8–2.0]	12.6	[8.0–16.8]
Vanuatu	WPR	...	...	...	...	...	...
Venezuela (Bolivarian Republic of)	AMR	...	...	...	...	...	...
Viet Nam	WPR	48.6	[39.6–59.0]	1.3	[1.0–1.6]	24.3	[19.8–29.5]
Yemen	EMR	...	...	...	...	...	...
Zambia	AFR	24.4	[17.8–31.7]	3.9	[2.4–5.7]	14.1	[10.0–18.6]
Zimbabwe	AFR	...	...	...	...	...	...

\* Cigarette smoking only

**Annex 4.5: Tobacco (continued)**

Current tobacco smoking Age-standardized						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
45.6	[34.2–58.9]	20.6	[15.1–26.6]	33.5	[24.9–43.2]	Samoa
...	...	...	...	...	...	San Marino
13.5	[8.9–18.4]	1.9	[1.0–2.9]	7.5	[4.8–10.5]	Sao Tome and Principe
...	...	...	...	...	...	Saudi Arabia
...	...	...	...	...	...	Senegal
...	...	...	...	...	...	Serbia
43.6	[32.3–57.4]	8.6	[5.7–12.0]	26.4	[19.3–35.1]	Seychelles
54.6	[42.4–69.4]	13.5	[8.2–19.7]	33.9	[25.1–44.3]	Sierra Leone
27.2	[22.2–34.4]	4.8	[3.6–6.0]	15.8	[12.7–19.9]	Singapore
38.6	[24.3–52.6]	18.4	[9.8–26.6]	28.1	[16.8–39.1]	Slovakia
23.7	[19.0–29.2]	18.9	[14.8–23.1]	21.3	[16.9–26.1]	Slovenia
...	...	...	...	...	...	Solomon Islands
...	...	...	...	...	...	Somalia
...	...	...	...	...	...	South Africa
...	...	...	...	...	...	South Sudan
33.8	[27.9–40.0]	28.3	[22.7–33.8]	31.0	[25.2–36.9]	Spain
28.7	[21.4–37.9]	0.5	[0.3–0.8]	14.1	[10.5–18.7]	Sri Lanka
...	...	...	...	...	...	Sudan
54.5	[27.7–91.9]	11.1	[4.7–18.4]	32.7	[16.2–54.9]	Suriname
18.0	[13.4–22.8]	2.4	[1.5–3.4]	10.0	[7.3–12.8]	Swaziland
22.1	[18.4–26.1]	22.9	[18.7–27.2]	22.5	[18.6–26.7]	Sweden
32.0	[26.2–37.0]	25.1	[20.1–29.1]	28.5	[23.1–33.0]	Switzerland
...	...	...	...	...	...	Syrian Arab Republic
...	...	...	...	...	...	Tajikistan
...	...	...	...	...	...	Thailand
...	...	...	...	...	...	the former Yugoslav Republic of Macedonia
...	...	...	...	...	...	Timor–Leste
...	...	...	...	...	...	Togo
47.1	[35.4–57.4]	13.2	[9.9–16.7]	29.8	[22.4–36.7]	Tonga
...	...	...	...	...	...	Trinidad and Tobago
...	...	...	...	...	...	Tunisia
43.2	[34.9–50.6]	13.8	[11.3–16.6]	28.1	[22.7–33.1]	Turkey
...	...	...	...	...	...	Turkmenistan
...	...	...	...	...	...	Tuvalu
18.8	[13.3–24.8]	3.2	[2.3–4.3]	11.0	[7.8–14.5]	Uganda
50.9	[41.0–60.1]	14.1	[11.4–16.6]	30.8	[24.8–36.3]	Ukraine
...	...	...	...	...	...	United Arab Emirates
22.1	[18.0–25.9]	20.2	[16.4–24.0]	21.1	[17.2–24.9]	United Kingdom*
29.8	[22.0–38.1]	4.0	[2.2–5.8]	16.8	[12.0–21.9]	United Republic of Tanzania
21.0	[17.2–24.4]	16.4	[13.7–19.3]	18.6	[15.4–21.8]	United States of America*
30.1	[24.3–36.7]	22.2	[17.8–27.3]	26.0	[20.9–31.7]	Uruguay
25.2	[16.5–33.7]	1.4	[0.8–2.0]	13.1	[8.5–17.6]	Uzbekistan
...	...	...	...	...	...	Vanuatu
...	...	...	...	...	...	Venezuela (Bolivarian Republic of)
48.4	[39.4–58.4]	1.3	[1.1–1.7]	24.2	[19.7–29.2]	Viet Nam
...	...	...	...	...	...	Yemen
26.8	[19.2–34.1]	4.8	[3.0–6.9]	15.8	[11.1–20.5]	Zambia
...	...	...	...	...	...	Zimbabwe

## 4.6 Body mass index

### Comparable estimates of mean body mass index (adults 18+ years), 2010 and 2014

Country name	Region	2010 Mean BMI					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	21.1	[18.8–23.5]	21.2	[18.3–24.4]	21.2	[19.3–23.1]
Albania	EUR	26.3	[25.5–27]	25.6	[24.7–26.4]	25.9	[25.3–26.5]
Algeria	AFR	25.1	[23.7–26.6]	26.7	[24.9–28.5]	25.9	[24.8–27]
Andorra	EUR	27.5	[25.2–29.9]	27.1	[24.2–30]	27.3	[25.5–29.3]
Angola	AFR	23.1	[20.7–25.6]	24.1	[21.1–27.1]	23.6	[21.8–25.6]
Antigua and Barbuda	AMR	26.8	[24.5–29.2]	28.9	[25.9–31.8]	27.9	[26–29.7]
Argentina	AMR	27.4	[26.3–28.4]	27.1	[26.2–28.1]	27.2	[26.5–28]
Armenia	EUR	25.5	[24.5–26.6]	27.1	[26.1–28.2]	26.3	[25.5–27.1]
Australia	WPR	27.3	[26.9–27.7]	26.6	[26.2–27]	26.9	[26.7–27.2]
Austria	EUR	26.2	[24.6–27.9]	24.3	[22.2–26.4]	25.3	[24–26.6]
Azerbaijan	EUR	25.9	[25–26.8]	27.6	[26.5–28.6]	26.7	[26.1–27.4]
Bahamas	AMR	27.5	[25.2–29.8]	29.2	[26.3–32.2]	28.4	[26.4–30.2]
Bahrain	EMR	27.5	[26.5–28.6]	28.3	[27.1–29.6]	27.8	[27–28.7]
Bangladesh	SEAR	20.5	[19.8–21.1]	20.7	[20.1–21.2]	20.6	[20.2–21]
Barbados	AMR	26.8	[25.4–28.2]	29.5	[27.8–31.1]	28.2	[27–29.2]
Belarus	EUR	26.6	[24.2–29]	26.2	[23.1–29.1]	26.4	[24.5–28.4]
Belgium	EUR	26.1	[25.2–27]	24.8	[23.4–26]	25.4	[24.6–26.2]
Belize	AMR	27.1	[26.1–28.2]	29.8	[28.6–30.9]	28.4	[27.7–29.1]
Benin	AFR	22.4	[21.6–23.2]	23.8	[23.2–24.3]	23.1	[22.6–23.6]
Bhutan	SEAR	23.0	[22.3–23.8]	23.7	[22.8–24.6]	23.3	[22.8–23.9]
Bolivia (Plurinational State of)	AMR	24.2	[23–25.5]	26.8	[26–27.7]	25.5	[24.7–26.3]
Bosnia and Herzegovina	EUR	26.2	[25.2–27.3]	25.7	[24.5–26.9]	26.0	[25.2–26.8]
Botswana	AFR	22.5	[21.6–23.4]	26.2	[25.2–27.2]	24.4	[23.7–25]
Brazil	AMR	25.5	[25–25.9]	25.7	[25.2–26.2]	25.6	[25.3–25.9]
Brunei Darussalam	WPR	25.5	[23.2–27.9]	26.5	[23.5–29.5]	26.0	[24.2–28]
Bulgaria	EUR	26.4	[25.5–27.4]	25.2	[24.1–26.4]	25.8	[25.1–26.6]
Burkina Faso	AFR	21.9	[21.1–22.6]	21.8	[21.2–22.3]	21.8	[21.4–22.2]
Burundi	AFR	20.4	[18–22.7]	21.0	[20–22]	20.7	[19.5–21.9]
Cabo Verde	AFR	23.6	[22.7–24.5]	25.0	[24–26.1]	24.3	[23.6–25.1]
Cambodia	WPR	21.5	[20.7–22.3]	21.6	[21–22.2]	21.5	[21–22]
Cameroon	AFR	23.6	[22.4–24.8]	24.7	[24.1–25.3]	24.2	[23.5–24.9]
Canada	AMR	27.4	[26.9–27.9]	26.6	[26–27.1]	27.0	[26.6–27.3]
Central African Republic	AFR	21.5	[20.1–22.9]	22.8	[21.5–24]	22.2	[21.3–23.1]
Chad	AFR	21.9	[20.5–23.3]	22.2	[21.2–23.1]	22.0	[21.2–22.8]
Chile	AMR	27.2	[26.6–27.8]	27.7	[27–28.4]	27.5	[27–27.9]
China	WPR	23.6	[23.2–24]	23.3	[22.8–23.7]	23.4	[23.1–23.7]
Colombia	AMR	25.0	[24.4–25.5]	26.2	[25.6–26.8]	25.6	[25.2–26]
Comoros	AFR	22.9	[22.1–23.7]	24.6	[23.9–25.3]	23.8	[23.2–24.3]
Congo	AFR	22.2	[20.7–23.7]	23.7	[22.9–24.5]	23.0	[22.1–23.8]
Cook Islands	WPR	31.7	[30.6–32.8]	32.4	[31.2–33.5]	32.0	[31.2–32.9]
Costa Rica	AMR	26.4	[25.7–27.1]	26.7	[25.9–27.5]	26.5	[26–27.1]
Côte d'Ivoire	AFR	23.0	[22.2–23.8]	23.8	[23.1–24.4]	23.4	[22.8–23.9]
Croatia	EUR	26.2	[24.9–27.5]	24.5	[23–26.1]	25.3	[24.4–26.3]
Cuba	AMR	25.1	[24–26.2]	26.3	[25.1–27.5]	25.7	[24.9–26.4]
Cyprus	EUR	27.4	[26.3–28.6]	26.2	[25–27.5]	26.8	[25.9–27.7]
Czech Republic	EUR	27.6	[26.9–28.3]	26.1	[25.3–26.9]	26.8	[26.3–27.3]



... Indicates no data were available

2014 Mean BMI						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
21.5	[19–23.9]	21.8	[18.6–25]	21.6	[19.7–23.6]	Afghanistan
26.6	[25.6–27.5]	25.6	[24.6–26.7]	26.1	[25.4–26.9]	Albania
25.5	[23.9–27.1]	27.0	[25.1–28.9]	26.2	[25.1–27.5]	Algeria
27.8	[25.4–30.3]	27.1	[24.1–30.2]	27.5	[25.4–29.3]	Andorra
23.5	[21–26.1]	24.6	[21.5–27.8]	24.1	[22–26.2]	Angola
27.3	[24.9–29.8]	29.5	[26.3–32.5]	28.4	[26.3–30.4]	Antigua and Barbuda
27.8	[26.5–29.1]	27.5	[26.3–28.8]	27.7	[26.8–28.6]	Argentina
25.9	[24.7–27.3]	27.4	[26.1–28.8]	26.7	[25.8–27.6]	Armenia
27.6	[27–28.1]	26.8	[26.2–27.4]	27.2	[26.7–27.6]	Australia
26.5	[24.6–28.3]	24.4	[22–26.7]	25.4	[23.9–26.9]	Austria
26.6	[25.4–27.8]	28.1	[26.8–29.5]	27.4	[26.5–28.3]	Azerbaijan
28.0	[25.6–30.4]	29.6	[26.6–32.7]	28.8	[26.9–30.7]	Bahamas
28.0	[26.6–29.3]	28.6	[27.1–30.3]	28.2	[27.2–29.2]	Bahrain
20.7	[19.9–21.6]	21.2	[20.4–22]	21.0	[20.4–21.6]	Bangladesh
27.4	[25.7–29]	30.0	[27.9–32]	28.7	[27.5–30]	Barbados
27.1	[24.6–29.5]	26.2	[23.1–29.4]	26.6	[24.6–28.8]	Belarus
26.2	[25.1–27.4]	24.7	[23.1–26.2]	25.5	[24.5–26.4]	Belgium
27.5	[26.2–28.8]	30.2	[28.9–31.6]	28.9	[27.9–29.8]	Belize
22.6	[21.6–23.6]	24.3	[23.5–25]	23.4	[22.8–24]	Benin
23.4	[22.7–24.2]	24.2	[23.4–25.1]	23.8	[23.2–24.4]	Bhutan
24.6	[23.2–26]	27.3	[26.1–28.5]	25.9	[25–26.9]	Bolivia (Plurinational State of)
26.5	[25.2–27.8]	25.7	[24.2–27.3]	26.1	[25.1–27.1]	Bosnia and Herzegovina
22.9	[21.8–24]	26.6	[25.4–27.8]	24.7	[23.9–25.5]	Botswana
25.9	[25.2–26.6]	26.0	[25.3–26.8]	25.9	[25.4–26.5]	Brazil
25.8	[23.3–28.3]	26.6	[23.4–29.7]	26.2	[24.1–28.3]	Brunei Darussalam
26.7	[25.5–28]	25.3	[23.9–26.7]	26.0	[25.1–27]	Bulgaria
22.1	[21.3–22.9]	22.0	[21.3–22.7]	22.1	[21.5–22.6]	Burkina Faso
20.4	[17.9–22.9]	21.3	[20.2–22.5]	20.9	[19.6–22.2]	Burundi
23.9	[22.8–25]	25.4	[24.2–26.6]	24.7	[23.9–25.5]	Cabo Verde
21.9	[20.9–22.8]	22.0	[21.2–22.8]	21.9	[21.3–22.5]	Cambodia
23.8	[22.4–25.2]	25.1	[24.3–25.8]	24.4	[23.7–25.3]	Cameroon
27.6	[26.8–28.3]	26.8	[25.9–27.6]	27.2	[26.6–27.8]	Canada
21.6	[20.1–23.2]	23.2	[21.7–24.8]	22.4	[21.3–23.5]	Central African Republic
22.1	[20.6–23.7]	22.5	[21.3–23.7]	22.3	[21.3–23.3]	Chad
27.6	[26.7–28.5]	28.0	[27–28.9]	27.8	[27.2–28.4]	Chile
24.2	[23.5–24.9]	23.6	[22.9–24.4]	23.9	[23.4–24.4]	China
25.4	[24.6–26.1]	26.5	[25.6–27.3]	25.9	[25.4–26.5]	Colombia
23.0	[22.2–23.9]	25.1	[24.4–26]	24.1	[23.5–24.7]	Comoros
22.5	[20.8–24.1]	24.1	[23.2–25.1]	23.3	[22.3–24.2]	Congo
32.1	[30.8–33.4]	32.6	[31.2–34]	32.3	[31.4–33.2]	Cook Islands
26.7	[25.9–27.5]	27.1	[26.2–27.9]	26.9	[26.3–27.5]	Costa Rica
23.2	[22.1–24.2]	24.1	[23.2–24.9]	23.6	[22.9–24.3]	Côte d'Ivoire
26.5	[24.9–28.1]	24.6	[22.7–26.4]	25.5	[24.4–26.7]	Croatia
25.6	[24.2–27]	26.7	[25.2–28.2]	26.2	[25.1–27.1]	Cuba
27.6	[26.3–29]	26.3	[24.8–27.9]	27.0	[25.9–28]	Cyprus
27.8	[26.9–28.8]	26.0	[24.9–27.1]	26.9	[26.2–27.6]	Czech Republic



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Mean BMI					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	21.8	[19.3–24.2]	21.8	[18.5–25]	21.8	[19.7–23.9]
Democratic Republic of the Congo	AFR	21.8	[20.5–23.1]	22.1	[21.4–22.7]	21.9	[21.2–22.6]
Denmark	EUR	25.9	[25.2–26.5]	24.4	[23.6–25.2]	25.1	[24.6–25.6]
Djibouti	EMR	22.6	[20.3–25]	23.7	[20.8–26.7]	23.2	[21.3–25.2]
Dominica	AMR	24.6	[23.6–25.5]	28.5	[27.4–29.5]	26.5	[25.8–27.3]
Dominican Republic	AMR	25.5	[24.3–26.7]	26.9	[25.7–28.2]	26.2	[25.4–27]
Ecuador	AMR	26.0	[25.2–26.8]	27.3	[26.5–28.1]	26.6	[26.1–27.1]
Egypt	EMR	27.3	[26.8–27.7]	30.2	[29.7–30.7]	28.7	[28.4–29.1]
El Salvador	AMR	26.4	[25–27.9]	27.6	[26.8–28.3]	27.0	[26.2–27.9]
Equatorial Guinea	AFR	24.7	[22.2–27.1]	25.6	[22.4–28.8]	25.1	[23.1–27.1]
Eritrea	AFR	20.2	[19.5–20.8]	20.8	[20.1–21.4]	20.5	[20–20.9]
Estonia	EUR	26.7	[25.7–27.7]	24.3	[22.8–25.8]	25.4	[24.5–26.3]
Ethiopia	AFR	20.0	[19.3–20.7]	20.7	[20–21.4]	20.3	[19.8–20.8]
Fiji	WPR	25.9	[25.3–26.5]	28.3	[27.6–29]	27.1	[26.6–27.6]
Finland	EUR	26.4	[26–26.8]	25.4	[25–25.8]	25.9	[25.6–26.2]
France	EUR	25.9	[25.2–26.6]	24.5	[23.7–25.4]	25.2	[24.6–25.7]
Gabon	AFR	24.3	[22.9–25.7]	25.9	[25.1–26.7]	25.1	[24.4–25.9]
Gambia	AFR	22.5	[21.8–23.2]	24.5	[23.7–25.3]	23.5	[23–24.1]
Georgia	EUR	26.7	[25.8–27.5]	26.8	[26–27.8]	26.8	[26.2–27.3]
Germany	EUR	26.8	[26.2–27.3]	25.5	[24.9–26.2]	26.1	[25.7–26.6]
Ghana	AFR	23.1	[22.4–23.8]	24.6	[24–25.2]	23.8	[23.4–24.3]
Greece	EUR	27.3	[26.4–28.3]	27.2	[26–28.3]	27.3	[26.5–28]
Grenada	AMR	24.8	[23.9–25.6]	28.1	[27.1–29.1]	26.4	[25.8–27.1]
Guatemala	AMR	25.6	[24.3–26.8]	26.7	[26–27.4]	26.1	[25.4–26.8]
Guinea	AFR	22.0	[20.7–23.2]	23.0	[22.3–23.7]	22.5	[21.8–23.2]
Guinea–Bissau	AFR	22.0	[19.9–24.3]	23.5	[22.5–24.5]	22.8	[21.7–24]
Guyana	AMR	24.6	[23.7–25.5]	27.1	[26–28.1]	25.8	[25.1–26.5]
Haiti	AMR	23.8	[21.5–26.3]	23.5	[22.7–24.3]	23.6	[22.4–25]
Honduras	AMR	25.2	[23.7–26.7]	26.9	[26.2–27.5]	26.0	[25.2–26.9]
Hungary	EUR	27.3	[26.2–28.4]	25.2	[23.6–26.9]	26.2	[25.2–27.3]
Iceland	EUR	26.6	[25.3–27.9]	25.1	[23.5–26.8]	25.9	[24.8–26.9]
India	SEAR	21.5	[21.1–21.9]	21.7	[21.3–22.1]	21.6	[21.3–21.9]
Indonesia	SEAR	21.9	[21.3–22.6]	23.0	[22.3–23.7]	22.5	[22–22.9]
Iran (Islamic Republic of)	EMR	25.0	[24.7–25.4]	26.8	[26.4–27.2]	25.9	[25.7–26.2]
Iraq	EMR	26.7	[25.8–27.6]	28.4	[27.4–29.4]	27.5	[26.8–28.2]
Ireland	EUR	27.7	[27.2–28.2]	26.8	[26.2–27.3]	27.2	[26.9–27.6]
Israel	EUR	26.0	[25.3–26.7]	26.1	[25.3–26.9]	26.1	[25.5–26.6]
Italy	EUR	26.6	[26.2–27.1]	25.2	[24.7–25.7]	25.9	[25.5–26.2]
Jamaica	AMR	25.1	[24.3–25.8]	28.6	[27.8–29.4]	26.9	[26.3–27.4]
Japan	WPR	23.5	[23.1–23.8]	21.8	[21.5–22.2]	22.6	[22.4–22.9]
Jordan	EMR	27.8	[27.1–28.4]	29.5	[29–29.9]	28.6	[28.2–29]
Kazakhstan	EUR	26.8	[25.1–28.6]	27.1	[25.7–28.5]	27.0	[25.9–28.1]
Kenya	AFR	21.7	[20–23.4]	23.6	[22.8–24.4]	22.6	[21.7–23.5]
Kiribati	WPR	28.6	[27.6–29.5]	30.3	[29.2–31.4]	29.4	[28.7–30.1]
Kuwait	EMR	29.0	[28.1–29.8]	30.4	[29.5–31.4]	29.5	[28.9–30.2]
Kyrgyzstan	EUR	25.2	[24.5–25.9]	26.4	[25.7–27]	25.8	[25.3–26.2]
Lao People's Democratic Republic	WPR	21.9	[21.1–22.7]	22.3	[21.7–23]	22.1	[21.6–22.6]
Latvia	EUR	26.4	[25.2–27.7]	25.1	[23.6–26.6]	25.7	[24.6–26.7]
Lebanon	EMR	27.4	[26.7–28.1]	27.1	[26.3–27.9]	27.3	[26.8–27.8]
Lesotho	AFR	22.4	[21.8–23]	26.8	[26.1–27.4]	24.6	[24.2–25.1]

## Annex 4.6: Body mass index

2014 Mean BMI						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
21.9	[19.2–24.5]	21.8	[18.3–25.2]	21.8	[19.6–24]	Democratic People's Republic of Korea
21.8	[20.3–23.4]	22.5	[21.7–23.3]	22.2	[21.3–23]	Democratic Republic of the Congo
26.0	[25.1–26.9]	24.5	[23.5–25.5]	25.3	[24.6–25.9]	Denmark
22.7	[20.3–25.2]	23.9	[20.9–27]	23.3	[21.3–25.5]	Djibouti
25.1	[23.9–26.3]	29.0	[27.7–30.3]	27.0	[26.2–27.9]	Dominica
26.0	[24.6–27.5]	27.4	[25.8–29]	26.7	[25.6–27.7]	Dominican Republic
26.4	[25.5–27.2]	27.7	[26.7–28.6]	27.0	[26.4–27.6]	Ecuador
27.6	[26.9–28.3]	30.7	[30–31.5]	29.2	[28.6–29.7]	Egypt
26.8	[25.1–28.4]	28.0	[26.9–29]	27.4	[26.4–28.4]	El Salvador
25.0	[22.5–27.7]	26.1	[22.7–29.4]	25.6	[23.4–27.9]	Equatorial Guinea
20.1	[19.2–20.9]	21.0	[20.1–21.9]	20.5	[19.9–21.1]	Eritrea
27.0	[25.8–28.4]	24.3	[22.4–26]	25.5	[24.5–26.7]	Estonia
20.2	[19.3–21]	21.0	[20.1–21.9]	20.6	[20–21.2]	Ethiopia
26.1	[25.3–26.9]	28.4	[27.5–29.4]	27.2	[26.6–27.8]	Fiji
26.5	[25.9–27.1]	25.3	[24.7–25.9]	25.9	[25.5–26.3]	Finland
26.1	[25.1–27.1]	24.6	[23.5–25.7]	25.3	[24.5–26]	France
24.6	[23–26.1]	26.4	[25.4–27.3]	25.5	[24.5–26.3]	Gabon
23.0	[22–23.9]	25.1	[24.1–26.1]	24.0	[23.3–24.7]	Gambia
27.2	[26.2–28.1]	27.3	[26.2–28.3]	27.2	[26.5–27.9]	Georgia
27.0	[26.2–27.8]	25.6	[24.7–26.5]	26.3	[25.7–26.8]	Germany
23.4	[22.5–24.4]	25.1	[24.2–25.9]	24.2	[23.6–24.9]	Ghana
27.4	[26.2–28.6]	27.2	[25.7–28.7]	27.3	[26.3–28.2]	Greece
25.2	[24.3–26.2]	28.7	[27.6–29.8]	27.0	[26.2–27.7]	Grenada
25.8	[24.4–27.3]	27.1	[26.1–28.1]	26.5	[25.6–27.4]	Guatemala
22.1	[20.8–23.5]	23.3	[22.5–24.2]	22.7	[22–23.5]	Guinea
22.2	[19.9–24.6]	23.9	[22.7–25]	23.1	[21.7–24.4]	Guinea-Bissau
25.0	[24–26.1]	27.6	[26.4–28.8]	26.3	[25.6–27.1]	Guyana
24.2	[21.7–26.8]	24.0	[23–24.9]	24.1	[22.7–25.5]	Haiti
25.5	[23.9–27.1]	27.3	[26.5–28.1]	26.4	[25.5–27.3]	Honduras
27.5	[26.3–28.9]	25.2	[23.2–27.2]	26.3	[25.1–27.4]	Hungary
26.7	[25.2–28.4]	25.1	[23.2–27]	25.9	[24.7–27.1]	Iceland
21.8	[21.1–22.4]	22.1	[21.4–22.8]	21.9	[21.5–22.4]	India
22.4	[21.5–23.4]	23.4	[22.4–24.4]	22.9	[22.3–23.6]	Indonesia
25.3	[24.7–25.9]	27.2	[26.5–27.9]	26.2	[25.8–26.7]	Iran (Islamic Republic of)
27.2	[26.1–28.3]	28.8	[27.6–30.1]	28.0	[27.2–28.8]	Iraq
27.9	[27.2–28.6]	27.1	[26.3–27.8]	27.5	[26.9–28.1]	Ireland
26.3	[25.2–27.3]	26.2	[25.1–27.4]	26.3	[25.5–27.1]	Israel
26.8	[26.1–27.5]	25.2	[24.5–26]	26.0	[25.5–26.5]	Italy
25.5	[24.5–26.6]	29.2	[28.2–30.3]	27.4	[26.6–28.2]	Jamaica
23.6	[23–24.2]	21.7	[21.1–22.3]	22.6	[22.2–23]	Japan
28.2	[27.3–29.1]	29.7	[29–30.4]	28.9	[28.4–29.5]	Jordan
27.4	[25.4–29.4]	27.5	[25.7–29.2]	27.4	[26.2–28.7]	Kazakhstan
21.9	[20–23.8]	24.0	[23–25.1]	23.0	[21.9–24.1]	Kenya
28.7	[27.5–29.8]	30.5	[29.1–31.8]	29.6	[28.6–30.4]	Kiribati
29.5	[28.4–30.6]	30.8	[29.7–32.1]	30.0	[29.2–30.8]	Kuwait
25.6	[24.8–26.4]	26.8	[26.1–27.5]	26.2	[25.7–26.8]	Kyrgyzstan
22.4	[21.6–23.2]	22.7	[22–23.5]	22.6	[22–23.1]	Lao People's Democratic Republic
26.8	[25.2–28.3]	25.1	[23.2–26.9]	25.8	[24.7–27.1]	Latvia
28.0	[27–28.9]	27.6	[26.5–28.6]	27.8	[27.1–28.5]	Lebanon
22.7	[22–23.4]	27.1	[26.2–27.9]	24.9	[24.3–25.4]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Mean BMI					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	23.1	[22.4–23.7]	24.3	[23.7–25]	23.7	[23.2–24.2]
Libya	EMR	26.8	[26–27.6]	29.2	[28.3–30.1]	28.0	[27.4–28.5]
Lithuania	EUR	27.0	[25.9–28]	26.0	[24.7–27.2]	26.4	[25.6–27.2]
Luxembourg	EUR	27.3	[26.5–28.1]	25.4	[24.4–26.3]	26.4	[25.8–27]
Madagascar	AFR	20.9	[19.7–22.1]	21.0	[20.2–21.7]	20.9	[20.2–21.6]
Malawi	AFR	22.0	[21.3–22.8]	22.9	[22.3–23.4]	22.5	[22–22.9]
Malaysia	WPR	24.6	[24.1–25.1]	25.3	[24.8–25.8]	25.0	[24.6–25.4]
Maldives	SEAR	23.9	[23–24.7]	25.7	[25–26.3]	24.8	[24.2–25.3]
Mali	AFR	22.3	[21.1–23.4]	22.6	[21.9–23.3]	22.4	[21.8–23.1]
Malta	EUR	27.3	[25.7–28.9]	26.8	[24.8–28.8]	27.1	[25.8–28.3]
Marshall Islands	WPR	28.3	[27.2–29.4]	30.0	[28.8–31.2]	29.1	[28.4–29.9]
Mauritania	AFR	23.0	[21.5–24.4]	26.0	[24.9–27.2]	24.5	[23.5–25.4]
Mauritius	AFR	24.7	[24–25.3]	25.9	[25.1–26.7]	25.3	[24.7–25.8]
Mexico	AMR	27.2	[26.8–27.6]	28.3	[27.9–28.7]	27.8	[27.5–28]
Micronesia (Federated States of)	WPR	27.6	[26.9–28.4]	30.8	[30–31.6]	29.2	[28.6–29.7]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	24.9	[24.5–25.4]	25.8	[25.3–26.4]	25.4	[25–25.8]
Montenegro	EUR	26.2	[23.9–28.6]	25.5	[22.5–28.4]	25.9	[24–27.7]
Morocco	EMR	24.8	[23.8–25.9]	25.6	[24.8–26.4]	25.2	[24.6–25.9]
Mozambique	AFR	21.4	[20.5–22.4]	22.7	[22–23.4]	22.1	[21.5–22.7]
Myanmar	SEAR	21.7	[20.9–22.5]	22.8	[21.9–23.7]	22.3	[21.7–22.8]
Namibia	AFR	22.5	[21.5–23.5]	25.3	[24.4–26.1]	23.9	[23.3–24.6]
Nauru	WPR	32.2	[31.4–33.1]	33.0	[32–34]	32.6	[32–33.2]
Nepal	SEAR	22.0	[21.3–22.8]	21.4	[20.9–22]	21.7	[21.3–22.2]
Netherlands	EUR	25.7	[25–26.3]	24.9	[24.1–25.7]	25.3	[24.8–25.8]
New Zealand	WPR	27.7	[27.3–28.1]	27.5	[27.1–27.9]	27.6	[27.3–27.9]
Nicaragua	AMR	25.7	[24.3–27.2]	27.4	[26.6–28.2]	26.6	[25.7–27.4]
Niger	AFR	21.1	[20.2–21.9]	21.9	[21.3–22.5]	21.5	[20.9–22]
Nigeria	AFR	22.4	[21.7–23.2]	23.7	[23.2–24.2]	23.1	[22.6–23.5]
Niue	WPR	31.1	[30.4–31.9]	32.9	[32–33.7]	32.0	[31.4–32.5]
Norway	EUR	26.6	[25.8–27.5]	25.1	[24.2–26.1]	25.9	[25.3–26.5]
Oman	EMR	26.3	[25.3–27.3]	26.8	[25.6–27.9]	26.5	[25.8–27.2]
Pakistan	EMR	23.0	[22.2–23.8]	24.0	[23.4–24.5]	23.4	[22.9–23.9]
Palau	WPR	29.2	[28.3–30.2]	29.5	[28.4–30.5]	29.4	[28.6–30]
Panama	AMR	26.0	[24.9–27]	27.2	[26–28.4]	26.6	[25.8–27.4]
Papua New Guinea	WPR	24.8	[23.9–25.6]	25.3	[24.2–26.3]	25.0	[24.3–25.7]
Paraguay	AMR	25.3	[22.9–27.6]	25.6	[22.6–28.6]	25.4	[23.6–27.2]
Peru	AMR	25.2	[24.6–25.9]	26.6	[26.2–26.9]	25.9	[25.5–26.3]
Philippines	WPR	22.6	[21.9–23.4]	23.1	[22.3–23.9]	22.9	[22.3–23.4]
Poland	EUR	26.7	[26–27.3]	25.7	[24.8–26.5]	26.1	[25.6–26.7]
Portugal	EUR	26.5	[25.7–27.4]	25.7	[24.7–26.6]	26.1	[25.4–26.8]
Qatar	EMR	28.3	[27.7–28.9]	29.6	[28.9–30.3]	28.6	[28.1–29.2]
Republic of Korea	WPR	24.0	[23.6–24.4]	23.1	[22.8–23.5]	23.6	[23.3–23.8]
Republic of Moldova	EUR	26.0	[25.2–26.9]	27.0	[26.2–27.6]	26.5	[26–27]
Romania	EUR	25.4	[24.3–26.5]	24.9	[23.5–26.3]	25.2	[24.3–26.1]
Russian Federation	EUR	25.7	[25.1–26.3]	26.7	[26.1–27.3]	26.2	[25.8–26.7]
Rwanda	AFR	21.1	[20.5–21.6]	22.3	[21.7–22.9]	21.7	[21.3–22.1]
Saint Kitts and Nevis	AMR	28.0	[26.6–29.3]	30.3	[28.9–31.7]	29.2	[28.2–30.1]
Saint Lucia	AMR	28.1	[27.3–29]	29.4	[28.5–30.4]	28.8	[28.2–29.4]
Saint Vincent and the Grenadines	AMR	25.9	[23.6–28.2]	27.6	[24.7–30.5]	26.8	[24.9–28.7]

## Annex 4.6: Body mass index

2014 Mean BMI						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
23.2	[22.5–23.9]	24.9	[24.2–25.6]	24.0	[23.5–24.6]	Liberia
27.2	[26.2–28.2]	29.6	[28.5–30.7]	28.4	[27.7–29.1]	Libya
27.3	[25.9–28.6]	26.0	[24.3–27.5]	26.6	[25.5–27.7]	Lithuania
27.6	[26.6–28.6]	25.5	[24.3–26.6]	26.5	[25.8–27.3]	Luxembourg
20.9	[19.5–22.4]	21.2	[20.2–22.1]	21.1	[20.2–22]	Madagascar
22.3	[21.4–23.2]	23.3	[22.5–24.1]	22.8	[22.2–23.4]	Malawi
25.0	[24.3–25.8]	25.6	[24.9–26.4]	25.3	[24.8–25.9]	Malaysia
24.2	[23.3–25.2]	25.9	[25.1–26.8]	25.1	[24.4–25.7]	Maldives
22.6	[21.2–24]	23.0	[22.2–23.8]	22.8	[22–23.5]	Mali
27.5	[25.7–29.3]	26.8	[24.5–29.1]	27.2	[25.7–28.5]	Malta
28.4	[27.1–29.7]	30.0	[28.6–31.5]	29.2	[28.2–30.2]	Marshall Islands
23.2	[21.6–24.8]	26.4	[25–27.8]	24.8	[23.7–26]	Mauritania
25.0	[24–25.9]	26.2	[25.2–27.3]	25.6	[24.9–26.3]	Mauritius
27.5	[26.9–28.1]	28.7	[28.1–29.3]	28.1	[27.7–28.5]	Mexico
27.8	[26.9–28.7]	31.0	[30–32]	29.4	[28.7–30]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
25.5	[24.9–26.2]	26.4	[25.6–27.1]	26.0	[25.4–26.4]	Mongolia
26.5	[24.1–29]	25.5	[22.3–28.6]	26.0	[23.9–27.9]	Montenegro
25.2	[23.9–26.6]	25.9	[24.8–26.9]	25.6	[24.7–26.4]	Morocco
21.6	[20.4–22.8]	23.0	[22.1–23.9]	22.3	[21.6–23.1]	Mozambique
22.1	[21.1–23.1]	23.2	[22.1–24.2]	22.6	[21.9–23.4]	Myanmar
22.9	[21.6–24.1]	25.6	[24.5–26.7]	24.3	[23.5–25.1]	Namibia
32.1	[30.9–33.2]	32.8	[31.6–34.1]	32.5	[31.6–33.3]	Nauru
22.4	[21.6–23.2]	22.0	[21.4–22.7]	22.2	[21.7–22.8]	Nepal
25.9	[24.9–26.8]	25.0	[23.9–26]	25.4	[24.7–26.1]	Netherlands
28.0	[27.4–28.5]	27.8	[27.2–28.3]	27.9	[27.5–28.2]	New Zealand
26.0	[24.3–27.7]	27.8	[26.7–28.9]	26.9	[25.9–27.8]	Nicaragua
21.3	[20.2–22.3]	22.2	[21.4–23]	21.7	[21.1–22.4]	Niger
22.8	[21.8–23.7]	24.0	[23.3–24.7]	23.4	[22.7–24]	Nigeria
31.4	[30.6–32.2]	33.1	[32.2–34.1]	32.3	[31.6–32.9]	Niue
26.9	[25.8–28]	25.2	[23.9–26.4]	26.0	[25.2–26.8]	Norway
26.8	[25.6–28]	27.1	[25.7–28.6]	26.9	[26–27.8]	Oman
23.3	[22.2–24.5]	24.4	[23.7–25.1]	23.8	[23.1–24.5]	Pakistan
29.4	[28.4–30.3]	29.5	[28.5–30.6]	29.4	[28.7–30.2]	Palau
26.4	[25.1–27.7]	27.7	[26.2–29.1]	27.1	[26.1–28]	Panama
25.0	[23.9–26.1]	25.6	[24.4–26.9]	25.3	[24.5–26.1]	Papua New Guinea
25.6	[23.1–28]	26.0	[22.9–29.1]	25.8	[23.8–27.8]	Paraguay
25.7	[24.8–26.7]	26.9	[26.4–27.5]	26.3	[25.8–26.9]	Peru
22.9	[22–24]	23.4	[22.2–24.5]	23.2	[22.4–23.9]	Philippines
27.0	[26.1–28]	25.7	[24.6–26.9]	26.4	[25.6–27.2]	Poland
26.7	[25.7–27.8]	25.7	[24.5–26.9]	26.2	[25.4–27]	Portugal
29.0	[28.2–29.7]	30.1	[29.3–31]	29.2	[28.7–29.9]	Qatar
24.3	[23.7–24.9]	23.4	[22.7–24.1]	23.9	[23.4–24.3]	Republic of Korea
26.3	[25.5–27.2]	27.1	[26.2–27.9]	26.7	[26.1–27.3]	Republic of Moldova
25.7	[24.3–27.1]	24.9	[23.2–26.6]	25.3	[24.2–26.5]	Romania
26.1	[25.2–27.1]	26.8	[25.9–27.8]	26.5	[25.8–27.1]	Russian Federation
21.3	[20.6–22]	22.7	[21.9–23.4]	22.0	[21.5–22.5]	Rwanda
28.4	[26.9–30]	30.9	[29.3–32.5]	29.7	[28.5–30.7]	Saint Kitts and Nevis
28.9	[28–29.9]	30.2	[29.1–31.3]	29.6	[28.8–30.3]	Saint Lucia
26.5	[24–28.9]	28.1	[25.1–31.1]	27.3	[25.5–29.2]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	2010 Mean BMI					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	29.7	[29.1–30.3]	33.1	[32.4–33.9]	31.4	[30.9–31.9]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	23.6	[23–24.3]	25.2	[24.4–26]	24.4	[23.9–24.9]
Saudi Arabia	EMR	27.8	[27.1–28.6]	28.4	[27.6–29.3]	28.1	[27.5–28.6]
Senegal	AFR	21.6	[20.9–22.4]	23.8	[23.1–24.5]	22.7	[22.2–23.2]
Serbia	EUR	26.2	[25.7–26.8]	25.2	[24.3–26.1]	25.7	[25.2–26.2]
Seychelles	AFR	25.2	[24.6–25.8]	27.7	[27–28.4]	26.4	[26–26.9]
Sierra Leone	AFR	21.8	[21.2–22.4]	23.3	[22.7–23.9]	22.5	[22.1–23]
Singapore	WPR	24.1	[23.6–24.5]	23.1	[22.6–23.6]	23.6	[23.3–23.9]
Slovakia	EUR	27.0	[26.2–27.9]	25.6	[24.7–26.5]	26.3	[25.7–26.9]
Slovenia	EUR	27.2	[24.8–29.4]	26.2	[23.4–29.2]	26.7	[24.8–28.6]
Solomon Islands	WPR	24.5	[23.6–25.4]	26.3	[25.3–27.2]	25.4	[24.7–26.1]
Somalia	EMR	21.2	[18.9–23.6]	22.3	[19.3–25.2]	21.7	[19.8–23.8]
South Africa	AFR	25.0	[24.6–25.4]	28.7	[28.3–29.1]	26.9	[26.7–27.2]
South Sudan	AFR	23.4	[22.5–24.3]	26.3	[25.3–27.4]	24.9	[24.2–25.6]
Spain	EUR	27.2	[26.7–27.7]	26.0	[25.4–26.6]	26.6	[26.2–27]
Sri Lanka	SEAR	22.0	[21.3–22.8]	23.0	[22.2–23.9]	22.5	[22–23.1]
Sudan	EMR	23.4	[22.5–24.3]	26.3	[25.3–27.4]	24.9	[24.2–25.6]
Suriname	AMR	26.0	[23.7–28.3]	27.7	[24.8–30.6]	26.8	[25–28.7]
Swaziland	AFR	23.8	[22.9–24.7]	28.4	[27.4–29.5]	26.2	[25.4–26.9]
Sweden	EUR	26.4	[25.7–27.1]	24.8	[24–25.7]	25.6	[25.1–26.1]
Switzerland	EUR	26.4	[25.8–27.1]	23.9	[22.7–25]	25.1	[24.5–25.8]
Syrian Arab Republic	EMR	26.8	[25.8–27.9]	28.6	[27.5–29.8]	27.7	[27–28.5]
Tajikistan	EUR	25.1	[22.7–27.4]	24.8	[23.9–25.8]	24.9	[23.7–26.2]
Thailand	SEAR	23.2	[22.6–23.8]	24.4	[23.7–25]	23.8	[23.3–24.2]
the former Yugoslav Republic of Macedonia	EUR	26.1	[23.8–28.4]	25.2	[23.7–26.7]	25.7	[24.4–27.1]
Timor–Leste	SEAR	21.1	[18.7–23.5]	20.7	[19.7–21.7]	20.9	[19.6–22.2]
Togo	AFR	22.2	[21.4–23.1]	23.6	[22.8–24.4]	22.9	[22.3–23.5]
Tonga	WPR	30.3	[29.6–30.9]	33.3	[32.5–34]	31.8	[31.3–32.3]
Trinidad and Tobago	AMR	27.2	[25.9–28.4]	28.8	[27.3–30.2]	28.0	[26.9–29]
Tunisia	EMR	25.5	[24.6–26.5]	27.1	[26–28.2]	26.3	[25.6–27]
Turkey	EUR	26.7	[26.2–27.1]	28.2	[27.8–28.7]	27.5	[27.1–27.8]
Turkmenistan	EUR	25.8	[25–26.6]	25.8	[25.1–26.6]	25.8	[25.2–26.4]
Tuvalu	WPR	28.5	[26.2–30.8]	29.7	[26.8–32.6]	29.1	[27.1–30.9]
Uganda	AFR	20.8	[20.2–21.5]	22.6	[21.8–23.3]	21.7	[21.2–22.2]
Ukraine	EUR	26.1	[23.7–28.5]	25.8	[24.2–27.3]	25.9	[24.5–27.2]
United Arab Emirates	EMR	28.2	[27.1–29.3]	29.5	[28.3–30.7]	28.6	[27.8–29.4]
United Kingdom	EUR	27.2	[27–27.5]	26.9	[26.6–27.1]	27.0	[26.9–27.2]
United Republic of Tanzania	AFR	22.0	[21.4–22.6]	23.5	[23–24]	22.8	[22.4–23.1]
United States of America	AMR	28.5	[28.2–28.9]	28.5	[28.1–28.9]	28.5	[28.2–28.8]
Uruguay	AMR	26.3	[25.3–27.3]	26.6	[25.4–27.6]	26.4	[25.7–27.2]
Uzbekistan	EUR	25.4	[24.3–26.4]	25.7	[24.5–26.9]	25.6	[24.9–26.3]
Vanuatu	WPR	25.5	[24.8–26.1]	26.6	[25.9–27.3]	26.0	[25.5–26.5]
Venezuela (Bolivarian Republic of)	AMR	27.1	[26.3–27.9]	26.9	[26–27.8]	27.0	[26.4–27.6]
Viet Nam	WPR	21.0	[20.5–21.6]	21.2	[20.6–21.8]	21.1	[20.7–21.5]
Yemen	EMR	24.8	[22.5–27.2]	26.2	[23.2–29.3]	25.5	[23.6–27.4]
Zambia	AFR	21.3	[20.1–22.4]	23.4	[22.6–24.1]	22.3	[21.6–23]
Zimbabwe	AFR	21.7	[21.1–22.3]	24.8	[24.2–25.5]	23.3	[22.9–23.7]



## Annex 4.6: Body mass index

2014 Mean BMI						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
29.9	[29.2–30.7]	33.5	[32.6–34.4]	31.7	[31.1–32.3]	Samoa
...	...	...	...	...	...	San Marino
23.9	[23.1–24.8]	25.6	[24.7–26.5]	24.8	[24.1–25.4]	Sao Tome and Principe
28.3	[27.3–29.3]	28.7	[27.6–29.9]	28.5	[27.7–29.2]	Saudi Arabia
21.8	[21–22.7]	24.1	[23.1–25]	23.0	[22.3–23.6]	Senegal
26.4	[25.7–27.1]	25.2	[24–26.5]	25.8	[25.1–26.5]	Serbia
25.6	[24.9–26.4]	28.0	[27.2–28.8]	26.8	[26.2–27.4]	Seychelles
22.0	[21.3–22.6]	23.6	[22.9–24.4]	22.8	[22.3–23.3]	Sierra Leone
24.3	[23.7–24.9]	23.2	[22.5–23.9]	23.7	[23.3–24.2]	Singapore
27.4	[26.5–28.3]	25.7	[24.7–26.7]	26.5	[25.8–27.2]	Slovakia
27.5	[25–29.8]	26.3	[23.3–29.5]	26.9	[24.8–28.9]	Slovenia
24.5	[23.4–25.5]	26.4	[25.3–27.5]	25.5	[24.7–26.2]	Solomon Islands
21.2	[18.8–23.8]	22.5	[19.4–25.6]	21.9	[19.8–23.9]	Somalia
25.4	[24.7–25.9]	29.1	[28.5–29.8]	27.3	[26.9–27.7]	South Africa
23.7	[22.5–24.8]	26.7	[25.5–28]	25.2	[24.4–26.1]	South Sudan
27.4	[26.6–28.2]	26.0	[25.1–26.9]	26.7	[26.1–27.4]	Spain
22.5	[21.5–23.6]	23.5	[22.4–24.7]	23.0	[22.2–23.8]	Sri Lanka
23.7	[22.5–24.8]	26.7	[25.5–28]	25.2	[24.4–26.1]	Sudan
26.5	[24.1–29]	28.2	[25.1–31.2]	27.4	[25.5–29.2]	Suriname
24.1	[23–25.3]	28.9	[27.6–30.2]	26.5	[25.7–27.4]	Swaziland
26.7	[25.5–27.7]	24.9	[23.7–26]	25.8	[25–26.6]	Sweden
26.7	[25.9–27.5]	23.8	[22.5–25.2]	25.3	[24.5–26]	Switzerland
27.2	[26–28.5]	29.0	[27.6–30.4]	28.1	[27.2–29]	Syrian Arab Republic
25.5	[23–28]	25.3	[24.3–26.4]	25.4	[24.1–26.6]	Tajikistan
23.6	[22.7–24.4]	24.6	[23.7–25.5]	24.1	[23.4–24.7]	Thailand
26.4	[23.9–28.8]	25.3	[23.5–27.1]	25.8	[24.2–27.3]	the former Yugoslav Republic of Macedonia
21.5	[19–24]	21.0	[19.9–22.1]	21.2	[19.7–22.6]	Timor–Leste
22.4	[21.5–23.4]	24.0	[23–25.1]	23.2	[22.5–23.9]	Togo
30.4	[29.6–31.3]	33.5	[32.6–34.4]	31.9	[31.3–32.6]	Tonga
27.9	[26.3–29.5]	29.4	[27.6–31.3]	28.7	[27.4–29.9]	Trinidad and Tobago
26.0	[24.9–27.3]	27.5	[26.2–28.9]	26.8	[25.9–27.7]	Tunisia
27.1	[26.5–27.8]	28.5	[27.9–29.2]	27.8	[27.4–28.3]	Turkey
26.4	[25.5–27.2]	26.4	[25.5–27.2]	26.4	[25.8–27]	Turkmenistan
28.7	[26.3–31.1]	29.9	[26.9–32.9]	29.3	[27.4–31.1]	Tuvalu
21.0	[20.2–21.8]	23.0	[22–24]	22.0	[21.4–22.6]	Uganda
26.4	[23.9–28.9]	25.8	[24–27.5]	26.0	[24.5–27.5]	Ukraine
28.6	[27.3–30]	29.7	[28.3–31.3]	29.0	[27.9–30]	United Arab Emirates
27.5	[27–27.9]	27.1	[26.7–27.6]	27.3	[27–27.6]	United Kingdom
22.2	[21.5–22.9]	24.0	[23.3–24.6]	23.1	[22.6–23.5]	United Republic of Tanzania
28.8	[28.2–29.3]	28.8	[28.2–29.4]	28.8	[28.4–29.2]	United States of America
26.7	[25.5–28]	26.9	[25.5–28.2]	26.8	[26–27.7]	Uruguay
25.9	[24.6–27.2]	26.3	[24.8–27.7]	26.1	[25.1–27]	Uzbekistan
25.6	[24.8–26.4]	26.8	[25.9–27.7]	26.2	[25.7–26.8]	Vanuatu
27.4	[26.3–28.4]	27.1	[26–28.3]	27.2	[26.5–28]	Venezuela (Bolivarian Republic of)
21.5	[20.7–22.4]	21.6	[20.7–22.5]	21.6	[20.9–22.2]	Viet Nam
25.2	[22.7–27.7]	26.5	[23.4–29.7]	25.8	[23.7–27.8]	Yemen
21.5	[20.2–22.8]	23.8	[22.8–24.8]	22.6	[21.8–23.5]	Zambia
21.8	[21–22.6]	25.0	[24.1–25.9]	23.4	[22.8–24]	Zimbabwe

## 4.7a Overweight and Obesity

### Comparable estimates of prevalence of overweight (population aged 18+ years), 2010

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	10.6	[7.3–14.6]	14.3	[10.8–18.5]	12.4	[9.8–15]
Albania	EUR	55.0	[48.6–61.4]	47.8	[40.8–54.6]	51.4	[46.8–56.1]
Algeria	AFR	49.4	[43.9–54.9]	56.7	[51.1–62.1]	53.0	[48.7–56.9]
Andorra	EUR	73.3	[68.3–77.9]	64.1	[58.1–69.9]	68.6	[64.8–72.5]
Angola	AFR	18.5	[13.1–24.8]	30.1	[23.5–37]	24.3	[19.7–28.9]
Antigua and Barbuda	AMR	52.3	[44.3–60]	66.4	[58.9–73.2]	59.4	[53.9–64.8]
Argentina	AMR	60.4	[54.4–66.3]	57.8	[51.6–64]	59.1	[55.2–63.3]
Armenia	EUR	51.7	[44.8–58.6]	54.1	[47.6–60.5]	52.8	[48.3–57.8]
Australia	WPR	69.4	[65.5–73.1]	58.2	[54.1–62.3]	63.8	[60.9–66.3]
Austria	EUR	62.3	[56.5–67.9]	47.3	[41.6–53]	54.6	[50.3–58.8]
Azerbaijan	EUR	50.9	[43.7–58]	54.4	[47.6–61.1]	52.7	[47.7–57.6]
Bahamas	AMR	63.3	[57.5–69]	70.4	[64.5–75.8]	66.9	[62.3–71.1]
Bahrain	EMR	66.4	[61.3–71.5]	69.3	[64.1–74.1]	67.5	[63.8–71.4]
Bangladesh	SEAR	12.7	[9.3–16.7]	16.9	[13.2–20.9]	14.8	[12.1–17.5]
Barbados	AMR	55.7	[48.2–63.3]	68.3	[61.5–74.8]	62.0	[57–67.2]
Belarus	EUR	58.5	[51.9–64.8]	56.7	[49.4–63.6]	57.5	[52.5–62.2]
Belgium	EUR	66.9	[61.7–71.9]	50.5	[44.5–56.4]	58.5	[54.7–62.5]
Belize	AMR	42.9	[36.6–49.4]	53.1	[46.7–59.7]	48.0	[43.6–52.5]
Benin	AFR	16.6	[13.1–20.6]	30.7	[26.4–34.9]	23.7	[20.9–26.6]
Bhutan	SEAR	20.0	[15.4–25.1]	23.3	[18.9–28.3]	21.5	[18.3–25]
Bolivia (Plurinational State of)	AMR	42.4	[36–49.1]	50.9	[44.6–57]	46.6	[42–50.9]
Bosnia and Herzegovina	EUR	55.0	[47.6–62.3]	51.4	[43.7–58.9]	53.2	[47.4–57.7]
Botswana	AFR	29.1	[23.2–35.5]	49.5	[42.9–56.2]	39.3	[34.5–44.1]
Brazil	AMR	50.9	[45.6–56.5]	49.9	[44.5–55.2]	50.4	[46.5–54]
Brunei Darussalam	WPR	44.6	[36.6–52.8]	44.5	[36.6–52.2]	44.5	[38.9–49.9]
Bulgaria	EUR	64.7	[58.4–70.6]	57.6	[50.4–64.5]	61.0	[56.5–65.6]
Burkina Faso	AFR	14.2	[10.8–18.2]	23.9	[19.9–28]	19.1	[16.5–21.7]
Burundi	AFR	6.7	[4.1–10.1]	16.9	[12.8–21.6]	11.9	[9.3–14.6]
Cabo Verde	AFR	25.2	[20.5–30.3]	35.4	[30.3–40.5]	30.3	[27–33.8]
Cambodia	WPR	10.4	[7.5–13.8]	17.5	[13.7–21.5]	14.0	[11.7–16.6]
Cameroon	AFR	20.4	[16.2–25.2]	33.9	[29.6–38.7]	27.1	[23.7–30.3]
Canada	AMR	69.9	[65.7–73.9]	61.4	[56.8–65.8]	65.6	[62.6–68.7]
Central African Republic	AFR	12.1	[8.1–16.8]	23.2	[18–28.8]	17.7	[14.1–21.3]
Chad	AFR	14.5	[10.8–18.8]	26.9	[22.3–31.7]	20.7	[17.5–23.8]
Chile	AMR	60.7	[55.2–66.4]	61.9	[56.1–67.4]	61.3	[57.4–65]
China	WPR	31.5	[26.6–36.6]	29.5	[24.5–34.8]	30.5	[27–34.1]
Colombia	AMR	49.8	[44.3–55.1]	55.7	[50.6–60.7]	52.8	[48.9–56.5]
Comoros	AFR	13.4	[10.1–17.5]	27.7	[23.3–32.2]	20.5	[17.6–23.2]
Congo	AFR	22.0	[16.1–28.7]	33.7	[27.4–39.8]	27.9	[23.5–32]
Cook Islands	WPR	76.1	[71.1–80.8]	80.3	[75.8–84.4]	78.1	[74.9–81.5]
Costa Rica	AMR	54.2	[48.7–59.5]	59.0	[53.7–64.1]	56.6	[52.9–60.1]
Côte d'Ivoire	AFR	20.3	[16.1–24.9]	31.2	[26.8–35.9]	25.6	[22.6–28.5]
Croatia	EUR	64.8	[58.6–70.8]	56.9	[49.6–63.8]	60.7	[56–65.7]
Cuba	AMR	52.7	[45.2–60.1]	63.6	[56.6–70.1]	58.1	[53.2–62.9]
Cyprus	EUR	62.4	[56.3–68]	56.7	[50.5–62.9]	59.6	[55.5–63.9]
Czech Republic	EUR	70.3	[64.7–75.6]	60.5	[53.6–67]	65.3	[60.7–69.6]



... Indicates no data were available

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
12.0	[8.3–16.4]	16.9	[12.8–21.7]	14.4	[11.4–17.5]	Afghanistan
54.5	[48.2–61]	46.5	[39.6–53.2]	50.5	[45.8–55.1]	Albania
52.4	[46.8–58.1]	60.6	[55–65.8]	56.4	[52.6–60.2]	Algeria
70.2	[65.3–74.9]	60.3	[54.3–66.1]	65.2	[61.6–69]	Andorra
21.0	[14.9–27.9]	34.6	[27.2–42.2]	27.8	[22.6–33.4]	Angola
52.7	[44.7–60.5]	66.4	[58.9–73.3]	59.6	[54–64.6]	Antigua and Barbuda
60.8	[54.8–66.6]	57.3	[51–63.4]	59.0	[54.8–63.2]	Argentina
52.6	[45.7–59.5]	53.2	[46.7–59.6]	52.9	[47.8–57.4]	Armenia
67.6	[63.7–71.4]	55.8	[51.6–59.9]	61.6	[58.6–64.2]	Australia
59.3	[53.6–64.7]	43.8	[38.3–49.4]	51.3	[47.7–55.6]	Austria
52.7	[45.3–59.9]	55.7	[48.9–62.3]	54.2	[49–59.1]	Azerbaijan
63.5	[57.7–69.3]	69.9	[64.1–75.4]	66.8	[62.7–70.8]	Bahamas
67.7	[62.8–72.5]	72.4	[67.6–76.7]	69.4	[65.8–72.9]	Bahrain
13.5	[9.9–17.6]	18.8	[14.9–23.3]	16.1	[13.1–19]	Bangladesh
54.1	[46.8–61.5]	65.5	[58.6–72]	59.8	[54.7–64.8]	Barbados
57.2	[50.7–63.5]	53.3	[46.1–60.1]	55.1	[50.4–60]	Belarus
63.8	[58.6–68.8]	46.9	[41.1–52.6]	55.2	[51.6–59]	Belgium
46.5	[39.9–53.3]	57.6	[51.2–64]	52.0	[47.5–56.5]	Belize
18.4	[14.6–22.8]	34.6	[30–39.2]	26.5	[23.4–29.5]	Benin
21.8	[16.8–27.4]	27.1	[22–32.5]	24.3	[20.5–28.1]	Bhutan
45.3	[38.5–52.5]	53.6	[47.2–59.9]	49.5	[44.6–54.4]	Bolivia (Plurinational State of)
53.0	[45.9–60.1]	48.1	[40.6–55.4]	50.5	[45.4–56.2]	Bosnia and Herzegovina
33.1	[26.5–40.1]	55.4	[48.6–62.1]	44.2	[39.5–49.1]	Botswana
51.9	[46.4–57.5]	50.3	[45–55.7]	51.1	[47.2–55.1]	Brazil
44.3	[36.3–52.5]	45.0	[37.1–52.5]	44.6	[38.8–50.6]	Brunei Darussalam
61.6	[55.6–67.5]	52.8	[45.9–59.7]	57.1	[53–61.4]	Bulgaria
16.4	[12.6–20.7]	27.5	[23.1–31.9]	22.0	[18.9–25]	Burkina Faso
7.7	[4.7–11.4]	20.1	[15.6–25.1]	14.0	[10.9–17.3]	Burundi
28.4	[23.2–33.9]	38.8	[33.4–44.2]	33.6	[30–37.4]	Cabo Verde
11.5	[8.4–15.2]	19.1	[15.1–23.3]	15.4	[12.7–18.4]	Cambodia
23.3	[18.5–28.5]	38.7	[34.1–43.7]	31.0	[27.6–34.4]	Cameroon
67.2	[63–71.2]	58.1	[53.4–62.5]	62.6	[59.6–65.6]	Canada
13.5	[9–18.8]	26.2	[20.6–32.1]	19.9	[16.1–23.9]	Central African Republic
16.7	[12.6–21.5]	31.7	[26.6–36.9]	24.2	[21–28]	Chad
60.4	[54.9–66.1]	60.9	[55.1–66.5]	60.7	[56.7–64.6]	Chile
31.1	[26.3–36.2]	29.1	[24.1–34.3]	30.1	[26.7–33.8]	China
51.3	[45.7–56.7]	56.7	[51.5–61.7]	54.0	[50.3–57.8]	Colombia
14.7	[11–19]	31.0	[26.4–35.8]	22.8	[19.9–25.9]	Comoros
24.3	[17.7–31.5]	37.7	[31–44.3]	31.0	[26.2–35.5]	Congo
77.4	[72.5–82]	81.4	[77.1–85.4]	79.4	[76.3–82.4]	Cook Islands
55.4	[50–60.8]	60.1	[54.9–65.2]	57.7	[54.2–61.5]	Costa Rica
21.9	[17.4–26.9]	35.1	[30.5–40]	28.4	[24.8–31.8]	Côte d'Ivoire
61.7	[55.7–67.6]	52.4	[45.3–59.3]	56.9	[52.3–61.5]	Croatia
50.5	[43.2–57.7]	60.4	[53.5–67.1]	55.4	[50.6–60.3]	Cuba
62.0	[55.9–67.6]	55.3	[49.1–61.5]	58.7	[54.3–62.8]	Cyprus
67.7	[62.2–73.1]	56.6	[49.8–63.2]	62.1	[57.7–66.2]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	18.5	[12.2–26.2]	21.4	[14.9–28.6]	20.0	[15.1–25]
Democratic Republic of the Congo	AFR	11.0	[6.8–16.1]	22.2	[16.9–28.3]	16.6	[13–20.2]
Denmark	EUR	65.8	[60.5–71]	48.1	[42.2–54]	56.9	[52.9–60.6]
Djibouti	EMR	22.2	[16.2–28.9]	30.6	[23.9–37.6]	26.4	[21.5–31.1]
Dominica	AMR	49.6	[43–56.1]	60.6	[54.5–66.7]	55.1	[50.6–59.6]
Dominican Republic	AMR	46.3	[39.9–53]	55.2	[48.9–61.3]	50.8	[46.3–55.2]
Ecuador	AMR	46.9	[40.3–53.6]	52.9	[46.4–59.2]	49.9	[45.2–54.4]
Egypt	EMR	50.2	[45.1–55.5]	63.4	[58.6–68.1]	56.8	[53.1–60]
El Salvador	AMR	46.7	[41.1–52.6]	55.4	[50.2–60.7]	51.3	[47.7–55.2]
Equatorial Guinea	AFR	30.7	[21.9–40.5]	42.2	[32.8–51.7]	36.3	[30.2–43.4]
Eritrea	AFR	10.0	[7.2–13.1]	20.3	[16.3–24.6]	15.2	[12.7–17.8]
Estonia	EUR	61.0	[54.5–67.4]	55.9	[48.5–63.1]	58.3	[53.2–63.2]
Ethiopia	AFR	9.6	[6.8–12.6]	20.6	[16.7–24.9]	15.1	[12.5–17.5]
Fiji	WPR	65.2	[59–71]	72.1	[67–76.9]	68.6	[64.8–72.5]
Finland	EUR	63.7	[59–68.3]	52.0	[46.9–56.7]	57.7	[54.4–61]
France	EUR	68.0	[62.5–73.4]	56.3	[50–62.5]	62.0	[57.8–65.9]
Gabon	AFR	34.0	[26.1–41.9]	43.3	[36.2–50.3]	38.6	[32.9–43.9]
Gambia	AFR	20.3	[16–25.1]	30.6	[25.8–35.8]	25.5	[22.2–28.9]
Georgia	EUR	52.5	[45.3–59.8]	56.6	[49.8–63.1]	54.6	[49.8–59.8]
Germany	EUR	64.7	[59.7–69.4]	50.8	[45.7–55.8]	57.6	[54.4–61.3]
Ghana	AFR	18.8	[14.3–24]	35.9	[30.6–41.4]	27.4	[23.4–31.2]
Greece	EUR	67.4	[61.8–72.7]	58.4	[52.5–64.2]	62.8	[58.7–67]
Grenada	AMR	44.2	[37.6–51.1]	58.6	[52.2–65.2]	51.4	[46.8–56]
Guatemala	AMR	41.2	[35.4–47.3]	50.1	[44.7–55.6]	45.7	[41.9–49.5]
Guinea	AFR	15.8	[12.3–19.5]	27.0	[23–31.2]	21.4	[18.6–24.2]
Guinea-Bissau	AFR	16.2	[12.5–20.5]	26.8	[22.4–31.6]	21.5	[18.4–24.5]
Guyana	AMR	39.2	[32.4–46.4]	56.9	[49.8–63.5]	47.9	[43.1–53.1]
Haiti	AMR	26.3	[19.9–33.2]	38.4	[32–45]	32.4	[27.9–37.1]
Honduras	AMR	40.6	[34.9–46.5]	49.2	[44–54.7]	44.9	[41–48.8]
Hungary	EUR	67.0	[61.3–72.5]	56.5	[49.5–63.3]	61.5	[57.2–65.8]
Iceland	EUR	64.7	[58.9–70.2]	51.2	[44.9–57.4]	58.0	[53.8–62.2]
India	SEAR	16.7	[13.4–20.4]	21.2	[17.8–25]	18.9	[16.4–21.3]
Indonesia	SEAR	17.2	[13.3–21.6]	24.4	[20–29]	20.8	[17.7–23.8]
Iran (Islamic Republic of)	EMR	52.8	[48.3–57.3]	58.6	[54.2–62.9]	55.7	[52.7–58.9]
Iraq	EMR	44.7	[38.8–50.7]	54.4	[48.6–60.2]	49.5	[45.5–53.5]
Ireland	EUR	66.5	[61.5–71.6]	53.7	[48.7–59]	60.1	[56.8–63.6]
Israel	EUR	66.4	[61–71.7]	58.8	[52.9–64.5]	62.5	[58.5–66.4]
Italy	EUR	66.8	[61.9–71.5]	57.3	[51.9–62.6]	61.9	[58.2–65.6]
Jamaica	AMR	47.9	[42–54.2]	63.0	[57.1–68.5]	55.6	[51.6–59.8]
Japan	WPR	28.6	[24.2–33]	22.3	[18.6–26.2]	25.3	[22.3–28.2]
Jordan	EMR	55.0	[49.2–60.6]	62.9	[57.9–67.8]	58.9	[54.9–62.7]
Kazakhstan	EUR	55.6	[48.9–62.2]	55.2	[48.3–61.8]	55.4	[50.8–60.2]
Kenya	AFR	14.4	[10.8–18.5]	26.8	[22.3–31.6]	20.6	[17.5–23.9]
Kiribati	WPR	65.8	[59.4–71.7]	76.8	[71.9–81.3]	71.2	[67.5–75]
Kuwait	EMR	71.4	[66.3–76.3]	70.1	[64.7–75.1]	70.9	[67.5–74.4]
Kyrgyzstan	EUR	39.5	[32.7–46.9]	43.7	[37.2–50]	41.6	[37–46.2]
Lao People's Democratic Republic	WPR	11.4	[8.3–14.9]	17.4	[13.6–21.5]	14.4	[12.1–17.1]
Latvia	EUR	60.7	[54.2–67.1]	58.2	[50.7–65]	59.4	[54.7–64]
Lebanon	EMR	64.3	[58.8–69.5]	65.0	[59.6–70.1]	64.6	[60.8–68.5]
Lesotho	AFR	15.0	[11.1–19.4]	42.8	[36.8–49]	29.1	[25.5–32.8]

## Annex 4.7a: Overweight and Obesity

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
18.0	[11.8–25.6]	20.6	[14.3–27.5]	19.3	[14.7–24.3]	Democratic People's Republic of Korea
12.2	[7.7–17.8]	25.3	[19.5–31.8]	18.8	[14.6–23]	Democratic Republic of the Congo
62.6	[57.3–67.6]	44.3	[38.6–50.1]	53.4	[49.6–57]	Denmark
24.4	[17.9–31.8]	34.4	[27.2–41.9]	29.4	[24.3–34.5]	Djibouti
50.0	[43.3–56.6]	60.6	[54.5–66.8]	55.3	[50.9–59.9]	Dominica
48.2	[41.6–54.9]	57.3	[51.1–63.4]	52.7	[48.4–56.9]	Dominican Republic
48.7	[42–55.5]	54.6	[48–60.9]	51.6	[47.2–56.5]	Ecuador
52.8	[47.4–58.2]	66.0	[61.1–70.7]	59.4	[55.9–63.1]	Egypt
50.6	[44.7–56.6]	58.0	[52.8–63.2]	54.5	[50.3–58.4]	El Salvador
32.1	[22.9–42.3]	45.7	[35.9–55.4]	38.7	[32–45.8]	Equatorial Guinea
11.5	[8.3–15]	23.9	[19.4–28.7]	17.7	[14.7–20.2]	Eritrea
59.1	[52.7–65.4]	51.7	[44.5–58.7]	55.1	[50.4–60]	Estonia
10.8	[7.7–14.2]	23.6	[19.3–28.3]	17.2	[14.2–20]	Ethiopia
66.9	[60.7–72.7]	73.6	[68.6–78.2]	70.2	[66.4–73.9]	Fiji
60.2	[55.7–64.8]	47.3	[42.4–51.9]	53.6	[50.2–57]	Finland
65.2	[59.8–70.6]	52.6	[46.4–58.7]	58.7	[54.6–62.7]	France
37.1	[28.8–45.7]	47.0	[39.5–54.4]	42.1	[36.3–47.8]	Gabon
22.9	[18.2–28.2]	35.8	[30.6–41.5]	29.4	[25.6–33]	Gambia
51.5	[44.4–58.7]	53.8	[47.3–60.3]	52.8	[48.1–57.2]	Georgia
60.7	[55.9–65.4]	45.8	[41–50.7]	53.1	[49.7–56.3]	Germany
20.7	[15.8–26.4]	39.8	[34.3–45.5]	30.3	[26.6–34.1]	Ghana
64.2	[58.7–69.5]	54.0	[48.2–59.8]	59.1	[55.2–63]	Greece
47.6	[40.7–54.7]	62.1	[55.6–68.7]	54.9	[50.3–60]	Grenada
45.5	[39.3–52]	54.5	[49–60]	50.1	[46–54.4]	Guatemala
17.4	[13.6–21.5]	30.1	[25.8–34.5]	23.7	[20.8–26.5]	Guinea
17.8	[13.8–22.5]	30.0	[25.3–35.3]	24.0	[20.4–27.2]	Guinea-Bissau
41.1	[34–48.6]	59.9	[52.9–66.5]	50.4	[45.3–55.4]	Guyana
28.9	[21.9–36.3]	42.2	[35.5–49.2]	35.6	[30.9–40.7]	Haiti
44.4	[38.3–50.6]	53.7	[48.4–59.2]	49.1	[44.9–53.4]	Honduras
64.6	[59–70.1]	52.4	[45.5–59.1]	58.2	[53.7–62.6]	Hungary
63.2	[57.5–68.7]	49.2	[43–55.3]	56.3	[51.8–60.5]	Iceland
17.3	[13.8–21.1]	22.3	[18.7–26.2]	19.7	[17.2–22.2]	India
17.3	[13.4–21.7]	25.2	[20.8–29.9]	21.2	[18.2–24.1]	Indonesia
56.1	[51.4–60.6]	62.8	[58.4–67]	59.4	[56.5–63]	Iran (Islamic Republic of)
49.5	[43.2–55.8]	59.7	[54–65.2]	54.5	[50.3–58.9]	Iraq
64.6	[59.7–69.6]	52.0	[47–57.4]	58.3	[54.7–62]	Ireland
66.2	[60.7–71.5]	57.6	[51.6–63.4]	61.8	[57.4–65.6]	Israel
62.7	[58–67.3]	52.0	[46.6–57.3]	57.2	[53.3–60.9]	Italy
48.7	[42.7–55.1]	63.6	[57.7–69]	56.3	[52.6–60.6]	Jamaica
27.2	[23.2–31.5]	19.4	[15.9–23]	23.2	[20.3–26.1]	Japan
59.0	[53.1–64.7]	68.0	[63.1–72.6]	63.4	[59.5–67.1]	Jordan
57.0	[50.2–63.7]	55.4	[48.5–62.1]	56.2	[51.2–61.4]	Kazakhstan
16.5	[12.4–21.1]	31.2	[26.3–36.4]	23.9	[20.6–27]	Kenya
66.8	[60.4–72.8]	77.9	[73–82.3]	72.2	[68.2–76.1]	Kiribati
72.8	[67.9–77.4]	73.9	[69–78.3]	73.3	[69.9–76.7]	Kuwait
42.7	[35.5–50.7]	46.9	[40.1–53.4]	44.8	[39.7–49.5]	Kyrgyzstan
12.8	[9.4–16.8]	19.9	[15.8–24.3]	16.4	[13.6–19.1]	Lao People's Democratic Republic
59.0	[52.6–65.2]	53.9	[46.5–60.7]	56.2	[51.7–61.1]	Latvia
64.5	[59–69.8]	67.4	[61.9–72.4]	66.0	[62.1–69.7]	Lebanon
18.1	[13.5–23.1]	48.1	[41.8–54.7]	33.4	[29.5–37.2]	Lesotho



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	14.3	[10.7–18.7]	26.3	[21.8–31.3]	20.3	[17.3–23.3]
Libya	EMR	60.4	[55.5–65.2]	65.2	[60.5–70]	62.8	[59.4–66]
Lithuania	EUR	60.6	[54.2–66.7]	59.8	[52.6–66.3]	60.2	[55.5–64.7]
Luxembourg	EUR	68.3	[62.9–73.5]	49.4	[43.3–55.3]	58.8	[54.8–62.9]
Madagascar	AFR	12.9	[9.7–16.5]	24.1	[19.7–28.7]	18.5	[15.8–21.2]
Malawi	AFR	10.5	[7.7–13.7]	24.0	[20.1–28.2]	17.3	[14.7–19.7]
Malaysia	WPR	31.5	[26–37.1]	34.0	[28.8–39.4]	32.8	[28.9–36.6]
Maldives	SEAR	20.8	[14.9–27.4]	27.7	[21.6–34.2]	24.2	[19.6–28.4]
Mali	AFR	15.3	[11.6–19.4]	24.9	[20.8–29.2]	20.0	[17.2–22.8]
Malta	EUR	69.3	[63.4–74.7]	61.7	[55.4–67.9]	65.5	[61.6–69.4]
Marshall Islands	WPR	70.7	[65.2–75.9]	77.1	[72.3–81.7]	73.9	[70.3–77.4]
Mauritania	AFR	21.0	[16.2–26.3]	29.3	[24.3–34.8]	25.1	[21.6–28.5]
Mauritius	AFR	36.6	[29.9–43.4]	49.4	[42.6–56.3]	43.1	[38.4–47.9]
Mexico	AMR	58.5	[53.8–63.3]	62.3	[57.7–66.9]	60.5	[57.2–63.7]
Micronesia (Federated States of)	WPR	56.1	[50.6–61.6]	68.0	[62.9–72.9]	61.9	[58.4–65.8]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	43.4	[36.8–50.2]	43.5	[37–50]	43.4	[38.9–47.8]
Montenegro	EUR	61.4	[54.9–67.4]	52.2	[45.3–59.1]	56.7	[52.1–61.8]
Morocco	EMR	46.8	[40.9–52.4]	56.0	[50.4–61.4]	51.5	[47.3–55.4]
Mozambique	AFR	11.0	[8–14.4]	24.0	[19.8–28.4]	17.6	[14.8–20]
Myanmar	SEAR	10.9	[7.8–14.8]	17.9	[14–22.2]	14.5	[11.9–17.3]
Namibia	AFR	24.4	[19.3–30]	47.2	[40.8–53.6]	36.2	[31.8–40.5]
Nauru	WPR	74.3	[67.6–80.5]	78.9	[73.1–83.9]	76.6	[72.4–80.4]
Nepal	SEAR	12.6	[9.3–16.4]	17.4	[13.8–21.3]	15.0	[12.3–17.8]
Netherlands	EUR	64.7	[59.6–69.5]	50.3	[45–55.5]	57.4	[53.9–61]
New Zealand	WPR	68.0	[64–72]	59.9	[55.6–64.2]	63.9	[60.9–66.9]
Nicaragua	AMR	38.3	[32.4–44.5]	48.8	[43.1–54.4]	43.6	[39.5–47.4]
Niger	AFR	11.7	[8.5–15.4]	21.2	[17.3–25.3]	16.4	[13.8–19]
Nigeria	AFR	20.8	[16.9–25]	33.0	[28.6–37.4]	26.8	[23.8–29.7]
Niue	WPR	68.4	[63–73.5]	76.0	[71.3–80.3]	72.1	[68.7–75.5]
Norway	EUR	65.9	[60.9–70.7]	54.2	[48.8–59.4]	60.1	[56.4–63.5]
Oman	EMR	57.0	[51.7–62.2]	60.4	[55–65.7]	58.4	[54.5–62.3]
Pakistan	EMR	17.5	[13.3–22.3]	20.6	[16.7–25]	19.0	[16–22.3]
Palau	WPR	75.3	[70–80]	79.2	[74.5–83.4]	77.2	[74–80.6]
Panama	AMR	54.3	[48.4–60.1]	61.9	[56.4–67.3]	58.1	[54.2–62.1]
Papua New Guinea	WPR	50.1	[43.1–56.9]	60.2	[53.9–66.1]	55.0	[50.2–59.8]
Paraguay	AMR	42.9	[36.9–49.2]	43.7	[37.3–50.2]	43.3	[39–47.7]
Peru	AMR	48.7	[42.3–55.3]	57.1	[51.5–62.6]	52.9	[48.8–57.4]
Philippines	WPR	17.8	[13.7–22.2]	22.4	[18–27]	20.1	[17.2–23]
Poland	EUR	64.9	[59.4–70.3]	58.4	[51.7–64.8]	61.5	[56.9–65.8]
Portugal	EUR	62.3	[56.2–68.5]	52.6	[46.3–58.9]	57.3	[52.9–61.2]
Qatar	EMR	73.1	[67.6–78.3]	73.5	[68.3–78.6]	73.2	[69–77.5]
Republic of Korea	WPR	33.9	[29–39]	28.4	[23.6–33.5]	31.1	[27.4–34.5]
Republic of Moldova	EUR	43.7	[36.5–50.6]	47.2	[40.3–54]	45.5	[40.5–50.5]
Romania	EUR	62.0	[55.8–67.9]	54.9	[47.9–61.6]	58.3	[53.9–62.9]
Russian Federation	EUR	58.3	[52.2–64.2]	59.3	[53.1–65.3]	58.8	[54.5–63.1]
Rwanda	AFR	9.3	[6–13.3]	21.4	[16.8–26.4]	15.5	[12.4–18.5]
Saint Kitts and Nevis	AMR	50.4	[43.4–57.5]	62.9	[55.9–69.5]	56.7	[51.7–61.8]
Saint Lucia	AMR	47.7	[40.2–55.4]	60.2	[52.9–67.4]	54.1	[48.9–59.3]
Saint Vincent and the Grenadines	AMR	46.8	[40.3–53.2]	57.8	[51.5–64.1]	52.2	[47.7–56.9]

## Annex 4.7a: Overweight and Obesity

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
15.8	[11.9–20.5]	29.5	[24.6–34.8]	22.6	[19.1–26.1]	Liberia
63.4	[58.5–68.1]	68.8	[64.3–73.3]	66.0	[62.7–69.3]	Libya
59.5	[53.2–65.5]	56.5	[49.4–63.1]	57.9	[53–62.2]	Lithuania
65.3	[60.1–70.5]	46.4	[40.4–52.2]	55.8	[51.8–59.5]	Luxembourg
14.3	[10.7–18.2]	27.4	[22.7–32.5]	20.9	[17.7–24]	Madagascar
12.1	[8.9–15.7]	27.7	[23.3–32.2]	19.9	[17.1–22.6]	Malawi
32.7	[27–38.6]	36.0	[30.7–41.6]	34.4	[30.6–38.1]	Malaysia
22.9	[16.5–30]	31.2	[24.7–38.1]	27.0	[22.1–31.9]	Maldives
17.4	[13.3–22.1]	28.6	[24.1–33.3]	23.0	[19.7–26]	Mali
66.4	[60.6–72]	57.9	[51.5–64.1]	62.1	[58.1–66.4]	Malta
71.8	[66.2–77]	78.2	[73.4–82.6]	75.0	[71.6–78.4]	Marshall Islands
23.0	[17.7–28.7]	32.6	[27.3–38.4]	27.8	[23.4–31.5]	Mauritania
35.5	[29–42.3]	47.8	[41.1–54.7]	41.7	[37–46.6]	Mauritius
60.4	[55.7–65.3]	63.6	[59–68.1]	62.1	[59–65.4]	Mexico
62.8	[57.1–68.4]	73.3	[68.5–77.9]	67.9	[64.1–71.9]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
46.6	[39.5–53.6]	46.9	[40.2–53.5]	46.7	[41.9–51.6]	Mongolia
59.5	[53.2–65.5]	49.2	[42.3–56]	54.3	[49.8–59.1]	Montenegro
48.8	[42.7–54.5]	58.4	[52.7–63.8]	53.7	[49.8–58]	Morocco
12.5	[9.2–16.3]	27.0	[22.6–31.7]	19.9	[16.9–22.9]	Mozambique
11.2	[7.9–15.2]	18.7	[14.7–23.1]	15.0	[12.2–17.9]	Myanmar
27.4	[21.8–33.5]	51.9	[45.4–58.2]	40.0	[35.3–44.4]	Namibia
75.3	[68.5–81.5]	79.9	[74.2–84.8]	77.6	[73.3–81.6]	Nauru
13.2	[9.8–17.3]	19.1	[15.3–23.4]	16.2	[13.3–18.8]	Nepal
61.2	[56.3–65.9]	46.4	[41.2–51.5]	53.7	[50.3–57.1]	Netherlands
66.2	[62.1–70.1]	57.3	[53.1–61.6]	61.7	[58.8–64.7]	New Zealand
41.9	[35.7–48.5]	52.9	[47.1–58.6]	47.4	[43.4–51.6]	Nicaragua
12.4	[9–16.2]	24.1	[19.9–28.6]	18.2	[15.4–21]	Niger
23.0	[18.8–27.6]	36.8	[32.2–41.5]	29.8	[26.8–32.8]	Nigeria
69.8	[64.4–74.9]	77.2	[72.6–81.4]	73.4	[70.1–76.9]	Niue
63.2	[58.3–67.9]	50.9	[45.5–56.1]	57.1	[53.5–60.7]	Norway
62.8	[57.5–67.7]	67.5	[62.4–72.2]	64.7	[61–68.3]	Oman
19.2	[14.7–24.5]	23.3	[19.1–28]	21.2	[17.7–24.7]	Pakistan
76.3	[71.1–81]	80.3	[75.7–84.3]	78.3	[75.1–81.4]	Palau
55.4	[49.5–61.2]	62.9	[57.3–68.1]	59.1	[55–63.2]	Panama
54.3	[47.1–61.5]	64.6	[58.3–70.3]	59.4	[54.5–64.4]	Papua New Guinea
45.5	[39.3–52.1]	46.7	[40.2–53.1]	46.1	[41.3–50.7]	Paraguay
50.6	[44–57.2]	59.0	[53.2–64.5]	54.8	[50.3–59.2]	Peru
18.9	[14.6–23.8]	24.2	[19.5–29]	21.5	[18.4–24.7]	Philippines
63.4	[57.9–68.7]	55.2	[48.6–61.7]	59.2	[54.9–63.5]	Poland
59.3	[53.5–65.2]	48.5	[42.3–54.7]	53.7	[49.6–58]	Portugal
74.5	[69.2–79.2]	76.9	[72.2–81.3]	75.1	[71.2–79]	Qatar
32.7	[27.9–37.8]	26.6	[21.9–31.5]	29.6	[26–33.1]	Republic of Korea
43.4	[36.2–50.3]	45.3	[38.6–52]	44.4	[39.7–49.4]	Republic of Moldova
60.3	[54.3–66.1]	51.9	[45–58.6]	56.0	[51.6–60.5]	Romania
57.2	[51.2–63]	55.6	[49.4–61.8]	56.4	[52.2–60.4]	Russian Federation
10.6	[7–15.2]	24.9	[19.9–30.3]	17.9	[14.3–21.1]	Rwanda
50.8	[43.8–58]	62.9	[55.9–69.6]	56.9	[52–61.5]	Saint Kitts and Nevis
48.1	[40.5–55.8]	60.5	[53.2–67.7]	54.4	[48.9–59.8]	Saint Lucia
47.6	[41.1–54.2]	59.1	[52.8–65.4]	53.3	[48.7–57.8]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	65.4	[59.1–71.3]	76.7	[71.9–81.3]	70.9	[67–75.1]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	20.5	[16.1–25.4]	34.5	[29.4–40]	27.6	[24.1–31]
Saudi Arabia	EMR	64.0	[58.8–69]	65.3	[60.2–70.5]	64.6	[61.1–68.4]
Senegal	AFR	18.2	[14.4–22.4]	30.7	[26.2–35.3]	24.6	[21.8–27.6]
Serbia	EUR	59.5	[53.4–65.4]	50.9	[44–57.4]	55.1	[50.5–59.5]
Seychelles	AFR	44.3	[36.7–52]	60.5	[53.3–67.5]	52.3	[47.2–57.9]
Sierra Leone	AFR	14.7	[11.4–18.3]	27.0	[23.1–31.3]	20.9	[18.4–23.8]
Singapore	WPR	35.8	[30.8–40.9]	27.7	[23.2–32.5]	31.7	[28.5–34.9]
Slovakia	EUR	65.0	[59–70.9]	57.3	[50.1–64]	61.1	[56.4–65.6]
Slovenia	EUR	67.1	[60.6–73.5]	58.1	[50.5–65.6]	62.6	[57.6–67.3]
Solomon Islands	WPR	47.5	[40.7–54.2]	60.4	[54.5–66.5]	53.9	[49.4–58.4]
Somalia	EMR	12.8	[8.8–17.4]	21.3	[16.4–26.5]	17.0	[13.9–20.3]
South Africa	AFR	36.7	[31.7–41.8]	59.2	[54.2–64.2]	48.3	[44.5–51.9]
South Sudan	AFR	18.1	[13.8–22.8]	27.7	[22.8–32.9]	22.9	[19.6–26.2]
Spain	EUR	67.8	[62.7–72.6]	58.2	[52.6–63.6]	62.9	[59.2–66.6]
Sri Lanka	SEAR	16.2	[11.9–21.3]	28.4	[22.6–34.4]	22.4	[18.4–26.2]
Sudan	EMR	18.1	[13.8–22.8]	27.7	[22.8–32.9]	22.9	[19.6–26.2]
Suriname	AMR	49.4	[42.8–55.9]	60.3	[53.9–66.4]	54.8	[50.8–59.6]
Swaziland	AFR	21.6	[16.7–27]	45.8	[39.2–52.4]	33.9	[29.6–38.1]
Sweden	EUR	63.6	[58.7–68.2]	50.6	[45.5–55.7]	57.1	[53.7–60.8]
Switzerland	EUR	64.7	[59.6–69.6]	48.8	[43.2–54.3]	56.6	[52.9–60.7]
Syrian Arab Republic	EMR	48.2	[42.9–53.4]	54.9	[49.3–60.6]	51.5	[47.2–55.3]
Tajikistan	EUR	34.8	[27.6–42.2]	41.8	[35–48.6]	38.3	[33.1–43.2]
Thailand	SEAR	23.7	[19.1–28.9]	31.6	[26.6–36.9]	27.7	[24–31.2]
the former Yugoslav Republic of Macedonia	EUR	58.9	[52.3–65.1]	51.7	[44.6–58.5]	55.3	[50.6–60]
Timor-Leste	SEAR	8.4	[5.7–11.8]	14.0	[10.5–18]	11.2	[8.7–13.6]
Togo	AFR	14.2	[10.9–17.7]	27.7	[23.5–32.1]	21.0	[18.3–23.8]
Tonga	WPR	65.6	[59.6–71.4]	76.4	[71.7–80.8]	71.0	[67.2–74.7]
Trinidad and Tobago	AMR	51.6	[42.1–61.3]	65.1	[56.4–73]	58.4	[52.4–64.5]
Tunisia	EMR	54.7	[49.6–59.6]	62.9	[58.1–67.7]	58.8	[55.4–62.3]
Turkey	EUR	59.8	[55.2–64.4]	65.8	[61.5–70.1]	62.9	[59.8–65.9]
Turkmenistan	EUR	47.3	[40.6–54.4]	49.8	[43.2–56.3]	48.6	[43.7–53.3]
Tuvalu	WPR	66.6	[60.9–72]	74.2	[69.4–78.8]	70.3	[66.9–74]
Uganda	AFR	10.3	[7–14.3]	22.7	[18.2–27.8]	16.5	[13.4–19.4]
Ukraine	EUR	54.5	[47.6–61.2]	55.1	[47.8–62]	54.8	[50.2–59.9]
United Arab Emirates	EMR	64.2	[58.9–69.7]	65.5	[59.8–71.1]	64.6	[60.5–68.6]
United Kingdom	EUR	68.7	[65.3–72]	60.1	[56.5–63.8]	64.3	[61.9–67]
United Republic of Tanzania	AFR	13.4	[10.2–17]	26.6	[22.7–30.8]	20.0	[17.3–22.7]
United States of America	AMR	72.2	[68.4–75.8]	63.4	[59.3–67.4]	67.7	[65–70.3]
Uruguay	AMR	59.6	[53.4–65.7]	60.2	[53.7–66.4]	59.9	[55.6–64.3]
Uzbekistan	EUR	40.6	[33.5–47.8]	45.3	[38.5–52]	42.9	[38.4–48.1]
Vanuatu	WPR	57.0	[50.7–63]	67.3	[61.9–72.4]	62.1	[58.1–66]
Venezuela (Bolivarian Republic of)	AMR	57.0	[51.6–62.4]	60.6	[55.2–65.8]	58.8	[55.1–62.7]
Viet Nam	WPR	13.8	[10.4–17.7]	19.7	[15.6–24.1]	16.8	[13.7–19.8]
Yemen	EMR	32.6	[26.3–39.2]	44.8	[37.8–51.8]	38.6	[34–43.2]
Zambia	AFR	15.5	[11.8–19.4]	29.3	[24.6–34.2]	22.4	[19.4–25.5]
Zimbabwe	AFR	12.7	[8.8–17.3]	35.9	[29.6–42.6]	24.5	[20.5–28.6]

## Annex 4.7a: Overweight and Obesity

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
68.0	[61.8–73.9]	78.9	[74.2–83.2]	73.3	[69.3–77.2]	Samoa
...	...	...	...	...	...	San Marino
23.7	[18.8–29.2]	39.5	[34–45.3]	31.7	[28–35.8]	Sao Tome and Principe
65.3	[60.2–70.1]	69.9	[65.1–74.5]	67.3	[63.6–71.1]	Saudi Arabia
21.0	[16.7–25.7]	35.0	[30.2–40]	28.1	[24.5–31.4]	Senegal
57.6	[51.7–63.4]	47.7	[41–54.2]	52.5	[47.8–56.8]	Serbia
43.9	[36.3–51.6]	60.1	[52.9–66.9]	51.9	[46.9–57.1]	Seychelles
16.2	[12.6–20.1]	30.6	[26.3–35.1]	23.5	[20.5–26.2]	Sierra Leone
34.2	[29.3–39.2]	26.0	[21.8–30.7]	30.1	[26.8–33.2]	Singapore
63.6	[57.6–69.4]	54.6	[47.5–61.3]	58.9	[54.4–63.5]	Slovakia
64.1	[57.7–70.2]	54.0	[46.6–61.4]	59.0	[54.3–63.8]	Slovenia
52.0	[44.8–59]	65.9	[60.1–71.7]	58.9	[54.4–63.5]	Solomon Islands
14.2	[9.9–19.3]	24.2	[18.9–29.9]	19.2	[15.6–22.9]	Somalia
39.3	[33.9–44.7]	61.4	[56.4–66.5]	50.7	[47.1–54.2]	South Africa
20.0	[15.3–25.1]	31.2	[26–36.6]	25.6	[22.1–29.3]	South Sudan
64.6	[59.7–69.3]	54.0	[48.4–59.3]	59.2	[55.7–62.9]	Spain
16.0	[11.7–21.1]	27.8	[22.1–33.8]	22.0	[18.4–25.5]	Sri Lanka
20.0	[15.3–25.1]	31.2	[26–36.6]	25.6	[22.1–29.3]	Sudan
50.1	[43.4–56.8]	60.9	[54.5–67]	55.5	[50.8–60.2]	Suriname
25.8	[20.2–32]	52.1	[45.3–58.7]	39.2	[34.9–43.5]	Swaziland
60.8	[56–65.4]	47.1	[42–52]	53.9	[50.3–57.2]	Sweden
61.5	[56.5–66.2]	45.2	[39.8–50.6]	53.2	[49.8–56.9]	Switzerland
52.2	[46.8–57.7]	59.9	[54.2–65.3]	56.0	[52.1–59.8]	Syrian Arab Republic
38.6	[30.9–46.5]	46.6	[39.4–53.7]	42.6	[37.5–47.4]	Tajikistan
22.7	[18.2–27.7]	30.1	[25.3–35.3]	26.5	[22.9–30.1]	Thailand
57.5	[51–63.7]	49.5	[42.5–56.2]	53.5	[48.7–58.1]	the former Yugoslav Republic of Macedonia
9.7	[6.6–13.4]	16.1	[12.2–20.4]	12.8	[10.3–15.5]	Timor–Leste
16.1	[12.5–20]	31.7	[27.2–36.5]	24.0	[21.1–27.2]	Togo
69.1	[63.1–74.8]	78.8	[74.3–83.1]	74.0	[70.1–77.4]	Tonga
51.5	[41.9–61.1]	64.6	[55.8–72.5]	58.1	[51.7–64.2]	Trinidad and Tobago
56.0	[50.9–60.9]	64.1	[59.2–68.8]	60.1	[56.7–63.5]	Tunisia
61.1	[56.6–65.7]	66.5	[62.1–70.7]	63.8	[61–67.2]	Turkey
50.7	[43.6–58]	53.0	[46.3–59.5]	51.9	[46.6–56.5]	Turkmenistan
68.0	[62.3–73.4]	75.5	[70.7–80]	71.7	[67.8–75.3]	Tuvalu
12.0	[8.2–16.5]	26.8	[21.7–32.3]	19.4	[16–23.1]	Uganda
53.3	[46.5–59.9]	51.5	[44.3–58.3]	52.3	[47.3–56.8]	Ukraine
71.0	[66–75.6]	74.6	[70–78.9]	72.0	[68.5–75.7]	United Arab Emirates
65.9	[62.6–69.4]	56.8	[53.1–60.5]	61.3	[58.9–63.6]	United Kingdom
15.3	[11.7–19.1]	30.5	[26.2–35]	22.9	[19.7–25.7]	United Republic of Tanzania
70.3	[66.5–74]	60.8	[56.8–64.9]	65.5	[62.7–68.2]	United States of America
58.9	[52.8–64.9]	58.1	[51.6–64.3]	58.5	[54.1–63.1]	Uruguay
43.8	[36.3–51.4]	48.6	[41.8–55.4]	46.2	[41.2–51.1]	Uzbekistan
61.2	[54.8–67.4]	71.9	[66.9–76.7]	66.5	[62.6–70.5]	Vanuatu
58.6	[53.2–64.2]	62.2	[56.8–67.3]	60.4	[56.8–64.2]	Venezuela (Bolivarian Republic of)
14.2	[10.6–18.3]	20.5	[16.3–25]	17.4	[14.5–20.3]	Viet Nam
38.0	[31–45.3]	51.8	[44.7–59.2]	44.8	[39.6–50]	Yemen
17.8	[13.7–22.2]	34.8	[29.7–40.2]	26.4	[22.9–29.4]	Zambia
15.5	[10.9–20.7]	42.5	[35.5–49.7]	29.2	[25.1–33.8]	Zimbabwe

#### 4.7a Overweight and Obesity (continued)

##### Comparable estimates of prevalence of overweight (population aged 18+ years), 2010

Country name	Region	Obesity (BMI $\geq$ 30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	1.2	[0.6–2.2]	2.7	[1.5–4.2]	1.9	[1.1–2.7]
Albania	EUR	14.9	[10.4–20]	18.2	[12.8–24.3]	16.5	[12.8–20.2]
Algeria	AFR	15.3	[11.4–19.7]	26.3	[20.8–32.2]	20.7	[17.3–24.2]
Andorra	EUR	27.6	[21.9–33.7]	31.1	[24.3–38.3]	29.4	[24.5–33.9]
Angola	AFR	3.9	[2–6.6]	9.9	[6–14.9]	7.0	[4.2–9.6]
Antigua and Barbuda	AMR	19.2	[13.1–26.5]	36.3	[28.1–44.9]	27.8	[22.4–33.2]
Argentina	AMR	20.8	[15.8–26.3]	26.5	[20.8–32.6]	23.7	[19.8–27.6]
Armenia	EUR	14.7	[9.9–20]	21.1	[15.7–27.1]	17.8	[14.2–21.3]
Australia	WPR	26.5	[22.6–30.6]	27.7	[23.6–31.7]	27.1	[24.2–29.8]
Austria	EUR	19.9	[15–25.5]	16.6	[12–21.8]	18.2	[14.2–22]
Azerbaijan	EUR	14.8	[9.8–20]	22.4	[16.7–28.7]	18.6	[14.9–22.6]
Bahamas	AMR	26.4	[20.4–33.3]	40.6	[33.1–47.9]	33.6	[29.1–38.4]
Bahrain	EMR	26.8	[21.2–32.6]	38.2	[31.8–44.7]	31.1	[26.8–35.2]
Bangladesh	SEAR	1.6	[0.8–2.6]	3.6	[2.3–5.2]	2.6	[1.8–3.4]
Barbados	AMR	21.6	[15.2–28.8]	37.9	[30.2–46]	29.8	[25–34.9]
Belarus	EUR	18.7	[13.4–24.8]	25.5	[18.3–33.1]	22.4	[17.7–27.3]
Belgium	EUR	22.1	[17.2–27.2]	18.7	[13.9–24]	20.4	[17–23.6]
Belize	AMR	12.9	[9–17.7]	24.2	[18.3–30.8]	18.5	[14.7–22.4]
Benin	AFR	3.1	[1.9–4.7]	10.6	[8–13.5]	6.8	[5.4–8.3]
Bhutan	SEAR	3.5	[2.1–5.5]	6.2	[4.1–8.9]	4.7	[3.4–6.2]
Bolivia (Plurinational State of)	AMR	9.7	[6.1–13.8]	18.3	[13.5–23.8]	14.0	[10.8–17.2]
Bosnia and Herzegovina	EUR	15.3	[10.3–21.5]	20.7	[14.4–28.1]	18.1	[13.7–22.1]
Botswana	AFR	8.4	[5.4–12.2]	25.0	[18.7–31.7]	16.7	[13.1–20.3]
Brazil	AMR	14.7	[11.1–18.6]	20.1	[16.1–24.5]	17.4	[14.7–20.2]
Brunei Darussalam	WPR	13.6	[8.8–19.7]	18.3	[12.6–25]	15.9	[11.9–20.3]
Bulgaria	EUR	20.9	[15.6–27]	25.2	[18.7–32.2]	23.1	[18.9–27.4]
Burkina Faso	AFR	2.3	[1.4–3.7]	6.5	[4.6–8.7]	4.4	[3.3–5.5]
Burundi	AFR	0.5	[0.2–1.1]	2.7	[1.5–4.3]	1.6	[0.9–2.3]
Cabo Verde	AFR	5.9	[3.9–8.5]	13.2	[9.7–17.1]	9.6	[7.5–11.8]
Cambodia	WPR	1.1	[0.6–1.9]	3.0	[1.9–4.5]	2.1	[1.4–2.8]
Cameroon	AFR	4.1	[2.6–6.2]	12.2	[9.3–15.5]	8.2	[6.4–10]
Canada	AMR	26.2	[21.7–30.9]	29.3	[24.7–34]	27.7	[24.6–31]
Central African Republic	AFR	1.6	[0.8–2.9]	5.7	[3.4–8.7]	3.7	[2.4–5.1]
Chad	AFR	2.8	[1.6–4.5]	8.7	[6.1–11.8]	5.7	[4.2–7.3]
Chile	AMR	21.2	[16.5–26.4]	30.1	[24.5–36.1]	25.7	[22.1–29.8]
China	WPR	4.4	[2.8–6.4]	6.5	[4.3–9.1]	5.4	[4–7]
Colombia	AMR	13.7	[10–17.6]	23.0	[18.5–27.6]	18.4	[15.4–21.3]
Comoros	AFR	1.8	[1–2.9]	7.9	[5.6–10.8]	4.8	[3.5–6.1]
Congo	AFR	4.6	[2.5–7.4]	11.8	[8.1–16.3]	8.2	[5.9–10.5]
Cook Islands	WPR	42.6	[35.6–49.5]	52.1	[45.3–59.1]	47.3	[42.2–52.1]
Costa Rica	AMR	16.5	[12.6–20.9]	26.3	[21.3–31.7]	21.3	[18–24.6]
Côte d'Ivoire	AFR	3.7	[2.3–5.6]	10.2	[7.6–13.3]	6.9	[5.4–8.5]
Croatia	EUR	21.6	[16–27.6]	25.2	[18.6–32.5]	23.4	[18.8–28]
Cuba	AMR	17.1	[11.8–23.3]	30.9	[23.9–38.4]	24.0	[19.4–28.6]
Cyprus	EUR	20.1	[14.9–25.8]	25.0	[18.8–31.4]	22.5	[18.3–26.8]
Czech Republic	EUR	25.6	[19.9–31.7]	28.7	[21.7–35.8]	27.2	[22.7–31.8]





... Indicates no data were available

Obesity (BMI $\geq$ 30) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
1.4	[0.7–2.5]	3.3	[1.9–5.1]	2.4	[1.4–3.2]	Afghanistan
14.6	[10.2–19.7]	17.5	[12.3–23.5]	16.1	[12.3–19.9]	Albania
16.6	[12.4–21.2]	28.7	[23–34.7]	22.6	[19.1–26.2]	Algeria
26.1	[20.7–31.9]	28.8	[22.5–35.6]	27.5	[23.2–31.8]	Andorra
4.6	[2.4–7.7]	12.0	[7.5–17.7]	8.3	[5.1–11.3]	Angola
19.4	[13.3–26.8]	36.4	[28.2–45]	28.0	[22.4–33.2]	Antigua and Barbuda
21.0	[16–26.5]	26.2	[20.6–32.3]	23.7	[19.9–27.8]	Argentina
15.1	[10.2–20.5]	20.7	[15.4–26.6]	17.8	[14.1–21.5]	Armenia
25.6	[21.8–29.7]	26.3	[22.4–30.3]	26.0	[23–28.7]	Australia
18.5	[13.9–23.8]	15.0	[10.8–19.8]	16.7	[13.5–19.9]	Austria
15.5	[10.3–20.9]	23.2	[17.4–29.7]	19.4	[15.4–23.5]	Azerbaijan
26.4	[20.4–33.4]	40.2	[32.7–47.6]	33.5	[28.4–38.4]	Bahamas
27.7	[22.2–33.4]	40.5	[34.1–46.8]	32.5	[28.4–36.6]	Bahrain
1.7	[0.9–2.8]	4.2	[2.7–6]	2.9	[2–3.9]	Bangladesh
20.7	[14.5–27.7]	35.9	[28.3–43.8]	28.3	[23.4–33.8]	Barbados
18.1	[12.9–24]	23.6	[16.9–30.9]	21.0	[16.7–25.7]	Belarus
20.6	[15.9–25.4]	16.9	[12.5–21.8]	18.7	[15.7–22.3]	Belgium
14.4	[10.1–19.7]	27.2	[20.9–33.9]	20.8	[16.8–24.8]	Belize
3.5	[2.2–5.2]	12.4	[9.5–15.7]	8.0	[6.1–9.7]	Benin
3.9	[2.3–6.2]	7.5	[5–10.6]	5.5	[3.9–7.3]	Bhutan
10.6	[6.7–15.1]	19.9	[14.8–25.7]	15.3	[11.8–18.6]	Bolivia (Plurinational State of)
14.5	[9.8–20.4]	19.0	[13.1–25.9]	16.8	[12.9–20.5]	Bosnia and Herzegovina
10.0	[6.4–14.4]	29.0	[22.3–36.1]	19.4	[15.6–23.7]	Botswana
15.1	[11.4–19.1]	20.4	[16.4–24.7]	17.8	[14.9–20.7]	Brazil
13.4	[8.5–19.5]	18.4	[12.7–25.1]	15.9	[11.7–20]	Brunei Darussalam
19.5	[14.6–25.3]	22.7	[16.7–29.2]	21.2	[16.9–25.3]	Bulgaria
2.8	[1.6–4.3]	7.8	[5.6–10.4]	5.3	[3.9–6.8]	Burkina Faso
0.6	[0.2–1.2]	3.5	[2–5.5]	2.0	[1.1–2.9]	Burundi
6.9	[4.5–9.9]	15.1	[11.1–19.3]	11.0	[8.5–13.6]	Cabo Verde
1.2	[0.6–2.1]	3.4	[2.1–5.1]	2.3	[1.5–3.2]	Cambodia
4.9	[3.1–7.3]	14.7	[11.3–18.5]	9.8	[7.7–12]	Cameroon
24.6	[20.3–29.1]	27.2	[22.8–31.7]	25.9	[22.8–29.3]	Canada
1.9	[0.9–3.3]	6.8	[4.1–10.2]	4.4	[2.7–6.1]	Central African Republic
3.3	[1.9–5.3]	10.8	[7.7–14.5]	7.1	[5.2–8.8]	Chad
21.0	[16.4–26.2]	29.6	[24–35.5]	25.3	[21.3–29]	Chile
4.3	[2.7–6.3]	6.4	[4.2–8.9]	5.3	[4–6.8]	China
14.2	[10.5–18.3]	23.6	[19–28.2]	19.0	[15.7–22]	Colombia
2.0	[1.1–3.2]	9.2	[6.6–12.5]	5.6	[4.1–7.2]	Comoros
5.2	[2.9–8.4]	13.8	[9.6–18.8]	9.5	[7–12]	Congo
43.5	[36.5–50.3]	53.1	[46.3–60]	48.2	[43.1–53.3]	Cook Islands
17.0	[13–21.6]	27.1	[22–32.6]	21.9	[18.5–25.1]	Costa Rica
4.0	[2.5–6.1]	12.0	[9.1–15.5]	7.9	[6.1–9.6]	Côte d'Ivoire
20.1	[14.8–25.9]	22.7	[16.7–29.6]	21.4	[17.3–25.6]	Croatia
16.1	[11.1–22.1]	28.9	[22.2–36.1]	22.5	[17.9–27]	Cuba
20.0	[14.8–25.7]	24.2	[18.1–30.6]	22.0	[18.1–26.1]	Cyprus
24.2	[18.7–30]	26.3	[19.8–33.1]	25.3	[21.1–29.3]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Obesity (BMI ≥ 30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	1.5	[0.6–3]	3.0	[1.3–5.8]	2.3	[1–3.5]
Democratic Republic of the Congo	AFR	1.2	[0.5–2.4]	4.9	[2.9–7.6]	3.1	[1.9–4.4]
Denmark	EUR	21.6	[16.5–26.8]	17.2	[12.6–22.1]	19.4	[16.2–23]
Djibouti	EMR	4.3	[2.3–7.3]	10.0	[6.3–14.5]	7.1	[4.8–9.6]
Dominica	AMR	15.7	[11.1–21.1]	30.1	[23.7–36.9]	22.9	[18.9–26.9]
Dominican Republic	AMR	14.4	[10.1–19.5]	25.4	[19.7–31.4]	19.9	[16.1–24.1]
Ecuador	AMR	12.0	[8–16.6]	19.9	[14.7–25.6]	15.9	[12.6–19.7]
Egypt	EMR	16.7	[12.8–21]	32.9	[27.8–38.2]	24.7	[21.4–27.8]
El Salvador	AMR	12.9	[9.3–17.3]	23.4	[18.6–28.7]	18.4	[15–21.7]
Equatorial Guinea	AFR	9.5	[5.1–15.6]	18.4	[11.2–26.6]	13.8	[9.4–18.5]
Eritrea	AFR	1.1	[0.6–1.9]	4.5	[2.9–6.5]	2.8	[1.9–3.7]
Estonia	EUR	20.9	[15.5–27.2]	24.5	[17.6–32.1]	22.8	[18.2–27.5]
Ethiopia	AFR	1.1	[0.6–1.8]	4.3	[2.8–6.2]	2.7	[1.8–3.6]
Fiji	WPR	28.4	[22.4–35]	39.8	[33.1–46.4]	34.0	[29.3–38.7]
Finland	EUR	21.5	[17.5–25.9]	20.8	[17–25.1]	21.2	[18.1–24]
France	EUR	23.1	[17.8–28.8]	24.1	[18.4–30.4]	23.6	[19.5–28]
Gabon	AFR	9.7	[5.7–14.8]	18.4	[13.2–24.3]	14.0	[10.6–17.6]
Gambia	AFR	4.0	[2.5–6]	10.7	[7.7–14.3]	7.4	[5.6–9.3]
Georgia	EUR	15.3	[10.3–21.2]	23.2	[17.4–29.5]	19.5	[15.6–23.6]
Germany	EUR	21.8	[17.5–26.5]	19.8	[15.7–24.4]	20.8	[17.5–23.7]
Ghana	AFR	3.7	[2.2–5.7]	13.9	[10.5–17.8]	8.9	[6.9–11]
Greece	EUR	21.3	[16–27]	25.1	[19.3–31.4]	23.2	[19.5–27.3]
Grenada	AMR	13.9	[9.5–18.9]	29.1	[22.7–35.9]	21.5	[17.4–25.7]
Guatemala	AMR	10.2	[7–14.3]	19.5	[15.1–24.3]	15.0	[11.9–18.1]
Guinea	AFR	2.5	[1.5–3.8]	7.5	[5.4–10]	5.0	[3.8–6.3]
Guinea-Bissau	AFR	2.7	[1.6–4.2]	7.9	[5.5–10.7]	5.3	[4–6.8]
Guyana	AMR	11.4	[7.5–16.1]	27.3	[20.9–34.4]	19.2	[15.1–23.2]
Haiti	AMR	5.3	[3–8.5]	12.8	[8.9–17.4]	9.1	[6.4–11.7]
Honduras	AMR	9.7	[6.7–13.4]	19.2	[14.9–24.1]	14.5	[11.7–17.2]
Hungary	EUR	23.4	[18.1–29.3]	25.1	[18.6–32.2]	24.3	[19.9–28.7]
Iceland	EUR	23.1	[17.4–29.2]	21.3	[15.9–27.1]	22.2	[17.8–26.6]
India	SEAR	2.5	[1.6–3.5]	5.3	[3.9–7]	3.8	[2.9–4.7]
Indonesia	SEAR	2.5	[1.5–3.8]	5.9	[4–8.2]	4.2	[2.9–5.4]
Iran (Islamic Republic of)	EMR	16.5	[13.2–20]	27.1	[22.9–31.5]	21.7	[19.1–24.6]
Iraq	EMR	12.8	[9.1–17.5]	24.2	[18.8–30.2]	18.5	[14.8–21.7]
Ireland	EUR	24.3	[19.4–29.6]	23.8	[18.8–28.8]	24.0	[20.5–27.6]
Israel	EUR	21.5	[16.7–27]	26.2	[20.6–32.1]	23.9	[20.2–28]
Italy	EUR	20.6	[16.4–25.1]	23.1	[18.4–28.1]	21.9	[18.7–25.3]
Jamaica	AMR	15.4	[11.2–20.2]	32.5	[26.5–38.5]	24.1	[20.3–27.6]
Japan	WPR	2.8	[1.9–4.1]	3.3	[2.3–4.7]	3.1	[2.3–3.9]
Jordan	EMR	18.4	[13.8–23.6]	32.5	[27.5–37.8]	25.3	[21.8–29.1]
Kazakhstan	EUR	18.3	[12.7–24.2]	23.2	[17.3–29.8]	20.8	[16.8–25]
Kenya	AFR	2.0	[1.1–3.3]	7.1	[5–9.8]	4.6	[3.4–5.9]
Kiribati	WPR	31.0	[24.2–38.2]	46.3	[39.4–53.5]	38.6	[33.4–43.6]
Kuwait	EMR	31.5	[25.7–37.5]	40.2	[33.6–47]	35.0	[30.6–39.3]
Kyrgyzstan	EUR	9.1	[5.7–13.4]	14.1	[10–18.8]	11.6	[8.7–14.4]
Lao People's Democratic Republic	WPR	1.2	[0.7–2]	3.0	[1.9–4.5]	2.1	[1.3–2.9]
Latvia	EUR	20.5	[14.8–26.8]	26.8	[19.3–34.8]	23.9	[19.2–29]
Lebanon	EMR	22.9	[17.7–28.6]	32.2	[26.1–38.1]	27.5	[23.5–31.2]
Lesotho	AFR	2.7	[1.6–4.3]	18.5	[13.8–23.9]	10.8	[8.1–13.3]

## Annex 4.7a: Overweight and Obesity

Obesity (BMI $\geq$ 30) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
1.4	[0.6–2.9]	2.8	[1.2–5.5]	2.2	[1–3.3]	Democratic People's Republic of Korea
1.4	[0.6–2.7]	5.9	[3.5–9.1]	3.7	[2.2–5.2]	Democratic Republic of the Congo
20.0	[15.3–24.8]	15.5	[11.3–19.9]	17.7	[14.5–20.9]	Denmark
4.9	[2.6–8.2]	11.7	[7.4–16.8]	8.3	[5.7–10.9]	Djibouti
15.8	[11.2–21.2]	30.1	[23.7–36.9]	23.0	[19–27]	Dominica
15.2	[10.6–20.4]	26.8	[20.9–33]	21.0	[17.2–24.9]	Dominican Republic
12.6	[8.4–17.5]	20.9	[15.6–26.8]	16.8	[12.8–20.3]	Ecuador
17.7	[13.7–22.3]	34.8	[29.5–40.3]	26.2	[22.8–29.6]	Egypt
14.4	[10.4–19.2]	25.1	[20.1–30.6]	20.0	[16.4–23.7]	El Salvador
9.9	[5.3–16.4]	20.3	[12.6–29.2]	15.0	[10.2–20]	Equatorial Guinea
1.3	[0.7–2.2]	5.7	[3.7–8]	3.5	[2.4–4.7]	Eritrea
20.0	[14.8–26.1]	22.3	[16–29.3]	21.2	[16.8–25.8]	Estonia
1.2	[0.6–2.1]	5.3	[3.4–7.5]	3.3	[2.3–4.5]	Ethiopia
29.4	[23.2–36.2]	40.9	[34.1–47.5]	35.0	[30.2–39.5]	Fiji
19.8	[16.1–23.9]	18.3	[14.8–22.2]	19.0	[16.2–21.7]	Finland
21.8	[16.7–27.3]	22.3	[17–28.1]	22.0	[17.9–25.8]	France
10.9	[6.5–16.5]	20.6	[15–27]	15.7	[11.9–19.8]	Gabon
4.7	[2.9–6.9]	13.2	[9.7–17.4]	9.0	[6.8–11.1]	Gambia
15.0	[10.1–20.7]	21.8	[16.3–27.9]	18.6	[14.5–22.3]	Georgia
19.9	[15.9–24.2]	17.2	[13.6–21.2]	18.5	[15.8–21]	Germany
4.2	[2.5–6.4]	16.0	[12.2–20.2]	10.1	[7.8–12.3]	Ghana
20.0	[15–25.4]	22.6	[17.3–28.4]	21.3	[17.6–25.1]	Greece
15.4	[10.7–20.7]	31.8	[25–38.7]	23.6	[19.6–28.1]	Grenada
11.7	[8.2–16.2]	22.1	[17.3–27.3]	17.1	[14.1–20.3]	Guatemala
2.8	[1.7–4.3]	8.8	[6.4–11.5]	5.8	[4.2–7.3]	Guinea
3.0	[1.8–4.7]	9.2	[6.5–12.3]	6.1	[4.6–7.7]	Guinea–Bissau
12.1	[7.9–17]	29.3	[22.7–36.6]	20.5	[16.4–24.7]	Guyana
6.0	[3.4–9.5]	14.6	[10.3–19.7]	10.4	[7.6–13.3]	Haiti
11.0	[7.6–15]	21.9	[17.2–27.1]	16.5	[13.5–19.5]	Honduras
22.1	[17.1–27.9]	22.8	[16.7–29.6]	22.5	[17.9–26.7]	Hungary
22.4	[16.9–28.2]	20.2	[15.1–25.9]	21.3	[17.4–25.2]	Iceland
2.5	[1.6–3.7]	5.6	[4.1–7.4]	4.0	[3.1–5]	India
2.5	[1.5–3.8]	6.1	[4.1–8.6]	4.3	[3–5.5]	Indonesia
18.0	[14.4–21.8]	29.9	[25.5–34.4]	23.9	[21.3–26.9]	Iran (Islamic Republic of)
14.7	[10.6–19.8]	27.5	[21.8–33.7]	21.0	[17.1–24.5]	Iraq
23.3	[18.7–28.5]	22.8	[18–27.8]	23.1	[19.6–26.3]	Ireland
21.5	[16.6–26.9]	25.5	[20–31.3]	23.5	[19.8–27.6]	Israel
18.8	[14.9–23]	20.3	[16–24.9]	19.6	[16.4–22.5]	Italy
15.7	[11.4–20.6]	33.0	[27.1–39.1]	24.5	[20.9–28.3]	Jamaica
2.9	[1.9–4.1]	2.9	[2–4.1]	2.9	[2.1–3.6]	Japan
20.4	[15.6–25.9]	36.2	[30.8–41.6]	28.1	[24.4–31.7]	Jordan
18.8	[13.1–25]	23.4	[17.4–30]	21.2	[16.8–25.8]	Kazakhstan
2.4	[1.3–3.9]	8.9	[6.2–12]	5.6	[4.1–7.2]	Kenya
31.5	[24.6–38.9]	47.2	[40.2–54.3]	39.2	[34.2–43.9]	Kiribati
32.5	[26.8–38.4]	43.2	[36.7–49.6]	36.8	[32.4–40.9]	Kuwait
10.1	[6.3–14.8]	15.7	[11.3–20.8]	13.0	[9.7–16.2]	Kyrgyzstan
1.4	[0.8–2.4]	3.6	[2.3–5.4]	2.5	[1.6–3.5]	Lao People's Democratic Republic
19.6	[14.2–25.7]	24.4	[17.4–32]	22.2	[17.3–26.7]	Latvia
23.0	[17.8–28.7]	34.0	[27.8–40.1]	28.4	[24.1–32.3]	Lebanon
3.4	[2–5.3]	21.8	[16.5–27.8]	12.8	[9.8–15.6]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Obesity (BMI ≥ 30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	2.0	[1.2–3.3]	7.4	[5.2–10.1]	4.7	[3.4–6.1]
Libya	EMR	21.9	[17.5–26.8]	34.1	[28.5–39.8]	27.9	[24.1–31.6]
Lithuania	EUR	20.9	[15.4–27.1]	28.7	[21.5–36.3]	25.1	[20.1–29.8]
Luxembourg	EUR	25.5	[20.2–31.2]	19.4	[14.4–24.9]	22.4	[18.8–26.2]
Madagascar	AFR	1.7	[0.9–2.7]	5.9	[3.8–8.2]	3.8	[2.5–5]
Malawi	AFR	1.2	[0.6–1.9]	5.8	[4–7.9]	3.5	[2.4–4.4]
Malaysia	WPR	7.7	[5.3–10.8]	12.1	[8.8–16]	10.0	[7.4–12.1]
Maldives	SEAR	3.4	[1.7–5.9]	8.0	[4.9–12.1]	5.7	[3.6–7.7]
Mali	AFR	2.6	[1.5–4.1]	6.9	[4.9–9.3]	4.7	[3.4–5.9]
Malta	EUR	24.1	[18.4–30.4]	29.3	[22.7–36.4]	26.7	[22.1–31.3]
Marshall Islands	WPR	35.1	[28.4–42]	47.0	[39.9–53.9]	40.9	[35.8–45.7]
Mauritania	AFR	4.4	[2.6–6.7]	10.1	[7.2–13.8]	7.2	[5.4–9.2]
Mauritius	AFR	9.7	[6.3–14]	21.6	[16.2–27.6]	15.7	[12.3–19.1]
Mexico	AMR	19.8	[15.8–24.2]	29.9	[25.3–34.5]	25.0	[21.9–28]
Micronesia (Federated States of)	WPR	25.5	[20.1–31.2]	38.3	[32.3–44.4]	31.8	[27.7–35.9]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	11.0	[7.3–15.3]	14.8	[10.5–19.6]	12.9	[10–15.8]
Montenegro	EUR	18.5	[13.5–24.3]	21.3	[15.3–28.2]	19.9	[15.9–24.3]
Morocco	EMR	13.4	[9.6–17.7]	24.5	[19.4–29.8]	19.1	[15.7–22.5]
Mozambique	AFR	1.3	[0.7–2.2]	6.0	[4.1–8.3]	3.7	[2.6–4.9]
Myanmar	SEAR	1.0	[0.5–1.7]	3.0	[1.8–4.6]	2.0	[1.2–2.8]
Namibia	AFR	6.4	[4–9.4]	22.7	[17.1–28.6]	14.8	[11.4–18.1]
Nauru	WPR	39.5	[31.4–48.1]	50.3	[42.2–57.9]	44.8	[39.2–50.6]
Nepal	SEAR	1.5	[0.8–2.5]	3.4	[2.1–4.9]	2.5	[1.6–3.2]
Netherlands	EUR	21.0	[16.4–25.8]	18.7	[14.4–23.4]	19.9	[16.7–23]
New Zealand	WPR	25.7	[21.6–30.1]	29.6	[25.3–34.2]	27.7	[24.7–30.8]
Nicaragua	AMR	8.7	[5.8–12.4]	19.1	[14.5–24.2]	14.0	[11–16.9]
Niger	AFR	1.6	[0.8–2.6]	4.8	[3.3–6.7]	3.2	[2.2–4.1]
Nigeria	AFR	4.1	[2.7–5.9]	11.6	[8.9–14.8]	7.8	[6.1–9.4]
Niue	WPR	34.2	[28.2–40.6]	46.3	[39.7–52.7]	40.1	[35.8–44.3]
Norway	EUR	23.8	[19–28.8]	22.5	[17.7–27.2]	23.1	[19.9–26.6]
Oman	EMR	20.8	[16–26.1]	30.0	[24.3–36]	24.6	[21–28.6]
Pakistan	EMR	2.8	[1.6–4.5]	5.4	[3.7–7.8]	4.1	[2.8–5.4]
Palau	WPR	40.8	[34.1–47.7]	50.2	[43.1–57]	45.4	[40.8–50.1]
Panama	AMR	17.1	[12.8–22.1]	29.3	[23.5–35.4]	23.1	[19.7–26.9]
Papua New Guinea	WPR	18.8	[13.3–25]	28.8	[22.3–35.6]	23.7	[19.6–27.9]
Paraguay	AMR	10.7	[7.1–15]	15.9	[11.3–21.4]	13.3	[10.4–16.7]
Peru	AMR	12.8	[8.8–17.5]	22.3	[17.7–27.1]	17.5	[14.2–20.6]
Philippines	WPR	2.6	[1.6–4.1]	4.9	[3.2–7.2]	3.8	[2.6–5]
Poland	EUR	21.8	[17–27.1]	26.9	[21–33.5]	24.5	[20.2–28.3]
Portugal	EUR	19.0	[13.9–24.5]	21.0	[15.6–26.8]	20.0	[15.9–23.9]
Qatar	EMR	34.3	[28.1–40.8]	43.8	[36.9–50.8]	36.6	[30.9–41.8]
Republic of Korea	WPR	3.7	[2.3–5.4]	5.4	[3.6–7.6]	4.6	[3.2–5.8]
Republic of Moldova	EUR	10.1	[6.5–14.7]	17.8	[12.3–23.9]	14.1	[10.6–17.8]
Romania	EUR	19.2	[14–24.9]	23.4	[17.1–30.3]	21.3	[17–25.9]
Russian Federation	EUR	18.2	[13.6–23]	28.6	[22.5–34.6]	23.8	[19.7–27.4]
Rwanda	AFR	0.8	[0.4–1.6]	4.1	[2.6–6.2]	2.5	[1.6–3.6]
Saint Kitts and Nevis	AMR	18.1	[12.8–24.4]	33.0	[25.8–40.6]	25.6	[20.6–30.4]
Saint Lucia	AMR	16.1	[10.9–22.3]	30.4	[23.3–37.9]	23.4	[18.5–28.1]
Saint Vincent and the Grenadines	AMR	14.8	[10.5–20]	27.7	[21.5–34.6]	21.2	[17.1–25.2]

## Annex 4.7a: Overweight and Obesity

Obesity (BMI $\geq$ 30) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
2.3	[1.3–3.7]	8.6	[6.1–11.7]	5.4	[3.9–6.8]	Liberia
23.5	[18.9–28.6]	36.7	[31.1–42.5]	30.0	[26.3–33.8]	Libya
20.3	[15–26.4]	26.7	[19.9–34.1]	23.8	[19.1–28.3]	Lithuania
23.9	[18.8–29.3]	17.9	[13.2–23]	20.8	[17.5–24.4]	Luxembourg
1.9	[1.1–3.1]	7.0	[4.6–9.8]	4.5	[3.1–5.8]	Madagascar
1.4	[0.7–2.3]	7.0	[4.9–9.5]	4.2	[3–5.4]	Malawi
7.9	[5.5–11.2]	13.0	[9.5–17.1]	10.5	[8.2–12.8]	Malaysia
3.9	[2–6.7]	9.5	[5.9–14.2]	6.7	[4.5–9.1]	Maldives
3.1	[1.8–4.8]	8.4	[6–11.2]	5.7	[4.3–7.2]	Mali
22.6	[17.1–28.7]	26.9	[20.6–33.8]	24.7	[20.4–29.1]	Malta
35.6	[28.9–42.7]	47.8	[40.7–54.7]	41.7	[36.7–46.5]	Marshall Islands
4.9	[2.9–7.4]	11.6	[8.3–15.7]	8.2	[5.8–10.3]	Mauritania
9.3	[6–13.5]	20.7	[15.4–26.5]	15.0	[11.6–18.2]	Mauritius
20.7	[16.6–25.1]	30.7	[26.1–35.4]	25.9	[22.4–29.2]	Mexico
29.2	[23.2–35.4]	42.4	[36.2–48.6]	35.6	[31.4–39.9]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
12.2	[8.1–17]	16.5	[11.8–21.6]	14.4	[10.9–17.7]	Mongolia
17.7	[12.8–23.2]	19.8	[14.1–26.3]	18.7	[14.6–22.6]	Montenegro
14.1	[10.1–18.7]	26.0	[20.6–31.4]	20.2	[16.7–23.6]	Morocco
1.5	[0.8–2.5]	7.1	[4.9–9.7]	4.4	[3–5.6]	Mozambique
1.0	[0.5–1.8]	3.1	[1.9–4.9]	2.1	[1.3–3]	Myanmar
7.3	[4.7–10.7]	25.7	[19.6–32.1]	16.8	[13.5–20.5]	Namibia
39.9	[31.7–48.6]	51.0	[43–58.6]	45.4	[39.7–51.1]	Nauru
1.6	[0.8–2.6]	3.8	[2.4–5.6]	2.7	[1.8–3.7]	Nepal
19.4	[15.1–23.9]	16.7	[12.8–21.1]	18.0	[15–21]	Netherlands
24.8	[20.8–29.2]	28.1	[24–32.6]	26.5	[23.4–29.6]	New Zealand
9.8	[6.6–13.9]	21.5	[16.6–27]	15.7	[12.6–19]	Nicaragua
1.7	[0.9–2.8]	5.8	[4–8]	3.7	[2.7–4.8]	Niger
4.6	[3–6.6]	13.4	[10.3–16.9]	8.9	[7.1–10.8]	Nigeria
35.0	[28.9–41.4]	47.3	[40.7–53.5]	41.0	[36.2–45.5]	Niue
22.4	[17.9–27.3]	20.7	[16.2–25.3]	21.6	[18.3–24.7]	Norway
23.9	[18.9–29.3]	34.9	[29–40.9]	28.4	[24.5–32.1]	Oman
3.2	[1.8–5.1]	6.4	[4.4–9.1]	4.7	[3.3–6.2]	Pakistan
41.4	[34.6–48.4]	51.0	[44–57.7]	46.1	[41.1–51.2]	Palau
17.6	[13.2–22.6]	30.0	[24.1–36.1]	23.7	[20–27.7]	Panama
20.9	[14.9–27.6]	31.7	[24.9–38.7]	26.2	[21.3–30.5]	Papua New Guinea
11.6	[7.8–16.2]	17.5	[12.6–23.4]	14.5	[11.3–18]	Paraguay
13.5	[9.3–18.4]	23.5	[18.7–28.4]	18.5	[15.3–21.8]	Peru
2.8	[1.7–4.4]	5.5	[3.6–7.9]	4.1	[2.8–5.4]	Philippines
21.0	[16.2–26.2]	25.1	[19.4–31.3]	23.1	[19–27.1]	Poland
17.8	[13–23]	18.9	[14–24.3]	18.4	[14.8–22.1]	Portugal
35.4	[29.3–41.6]	46.5	[39.9–53.1]	38.1	[33.2–43.3]	Qatar
3.5	[2.2–5.1]	4.9	[3.3–7]	4.2	[3.1–5.4]	Republic of Korea
10.0	[6.4–14.4]	16.9	[11.6–22.7]	13.6	[10.1–17.1]	Republic of Moldova
18.5	[13.5–24]	21.7	[15.9–28.3]	20.2	[16.3–24.4]	Romania
17.6	[13.1–22.4]	26.2	[20.4–32.1]	22.2	[18.6–26.2]	Russian Federation
1.0	[0.4–1.9]	5.2	[3.3–7.8]	3.1	[2–4.4]	Rwanda
18.3	[12.9–24.7]	33.1	[25.8–40.7]	25.7	[21–30.6]	Saint Kitts and Nevis
16.3	[11–22.5]	30.7	[23.6–38.2]	23.6	[19.2–28.1]	Saint Lucia
15.1	[10.7–20.4]	28.6	[22.3–35.7]	21.8	[17.6–25.9]	Saint Vincent and the Grenadines



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Obesity (BMI ≥ 30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	32.4	[25.8–39.4]	48.1	[41.5–54.9]	40.0	[35.1–44.4]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	4.1	[2.6–6.2]	13.1	[9.7–16.9]	8.7	[6.6–10.8]
Saudi Arabia	EMR	26.0	[20.9–31.4]	35.4	[29.7–41.4]	30.1	[25.9–33.8]
Senegal	AFR	3.5	[2.1–5.2]	10.7	[7.9–13.9]	7.1	[5.4–8.7]
Serbia	EUR	17.5	[13–22.9]	20.7	[15.1–26.9]	19.2	[15.4–23.5]
Seychelles	AFR	14.4	[9.4–20.1]	32.4	[25.4–40]	23.2	[18.7–28]
Sierra Leone	AFR	2.3	[1.4–3.4]	8.3	[6.1–10.9]	5.3	[4–6.7]
Singapore	WPR	4.8	[3.2–6.8]	6.1	[4.1–8.6]	5.4	[4–6.9]
Slovakia	EUR	22.6	[17.2–28.6]	26.5	[19.9–33.2]	24.6	[20.4–28.9]
Slovenia	EUR	23.8	[17.5–30.6]	26.5	[19.1–34.6]	25.2	[19.8–30.5]
Solomon Islands	WPR	17.9	[12.9–23.6]	28.6	[22.5–34.9]	23.2	[18.9–27.5]
Somalia	EMR	1.7	[0.8–3]	5.0	[3–7.6]	3.3	[2–4.6]
South Africa	AFR	11.8	[8.9–15.2]	33.1	[28.1–37.9]	22.8	[19.7–25.8]
South Sudan	AFR	3.0	[1.8–4.8]	7.9	[5.3–11]	5.4	[3.8–7.2]
Spain	EUR	22.6	[18.1–27.4]	25.7	[20.8–30.9]	24.2	[20.7–27.7]
Sri Lanka	SEAR	2.3	[1.3–3.8]	7.5	[4.8–10.9]	4.9	[3.3–6.5]
Sudan	EMR	3.0	[1.8–4.8]	7.9	[5.3–11]	5.4	[3.8–7.2]
Suriname	AMR	16.2	[11.6–21.5]	29.8	[23.2–36.9]	23.0	[18.6–27.4]
Swaziland	AFR	4.9	[3–7.5]	21.2	[15.6–27.4]	13.2	[10–16.4]
Sweden	EUR	21.5	[17.1–26.3]	18.9	[14.6–23.6]	20.2	[16.8–23.2]
Switzerland	EUR	21.7	[17.1–26.6]	17.2	[12.7–21.8]	19.4	[16–22.7]
Syrian Arab Republic	EMR	13.8	[10.1–18.1]	24.3	[19–30.1]	18.9	[15.6–22.2]
Tajikistan	EUR	7.5	[4.4–11.5]	13.2	[9.1–18.1]	10.3	[7.6–13.3]
Thailand	SEAR	4.4	[2.8–6.5]	9.7	[6.9–13.3]	7.1	[5.1–9]
the former Yugoslav Republic of Macedonia	EUR	17.1	[12.3–22.8]	21.1	[15–28]	19.1	[15.2–23.2]
Timor-Leste	SEAR	0.8	[0.4–1.4]	2.1	[1.2–3.3]	1.4	[0.8–2]
Togo	AFR	2.2	[1.4–3.4]	8.5	[6.1–11.3]	5.4	[4–6.8]
Tonga	WPR	32.1	[25.6–39.1]	46.8	[40.2–53.5]	39.5	[34.7–44.2]
Trinidad and Tobago	AMR	19.3	[12.2–27.6]	35.0	[26.2–44.5]	27.2	[21.5–33.2]
Tunisia	EMR	17.2	[13.1–21.5]	30.5	[25.1–36]	23.9	[20.5–27.4]
Turkey	EUR	19.7	[16–23.9]	32.9	[28.2–37.7]	26.4	[23.2–29.6]
Turkmenistan	EUR	13.1	[8.8–17.9]	18.8	[13.7–24.4]	16.0	[12.5–19.5]
Tuvalu	WPR	31.7	[25–38.4]	43.6	[36.8–50.6]	37.5	[32.8–42.6]
Uganda	AFR	1.0	[0.5–1.9]	4.9	[3.1–7.2]	2.9	[1.8–4]
Ukraine	EUR	15.7	[10.8–21.5]	23.6	[16.8–31]	20.0	[15.6–24.5]
United Arab Emirates	EMR	26.3	[20.5–32.7]	36.0	[29.4–42.8]	29.1	[24.5–33.6]
United Kingdom	EUR	25.5	[22.2–28.9]	28.5	[25.1–31.9]	27.0	[24.5–29.5]
United Republic of Tanzania	AFR	1.9	[1.1–3]	7.4	[5.5–9.8]	4.6	[3.5–5.8]
United States of America	AMR	30.8	[26.7–35.1]	34.0	[29.8–38.4]	32.4	[29.3–35.4]
Uruguay	AMR	20.1	[14.8–26.2]	28.7	[22.3–35.5]	24.6	[20–28.9]
Uzbekistan	EUR	9.4	[5.9–13.9]	15.0	[10.4–20.3]	12.2	[9.4–15.5]
Vanuatu	WPR	24.8	[19.2–30.7]	36.2	[30–42.4]	30.4	[25.5–34.6]
Venezuela (Bolivarian Republic of)	AMR	18.1	[13.7–23.1]	26.9	[21.7–32.4]	22.5	[19.2–26.1]
Viet Nam	WPR	1.5	[0.8–2.5]	3.3	[1.9–5.2]	2.4	[1.4–3.3]
Yemen	EMR	8.0	[5–11.9]	17.9	[12.6–23.9]	12.9	[9.8–15.9]
Zambia	AFR	2.4	[1.3–3.7]	9.0	[6.4–12]	5.7	[4.2–7.1]
Zimbabwe	AFR	1.7	[0.9–3]	13.4	[9.4–18.1]	7.7	[5.2–9.9]

## Annex 4.7a: Overweight and Obesity

Obesity (BMI $\geq$ 30) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
34.0	[27.2–41.3]	50.0	[43.4–56.7]	41.8	[37.1–46.7]	Samoa
...	...	...	...	...	...	San Marino
5.0	[3.1–7.5]	15.7	[11.7–20.1]	10.4	[8.1–12.7]	Sao Tome and Principe
26.8	[21.8–32.4]	38.8	[33–44.7]	32.0	[28.1–36.1]	Saudi Arabia
4.2	[2.6–6.2]	12.7	[9.5–16.5]	8.5	[6.6–10.5]	Senegal
16.7	[12.4–21.8]	19.1	[13.7–24.9]	17.9	[14.2–21.4]	Serbia
14.2	[9.2–20]	32.1	[25.3–39.7]	23.0	[18.4–27.3]	Seychelles
2.6	[1.6–3.8]	9.8	[7.3–12.7]	6.2	[4.7–7.8]	Sierra Leone
4.4	[2.9–6.4]	5.6	[3.8–7.9]	5.0	[3.7–6.3]	Singapore
21.8	[16.5–27.7]	24.9	[18.5–31.4]	23.4	[18.9–27.5]	Slovakia
22.2	[16.3–28.8]	24.2	[17.4–31.8]	23.2	[18.4–28.2]	Slovenia
20.1	[14.5–26.3]	32.2	[25.8–38.8]	26.1	[21.7–30.4]	Solomon Islands
1.9	[0.9–3.4]	5.9	[3.5–9]	3.9	[2.3–5.5]	Somalia
12.9	[9.8–16.6]	34.7	[29.6–39.7]	24.1	[21.3–27.3]	South Africa
3.4	[2–5.5]	9.2	[6.3–12.7]	6.3	[4.4–8.1]	South Sudan
21.1	[16.8–25.5]	23.1	[18.5–28.1]	22.1	[18.7–25.4]	Spain
2.3	[1.3–3.8]	7.3	[4.7–10.7]	4.8	[3.3–6.4]	Sri Lanka
3.4	[2–5.5]	9.2	[6.3–12.7]	6.3	[4.4–8.1]	Sudan
16.5	[11.8–21.9]	30.2	[23.6–37.4]	23.4	[19–27.3]	Suriname
6.2	[3.8–9.3]	25.2	[19–32]	15.9	[12.2–19.7]	Swaziland
20.4	[16.2–24.9]	17.2	[13.2–21.5]	18.8	[15.7–21.8]	Sweden
20.2	[15.9–24.7]	15.5	[11.5–19.8]	17.8	[15–20.9]	Switzerland
15.5	[11.4–20.1]	27.5	[21.9–33.3]	21.3	[17.8–24.8]	Syrian Arab Republic
8.6	[5–13.1]	15.6	[10.9–21]	12.1	[8.8–15.2]	Tajikistan
4.1	[2.7–6.2]	9.1	[6.5–12.4]	6.7	[4.8–8.4]	Thailand
16.5	[11.8–22.1]	19.9	[14.1–26.5]	18.2	[14.3–22.3]	the former Yugoslav Republic of Macedonia
0.9	[0.4–1.6]	2.5	[1.4–3.9]	1.7	[1–2.4]	Timor–Leste
2.6	[1.6–3.9]	10.2	[7.4–13.4]	6.5	[4.8–8.2]	Togo
34.3	[27.6–41.5]	49.0	[42.3–55.6]	41.6	[36.8–46.4]	Tonga
19.1	[12.1–27.4]	34.6	[25.8–44]	27.0	[21.2–32.9]	Trinidad and Tobago
17.8	[13.6–22.2]	31.3	[25.9–36.9]	24.6	[21–27.8]	Tunisia
20.4	[16.6–24.7]	33.4	[28.7–38.2]	27.0	[24–30.2]	Turkey
14.4	[9.7–19.5]	20.6	[15.2–26.5]	17.6	[13.9–21.6]	Turkmenistan
32.4	[25.7–39.2]	44.6	[37.8–51.6]	38.4	[33.5–43.3]	Tuvalu
1.2	[0.6–2.3]	6.3	[4.1–9.1]	3.7	[2.3–5.1]	Uganda
15.3	[10.5–20.8]	21.7	[15.3–28.7]	18.7	[14.4–22.8]	Ukraine
30.9	[25.1–36.8]	43.2	[36.9–49.3]	34.5	[29.9–39.1]	United Arab Emirates
24.1	[21–27.5]	26.8	[23.6–30.2]	25.5	[23.3–27.7]	United Kingdom
2.2	[1.3–3.5]	9.0	[6.7–11.8]	5.6	[4.2–6.9]	United Republic of Tanzania
29.8	[25.8–34.1]	32.5	[28.4–36.9]	31.2	[28.2–34.2]	United States of America
19.8	[14.6–25.7]	27.5	[21.2–34.1]	23.8	[19.3–28.2]	Uruguay
10.5	[6.5–15.4]	16.8	[11.8–22.4]	13.6	[10.2–17.1]	Uzbekistan
27.1	[21.1–33.5]	39.7	[33.3–46]	33.3	[28.7–37.6]	Vanuatu
18.8	[14.2–23.8]	27.9	[22.6–33.5]	23.3	[19.5–27.2]	Venezuela (Bolivarian Republic of)
1.5	[0.8–2.5]	3.6	[2–5.5]	2.6	[1.5–3.5]	Viet Nam
9.8	[6.1–14.4]	21.8	[15.8–28.6]	15.7	[12.1–19.5]	Yemen
2.8	[1.6–4.4]	11.4	[8.2–15.1]	7.1	[5.1–9]	Zambia
2.2	[1.1–3.8]	17.1	[12.1–22.7]	9.7	[7.1–12.4]	Zimbabwe

## 4.7b Overweight and Obesity

Comparable estimates of prevalence of overweight and obesity  
(population aged 18+ years), 2014

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	11.8	[7.6–16.8]	16.1	[11.7–21.6]	13.9	[10.6–17]
Albania	EUR	57.8	[49.8–65.7]	49.2	[40.3–57.8]	53.5	[47.7–59.5]
Algeria	AFR	53.9	[46.5–61]	60.3	[53–67.1]	57.1	[51.6–61.6]
Andorra	EUR	76.0	[69.3–81.7]	66.5	[58.5–74]	71.2	[66.4–76.1]
Angola	AFR	21.1	[14.2–29.1]	33.1	[25–41.8]	27.1	[21.5–32.8]
Antigua and Barbuda	AMR	55.3	[45.4–65.1]	68.7	[59.6–77.1]	62.1	[55.2–68.2]
Argentina	AMR	63.9	[56.4–70.9]	60.6	[52.7–68.2]	62.2	[56.8–67.2]
Armenia	EUR	56.1	[47.6–64.3]	56.4	[48.3–64.4]	56.2	[50.4–62.1]
Australia	WPR	72.0	[66.8–77.1]	60.9	[55.3–66.4]	66.4	[62.7–70.1]
Austria	EUR	64.4	[56.7–71.6]	49.2	[41.8–56.7]	56.6	[52–62]
Azerbaijan	EUR	56.3	[47.6–64.7]	58.4	[50.3–66.2]	57.4	[51.6–63]
Bahamas	AMR	66.4	[59.2–73.3]	72.4	[65.3–78.6]	69.5	[64.5–74.6]
Bahrain	EMR	69.2	[62.6–75.4]	72.1	[65.8–77.9]	70.3	[65.6–74.8]
Bangladesh	SEAR	14.4	[9.9–19.7]	19.6	[14.7–25.2]	17.0	[13.4–20.5]
Barbados	AMR	59.2	[49.4–68.6]	70.6	[61.9–78.4]	64.9	[58.4–70.9]
Belarus	EUR	63.1	[54.8–71.2]	59.2	[50.1–67.6]	61.0	[54.7–67]
Belgium	EUR	69.0	[62.1–75.5]	52.3	[44.6–59.9]	60.5	[55.3–65.8]
Belize	AMR	45.4	[37.2–53.9]	55.5	[47.4–63.6]	50.5	[44.9–56]
Benin	AFR	18.1	[13.3–23.5]	33.7	[28–39.5]	25.9	[22.2–29.8]
Bhutan	SEAR	23.3	[17.3–30.3]	26.6	[20.8–33.2]	24.8	[20.5–29.2]
Bolivia (Plurinational State of)	AMR	45.3	[37.2–53.7]	53.4	[45.6–61.2]	49.3	[43.9–55.1]
Bosnia and Herzegovina	EUR	57.4	[48.4–66.2]	51.9	[42.4–60.9]	54.6	[48–61.2]
Botswana	AFR	33.1	[25.6–41.3]	53.2	[45.3–61]	43.0	[37.2–48.2]
Brazil	AMR	55.3	[47.9–62.6]	53.2	[46.1–60.2]	54.2	[49.1–59.5]
Brunei Darussalam	WPR	48.3	[38.5–58.5]	47.2	[37.5–56.7]	47.8	[40.7–54.3]
Bulgaria	EUR	67.8	[59.6–75.1]	59.7	[50.4–68.3]	63.6	[57.4–69.5]
Burkina Faso	AFR	15.2	[10.7–20.4]	26.1	[20.8–31.8]	20.7	[16.9–24.5]
Burundi	AFR	7.4	[4.2–11.5]	19.3	[14–25.3]	13.4	[10.1–16.9]
Cabo Verde	AFR	29.1	[22.6–36.1]	38.9	[32.1–45.6]	34.0	[29–38.5]
Cambodia	WPR	12.1	[7.9–17.2]	20.6	[15.2–26.5]	16.4	[12.7–20.2]
Cameroon	AFR	22.1	[16.3–28.6]	36.9	[31–43.1]	29.5	[25.1–33.8]
Canada	AMR	72.0	[66.2–77.5]	63.4	[57.2–69.3]	67.7	[63.7–71.9]
Central African Republic	AFR	13.2	[8.1–19.2]	25.3	[18.7–32.6]	19.3	[15.2–23.8]
Chad	AFR	15.2	[10.6–20.7]	29.0	[22.8–35.3]	22.1	[18.3–26]
Chile	AMR	63.9	[56.7–71]	64.4	[57–71.2]	64.2	[59.2–69.3]
China	WPR	37.2	[30.2–44.6]	33.6	[26.6–41.1]	35.4	[30.4–40.8]
Colombia	AMR	53.2	[45.9–60.3]	58.3	[51.5–64.8]	55.8	[50.8–60.6]
Comoros	AFR	14.3	[9.9–19.6]	30.7	[25–37]	22.5	[18.6–26.4]
Congo	AFR	24.6	[17.4–33]	36.4	[28.6–44.2]	30.5	[25.1–35.6]
Cook Islands	WPR	78.2	[72.4–83.3]	81.9	[76.8–86.2]	80.0	[76.3–83.2]
Costa Rica	AMR	58.0	[50.9–65]	61.9	[55.2–68.3]	59.9	[55.1–64.7]
Côte d'Ivoire	AFR	21.8	[16.1–28.1]	33.7	[27.9–39.9]	27.6	[23.6–32]
Croatia	EUR	67.8	[59.9–75]	58.4	[49.2–67.1]	62.9	[57.4–68.5]
Cuba	AMR	57.3	[47.9–66.3]	66.6	[58.2–74.4]	61.9	[56.2–68.8]
Cyprus	EUR	64.7	[56.8–71.9]	58.7	[50.7–66.4]	61.8	[56.7–67.1]
Czech Republic	EUR	72.8	[65.6–79.5]	61.8	[52.8–70.2]	67.2	[61.7–72.7]



... Indicates no data were available

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
13.4	[8.8–19.2]	19.1	[14.1–25.2]	16.2	[12.1–19.9]	Afghanistan
57.5	[49.5–65.4]	47.9	[38.9–56.4]	52.7	[47.1–57.9]	Albania
55.7	[48.2–62.9]	62.6	[55.4–69.3]	59.1	[54.5–64.1]	Algeria
72.0	[65.5–77.8]	61.9	[53.9–69.3]	66.9	[62.2–72]	Andorra
23.9	[16.2–33]	37.8	[29–47.1]	30.9	[24.8–37.1]	Angola
55.4	[45.5–65.2]	68.3	[59.1–76.7]	61.9	[55.4–68.4]	Antigua and Barbuda
63.9	[56.4–71]	59.7	[51.7–67.4]	61.7	[56.5–67.7]	Argentina
56.3	[47.8–64.4]	54.7	[46.7–62.7]	55.5	[49.6–61.7]	Armenia
69.9	[64.7–75]	58.1	[52.4–63.7]	64.0	[60.6–67.9]	Australia
61.1	[53.6–68.2]	45.4	[38.2–52.8]	53.1	[47.9–58.3]	Austria
57.4	[48.5–65.8]	58.7	[50.6–66.6]	58.1	[51.7–64.1]	Azerbaijan
66.3	[59.1–73.2]	71.5	[64.4–77.8]	69.0	[64.1–73.8]	Bahamas
70.2	[63.9–76]	74.0	[68.1–79.5]	71.7	[67.4–76.2]	Bahrain
15.0	[10.3–20.6]	21.3	[16.1–27.3]	18.1	[14.4–21.9]	Bangladesh
57.2	[47.4–66.3]	67.4	[58.6–75.4]	62.3	[56.4–68.7]	Barbados
61.2	[53–69.2]	55.2	[46.3–63.6]	58.0	[52.5–64.2]	Belarus
65.7	[59–72.1]	48.4	[40.9–55.7]	56.9	[51.6–62.1]	Belgium
48.5	[39.8–57.4]	59.1	[51–67.1]	53.8	[47.9–59.5]	Belize
20.0	[14.7–25.9]	37.7	[31.6–43.8]	28.9	[24.3–33.1]	Benin
24.6	[18.2–32.1]	30.0	[23.7–37]	27.1	[22.3–31.7]	Bhutan
48.2	[39.8–56.8]	56.0	[48.2–64]	52.1	[45.8–58.1]	Bolivia (Plurinational State of)
55.4	[46.6–64]	48.5	[39.2–57.4]	51.8	[44.8–58]	Bosnia and Herzegovina
37.1	[28.7–46.2]	59.0	[51–67]	48.0	[42–53.7]	Botswana
55.6	[48.2–62.8]	52.8	[45.7–59.8]	54.1	[48.7–59.3]	Brazil
47.5	[37.7–57.6]	46.5	[37.1–55.7]	47.0	[40.2–54.5]	Brunei Darussalam
64.1	[56.2–71.3]	54.4	[45.3–63]	59.1	[53–64.9]	Bulgaria
17.4	[12.4–23.2]	29.8	[24.1–36]	23.6	[19.6–27.6]	Burkina Faso
8.2	[4.7–12.9]	22.6	[16.8–28.9]	15.5	[12.2–19.1]	Burundi
31.8	[24.8–39.2]	41.9	[34.9–48.9]	36.9	[31.8–41.7]	Cabo Verde
13.1	[8.7–18.6]	21.9	[16.4–28.1]	17.6	[13.8–21.3]	Cambodia
25.1	[18.5–32.3]	41.8	[35.7–48.2]	33.5	[28.6–37.9]	Cameroon
69.0	[63.2–74.5]	59.8	[53.5–65.7]	64.4	[60.2–68.2]	Canada
14.6	[9.1–21.3]	28.4	[21.3–36.3]	21.6	[16.9–26.5]	Central African Republic
17.6	[12.3–23.8]	34.1	[27.4–41]	25.8	[21.1–30]	Chad
63.2	[56–70.3]	63.0	[55.5–69.9]	63.1	[58.3–68.4]	Chile
36.2	[29.4–43.6]	32.3	[25.4–39.7]	34.4	[29.6–39.3]	China
54.3	[46.9–61.4]	58.6	[51.9–65.1]	56.5	[51.6–61]	Colombia
15.4	[10.7–21.1]	33.8	[27.7–40.4]	24.6	[20.9–28.6]	Comoros
26.9	[19–36]	40.3	[32.1–48.5]	33.6	[28–39.4]	Congo
79.4	[73.6–84.4]	82.7	[77.6–86.9]	81.0	[77.6–84.8]	Cook Islands
58.5	[51.4–65.5]	62.3	[55.6–68.6]	60.4	[55.5–65.3]	Costa Rica
23.7	[17.5–30.4]	37.7	[31.6–44.2]	30.6	[26–35.2]	Côte d'Ivoire
64.4	[56.9–71.5]	53.6	[44.5–62.2]	58.8	[52.9–64.3]	Croatia
54.4	[45.4–63.3]	62.8	[54.4–70.6]	58.6	[53–64.1]	Cuba
63.6	[55.9–70.8]	56.9	[48.8–64.7]	60.3	[55–66.2]	Cyprus
69.6	[62.6–76.3]	57.3	[48.5–65.7]	63.4	[57.6–69]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	19.8	[11.9–29.7]	22.4	[14.5–31.4]	21.2	[15.4–27.3]
Democratic Republic of the Congo	AFR	12.0	[6.9–18.6]	24.3	[17.9–32.1]	18.2	[13.5–23.2]
Denmark	EUR	67.5	[60.7–74]	50.0	[42.6–57.5]	58.7	[53.7–63.6]
Djibouti	EMR	24.9	[17.1–33.7]	33.7	[25.4–42.3]	29.3	[23.7–34.8]
Dominica	AMR	53.5	[45.3–61.5]	63.6	[56.3–70.9]	58.6	[53.1–63.9]
Dominican Republic	AMR	51.2	[43–59.6]	58.4	[50.7–66]	54.8	[49.3–60.5]
Ecuador	AMR	50.1	[42.1–58.1]	55.5	[47.6–63.1]	52.8	[47.2–58.6]
Egypt	EMR	53.8	[46.7–61.1]	66.3	[59.7–72.3]	60.0	[55.3–65]
El Salvador	AMR	49.2	[41.9–56.5]	57.4	[50.6–64.1]	53.5	[48.8–58.6]
Equatorial Guinea	AFR	33.7	[23–45.4]	44.9	[34.1–55.8]	39.1	[31.6–46.5]
Eritrea	AFR	10.6	[6.9–14.9]	22.8	[17.3–28.9]	16.7	[13.1–20.5]
Estonia	EUR	64.2	[55.8–72.4]	56.9	[47.6–65.8]	60.3	[53.6–66.7]
Ethiopia	AFR	10.1	[6.5–14.4]	22.9	[17.6–28.9]	16.5	[13.1–20.2]
Fiji	WPR	66.8	[59.6–73.5]	74.0	[68.1–79.4]	70.4	[66.3–74.6]
Finland	EUR	65.6	[59.2–71.7]	53.4	[46.6–59.9]	59.4	[54.7–63.8]
France	EUR	69.9	[62.9–76.5]	58.6	[50.6–66.2]	64.1	[59.2–69.5]
Gabon	AFR	37.4	[27.7–47.2]	45.2	[36.8–53.8]	41.3	[34.3–47.7]
Gambia	AFR	22.7	[16.8–29.2]	34.1	[27.6–41]	28.5	[24.1–33.3]
Georgia	EUR	55.8	[47–64.4]	59.4	[51.2–67]	57.7	[51.7–63.8]
Germany	EUR	67.0	[60–73.5]	52.7	[45.8–59.7]	59.7	[54.9–64.3]
Ghana	AFR	21.5	[15.4–28.5]	39.9	[33.2–47.1]	30.8	[26–35.6]
Greece	EUR	69.6	[62.4–76.3]	60.2	[52.4–67.6]	64.9	[59.8–69.5]
Grenada	AMR	48.2	[39.8–56.7]	61.9	[53.9–69.7]	55.0	[49.5–60.8]
Guatemala	AMR	43.1	[35.7–50.8]	52.1	[45–59.1]	47.7	[42.6–52.8]
Guinea	AFR	16.7	[12.1–21.9]	29.3	[23.9–35.1]	23.0	[19.3–26.4]
Guinea-Bissau	AFR	17.7	[12.7–23.7]	29.3	[23.3–35.8]	23.5	[19.1–27.7]
Guyana	AMR	42.2	[33.5–51.3]	60.1	[51.4–68.1]	51.0	[45.2–57.3]
Haiti	AMR	29.4	[21–38.9]	41.4	[33.1–49.9]	35.5	[29.8–41.9]
Honduras	AMR	43.3	[35.6–50.9]	52.0	[45.2–58.9]	47.6	[42.2–52.4]
Hungary	EUR	69.4	[62.1–76.3]	57.8	[48.9–66.2]	63.3	[57.5–69]
Iceland	EUR	66.9	[59.5–73.8]	52.9	[44.8–60.6]	59.9	[54.7–65.3]
India	SEAR	19.0	[14.1–24.8]	23.9	[18.9–29.5]	21.4	[17.7–24.9]
Indonesia	SEAR	20.7	[15–27.5]	28.1	[21.9–34.9]	24.4	[19.9–28.9]
Iran (Islamic Republic of)	EMR	58.0	[51.5–64.2]	63.1	[56.9–69.2]	60.5	[56.2–64.9]
Iraq	EMR	48.7	[40.8–56.2]	57.8	[50.6–65.1]	53.2	[48.3–59]
Ireland	EUR	68.8	[62.1–75.1]	57.1	[50.4–64]	62.9	[58.1–67.6]
Israel	EUR	68.6	[61.8–75]	60.4	[52.7–67.8]	64.5	[59.4–69.6]
Italy	EUR	68.7	[61.8–75.2]	59.5	[52.2–66.7]	64.0	[58.7–68.7]
Jamaica	AMR	51.2	[43.2–59.1]	65.5	[58.2–72.3]	58.4	[53.1–63.9]
Japan	WPR	30.4	[24.2–37.1]	22.8	[17.8–28.4]	26.5	[22.3–30.6]
Jordan	EMR	58.9	[51.5–66]	66.0	[59.4–72]	62.3	[57.4–67]
Kazakhstan	EUR	59.8	[51.5–67.8]	57.7	[49.3–65.8]	58.7	[53.1–64.4]
Kenya	AFR	15.8	[11–21.3]	30.4	[24.3–36.9]	23.1	[19–27.1]
Kiribati	WPR	66.5	[58.8–73.2]	78.2	[72.4–83.2]	72.3	[67.5–77]
Kuwait	EMR	74.3	[67.8–80.2]	72.8	[66.3–78.7]	73.7	[69.4–78.1]
Kyrgyzstan	EUR	42.5	[34.2–51.2]	46.6	[38.7–54.3]	44.5	[38.6–50.7]
Lao People's Democratic Republic	WPR	13.6	[9.3–18.8]	20.0	[14.8–25.8]	16.8	[13.1–20.6]
Latvia	EUR	64.3	[55.8–72.1]	59.1	[49.3–67.8]	61.5	[55.3–67.7]
Lebanon	EMR	67.0	[60.4–73]	67.6	[61.1–73.6]	67.3	[62.9–71.7]
Lesotho	AFR	16.3	[11.3–22.1]	45.3	[37.8–53.1]	31.0	[26.4–35.5]



## Annex 4.7b: Overweight and Obesity

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
19.3	[11.5–28.9]	21.4	[13.8–30.2]	20.4	[14.3–25.9]	Democratic People's Republic of Korea
13.4	[7.8–20.7]	27.6	[20.6–35.8]	20.6	[15.6–25.4]	Democratic Republic of the Congo
64.4	[57.8–70.8]	46.2	[39–53.5]	55.2	[50.1–60.2]	Denmark
26.9	[18.6–36.3]	37.0	[28.2–46.2]	31.9	[25.5–38.2]	Djibouti
53.5	[45.3–61.6]	63.2	[55.8–70.5]	58.4	[52.7–63.7]	Dominica
52.7	[44.3–61.3]	59.9	[52.1–67.5]	56.3	[50.6–62.1]	Dominican Republic
51.5	[43.3–59.7]	56.7	[48.7–64.3]	54.1	[48.3–59.7]	Ecuador
55.8	[48.5–63.1]	68.2	[61.7–74.2]	62.0	[57.3–66.7]	Egypt
53.1	[45.5–60.7]	59.8	[52.9–66.5]	56.7	[51.5–61.6]	El Salvador
35.3	[24–47.6]	48.4	[37.2–59.8]	41.7	[33.6–50.5]	Equatorial Guinea
11.8	[7.7–16.6]	26.2	[20.2–32.7]	19.0	[15.2–23]	Eritrea
61.7	[53.5–69.7]	52.3	[43–61.2]	56.7	[50.4–62.7]	Estonia
11.5	[7.4–16.3]	26.3	[20.4–32.8]	18.9	[15.1–23.1]	Ethiopia
67.8	[60.5–74.4]	74.7	[68.8–80]	71.2	[66.5–75.3]	Fiji
62.1	[55.9–68.1]	48.6	[41.9–54.9]	55.2	[50.8–59.7]	Finland
67.1	[60.2–73.6]	54.7	[46.8–62.3]	60.7	[55.3–66]	France
40.6	[30.3–50.9]	49.0	[40.2–57.9]	44.8	[37.8–51.4]	Gabon
25.6	[19–32.7]	39.3	[32.3–46.8]	32.5	[27.6–37.2]	Gambia
54.3	[45.8–62.8]	56.0	[48–63.7]	55.2	[49.5–60.8]	Georgia
62.7	[55.9–69]	47.2	[40.6–54]	54.8	[49.9–59.6]	Germany
23.5	[16.9–31]	43.6	[36.5–50.8]	33.6	[28.4–38.6]	Ghana
65.8	[58.9–72.3]	55.2	[47.6–62.6]	60.5	[55.3–65.6]	Greece
50.6	[41.9–59.4]	64.5	[56.4–72.2]	57.5	[51.5–63.1]	Grenada
47.6	[39.7–55.9]	56.2	[49–63.2]	52.0	[46.6–57.5]	Guatemala
18.4	[13.4–24.1]	32.6	[26.8–38.6]	25.5	[21.9–29.5]	Guinea
19.4	[14–25.9]	32.6	[26.2–39.7]	26.1	[21.9–31]	Guinea-Bissau
43.9	[34.8–53.4]	62.1	[53.5–70.1]	52.9	[46.7–59.1]	Guyana
31.9	[22.9–41.8]	44.9	[36.4–53.9]	38.5	[32.1–45]	Haiti
46.9	[38.8–54.9]	56.0	[49.1–63]	51.5	[46–56.8]	Honduras
66.6	[59.4–73.4]	53.3	[44.5–61.6]	59.6	[54.2–65.1]	Hungary
65.2	[57.8–71.9]	50.5	[42.6–58.3]	57.9	[52.4–63.2]	Iceland
19.5	[14.4–25.4]	24.7	[19.6–30.4]	22.0	[18.3–25.5]	India
20.6	[14.9–27.5]	28.4	[22.2–35.2]	24.5	[20.4–28.9]	Indonesia
59.5	[53–65.8]	65.1	[59–71.2]	62.3	[57.8–66.9]	Iran (Islamic Republic of)
53.3	[45–61.2]	62.7	[55.7–69.7]	57.9	[52.6–63]	Iraq
66.2	[59.6–72.4]	54.6	[47.9–61.4]	60.3	[55.7–65.4]	Ireland
68.2	[61.3–74.7]	59.0	[51.2–66.4]	63.5	[58.6–68.7]	Israel
64.3	[57.5–70.7]	53.7	[46.3–60.9]	58.8	[53.7–63.5]	Italy
52.1	[44–60.2]	65.9	[58.6–72.7]	59.1	[53.9–63.8]	Jamaica
29.0	[23.1–35.3]	19.7	[15.1–24.9]	24.2	[20.7–28]	Japan
62.0	[54.5–69.1]	70.0	[63.6–75.8]	65.9	[61–70.9]	Jordan
60.5	[52.1–68.5]	57.1	[48.7–65.1]	58.8	[52.7–64.8]	Kazakhstan
17.7	[12.3–23.8]	34.6	[28.1–41.5]	26.2	[21.9–31]	Kenya
67.4	[59.7–74.3]	78.9	[73.2–83.9]	73.1	[68.6–77.7]	Kiribati
75.2	[68.9–80.6]	75.8	[69.8–81.1]	75.4	[71.3–79.4]	Kuwait
45.2	[36.3–54.5]	49.1	[41.1–56.9]	47.2	[41–53.1]	Kyrgyzstan
15.3	[10.4–21.1]	22.6	[17–28.7]	19.0	[15.5–23]	Lao People's Democratic Republic
62.0	[53.6–69.7]	54.5	[45–63.1]	57.9	[51.4–63.8]	Latvia
67.4	[60.8–73.4]	70.1	[63.7–75.9]	68.7	[64.1–73.2]	Lebanon
19.3	[13.5–26]	51.1	[43.2–59.2]	35.4	[30–40.8]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	15.9	[11–21.8]	29.5	[23.6–36.2]	22.6	[18.6–26.9]
Libya	EMR	65.0	[58.4–71]	69.0	[62.9–74.8]	67.0	[62.4–71.5]
Lithuania	EUR	64.2	[56.1–72]	61.7	[52.5–69.9]	62.8	[56.7–69.3]
Luxembourg	EUR	70.7	[63.6–77]	51.5	[43.7–59.2]	61.0	[55.8–66.4]
Madagascar	AFR	13.7	[9.5–18.7]	26.7	[20.9–33.2]	20.3	[16.4–24.1]
Malawi	AFR	11.2	[7.4–15.6]	26.8	[21.3–32.7]	19.0	[15.7–22.8]
Malaysia	WPR	36.2	[28.8–44.2]	38.3	[31–45.6]	37.3	[31.9–42.6]
Maldives	SEAR	24.1	[17.1–32.4]	30.6	[23.4–38.6]	27.4	[21.6–33]
Mali	AFR	16.9	[11.9–22.6]	27.2	[21.8–33.4]	22.0	[18.1–25.9]
Malta	EUR	71.6	[64.1–78.2]	63.7	[55.4–71.4]	67.6	[62.6–72.7]
Marshall Islands	WPR	71.7	[65.2–77.8]	78.2	[72.4–83.3]	74.9	[70.5–79.5]
Mauritania	AFR	23.3	[16.9–30.5]	32.3	[25.8–39.3]	27.8	[23–32.5]
Mauritius	AFR	39.5	[30.9–48.6]	53.9	[45.3–62.4]	46.8	[40.5–53.3]
Mexico	AMR	61.6	[55.3–67.9]	65.0	[58.8–70.9]	63.4	[59.1–67.8]
Micronesia (Federated States of)	WPR	57.1	[50.1–64]	69.1	[62.9–74.9]	63.0	[58.1–68]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	48.7	[40.7–57]	47.8	[39.8–55.5]	48.2	[42.8–53.7]
Montenegro	EUR	63.7	[55.5–71.4]	53.3	[44.2–62]	58.4	[52.6–64.5]
Morocco	EMR	50.5	[42.9–58]	59.6	[52.2–66.7]	55.1	[50.1–60.2]
Mozambique	AFR	11.9	[7.9–16.4]	26.6	[21.1–32.9]	19.4	[15.7–22.8]
Myanmar	SEAR	13.3	[8.8–19]	21.3	[15.9–27.3]	17.4	[13.4–21.2]
Namibia	AFR	27.1	[20.3–34.4]	50.4	[42.5–58.2]	39.1	[33.6–44.1]
Nauru	WPR	74.6	[66–81.8]	79.5	[72.6–85.3]	77.0	[71.9–82.2]
Nepal	SEAR	13.6	[9.4–18.8]	19.6	[15–25.2]	16.7	[13.5–20.3]
Netherlands	EUR	67.2	[60.2–73.6]	52.6	[45.3–59.6]	59.8	[54.9–64.6]
New Zealand	WPR	70.4	[64.8–75.6]	62.5	[56.9–68.1]	66.4	[62.2–70.4]
Nicaragua	AMR	40.7	[32.8–48.9]	51.3	[43.9–58.4]	46.1	[40.2–51.7]
Niger	AFR	11.8	[7.8–16.6]	23.1	[18.1–28.8]	17.4	[14.1–20.7]
Nigeria	AFR	23.6	[18–29.5]	36.9	[30.9–43]	30.1	[25.9–34.2]
Niue	WPR	70.2	[63.7–76.1]	77.5	[72.1–82.3]	73.8	[69.7–77.7]
Norway	EUR	67.9	[61.2–74.1]	55.2	[48.1–62.1]	61.6	[56.8–66.5]
Oman	EMR	58.8	[51.8–65.5]	64.0	[56.8–70.6]	60.6	[55.4–65.8]
Pakistan	EMR	19.1	[13.7–25.6]	22.7	[17.6–28.5]	20.8	[16.6–24.5]
Palau	WPR	76.6	[70.4–81.9]	80.3	[75–85]	78.4	[74.6–82.3]
Panama	AMR	58.4	[50.7–65.6]	65.2	[58.2–71.6]	61.7	[56.5–66.7]
Papua New Guinea	WPR	51.3	[42.9–59.8]	62.4	[54.7–69.6]	56.7	[51–62.4]
Paraguay	AMR	45.6	[37.9–53.7]	46.5	[38.5–54.3]	46.1	[40.3–51.4]
Peru	AMR	52.8	[44.7–60.9]	60.7	[53.6–67.4]	56.8	[51.4–62]
Philippines	WPR	19.9	[14.2–26.3]	24.7	[18.5–31.4]	22.3	[18.1–26.6]
Poland	EUR	68.2	[60.7–75.2]	60.5	[51.7–68.8]	64.2	[58.4–69.6]
Portugal	EUR	65.0	[57.1–72.7]	55.0	[46.6–62.8]	59.8	[54.6–65.2]
Qatar	EMR	76.6	[69.9–82.7]	76.6	[70.2–82.4]	76.6	[71.5–82.2]
Republic of Korea	WPR	38.4	[31.3–45.7]	32.6	[25.5–40]	35.5	[30.7–40.6]
Republic of Moldova	EUR	47.3	[38.4–56.1]	49.2	[40.7–57.9]	48.3	[41.8–54.5]
Romania	EUR	65.2	[57.3–72.7]	56.5	[47.6–65.2]	60.8	[54.9–66.1]
Russian Federation	EUR	62.8	[54.9–70.8]	61.2	[52.9–69]	62.0	[56.6–67.5]
Rwanda	AFR	10.3	[6.3–15.5]	24.3	[18.5–30.8]	17.5	[13.6–21.2]
Saint Kitts and Nevis	AMR	53.0	[43.7–62.3]	65.2	[56.8–73]	59.1	[53.1–65]
Saint Lucia	AMR	51.0	[41.1–60.9]	63.6	[54.5–72.2]	57.4	[51–64.1]
Saint Vincent and the Grenadines	AMR	51.1	[42.8–59.4]	60.8	[52.9–68.4]	55.9	[50.1–61.9]

## Annex 4.7b: Overweight and Obesity

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
17.4	[12–23.8]	32.7	[26.4–39.8]	25.0	[20.5–29.3]	Liberia
66.5	[59.9–72.5]	70.9	[65.1–76.5]	68.7	[64.6–72.7]	Libya
62.6	[54.5–70.2]	57.9	[48.8–66.3]	60.1	[54.2–66.4]	Lithuania
67.8	[60.9–74.1]	48.3	[40.7–56.1]	58.0	[53.1–63.1]	Luxembourg
15.2	[10.5–20.7]	30.3	[23.9–37.2]	22.8	[18.7–27]	Madagascar
12.9	[8.6–17.8]	30.9	[24.9–37.3]	21.9	[18.2–25.7]	Malawi
37.2	[29.6–45.4]	39.8	[32.4–47.2]	38.5	[33.1–44.1]	Malaysia
25.9	[18.4–34.6]	33.5	[25.8–41.6]	29.6	[23.9–35]	Maldives
19.1	[13.5–25.4]	31.1	[25.2–37.6]	25.1	[20.9–29.3]	Mali
68.5	[61.2–75.2]	59.6	[51.3–67.5]	64.0	[58.1–69.1]	Malta
72.7	[66.1–78.8]	78.9	[73.2–83.9]	75.8	[71.3–80]	Marshall Islands
25.2	[18.3–33]	35.5	[28.6–42.8]	30.3	[25–35.7]	Mauritania
38.2	[29.7–47]	51.8	[43.2–60.2]	45.1	[39.2–50.8]	Mauritius
63.1	[56.7–69.5]	65.6	[59.4–71.4]	64.4	[60.1–68.7]	Mexico
63.7	[56.3–70.8]	74.5	[68.5–79.8]	68.9	[64.1–73.3]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
50.9	[42.6–59.3]	49.9	[41.7–57.8]	50.4	[44.7–56.4]	Mongolia
61.7	[53.6–69.3]	50.1	[41.2–58.8]	55.8	[50–61.2]	Montenegro
52.0	[44.2–59.6]	60.8	[53.4–67.9]	56.5	[51.4–61.5]	Morocco
13.5	[9.1–18.6]	29.8	[24–36.4]	21.8	[18.2–25.6]	Mozambique
13.4	[8.8–19.1]	21.6	[16.1–27.7]	17.6	[14–21.7]	Myanmar
30.2	[22.8–38.2]	54.8	[46.7–62.7]	42.9	[37.2–48.8]	Namibia
75.5	[66.9–82.8]	80.2	[73.3–86]	77.8	[72.6–82.9]	Nauru
14.4	[9.9–19.9]	21.4	[16.4–27.3]	18.0	[14.2–21.6]	Nepal
63.6	[56.8–69.9]	48.2	[41.2–55.2]	55.9	[51–60.6]	Netherlands
68.5	[62.9–73.7]	59.7	[54.1–65.4]	64.0	[60.1–67.9]	New Zealand
43.9	[35.7–52.6]	54.8	[47.3–62]	49.4	[44–54.9]	Nicaragua
12.7	[8.4–17.9]	26.3	[20.8–32.4]	19.4	[15.5–23.2]	Niger
26.0	[19.9–32.3]	40.9	[34.6–47.2]	33.3	[28.8–37.6]	Nigeria
71.4	[64.8–77.4]	78.4	[73–83.1]	74.9	[70.9–79.2]	Niue
65.2	[58.5–71.4]	51.8	[44.7–58.8]	58.5	[53.5–62.9]	Norway
66.1	[59.3–72.4]	69.8	[63–75.7]	67.4	[62.8–71.9]	Oman
20.8	[14.9–27.9]	25.3	[19.7–31.6]	23.0	[18.6–27.2]	Pakistan
77.6	[71.4–82.9]	81.0	[75.7–85.6]	79.3	[75.5–83]	Palau
59.0	[51.4–66.3]	65.5	[58.7–72]	62.2	[57.2–67.2]	Panama
55.3	[46.6–64]	66.3	[58.7–73.2]	60.7	[55–66.4]	Papua New Guinea
48.0	[40–56.4]	49.1	[40.9–57]	48.5	[42.6–54.2]	Paraguay
54.3	[46–62.6]	62.0	[54.8–68.8]	58.2	[52.4–63.6]	Peru
21.0	[15.1–27.9]	26.3	[19.9–33.2]	23.6	[19.2–28.4]	Philippines
65.8	[58.5–72.8]	56.7	[48–65.1]	61.1	[55.1–66.9]	Poland
61.4	[53.8–68.9]	50.2	[42.1–58]	55.6	[50.4–60.8]	Portugal
77.8	[71.5–83.1]	78.9	[73.2–84]	78.1	[73.1–82.9]	Qatar
37.0	[30.1–44.2]	30.1	[23.2–37.2]	33.5	[28.7–38.5]	Republic of Korea
46.4	[37.5–55.1]	46.7	[38.4–55.4]	46.6	[40.6–53]	Republic of Moldova
62.7	[55–70]	52.7	[44.1–61.3]	57.6	[51.7–62.9]	Romania
60.9	[53.1–68.7]	56.8	[48.6–64.6]	58.7	[53.4–64.1]	Russian Federation
11.6	[7.1–17.3]	27.7	[21.5–34.6]	19.8	[15.8–23.8]	Rwanda
53.0	[43.8–62.4]	64.7	[56.3–72.6]	58.9	[53.2–65]	Saint Kitts and Nevis
51.1	[41.2–61.1]	63.4	[54.3–72]	57.4	[50.7–64.5]	Saint Lucia
51.3	[43–59.7]	61.3	[53.3–68.9]	56.3	[50.2–62]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Overweight (BMI≥25) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	66.3	[58.7–73.2]	78.0	[72.2–83]	72.0	[67.6–76.7]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	23.8	[17.8–30.5]	38.5	[31.9–45.7]	31.2	[26.8–36]
Saudi Arabia	EMR	67.5	[60.6–74]	69.2	[62.7–75.4]	68.2	[63.7–73]
Senegal	AFR	19.6	[14.5–25.3]	33.5	[27.5–39.7]	26.7	[22.6–30.7]
Serbia	EUR	62.3	[54.6–69.9]	52.8	[44–61.5]	57.5	[51.9–63.5]
Seychelles	AFR	48.3	[38.8–57.7]	64.5	[55.9–72.5]	56.3	[49.8–62.3]
Sierra Leone	AFR	16.1	[11.7–21]	30.4	[24.9–36.3]	23.3	[19.1–26.8]
Singapore	WPR	39.2	[32.7–46]	30.0	[24.1–36.6]	34.6	[30.1–38.9]
Slovakia	EUR	68.5	[60.6–75.7]	59.7	[50.6–68.1]	64.0	[57.8–69.4]
Slovenia	EUR	69.9	[61.6–77.7]	59.7	[50.1–69]	64.8	[58.4–70.8]
Solomon Islands	WPR	48.8	[40.3–56.9]	62.7	[55.3–69.8]	55.6	[50.3–61.2]
Somalia	EMR	13.2	[8.4–19]	23.2	[17–30]	18.3	[14.1–22.6]
South Africa	AFR	41.0	[34.1–48]	62.2	[55.9–68.4]	51.9	[47.4–56.5]
South Sudan	AFR	19.5	[14.2–25.7]	30.5	[24.1–37.5]	25.0	[20.6–29.8]
Spain	EUR	70.3	[63.2–76.5]	60.9	[53.1–68.1]	65.6	[60.5–70.3]
Sri Lanka	SEAR	18.9	[12.6–26.4]	32.9	[24.9–41.3]	26.1	[20–31.2]
Sudan	EMR	19.5	[14.2–25.7]	30.5	[24.1–37.5]	25.0	[20.6–29.8]
Suriname	AMR	53.5	[45.4–61.9]	63.3	[55.5–70.7]	58.4	[53.1–63.9]
Swaziland	AFR	23.0	[16.7–30.3]	48.8	[40.6–56.8]	36.1	[31.1–42.1]
Sweden	EUR	65.9	[59.2–72.3]	52.4	[45.4–59.5]	59.2	[54.4–64.1]
Switzerland	EUR	66.7	[59.7–73.1]	50.0	[42.6–57.4]	58.2	[53.3–63.4]
Syrian Arab Republic	EMR	51.5	[44.4–58.4]	58.7	[51.5–65.5]	55.0	[50.1–59.8]
Tajikistan	EUR	37.5	[28.8–46.6]	44.7	[36.5–53.1]	41.1	[35–47.3]
Thailand	SEAR	27.7	[20.9–35.5]	35.4	[28.4–42.6]	31.6	[26.7–36.7]
the former Yugoslav Republic of Macedonia	EUR	61.7	[53.6–69.6]	53.2	[44.3–62]	57.5	[51.8–63.6]
Timor–Leste	SEAR	9.3	[5.7–13.9]	15.3	[10.7–20.8]	12.3	[8.9–15.4]
Togo	AFR	15.4	[11–20.5]	30.5	[24.7–36.8]	23.1	[19–26.9]
Tonga	WPR	66.2	[59–73]	77.5	[71.9–82.5]	71.8	[67.4–76.3]
Trinidad and Tobago	AMR	56.9	[44.4–69]	69.1	[58.3–78.8]	63.1	[55–71.4]
Tunisia	EMR	59.0	[52.2–65.6]	66.5	[60.1–72.6]	62.8	[58.3–67.2]
Turkey	EUR	63.5	[57.2–69.5]	68.7	[62.8–74.3]	66.1	[62.3–70.3]
Turkmenistan	EUR	51.8	[43.5–60.1]	53.3	[45.1–61.1]	52.5	[46.9–58.1]
Tuvalu	WPR	68.4	[61.5–74.7]	76.0	[70.2–81]	72.1	[68–76.5]
Uganda	AFR	11.3	[7.3–16.2]	25.9	[20–32.5]	18.6	[14.7–22.4]
Ukraine	EUR	58.2	[49.5–66.9]	56.6	[47.3–65]	57.3	[51.1–63.5]
United Arab Emirates	EMR	70.5	[63.6–77]	70.9	[64.1–77.3]	70.6	[65.3–75.7]
United Kingdom	EUR	71.1	[66–75.8]	62.4	[57.2–67.5]	66.7	[63.4–70.3]
United Republic of Tanzania	AFR	15.1	[10.9–20]	30.0	[24.6–35.8]	22.6	[19–26.3]
United States of America	AMR	74.1	[68.8–78.9]	65.3	[59.7–70.7]	69.6	[66–73.5]
Uruguay	AMR	63.3	[55.4–70.6]	63.2	[55.1–70.7]	63.2	[58.1–68.8]
Uzbekistan	EUR	43.9	[35.3–52.5]	48.7	[40.3–57.1]	46.3	[40.2–52]
Vanuatu	WPR	58.9	[51.2–66.2]	69.7	[63.4–75.8]	64.2	[59.3–68.7]
Venezuela (Bolivarian Republic of)	AMR	59.9	[52.8–67.1]	62.6	[55.6–69.2]	61.3	[56.5–66.5]
Viet Nam	WPR	17.2	[12–23.6]	23.5	[17.6–30]	20.4	[16.2–24.6]
Yemen	EMR	34.5	[26.9–42.8]	46.8	[38.4–55.2]	40.6	[34.5–46.3]
Zambia	AFR	17.1	[12.1–22.7]	33.1	[26.7–39.9]	25.1	[21–29.3]
Zimbabwe	AFR	13.7	[8.6–19.9]	38.4	[30.4–46.7]	26.2	[21.1–31]

## Annex 4.7b: Overweight and Obesity

Overweight (BMI≥25) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
69.1	[61.3–76.1]	80.0	[74.3–84.8]	74.3	[69.7–79.2]	Samoa
...	...	...	...	...	...	San Marino
26.7	[20.1–34]	42.8	[35.9–50.2]	34.8	[30–39.4]	Sao Tome and Principe
68.0	[61.2–74.2]	71.9	[65.7–77.7]	69.6	[65.1–74.4]	Saudi Arabia
22.4	[16.6–28.7]	37.7	[31.3–44.2]	30.2	[26.2–34.6]	Senegal
59.9	[52.4–67.4]	49.2	[40.6–57.7]	54.5	[49–59.9]	Serbia
47.4	[37.9–56.6]	63.4	[55–71.4]	55.3	[49.3–61.5]	Seychelles
17.6	[12.9–23]	34.0	[28.1–40.3]	25.8	[21.7–29.8]	Sierra Leone
37.6	[31.3–44.3]	28.1	[22.3–34.4]	32.8	[28.4–37.5]	Singapore
66.1	[58.5–73.2]	56.2	[47.2–64.6]	61.0	[55.3–66.6]	Slovakia
66.1	[58.2–73.7]	55.1	[45.4–64.4]	60.6	[54.5–66.5]	Slovenia
53.2	[44.2–61.8]	67.4	[60.2–74.1]	60.2	[54.4–65.7]	Solomon Islands
14.9	[9.5–21.3]	26.5	[19.8–33.9]	20.7	[16.1–25.6]	Somalia
43.2	[36–50.5]	64.0	[57.6–70.1]	53.9	[49.2–58.5]	South Africa
21.5	[15.6–28.3]	34.1	[27.2–41.3]	27.8	[22.9–32.6]	South Sudan
66.2	[59.3–72.2]	55.7	[48.2–62.8]	60.9	[56.4–66.3]	Spain
18.4	[12.3–25.8]	31.6	[23.8–39.8]	25.2	[19.6–30.4]	Sri Lanka
21.5	[15.6–28.3]	34.1	[27.2–41.3]	27.8	[22.9–32.6]	Sudan
53.7	[45.6–62.1]	63.3	[55.5–70.7]	58.5	[52.7–64.2]	Suriname
27.3	[19.9–35.6]	55.2	[46.6–63.4]	41.4	[35.3–47.2]	Swaziland
63.1	[56.5–69.5]	48.8	[42–55.7]	55.9	[51.1–60.9]	Sweden
63.3	[56.5–69.5]	46.4	[39.1–53.6]	54.7	[49.8–59.6]	Switzerland
54.8	[47.5–61.9]	62.3	[55.2–69]	58.5	[53.5–63.2]	Syrian Arab Republic
41.0	[31.5–50.6]	48.8	[40.4–57.5]	44.9	[38.6–51.8]	Tajikistan
26.2	[19.8–33.7]	33.0	[26.3–40.1]	29.7	[24.8–34.4]	Thailand
59.8	[51.8–67.6]	50.5	[41.7–59.1]	55.2	[49.2–61.2]	the former Yugoslav Republic of Macedonia
11.0	[6.9–16.4]	18.1	[13–24.1]	14.5	[11–18.2]	Timor–Leste
17.2	[12.3–22.8]	34.4	[28.1–41.1]	25.9	[21.6–30.2]	Togo
69.9	[62.6–76.6]	79.6	[74.2–84.5]	74.8	[70–79.3]	Tonga
55.4	[43.1–67.4]	67.2	[56.4–77]	61.4	[53.7–69.9]	Trinidad and Tobago
59.3	[52.5–65.9]	66.4	[59.9–72.4]	62.9	[58.6–67.2]	Tunisia
64.1	[57.8–70.1]	68.5	[62.5–74.1]	66.3	[62.2–70.8]	Turkey
54.6	[46.1–63.1]	55.7	[47.5–63.6]	55.2	[49.6–60.4]	Turkmenistan
69.6	[62.7–76]	76.8	[71.1–81.9]	73.2	[69–77.4]	Tuvalu
13.2	[8.5–18.8]	30.4	[23.9–37.4]	21.8	[17.6–25.8]	Uganda
56.3	[47.8–64.9]	52.4	[43.4–60.9]	54.2	[48.5–60.3]	Ukraine
73.1	[66.8–78.9]	75.8	[70–81.2]	74.0	[69.6–78.3]	United Arab Emirates
68.1	[63.1–72.8]	58.8	[53.5–64]	63.4	[59.7–66.9]	United Kingdom
17.1	[12.3–22.5]	34.1	[28.4–40.2]	25.6	[21.8–29.7]	United Republic of Tanzania
72.1	[66.8–77]	62.6	[57–68.1]	67.3	[63.3–70.9]	United States of America
62.4	[54.5–69.8]	60.9	[52.8–68.6]	61.7	[56.3–67.6]	Uruguay
46.6	[37.6–55.6]	51.4	[43–59.9]	49.0	[42.7–55.7]	Uzbekistan
62.6	[54.7–69.9]	73.4	[67.3–79]	67.9	[63.2–72.8]	Vanuatu
61.0	[53.7–68.2]	63.5	[56.6–70.1]	62.3	[57.8–67.1]	Venezuela (Bolivarian Republic of)
17.3	[12–23.9]	23.8	[17.9–30.4]	20.6	[16.1–24.9]	Viet Nam
39.9	[31.4–49]	53.7	[45.1–62.4]	46.8	[40.4–52.7]	Yemen
19.5	[13.9–25.7]	38.9	[32–46.1]	29.2	[24.6–33.7]	Zambia
16.2	[10.4–23.2]	44.8	[36.3–53.5]	30.7	[25.5–35.9]	Zimbabwe



## 4.7b Overweight and Obesity (continued)

Comparable estimates of prevalence of overweight and obesity  
(population aged 18+ years), 2014

Country name	Region	Obesity (BMI≥30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	1.5	[0.7–2.9]	3.3	[1.8–5.4]	2.4	[1.2–3.5]
Albania	EUR	16.7	[10.8–23.7]	19.4	[12.6–27.2]	18.1	[13.5–22.8]
Algeria	AFR	18.0	[12.3–24.3]	29.3	[22–37]	23.6	[18.8–28.1]
Andorra	EUR	30.7	[22.9–38.7]	33.4	[25–42.5]	32.1	[26.4–37.6]
Angola	AFR	5.1	[2.4–9.3]	11.9	[6.8–18.5]	8.5	[5–11.8]
Antigua and Barbuda	AMR	22.8	[14.4–32.7]	39.0	[28.8–49.6]	31.0	[24.1–38.6]
Argentina	AMR	23.6	[16.6–31.2]	29.4	[22.2–37.4]	26.5	[21.3–31.4]
Armenia	EUR	17.1	[10.8–24.4]	22.9	[16–30.7]	19.9	[15–24.8]
Australia	WPR	29.4	[23.7–35.5]	30.5	[24.8–36.2]	29.9	[25.9–33.9]
Austria	EUR	22.1	[15.4–29.8]	18.1	[12.2–25]	20.1	[15.3–24.8]
Azerbaijan	EUR	18.5	[11.9–26.1]	25.9	[18.5–34.1]	22.2	[16.2–27.4]
Bahamas	AMR	29.8	[21.7–38.6]	43.2	[34.2–51.9]	36.6	[30.8–42.4]
Bahrain	EMR	29.7	[22.4–37.5]	41.3	[32.9–49.5]	34.1	[28.4–39.8]
Bangladesh	SEAR	2.0	[0.9–3.5]	4.6	[2.7–7]	3.3	[2–4.6]
Barbados	AMR	25.6	[16.9–35.6]	40.7	[30.8–50.6]	33.2	[26.1–40.2]
Belarus	EUR	22.1	[14.8–30.5]	27.8	[18.7–37.3]	25.2	[19.7–31.4]
Belgium	EUR	24.0	[17.5–31.1]	20.2	[14–27.4]	22.1	[17.6–26.9]
Belize	AMR	14.8	[9.4–21.5]	26.4	[18.8–34.6]	20.6	[15.5–25.4]
Benin	AFR	3.7	[2–6]	12.4	[8.8–16.7]	8.1	[5.9–10.1]
Bhutan	SEAR	4.6	[2.5–7.6]	7.5	[4.6–11.3]	5.9	[3.9–8]
Bolivia (Plurinational State of)	AMR	11.1	[6.4–17]	20.6	[14.3–27.9]	15.8	[11.5–19.8]
Bosnia and Herzegovina	EUR	17.1	[10.7–25.2]	21.2	[13.7–30.1]	19.2	[13.8–24.8]
Botswana	AFR	10.9	[6.5–16.8]	28.2	[20.4–36.5]	19.5	[14.8–24]
Brazil	AMR	17.2	[11.9–23]	22.9	[17.4–29.2]	20.1	[16–24]
Brunei Darussalam	WPR	16.7	[9.9–25.5]	20.6	[13.1–29.3]	18.6	[12.6–24.1]
Bulgaria	EUR	23.6	[16.3–31.8]	27.5	[19.1–36.6]	25.6	[20.1–31.4]
Burkina Faso	AFR	2.8	[1.4–4.7]	7.7	[5.1–11]	5.2	[3.5–6.9]
Burundi	AFR	0.6	[0.2–1.4]	3.6	[1.9–6]	2.1	[1–3.3]
Cabo Verde	AFR	7.7	[4.5–11.9]	15.7	[10.7–21.1]	11.7	[8.7–14.8]
Cambodia	WPR	1.5	[0.7–2.9]	4.2	[2.4–6.8]	2.9	[1.6–4.2]
Cameroon	AFR	4.9	[2.7–8]	14.3	[10.2–18.8]	9.6	[7–12.3]
Canada	AMR	28.6	[22.3–35.4]	31.5	[25.2–38.1]	30.1	[25.1–34.7]
Central African Republic	AFR	1.9	[0.8–3.8]	6.7	[3.7–10.8]	4.4	[2.5–6.4]
Chad	AFR	3.3	[1.7–5.9]	9.9	[6.4–14.1]	6.6	[4.4–8.9]
Chile	AMR	23.7	[17.2–31]	33.1	[25.6–41.1]	28.5	[23.1–33.9]
China	WPR	6.2	[3.4–9.7]	8.5	[5–12.9]	7.3	[5–9.8]
Colombia	AMR	15.7	[10.6–21.4]	25.5	[19.4–32.1]	20.7	[16.2–24.8]
Comoros	AFR	2.0	[1–3.7]	9.6	[6.4–13.6]	5.8	[3.7–7.6]
Congo	AFR	5.7	[2.8–9.8]	13.7	[8.8–19.5]	9.7	[6.3–13]
Cook Islands	WPR	45.8	[37.5–54]	54.4	[46.5–62.2]	50.0	[44–55.4]
Costa Rica	AMR	19.0	[13.4–25.5]	29.2	[22.6–36.4]	24.0	[19.5–28.9]
Côte d'Ivoire	AFR	4.3	[2.4–7.1]	11.8	[8.3–16]	8.0	[5.6–10.2]
Croatia	EUR	24.3	[16.9–32.3]	26.8	[18.6–36.2]	25.6	[19.8–31.5]
Cuba	AMR	20.4	[13.1–29]	34.0	[25.2–43.2]	27.2	[21–33.4]
Cyprus	EUR	22.3	[15.4–30.1]	26.8	[18.9–35]	24.5	[19.2–29.9]
Czech Republic	EUR	28.1	[20.7–36.1]	30.1	[21.3–39.2]	29.1	[23.3–35.5]



... Indicates no data were available

Obesity (BMI≥30)						Country name
Age-standardized adjusted estimates						
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
1.8	[0.8–3.3]	4.1	[2.2–6.7]	2.9	[1.6–4.2]	Afghanistan
16.5	[10.7–23.4]	18.7	[12–26.3]	17.6	[12.7–22.2]	Albania
18.8	[12.9–25.4]	30.8	[23.4–38.5]	24.8	[19.7–29.8]	Algeria
28.5	[21.1–36.1]	30.5	[22.5–39.1]	29.5	[23.8–35.1]	Andorra
6.0	[2.9–10.8]	14.2	[8.4–21.7]	10.2	[6–14.3]	Angola
22.8	[14.4–32.8]	38.7	[28.6–49.3]	30.9	[24–38]	Antigua and Barbuda
23.6	[16.7–31.3]	28.9	[21.7–36.9]	26.3	[21.3–31.4]	Argentina
17.2	[10.9–24.5]	22.0	[15.2–29.5]	19.5	[14.7–24.4]	Armenia
28.4	[22.8–34.3]	28.8	[23.3–34.5]	28.6	[24–32.9]	Australia
20.5	[14.2–27.7]	16.3	[10.9–22.6]	18.4	[13.7–23]	Austria
19.0	[12.2–26.8]	26.1	[18.6–34.2]	22.5	[17.4–28.1]	Azerbaijan
29.7	[21.5–38.5]	42.5	[33.6–51.3]	36.2	[29.9–42.4]	Bahamas
30.5	[23.2–38.2]	42.8	[34.6–50.6]	35.1	[29.9–40.7]	Bahrain
2.1	[1–3.7]	5.1	[3–7.8]	3.6	[2.2–5]	Bangladesh
24.4	[16–34]	38.2	[28.5–48]	31.3	[25–37.9]	Barbados
21.0	[14–29.3]	25.5	[16.9–34.5]	23.4	[17.4–29.5]	Belarus
22.3	[16.1–28.9]	18.2	[12.6–24.8]	20.2	[15.3–24.4]	Belgium
16.1	[10.3–23.4]	28.8	[20.9–37.3]	22.5	[17.4–27.8]	Belize
4.1	[2.3–6.8]	14.5	[10.3–19.3]	9.3	[6.7–11.8]	Benin
4.9	[2.7–8.2]	8.8	[5.5–13]	6.7	[4.4–9.1]	Bhutan
12.1	[6.9–18.4]	22.2	[15.6–29.8]	17.1	[12.5–21.6]	Bolivia (Plurinational State of)
16.3	[10.1–24]	19.4	[12.4–27.9]	17.9	[12.6–22.6]	Bosnia and Herzegovina
12.7	[7.6–19.3]	32.3	[24–41.1]	22.4	[17.3–27.5]	Botswana
17.3	[12–23.1]	22.7	[17.2–28.9]	20.0	[15.8–24]	Brazil
16.2	[9.5–24.7]	20.1	[12.8–28.7]	18.1	[13–23.5]	Brunei Darussalam
21.8	[15.1–29.6]	24.5	[16.8–33]	23.2	[17.6–28.5]	Bulgaria
3.2	[1.7–5.5]	9.2	[6.1–13]	6.3	[4.2–8.1]	Burkina Faso
0.7	[0.2–1.5]	4.5	[2.4–7.5]	2.6	[1.3–3.9]	Burundi
8.6	[5.1–13.2]	17.4	[12.1–23.3]	13.0	[9.7–16.4]	Cabo Verde
1.7	[0.8–3.2]	4.6	[2.6–7.4]	3.2	[1.8–4.5]	Cambodia
5.8	[3.2–9.3]	17.1	[12.4–22.3]	11.4	[8.5–14.4]	Cameroon
26.8	[20.8–33.4]	29.1	[23.1–35.4]	28.0	[23.9–32.6]	Canada
2.2	[0.9–4.3]	8.0	[4.5–12.6]	5.1	[3.1–7.3]	Central African Republic
4.0	[2–6.9]	12.3	[8.2–17.4]	8.1	[5.4–10.8]	Chad
23.3	[16.8–30.5]	32.2	[24.8–40.1]	27.8	[22.8–32.7]	Chile
5.9	[3.2–9.3]	8.0	[4.7–12.3]	6.9	[4.5–9.2]	China
16.1	[10.8–21.9]	25.7	[19.6–32.3]	21.0	[16.7–24.8]	Colombia
2.2	[1.1–4]	11.0	[7.3–15.4]	6.6	[4.3–8.8]	Comoros
6.4	[3.2–10.9]	15.7	[10.2–22.1]	11.0	[7.5–14.5]	Congo
46.6	[38.2–54.8]	55.1	[47.2–62.9]	50.8	[45.2–56.3]	Cook Islands
19.2	[13.5–25.7]	29.5	[22.9–36.7]	24.3	[19.9–28.4]	Costa Rica
4.7	[2.6–7.9]	13.8	[9.8–18.4]	9.2	[6.6–11.7]	Côte d'Ivoire
22.5	[15.6–30.2]	24.1	[16.5–33.1]	23.3	[18–29.2]	Croatia
19.0	[12.1–27.3]	31.5	[23–40.4]	25.2	[19.4–30.3]	Cuba
21.9	[15.1–29.6]	25.7	[18.1–33.9]	23.8	[18.3–28.7]	Cyprus
26.2	[19.2–34]	27.3	[19.1–36]	26.8	[21.3–32.2]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Obesity (BMI ≥ 30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	1.7	[0.5–3.8]	3.3	[1.2–7]	2.5	[0.8–4.3]
Democratic Republic of the Congo	AFR	1.4	[0.5–3.1]	5.9	[3.2–9.6]	3.7	[2–5.4]
Denmark	EUR	23.3	[16.7–30.2]	18.8	[13–25.3]	21.0	[16.7–26]
Djibouti	EMR	5.1	[2.4–9.1]	12.0	[7–18.2]	8.5	[5.1–11.9]
Dominica	AMR	18.5	[12.3–26.1]	33.2	[25.2–41.7]	25.9	[20.6–30.8]
Dominican Republic	AMR	17.6	[11.3–24.9]	28.4	[21–36.7]	23.0	[17.8–28]
Ecuador	AMR	13.9	[8.5–20.2]	22.2	[15.6–29.5]	18.0	[13.8–22.6]
Egypt	EMR	19.4	[13.9–25.8]	36.0	[29.2–43.3]	27.7	[23.4–32.2]
El Salvador	AMR	14.2	[9.3–20.3]	25.3	[19–32.4]	20.1	[15.6–24]
Equatorial Guinea	AFR	11.9	[5.8–20.4]	20.7	[12–31.2]	16.2	[9.9–21.9]
Eritrea	AFR	1.2	[0.5–2.3]	5.6	[3.3–8.7]	3.4	[2–4.9]
Estonia	EUR	23.5	[16.1–32.1]	25.4	[16.7–35]	24.5	[18.3–30.7]
Ethiopia	AFR	1.3	[0.6–2.4]	5.4	[3.2–8.4]	3.3	[1.9–4.7]
Fiji	WPR	30.2	[22.8–38]	41.9	[34.1–49.5]	35.9	[30.3–41.2]
Finland	EUR	23.4	[17.7–29.5]	22.2	[16.9–28.2]	22.8	[18.3–27.2]
France	EUR	25.3	[18.2–32.7]	26.1	[18.8–33.9]	25.7	[20.5–30.9]
Gabon	AFR	11.6	[6.3–18.4]	20.1	[13.7–27.6]	15.8	[11–20.2]
Gambia	AFR	5.0	[2.8–7.9]	13.1	[8.8–18.4]	9.1	[6.3–11.9]
Georgia	EUR	17.9	[11.4–25.5]	25.9	[18.5–33.9]	22.1	[16.4–27.4]
Germany	EUR	24.1	[17.8–31]	21.4	[15.8–27.9]	22.7	[18.4–27.3]
Ghana	AFR	4.9	[2.6–8.1]	16.8	[12–22.4]	10.9	[8–14.3]
Greece	EUR	23.6	[16.6–31.2]	26.7	[19.4–34.7]	25.1	[19.5–30.5]
Grenada	AMR	16.9	[10.8–24.1]	32.3	[24–40.7]	24.6	[18.8–29.9]
Guatemala	AMR	11.3	[6.9–16.6]	21.2	[15.4–27.8]	16.4	[12.3–20.6]
Guinea	AFR	2.8	[1.5–4.8]	8.9	[5.9–12.4]	5.9	[3.9–7.6]
Guinea-Bissau	AFR	3.2	[1.6–5.5]	9.4	[6.1–13.3]	6.3	[4.2–8.4]
Guyana	AMR	13.9	[8.5–20.7]	30.2	[21.9–39.1]	21.9	[16.8–27.1]
Haiti	AMR	6.4	[3.2–11.2]	14.8	[9.5–21.3]	10.7	[7.2–14.1]
Honduras	AMR	11.1	[6.9–16.2]	21.6	[15.9–28.1]	16.3	[12.6–20.4]
Hungary	EUR	25.5	[18.4–33.6]	26.5	[18.2–35.7]	26.0	[20.2–32.3]
Iceland	EUR	25.0	[17.8–33.1]	22.8	[15.8–30.3]	23.9	[18.7–29]
India	SEAR	3.1	[1.7–5]	6.5	[4.2–9.2]	4.7	[3.2–6.2]
Indonesia	SEAR	3.6	[1.9–6.3]	7.8	[4.7–11.7]	5.7	[3.6–7.7]
Iran (Islamic Republic of)	EMR	19.3	[14.1–24.9]	30.6	[24.5–37.1]	24.9	[20.8–28.9]
Iraq	EMR	15.3	[10–21.7]	27.3	[20.4–35.2]	21.2	[16.7–25.9]
Ireland	EUR	27.3	[20.5–34.3]	26.8	[20.3–33.5]	27.0	[22.2–31.9]
Israel	EUR	23.7	[16.9–31]	27.8	[20.7–35.8]	25.8	[20.5–30.9]
Italy	EUR	22.5	[16.6–29.1]	24.8	[18.6–31.9]	23.7	[18.7–28.5]
Jamaica	AMR	18.0	[11.9–24.9]	35.3	[27.5–43.3]	26.8	[21.7–32.1]
Japan	WPR	3.4	[1.9–5.5]	3.6	[2.1–5.7]	3.5	[2.2–4.8]
Jordan	EMR	21.0	[14.9–28]	35.6	[28.6–42.6]	28.1	[23–32.8]
Kazakhstan	EUR	21.3	[14–29.4]	25.4	[17.9–33.8]	23.5	[18–28.9]
Kenya	AFR	2.5	[1.2–4.5]	9.2	[6–13.4]	5.9	[3.8–7.9]
Kiribati	WPR	32.5	[24.5–41]	48.0	[39.9–56.1]	40.1	[34.1–46.2]
Kuwait	EMR	34.8	[27.3–42.7]	43.5	[35–51.8]	38.3	[33–44]
Kyrgyzstan	EUR	10.6	[6.1–16.5]	16.0	[10.8–22.2]	13.3	[9.3–17.2]
Lao People's Democratic Republic	WPR	1.8	[0.9–3.4]	4.1	[2.3–6.5]	3.0	[1.8–4.1]
Latvia	EUR	23.2	[15.8–31.9]	27.7	[18.4–37.8]	25.6	[19.2–32]
Lebanon	EMR	26.1	[19.5–33.1]	35.7	[28–42.8]	30.8	[25.8–35.8]
Lesotho	AFR	3.3	[1.7–5.4]	20.4	[14.5–27.2]	11.9	[8.6–15.2]

## Annex 4.7b: Overweight and Obesity

Obesity (BMI≥30)						Country name
Age-standardized adjusted estimates						
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
1.6	[0.5–3.7]	3.1	[1.2–6.6]	2.4	[0.8–4.1]	Democratic People's Republic of Korea
1.6	[0.6–3.6]	7.1	[3.9–11.4]	4.4	[2.3–6.2]	Democratic Republic of the Congo
21.7	[15.6–28.1]	17.0	[11.6–22.9]	19.3	[15.1–23.5]	Denmark
5.6	[2.7–10]	13.5	[8.1–20.3]	9.6	[5.9–12.8]	Djibouti
18.5	[12.3–26.2]	33.0	[25–41.5]	25.8	[20.5–31.1]	Dominica
18.2	[11.7–25.8]	29.5	[21.8–37.8]	23.9	[18.6–29.2]	Dominican Republic
14.4	[8.9–20.9]	22.9	[16.3–30.4]	18.7	[13.8–23.1]	Ecuador
20.3	[14.6–26.9]	37.5	[30.5–44.9]	28.9	[24.3–33.6]	Egypt
15.9	[10.5–22.5]	27.0	[20.4–34.2]	21.8	[17.4–26.5]	El Salvador
12.5	[6.1–21.6]	22.7	[13.4–33.9]	17.5	[10.9–24]	Equatorial Guinea
1.4	[0.6–2.6]	6.9	[4.1–10.5]	4.1	[2.5–5.8]	Eritrea
22.2	[15.2–30.4]	22.9	[15–31.9]	22.6	[16.9–28.2]	Estonia
1.5	[0.7–2.7]	6.6	[4–10.1]	4.0	[2.6–5.5]	Ethiopia
30.8	[23.3–38.7]	42.3	[34.4–49.9]	36.4	[31.2–41.8]	Fiji
21.6	[16.3–27.4]	19.6	[14.7–25]	20.6	[16.7–24.3]	Finland
23.8	[17–30.9]	24.0	[17.3–31.7]	23.9	[18.9–29.1]	France
12.9	[7.1–20.2]	22.5	[15.5–30.4]	17.6	[12.8–22.8]	Gabon
5.8	[3.2–9.2]	15.8	[10.8–21.7]	10.9	[7.7–14]	Gambia
17.2	[11–24.7]	24.0	[17.1–31.6]	20.8	[16.2–26]	Georgia
21.9	[16.2–28.2]	18.5	[13.5–24.2]	20.1	[15.9–23.9]	Germany
5.4	[2.9–9.1]	18.9	[13.7–24.8]	12.2	[9–15.4]	Ghana
21.9	[15.5–29]	23.8	[17.1–31.3]	22.9	[17.8–27.7]	Greece
18.1	[11.7–25.5]	34.3	[25.7–42.9]	26.2	[20.8–32]	Grenada
13.0	[8.1–19]	23.9	[17.5–30.8]	18.6	[14–22.9]	Guatemala
3.2	[1.7–5.4]	10.3	[7–14.3]	6.8	[4.9–8.7]	Guinea
3.6	[1.8–6.2]	10.8	[7.1–15.2]	7.2	[4.9–9.5]	Guinea–Bissau
14.4	[8.8–21.5]	31.6	[23.2–40.5]	22.9	[17.7–28.3]	Guyana
7.2	[3.5–12.4]	16.6	[10.8–23.6]	11.9	[8.3–15.8]	Haiti
12.4	[7.7–18]	24.1	[17.9–30.9]	18.2	[14.1–22.2]	Honduras
24.0	[17.2–31.8]	23.9	[16.1–32.7]	24.0	[18.4–29.5]	Hungary
24.1	[17.1–31.9]	21.5	[14.8–28.7]	22.8	[17.7–27.9]	Iceland
3.2	[1.8–5.1]	6.7	[4.4–9.6]	4.9	[3.4–6.4]	India
3.5	[1.9–6.2]	7.9	[4.8–11.8]	5.7	[3.5–7.9]	Indonesia
20.1	[14.7–25.9]	32.0	[25.8–38.6]	26.1	[22–30.5]	Iran (Islamic Republic of)
17.2	[11.5–24.1]	30.5	[23.1–38.7]	23.8	[18.9–28.9]	Iraq
25.9	[19.3–32.7]	25.3	[19.1–31.7]	25.6	[21.2–30.2]	Ireland
23.5	[16.8–30.8]	27.0	[19.9–34.9]	25.3	[20.1–30.3]	Israel
20.4	[14.9–26.4]	21.6	[15.8–28]	21.0	[17–24.9]	Italy
18.4	[12.2–25.4]	35.7	[27.8–43.7]	27.2	[21.9–32.7]	Jamaica
3.4	[2–5.5]	3.2	[1.8–5]	3.3	[2.1–4.4]	Japan
22.7	[16.2–30.1]	38.6	[31.5–45.8]	30.5	[25.5–35.7]	Jordan
21.6	[14.2–29.9]	25.0	[17.6–33.4]	23.4	[18–28.9]	Kazakhstan
2.8	[1.4–5.1]	11.1	[7.3–15.9]	7.0	[4.6–9.2]	Kenya
32.9	[24.9–41.6]	48.5	[40.4–56.6]	40.6	[34.8–46.8]	Kiribati
35.5	[28.2–43.1]	45.9	[37.7–54]	39.7	[33.8–45.3]	Kuwait
11.5	[6.6–17.8]	17.3	[11.8–23.8]	14.4	[10.4–18.5]	Kyrgyzstan
2.1	[1–3.8]	4.9	[2.8–7.7]	3.5	[2.1–4.9]	Lao People's Democratic Republic
22.0	[15–30.5]	25.1	[16.5–34.7]	23.7	[17.6–29.3]	Latvia
26.3	[19.7–33.4]	37.7	[29.9–44.8]	31.9	[27.2–37.4]	Lebanon
4.1	[2.1–6.8]	24.0	[17.3–31.6]	14.2	[10.5–18.1]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Obesity (BMI ≥ 30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	2.5	[1.2–4.4]	9.2	[6–13.1]	5.8	[3.9–7.7]
Libya	EMR	25.8	[19.7–32.7]	38.0	[30.4–45.3]	31.9	[27–36.7]
Lithuania	EUR	24.0	[16.7–32.5]	30.5	[21.5–40.2]	27.5	[21.1–33.8]
Luxembourg	EUR	28.3	[21.1–36]	21.3	[14.9–28.7]	24.8	[20.1–29.5]
Madagascar	AFR	1.9	[0.9–3.5]	7.2	[4.3–11]	4.6	[2.9–6.4]
Malawi	AFR	1.4	[0.6–2.6]	7.3	[4.6–10.6]	4.3	[2.8–5.9]
Malaysia	WPR	10.3	[6.4–15.5]	15.3	[10.4–20.9]	12.9	[9.3–16.2]
Maldives	SEAR	4.6	[2.2–8.3]	9.6	[5.6–14.8]	7.0	[4.1–9.8]
Mali	AFR	3.2	[1.6–5.5]	8.2	[5.5–11.8]	5.7	[3.9–7.6]
Malta	EUR	26.2	[18.6–34.6]	31.1	[22.7–40.2]	28.7	[22.9–34.4]
Marshall Islands	WPR	36.4	[28.2–44.6]	48.3	[40–56.3]	42.3	[36.4–47.5]
Mauritania	AFR	5.3	[2.7–8.7]	12.1	[8–17.3]	8.6	[5.9–11.4]
Mauritius	AFR	11.8	[6.8–18.2]	25.7	[18.4–33.8]	18.8	[14.1–23.7]
Mexico	AMR	22.1	[16.6–28.3]	32.7	[26.3–39.3]	27.6	[23.3–31.9]
Micronesia (Federated States of)	WPR	27.2	[20.3–34.5]	39.5	[32.1–46.8]	33.2	[28.1–38.5]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	13.7	[8.6–19.7]	17.7	[12–24.4]	15.7	[11.6–19.9]
Montenegro	EUR	20.3	[13.6–28.2]	22.5	[14.8–31.3]	21.4	[15.8–26.6]
Morocco	EMR	15.6	[10.4–21.9]	27.6	[20.6–35]	21.7	[17.3–26.2]
Mozambique	AFR	1.6	[0.7–2.9]	7.4	[4.7–10.9]	4.5	[2.9–6.3]
Myanmar	SEAR	1.4	[0.6–2.7]	4.2	[2.3–6.8]	2.9	[1.5–4.2]
Namibia	AFR	8.0	[4.6–12.5]	25.2	[18.2–32.7]	16.8	[12.7–21.5]
Nauru	WPR	39.3	[29.3–49.8]	51.1	[41.2–60.3]	45.1	[37.6–52.3]
Nepal	SEAR	1.7	[0.8–3.2]	4.1	[2.4–6.3]	2.9	[1.8–4.1]
Netherlands	EUR	23.2	[16.8–30]	20.6	[14.9–27.2]	21.9	[17.6–26.7]
New Zealand	WPR	28.7	[23–34.8]	32.5	[26.8–38.4]	30.6	[26.2–34.9]
Nicaragua	AMR	9.7	[5.8–14.8]	21.1	[15–28]	15.5	[11.6–19.4]
Niger	AFR	1.7	[0.8–3.1]	5.7	[3.5–8.4]	3.7	[2.3–5.1]
Nigeria	AFR	5.3	[3.1–8.3]	14.3	[10.4–19.1]	9.7	[7.2–12.3]
Niue	WPR	37.0	[29.6–44.7]	48.2	[40.8–55.8]	42.5	[37.1–47.6]
Norway	EUR	26.1	[19.4–33.1]	23.5	[17.2–30.2]	24.8	[19.7–29.5]
Oman	EMR	22.7	[16.3–30.2]	33.5	[25.9–41.6]	26.5	[21.4–31.7]
Pakistan	EMR	3.3	[1.7–5.7]	6.4	[4–9.6]	4.8	[3–6.6]
Palau	WPR	42.6	[34.4–50.6]	51.7	[43.3–59.6]	47.1	[41.6–52.5]
Panama	AMR	20.3	[14–27.4]	32.8	[25.2–40.6]	26.5	[21.4–31.8]
Papua New Guinea	WPR	20.6	[14–28.2]	30.7	[22.9–39]	25.5	[20.4–31.1]
Paraguay	AMR	12.2	[7.5–18]	18.0	[12.1–25.3]	15.1	[11–19.2]
Peru	AMR	15.2	[9.6–21.8]	25.5	[19.5–32.2]	20.4	[16.5–24.7]
Philippines	WPR	3.4	[1.7–6]	6.1	[3.5–9.5]	4.7	[3–6.5]
Poland	EUR	24.8	[17.9–32.2]	29.1	[21–37.8]	27.0	[21–32.6]
Portugal	EUR	21.4	[14.5–28.9]	22.8	[15.8–30.4]	22.1	[17–27.3]
Qatar	EMR	38.9	[30.6–47.3]	47.8	[39–56.6]	41.0	[34.3–47.5]
Republic of Korea	WPR	5.1	[2.7–8.2]	7.5	[4.4–11.7]	6.3	[4–8.5]
Republic of Moldova	EUR	11.8	[6.9–18.2]	19.2	[12.3–27]	15.7	[11.2–20.6]
Romania	EUR	21.8	[14.8–29.5]	24.9	[16.8–33.7]	23.4	[17.9–29.3]
Russian Federation	EUR	21.3	[14.9–28.5]	30.4	[22.2–38.7]	26.2	[20.5–31.8]
Rwanda	AFR	1.0	[0.4–2.2]	5.4	[3.2–8.5]	3.3	[1.8–4.6]
Saint Kitts and Nevis	AMR	21.2	[13.8–29.9]	35.6	[26.5–45]	28.4	[22–34.9]
Saint Lucia	AMR	19.7	[12.3–28.7]	34.0	[24.9–43.4]	27.0	[20.5–33.1]
Saint Vincent and the Grenadines	AMR	17.8	[11.7–25.2]	30.5	[22.5–39.3]	24.1	[19–29.3]



## Annex 4.7b: Overweight and Obesity

Obesity (BMI≥30)						Country name
Age-standardized adjusted estimates						
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
2.7	[1.3–4.9]	10.6	[7–15]	6.6	[4.4–8.9]	Liberia
26.6	[20.3–33.5]	39.5	[31.9–46.7]	33.1	[28.1–38.1]	Libya
23.1	[15.9–31.4]	28.3	[19.8–37.6]	25.9	[19.8–32.2]	Lithuania
26.6	[19.7–33.9]	19.7	[13.7–26.6]	23.1	[18.4–27.9]	Luxembourg
2.2	[1–4]	8.6	[5.2–12.9]	5.4	[3.4–7.6]	Madagascar
1.6	[0.7–3.1]	8.9	[5.7–12.8]	5.3	[3.5–7]	Malawi
10.6	[6.5–15.9]	16.0	[10.9–21.8]	13.3	[9.6–16.8]	Malaysia
5.0	[2.4–9.1]	10.8	[6.4–16.6]	7.9	[5–11.1]	Maldives
3.8	[1.9–6.4]	9.9	[6.6–14]	6.8	[4.5–9]	Mali
24.6	[17.4–32.6]	28.5	[20.5–37.2]	26.6	[21.4–32]	Malta
36.9	[28.7–45.3]	48.9	[40.6–56.8]	42.8	[37.3–48.5]	Marshall Islands
5.8	[3–9.5]	13.6	[9.1–19.3]	9.7	[6.5–12.8]	Mauritania
11.2	[6.5–17.4]	24.3	[17.2–32.3]	17.9	[12.9–22.5]	Mauritius
22.8	[17.1–29.1]	33.1	[26.6–39.7]	28.1	[23.4–32.5]	Mexico
31.0	[23.4–39.1]	43.7	[36.1–51.2]	37.2	[31.9–42.5]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
14.6	[9.1–21]	18.8	[12.9–25.7]	16.7	[12.2–21.1]	Mongolia
19.3	[13–27]	20.7	[13.5–29.1]	20.0	[14.7–24.9]	Montenegro
16.2	[10.8–22.7]	28.3	[21.3–35.8]	22.3	[17.5–26.9]	Morocco
1.8	[0.8–3.4]	8.7	[5.5–12.6]	5.3	[3.5–7.1]	Mozambique
1.4	[0.6–2.7]	4.3	[2.4–7]	2.9	[1.5–4.1]	Myanmar
9.2	[5.4–14.2]	28.2	[20.6–36.1]	18.9	[14.4–23.5]	Namibia
39.7	[29.5–50.3]	51.6	[41.7–60.7]	45.6	[38.6–52.8]	Nauru
1.8	[0.9–3.4]	4.6	[2.7–7.1]	3.3	[1.9–4.6]	Nepal
21.4	[15.3–27.8]	18.3	[13–24.4]	19.8	[15.7–24.1]	Netherlands
27.7	[22.1–33.7]	30.8	[25.2–36.6]	29.2	[25.2–33.1]	New Zealand
10.8	[6.4–16.4]	23.2	[16.7–30.5]	17.1	[12.6–21.4]	Nicaragua
1.9	[0.9–3.4]	6.8	[4.3–10]	4.3	[2.8–5.9]	Niger
5.9	[3.4–9.2]	16.3	[12–21.5]	11.0	[8.2–13.9]	Nigeria
37.7	[30.1–45.5]	49.0	[41.5–56.6]	43.2	[37.8–48.8]	Niue
24.6	[18.3–31.4]	21.7	[15.7–28]	23.1	[18.6–27.7]	Norway
27.2	[20.4–34.7]	37.7	[29.9–45.7]	30.9	[25.5–36.4]	Oman
3.7	[1.9–6.4]	7.3	[4.6–10.9]	5.4	[3.6–7.3]	Pakistan
43.1	[34.8–51.3]	52.2	[43.9–60.2]	47.6	[42.4–53.5]	Palau
20.6	[14.3–27.8]	33.1	[25.4–40.9]	26.8	[21.5–31.7]	Panama
22.6	[15.4–30.9]	33.4	[25.3–41.9]	27.9	[22.5–34]	Papua New Guinea
13.1	[8–19.4]	19.5	[13.3–27.1]	16.3	[11.8–20.4]	Paraguay
15.8	[10–22.6]	26.5	[20.3–33.2]	21.1	[16.8–25.8]	Peru
3.6	[1.8–6.4]	6.6	[3.8–10.3]	5.1	[3.2–7.2]	Philippines
23.5	[16.8–30.6]	26.7	[19.1–35.1]	25.2	[19.9–30.5]	Poland
19.8	[13.4–26.8]	20.3	[13.9–27.3]	20.1	[14.8–25.3]	Portugal
40.0	[31.8–48.1]	49.7	[41.4–57.8]	42.3	[35.9–48.4]	Qatar
4.8	[2.6–7.7]	6.7	[3.9–10.5]	5.8	[3.7–8]	Republic of Korea
11.4	[6.7–17.6]	17.9	[11.4–25.4]	14.9	[10.2–20]	Republic of Moldova
20.5	[13.8–27.9]	22.7	[15.2–31.2]	21.7	[16.1–27.4]	Romania
20.3	[14.1–27.3]	27.4	[19.6–35.4]	24.1	[18.9–29.3]	Russian Federation
1.2	[0.5–2.6]	6.6	[3.9–10.2]	4.0	[2.3–5.7]	Rwanda
21.2	[13.8–30]	35.3	[26.3–44.7]	28.3	[22.5–34.5]	Saint Kitts and Nevis
19.7	[12.4–28.7]	33.9	[24.8–43.3]	26.9	[21.4–33]	Saint Lucia
17.9	[11.8–25.3]	30.9	[22.8–39.7]	24.3	[18.7–29.3]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Obesity (BMI≥30) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	34.3	[26.2–43]	49.5	[41.6–57.3]	41.6	[35.7–47.2]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	5.4	[3.1–8.6]	15.8	[11.2–21.2]	10.6	[7.6–13.5]
Saudi Arabia	EMR	29.5	[22.5–37.2]	39.5	[31.8–47.3]	33.7	[28.3–38.8]
Senegal	AFR	4.0	[2.2–6.5]	12.5	[8.8–17]	8.3	[6–10.8]
Serbia	EUR	19.7	[13.5–26.9]	22.5	[15.1–30.8]	21.1	[15.8–26.1]
Seychelles	AFR	17.6	[10.9–25.5]	36.7	[27.8–45.7]	26.9	[21–33.1]
Sierra Leone	AFR	2.8	[1.5–4.6]	10.4	[7.1–14.1]	6.6	[4.6–8.6]
Singapore	WPR	6.1	[3.6–9.2]	7.4	[4.7–11]	6.8	[4.8–8.9]
Slovakia	EUR	25.9	[18.4–34.2]	28.9	[20.3–37.7]	27.4	[21.3–33.1]
Slovenia	EUR	26.7	[18.2–35.8]	28.2	[19.1–38.5]	27.4	[20.5–34.2]
Solomon Islands	WPR	19.6	[13.3–26.9]	30.5	[22.9–38.4]	25.0	[19.8–30.2]
Somalia	EMR	1.8	[0.7–3.5]	6.0	[3.3–9.7]	3.9	[2–5.7]
South Africa	AFR	14.6	[10.2–20.1]	36.0	[29.4–42.6]	25.6	[21.8–29.6]
South Sudan	AFR	3.6	[1.9–6.2]	9.6	[6–14.1]	6.6	[4.1–8.7]
Spain	EUR	24.9	[18.4–31.9]	28.0	[21.1–35.2]	26.5	[21.7–31.4]
Sri Lanka	SEAR	3.5	[1.6–6.4]	10.0	[5.8–15.5]	6.8	[4–9.4]
Sudan	EMR	3.6	[1.9–6.2]	9.6	[6–14.1]	6.6	[4.1–8.7]
Suriname	AMR	19.4	[13–26.7]	32.9	[24.5–42.1]	26.1	[20.8–31.7]
Swaziland	AFR	6.0	[3.2–9.9]	23.5	[16.3–31.4]	14.8	[10.9–19]
Sweden	EUR	23.6	[17.1–30.7]	20.4	[14.4–26.9]	22.0	[17–26.5]
Switzerland	EUR	23.8	[17.5–30.8]	18.3	[12.6–24.7]	21.0	[16.6–25.6]
Syrian Arab Republic	EMR	15.9	[10.7–21.8]	27.5	[20.6–34.9]	21.6	[17–25.9]
Tajikistan	EUR	8.8	[4.7–14.5]	15.1	[9.8–21.4]	12.0	[8.3–15.8]
Thailand	SEAR	6.1	[3.4–10]	12.1	[7.9–17.5]	9.2	[6.3–12.1]
the former Yugoslav Republic of Macedonia	EUR	19.2	[12.6–26.9]	22.4	[14.8–31]	20.8	[15.3–26.1]
Timor–Leste	SEAR	1.0	[0.4–2]	2.6	[1.3–4.4]	1.8	[0.9–2.7]
Togo	AFR	2.6	[1.4–4.4]	10.1	[6.7–14.3]	6.4	[4.4–8.3]
Tonga	WPR	34.0	[26–42.8]	48.2	[40.1–56.2]	41.1	[35.2–46.6]
Trinidad and Tobago	AMR	24.9	[14.5–37.4]	39.5	[27.8–51.3]	32.3	[24.4–40.3]
Tunisia	EMR	20.2	[14.5–26.4]	33.9	[26.8–41.3]	27.1	[22.3–31.6]
Turkey	EUR	22.6	[17.2–28.5]	35.9	[29.4–42.6]	29.4	[25.1–33.7]
Turkmenistan	EUR	15.9	[10.3–22.4]	21.7	[15.1–28.9]	18.8	[14.6–23.4]
Tuvalu	WPR	33.8	[25.9–42]	45.7	[37.8–53.6]	39.6	[33.6–45.3]
Uganda	AFR	1.3	[0.5–2.5]	6.5	[3.9–10]	3.9	[2.3–5.5]
Ukraine	EUR	17.9	[11.4–25.5]	24.9	[16.3–34.3]	21.7	[15.8–27.1]
United Arab Emirates	EMR	31.6	[23.7–40.1]	41.2	[32.6–49.9]	34.5	[28–40.9]
United Kingdom	EUR	28.5	[23.4–34.1]	31.1	[26.1–36.3]	29.8	[26.1–33.5]
United Republic of Tanzania	AFR	2.4	[1.3–4.1]	9.5	[6.6–13.2]	5.9	[4.1–7.6]
United States of America	AMR	33.7	[27.7–39.9]	36.3	[30.3–42.3]	35.0	[30.7–39.3]
Uruguay	AMR	22.9	[16–30.9]	31.9	[23.7–40.5]	27.6	[21.9–33.4]
Uzbekistan	EUR	11.2	[6.4–17.1]	17.4	[11.6–24.5]	14.3	[10.4–18.5]
Vanuatu	WPR	27.2	[19.9–35]	38.7	[31–46.3]	32.9	[27.6–38.5]
Venezuela (Bolivarian Republic of)	AMR	19.8	[13.8–26.6]	28.8	[21.9–36.2]	24.3	[19.7–29.5]
Viet Nam	WPR	2.3	[1–4.4]	4.8	[2.4–8]	3.5	[1.8–5.1]
Yemen	EMR	9.1	[5–14.4]	19.4	[12.8–27.1]	14.2	[10.3–18.4]
Zambia	AFR	2.9	[1.5–5]	11.5	[7.7–16.3]	7.2	[4.6–9.6]
Zimbabwe	AFR	1.9	[0.8–3.6]	14.8	[9.5–21.1]	8.4	[5.6–11.6]

## Annex 4.7b: Overweight and Obesity

Obesity (BMI≥30)						Country name
Age-standardized adjusted estimates						
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
36.0	[27.6–45]	51.3	[43.4–59.1]	43.4	[37.4–49.1]	Samoa
...	...	...	...	...	...	San Marino
6.2	[3.5–10.1]	18.2	[13.1–24.1]	12.3	[8.8–15.5]	Sao Tome and Principe
29.9	[22.9–37.7]	41.4	[33.8–49.1]	34.7	[29.6–40.1]	Saudi Arabia
4.8	[2.6–7.7]	14.6	[10.4–19.8]	9.8	[6.9–12.5]	Senegal
18.6	[12.8–25.5]	20.5	[13.5–28.3]	19.5	[14.6–23.8]	Serbia
17.1	[10.5–25.1]	35.9	[27.3–44.9]	26.3	[20.5–31.7]	Seychelles
3.1	[1.7–5.1]	12.0	[8.3–16.2]	7.6	[5.5–9.8]	Sierra Leone
5.7	[3.4–8.7]	6.8	[4.3–10.1]	6.2	[4.3–8.2]	Singapore
24.6	[17.4–32.7]	26.7	[18.7–35.2]	25.7	[20–31.3]	Slovakia
24.6	[16.7–33.3]	25.5	[17.1–35.2]	25.1	[19.3–31]	Slovenia
21.8	[14.9–29.9]	33.7	[25.7–41.8]	27.7	[22.4–33.1]	Solomon Islands
2.1	[0.8–4]	7.2	[4–11.5]	4.6	[2.6–6.6]	Somalia
15.7	[11–21.5]	37.3	[30.6–43.9]	26.8	[22.8–31.3]	South Africa
4.0	[2.1–7]	11.1	[7.1–16.1]	7.5	[4.9–10.2]	South Sudan
22.8	[16.7–29.3]	24.7	[18.5–31.4]	23.7	[19.5–28.1]	Spain
3.4	[1.6–6.2]	9.5	[5.5–14.7]	6.5	[3.9–9.1]	Sri Lanka
4.0	[2.1–7]	11.1	[7.1–16.1]	7.5	[4.9–10.2]	Sudan
19.4	[13–26.8]	32.9	[24.5–42]	26.1	[20.7–31.9]	Suriname
7.5	[4.1–12.3]	27.8	[19.7–36.5]	17.7	[13.5–22.2]	Swaziland
22.5	[16.4–29.3]	18.6	[13.1–24.8]	20.5	[16.3–25.2]	Sweden
22.3	[16.4–28.8]	16.5	[11.3–22.5]	19.4	[15.6–23.5]	Switzerland
17.4	[11.8–23.7]	29.9	[22.7–37.5]	23.5	[18.7–28.3]	Syrian Arab Republic
9.9	[5.3–16.2]	17.3	[11.3–24.1]	13.6	[9.5–17.7]	Tajikistan
5.7	[3.2–9.4]	11.1	[7.2–16.1]	8.5	[5.8–11.3]	Thailand
18.3	[12–25.7]	20.9	[13.6–29.2]	19.6	[14.7–24.7]	the former Yugoslav Republic of Macedonia
1.2	[0.5–2.5]	3.2	[1.7–5.5]	2.2	[1.1–3.3]	Timor-Leste
3.0	[1.6–5]	11.9	[8–16.5]	7.5	[5.1–10]	Togo
36.4	[28.1–45.4]	50.1	[42–58]	43.3	[37.1–49.2]	Tonga
24.1	[14–36.2]	38.0	[26.6–49.7]	31.1	[23.6–38.6]	Trinidad and Tobago
20.3	[14.6–26.6]	33.8	[26.7–41.1]	27.1	[22.6–31.7]	Tunisia
22.9	[17.5–28.9]	35.8	[29.2–42.4]	29.5	[25.2–33.8]	Turkey
17.1	[11–24]	23.1	[16.2–30.6]	20.1	[15.5–24.9]	Turkmenistan
34.5	[26.4–42.8]	46.4	[38.4–54.3]	40.3	[34.2–46.7]	Tuvalu
1.6	[0.7–3.1]	8.3	[5.1–12.5]	4.9	[3–6.9]	Uganda
17.1	[10.9–24.4]	22.6	[14.6–31.5]	20.1	[14.2–25]	Ukraine
33.8	[26–41.7]	45.1	[36.9–53.3]	37.2	[30.9–43.4]	United Arab Emirates
26.9	[22.1–32.2]	29.2	[24.4–34.2]	28.1	[24.5–31.8]	United Kingdom
2.8	[1.5–4.8]	11.4	[8–15.5]	7.1	[5.1–9.1]	United Republic of Tanzania
32.6	[26.7–38.7]	34.7	[28.9–40.7]	33.7	[29.6–37.7]	United States of America
22.5	[15.6–30.3]	30.6	[22.5–38.9]	26.7	[20.8–32.1]	Uruguay
12.1	[7–18.6]	18.9	[12.7–26.4]	15.5	[10.7–19.6]	Uzbekistan
29.4	[21.7–37.5]	41.5	[33.7–49.2]	35.4	[29.7–40.8]	Vanuatu
20.3	[14.2–27.2]	29.4	[22.5–36.9]	24.8	[20.3–30]	Venezuela (Bolivarian Republic of)
2.3	[1–4.4]	4.8	[2.5–8.1]	3.6	[1.9–5.4]	Viet Nam
11.1	[6.2–17.2]	23.4	[15.8–31.9]	17.2	[11.9–22]	Yemen
3.4	[1.7–5.9]	14.3	[9.7–19.8]	8.9	[6–11.6]	Zambia
2.4	[1–4.5]	18.5	[12.1–25.9]	10.5	[6.7–14.2]	Zimbabwe

## 4.8a Raised blood glucose

### Comparable estimates of prevalence of raised blood glucose (population aged 18+ years), 2010

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	6.0	[3–10]	5.8	[3.1–9.5]	5.9	[3.5–8.3]
Albania	EUR	8.8	[4.7–14]	8.2	[4.7–13.1]	8.5	[5.5–12]
Algeria	AFR	10.4	[6.6–15.3]	11.0	[7.1–15.8]	10.7	[7.7–14.1]
Andorra	EUR	10.6	[6.6–16.1]	9.1	[5.9–13.3]	9.8	[6.9–12.6]
Angola	AFR	7.9	[3.9–14.1]	7.2	[3.6–13]	7.5	[4–10.8]
Antigua and Barbuda	AMR	10.7	[5–18.7]	13.0	[6.5–22.3]	11.8	[6.6–17.2]
Argentina	AMR	8.9	[4.9–14.1]	8.6	[5.1–13.2]	8.7	[5.7–11.8]
Armenia	EUR	10.2	[5.9–16.1]	12.7	[7.9–18.8]	11.4	[7.8–15.1]
Australia	WPR	8.4	[5.6–11.6]	6.8	[4.7–9.2]	7.6	[5.8–9.6]
Austria	EUR	7.8	[4.7–12.1]	6.2	[3.8–9]	7.0	[4.8–9.1]
Azerbaijan	EUR	10.5	[6–16.4]	12.8	[7.7–19.6]	11.7	[7.8–15.4]
Bahamas	AMR	11.0	[6.1–18]	12.3	[7–19.5]	11.6	[7.5–15.7]
Bahrain	EMR	12.1	[7.6–17.9]	11.7	[7.2–17.1]	11.9	[8.3–15.6]
Bangladesh	SEAR	7.1	[4–11.2]	6.5	[3.9–10]	6.8	[4.5–9.2]
Barbados	AMR	13.3	[6.4–23]	16.3	[8.5–27.1]	14.8	[8.5–20.8]
Belarus	EUR	9.2	[4.9–15.3]	10.1	[5.7–17]	9.7	[6–13.3]
Belgium	EUR	7.4	[4.3–11.5]	6.2	[3.8–9.2]	6.8	[4.6–9]
Belize	AMR	7.3	[3.9–12.5]	9.7	[5.3–16.3]	8.5	[5.2–11.8]
Benin	AFR	6.1	[3.3–9.8]	5.8	[3.3–9.1]	6.0	[3.6–8.1]
Bhutan	SEAR	9.0	[5.4–13.3]	8.4	[5.1–12.5]	8.7	[6.1–11.3]
Bolivia (Plurinational State of)	AMR	5.0	[2.3–8.5]	6.7	[3.4–10.8]	5.8	[3.3–8.4]
Bosnia and Herzegovina	EUR	11.6	[6.2–18.4]	11.2	[6.3–17.4]	11.4	[7–15.7]
Botswana	AFR	6.6	[3.3–11.2]	8.5	[4.6–13.8]	7.5	[4.4–10.7]
Brazil	AMR	7.1	[4–11.1]	6.8	[4–10.3]	7.0	[4.6–9.3]
Brunei Darussalam	WPR	10.1	[5.3–16.3]	9.8	[5.2–16.2]	10.0	[5.9–13.7]
Bulgaria	EUR	10.4	[6–16.2]	10.1	[6.1–15.4]	10.2	[7.1–13.8]
Burkina Faso	AFR	5.2	[2.8–8.4]	4.6	[2.6–7.5]	4.9	[3–6.8]
Burundi	AFR	2.9	[1.2–5.7]	3.0	[1.3–5.7]	3.0	[1.4–4.6]
Cabo Verde	AFR	7.0	[4.1–11.1]	7.2	[4.4–10.9]	7.1	[4.9–9.5]
Cambodia	WPR	5.4	[2.9–8.6]	6.2	[3.6–9.7]	5.8	[3.7–7.9]
Cameroon	AFR	5.9	[3.3–9.5]	5.6	[3.2–9]	5.8	[3.7–8]
Canada	AMR	9.1	[5.7–13.2]	7.5	[5–10.9]	8.3	[5.9–10.6]
Central African Republic	AFR	5.5	[2.7–10.1]	5.6	[2.8–10.3]	5.5	[2.9–8.2]
Chad	AFR	6.6	[3.4–10.9]	5.4	[2.8–8.9]	6.0	[3.7–8.3]
Chile	AMR	9.7	[5.6–14.8]	9.7	[5.9–14.3]	9.7	[6.9–12.7]
China	WPR	8.7	[5.5–13.2]	7.5	[4.7–11.3]	8.1	[5.7–10.8]
Colombia	AMR	6.9	[3.9–10.9]	7.5	[4.5–11.4]	7.2	[4.8–9.7]
Comoros	AFR	6.2	[3.5–9.9]	6.3	[3.6–9.8]	6.3	[4–8.4]
Congo	AFR	6.4	[3.1–11.9]	6.2	[3.2–11.6]	6.3	[3.4–9.2]
Cook Islands	WPR	26.9	[18.5–36.8]	24.2	[16.7–33.5]	25.6	[19.3–31.8]
Costa Rica	AMR	7.9	[4.6–12.1]	7.8	[4.8–11.7]	7.8	[5.4–10.3]
Côte d'Ivoire	AFR	6.0	[3.1–10.1]	4.6	[2.4–7.8]	5.3	[3.3–7.4]
Croatia	EUR	10.4	[5.8–16.4]	9.2	[5.5–14.1]	9.8	[6.3–13.1]
Cuba	AMR	8.6	[4.4–15]	10.4	[5.9–17.3]	9.5	[5.8–13.6]
Cyprus	EUR	9.3	[5.5–14.2]	7.5	[4.6–11.3]	8.4	[5.7–10.9]
Czech Republic	EUR	9.9	[5.8–15.4]	9.0	[5.3–14.1]	9.5	[6.2–12.8]



... Indicates no data were available

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
8.8	[4.8–14]	8.2	[4.6–13]	8.5	[5.5–11.7]	Afghanistan
8.1	[4.4–13]	7.5	[4.2–12]	7.8	[4.8–10.8]	Albania
13.0	[8.5–18.7]	13.5	[8.9–19.1]	13.3	[9.9–16.9]	Algeria
9.1	[5.4–13.9]	6.8	[4.2–10.5]	7.9	[5.3–10.4]	Andorra
11.3	[5.9–19.2]	10.0	[5.3–17.5]	10.7	[6.1–14.9]	Angola
10.9	[5.1–19]	12.9	[6.4–22.2]	11.9	[6.1–17.6]	Antigua and Barbuda
8.9	[4.9–14.2]	7.7	[4.3–12.2]	8.3	[5.3–11.3]	Argentina
10.3	[6–16.4]	11.7	[7.2–17.6]	11.0	[7.5–14.8]	Armenia
7.3	[4.8–10.1]	5.4	[3.6–7.5]	6.3	[4.5–8]	Australia
6.3	[3.6–9.8]	4.2	[2.5–6.4]	5.2	[3.3–6.9]	Austria
12.1	[7.1–18.3]	13.9	[8.5–20.7]	13.0	[9–17.3]	Azerbaijan
11.6	[6.6–18.6]	12.1	[7–19.2]	11.9	[7.6–16.2]	Bahamas
16.4	[10.9–23.1]	15.3	[10–21.4]	16.0	[11.5–20.5]	Bahrain
8.8	[5.1–13.5]	8.5	[5.2–12.8]	8.6	[5.7–11.5]	Bangladesh
12.3	[6–21.3]	14.2	[7.2–24]	13.3	[7.6–18.9]	Barbados
8.5	[4.5–14.2]	7.9	[4.1–13.7]	8.2	[4.7–11.6]	Belarus
5.8	[3.3–9.2]	4.1	[2.3–6.4]	4.9	[3.1–6.8]	Belgium
9.9	[5.5–16.5]	12.7	[7.1–20.5]	11.3	[6.9–15.4]	Belize
8.8	[5–13.6]	7.9	[4.7–12]	8.3	[5.6–11.2]	Benin
11.7	[7.1–17]	11.3	[7–16.4]	11.5	[8.1–14.8]	Bhutan
6.3	[3.1–10.5]	7.9	[4.1–12.7]	7.1	[4.3–9.7]	Bolivia (Plurinational State of)
9.9	[5.1–16]	9.0	[4.8–14.4]	9.4	[5.7–12.9]	Bosnia and Herzegovina
9.9	[5.2–16.3]	11.4	[6.3–17.9]	10.6	[6.6–14.5]	Botswana
7.9	[4.5–12.2]	7.1	[4.2–10.7]	7.5	[4.9–10]	Brazil
11.2	[6.2–17.5]	11.1	[6.3–17.5]	11.1	[7.1–15]	Brunei Darussalam
8.4	[4.7–13.5]	7.1	[3.9–11.5]	7.7	[4.7–10.6]	Bulgaria
8.2	[4.7–12.8]	6.6	[3.8–10.3]	7.4	[4.7–10.1]	Burkina Faso
4.6	[1.9–8.5]	4.8	[2.3–8.6]	4.7	[2.2–7]	Burundi
9.8	[5.9–15.1]	8.6	[5.3–13]	9.2	[6.2–12.2]	Cabo Verde
7.2	[4–11.3]	7.4	[4.3–11.4]	7.3	[4.6–9.8]	Cambodia
8.5	[4.9–13.2]	7.9	[4.6–12.3]	8.2	[5.3–11]	Cameroon
7.6	[4.7–11.1]	5.7	[3.7–8.5]	6.6	[4.7–8.6]	Canada
7.7	[3.9–13.6]	7.3	[3.7–13.1]	7.5	[3.9–11]	Central African Republic
9.8	[5.3–15.6]	7.8	[4.2–12.5]	8.8	[5.6–12.2]	Chad
9.6	[5.6–14.6]	9.1	[5.4–13.4]	9.3	[6.2–12.2]	Chile
8.7	[5.5–13]	7.3	[4.6–11]	8.0	[5.6–10.6]	China
7.9	[4.6–12.3]	8.2	[5–12.2]	8.0	[5.2–10.7]	Colombia
8.7	[5.2–13.3]	8.5	[5.1–12.9]	8.6	[5.8–11.3]	Comoros
8.9	[4.5–15.7]	8.3	[4.4–15.1]	8.6	[4.8–12.4]	Congo
28.3	[19.7–38.1]	25.3	[17.7–34.7]	26.8	[20.6–32.3]	Cook Islands
8.8	[5.3–13.3]	8.4	[5.2–12.6]	8.6	[6–11.4]	Costa Rica
7.8	[4.1–12.6]	6.6	[3.6–10.6]	7.2	[4.5–10.2]	Côte d'Ivoire
8.3	[4.6–13.5]	6.4	[3.5–10.4]	7.4	[4.5–10.3]	Croatia
7.7	[3.9–13.4]	8.9	[4.8–15]	8.3	[4.4–11.9]	Cuba
9.0	[5.3–13.8]	6.5	[3.9–10.1]	7.8	[5.2–10.4]	Cyprus
8.5	[4.8–13.4]	6.7	[3.7–10.9]	7.6	[4.8–10.2]	Czech Republic



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	4.7	[1.8–9.3]	6.3	[2.8–11.4]	5.5	[2.4–8.5]
Democratic Republic of the Congo	AFR	4.0	[1.5–8.4]	3.9	[1.6–7.8]	4.0	[1.6–6.2]
Denmark	EUR	7.4	[4.3–11.8]	5.8	[3.5–8.8]	6.6	[4.4–8.9]
Djibouti	EMR	6.8	[3.3–12.2]	6.1	[3–10.8]	6.5	[3.6–9.4]
Dominica	AMR	7.4	[4–12.6]	10.6	[6.1–17.2]	9.0	[5.7–12.7]
Dominican Republic	AMR	7.7	[4.2–12.8]	8.6	[4.9–14.4]	8.1	[5–11.2]
Ecuador	AMR	6.4	[3.1–10.7]	7.3	[3.8–11.6]	6.9	[3.9–9.5]
Egypt	EMR	13.1	[8.5–18.5]	16.7	[11.4–22.7]	14.9	[11.2–18.4]
El Salvador	AMR	8.3	[4.9–12.8]	9.3	[5.6–13.8]	8.8	[6–11.8]
Equatorial Guinea	AFR	12.6	[5.6–23.2]	10.2	[4.4–19.8]	11.4	[5.8–17.3]
Eritrea	AFR	3.9	[2.1–6.4]	4.0	[2.2–6.6]	4.0	[2.3–5.5]
Estonia	EUR	9.8	[5.2–15.9]	9.3	[5.1–15.6]	9.5	[6.2–13.4]
Ethiopia	AFR	4.9	[2.6–8.1]	4.7	[2.6–7.9]	4.8	[3–6.8]
Fiji	WPR	13.3	[8.4–20]	15.8	[10.4–22.5]	14.5	[10.1–18.5]
Finland	EUR	9.7	[6.2–13.8]	8.1	[5.3–11.4]	8.9	[6.4–11.2]
France	EUR	9.1	[5.3–13.9]	6.9	[4.4–10.3]	7.9	[5.3–10.5]
Gabon	AFR	9.6	[4.8–17]	8.8	[4.5–16.1]	9.2	[5.3–13.6]
Gambia	AFR	6.2	[3.3–10.2]	5.6	[3–9.2]	5.9	[3.4–8.4]
Georgia	EUR	13.3	[8.3–20]	14.2	[9.1–20.4]	13.8	[9.6–18.1]
Germany	EUR	9.1	[5.7–13.4]	7.5	[4.9–10.6]	8.3	[5.8–10.7]
Ghana	AFR	5.7	[2.8–10]	5.5	[2.8–9.4]	5.6	[3.1–8]
Greece	EUR	9.4	[5.6–14.5]	8.8	[5.5–12.9]	9.1	[6–11.9]
Grenada	AMR	7.6	[3.8–13.2]	10.7	[5.8–17.5]	9.1	[5.4–13.1]
Guatemala	AMR	7.5	[4.2–12.3]	7.9	[4.4–12.2]	7.7	[4.6–10.7]
Guinea	AFR	5.2	[2.8–8.4]	4.9	[2.8–7.9]	5.0	[3.2–6.9]
Guinea-Bissau	AFR	5.5	[2.9–9]	5.4	[3–8.7]	5.5	[3.3–7.5]
Guyana	AMR	6.9	[3.2–12.7]	9.5	[4.8–16.2]	8.2	[4.5–11.8]
Haiti	AMR	5.7	[2.7–10.3]	5.8	[2.9–10.5]	5.8	[3.1–8.4]
Honduras	AMR	6.3	[3.5–10.2]	7.1	[4.2–11]	6.7	[4.1–9]
Hungary	EUR	10.1	[6.1–15.6]	8.9	[5.2–13.8]	9.5	[6.4–12.4]
Iceland	EUR	9.2	[5.1–14.7]	6.1	[3.5–9.6]	7.6	[4.8–10.6]
India	SEAR	7.8	[4.6–11.9]	7.8	[4.7–11.8]	7.8	[5.2–10.2]
Indonesia	SEAR	6.5	[3.6–10.3]	7.4	[4.4–11.1]	6.9	[4.5–9.2]
Iran (Islamic Republic of)	EMR	8.7	[5.6–12.7]	9.7	[6.5–13.7]	9.2	[6.7–11.6]
Iraq	EMR	10.6	[6.6–15.9]	12.0	[7.7–17.4]	11.3	[7.7–14.7]
Ireland	EUR	9.0	[5.6–13.5]	6.9	[4.3–10.2]	7.9	[5.6–10.3]
Israel	EUR	7.1	[4–11.5]	6.7	[4.1–10.4]	6.9	[4.6–9.4]
Italy	EUR	9.6	[6.3–13.9]	8.1	[5.6–11.3]	8.8	[6.5–11.3]
Jamaica	AMR	8.4	[4.8–13.9]	11.6	[7–18.3]	10.0	[6.3–13.6]
Japan	WPR	12.1	[8.6–16.3]	9.2	[6.7–12.3]	10.6	[8.3–13]
Jordan	EMR	10.2	[6.2–15.3]	11.1	[7.1–16.1]	10.6	[7.5–14.1]
Kazakhstan	EUR	11.0	[6.3–17.5]	12.0	[7.2–18.2]	11.5	[7.8–15.2]
Kenya	AFR	4.2	[2.2–6.9]	4.9	[2.8–7.8]	4.6	[2.9–6.3]
Kiribati	WPR	19.8	[13.2–28.2]	18.8	[12.3–26.8]	19.3	[13.9–24.4]
Kuwait	EMR	14.2	[8.7–21.2]	12.6	[7.5–19.2]	13.6	[9.5–18]
Kyrgyzstan	EUR	7.0	[3.9–11.2]	8.9	[5.2–13.9]	8.0	[5.2–10.9]
Lao People's Democratic Republic	WPR	5.5	[3–8.7]	6.1	[3.6–9.1]	5.8	[3.9–7.7]
Latvia	EUR	9.4	[5–15.4]	9.7	[5.4–16.1]	9.6	[6–13.3]
Lebanon	EMR	11.2	[6.3–17.7]	9.1	[5.2–14.4]	10.2	[6.7–13.8]
Lesotho	AFR	5.2	[2.7–8.6]	9.0	[5.1–14.1]	7.1	[4.4–9.6]

## Annex 4.8a: Raised blood glucose

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
5.1	[2.1–9.8]	5.7	[2.6–10.6]	5.4	[2.6–8.1]	Democratic People's Republic of Korea
5.9	[2.4–11.6]	5.4	[2.4–10.4]	5.7	[2.5–8.6]	Democratic Republic of the Congo
5.7	[3.2–9.2]	3.9	[2.2–6.2]	4.8	[3–6.6]	Denmark
9.2	[4.7–15.9]	8.2	[4.2–14]	8.7	[4.7–12.6]	Djibouti
7.6	[4.1–12.8]	10.5	[6–17.1]	9.1	[5.7–12.7]	Dominica
8.7	[4.8–14.3]	9.7	[5.6–15.9]	9.2	[5.4–12.6]	Dominican Republic
7.4	[3.7–12.2]	8.1	[4.2–12.9]	7.8	[4.6–10.9]	Ecuador
15.0	[9.9–20.9]	18.4	[12.7–24.9]	16.7	[12.8–20.9]	Egypt
9.9	[5.9–15.3]	10.3	[6.2–15.4]	10.1	[7.1–13.5]	El Salvador
14.7	[7.1–25.9]	12.5	[6–22.8]	13.6	[7.3–20.3]	Equatorial Guinea
6.6	[3.8–10.3]	6.2	[3.6–9.8]	6.4	[4.1–8.6]	Eritrea
8.5	[4.4–14.1]	6.5	[3.2–11.8]	7.4	[4.2–10.6]	Estonia
6.8	[3.7–11]	6.5	[3.6–10.4]	6.7	[4.1–9.1]	Ethiopia
14.7	[9.5–21.8]	16.9	[11.3–23.8]	15.8	[11–20.4]	Fiji
7.5	[4.7–10.8]	5.4	[3.3–7.9]	6.4	[4.5–8.3]	Finland
7.2	[4.1–11.3]	4.7	[2.7–7.4]	5.9	[3.9–8]	France
12.0	[6.2–20.7]	10.4	[5.4–19.1]	11.2	[6.3–16]	Gabon
9.0	[5–14.3]	8.6	[5–13.4]	8.8	[5.3–12.1]	Gambia
12.1	[7.5–18.4]	11.9	[7.3–17.4]	12.0	[8.4–15.9]	Georgia
6.8	[4.2–10.4]	4.8	[3–7.2]	5.8	[4.1–7.7]	Germany
7.9	[4–13.4]	7.3	[3.9–12.2]	7.6	[4.5–10.8]	Ghana
7.5	[4.3–11.9]	6.1	[3.6–9.6]	6.8	[4.5–9.3]	Greece
9.3	[4.7–15.9]	11.9	[6.4–19.8]	10.6	[6.6–15]	Grenada
9.7	[5.4–15.6]	10.1	[5.7–15.3]	9.9	[6.3–13.5]	Guatemala
7.1	[4–11.1]	6.5	[3.8–10.2]	6.8	[4.3–9.4]	Guinea
7.6	[4.2–12]	7.3	[4.2–11.3]	7.4	[4.9–10]	Guinea–Bissau
9.2	[4.6–15.8]	11.5	[6.1–19.1]	10.3	[6.2–14.4]	Guyana
7.4	[3.7–13]	7.4	[3.7–12.9]	7.4	[4.2–10.6]	Haiti
8.3	[4.7–13.2]	9.3	[5.5–14]	8.8	[5.5–12]	Honduras
8.7	[5.1–13.7]	6.3	[3.4–10.4]	7.5	[4.7–10.1]	Hungary
8.1	[4.4–13.2]	5.0	[2.7–8.1]	6.6	[4–9.2]	Iceland
9.1	[5.6–13.7]	8.8	[5.4–13.2]	9.0	[6.2–11.9]	India
7.7	[4.5–11.9]	8.4	[5.2–12.5]	8.0	[5.4–10.6]	Indonesia
11.0	[7.2–15.8]	12.1	[8.3–16.8]	11.5	[8.3–14.7]	Iran (Islamic Republic of)
14.7	[9.4–21.2]	15.5	[10.2–22]	15.1	[11.1–19.3]	Iraq
8.3	[5.1–12.5]	6.0	[3.6–9]	7.1	[5–9.4]	Ireland
6.7	[3.7–11]	5.7	[3.3–9.1]	6.2	[3.9–8.3]	Israel
7.4	[4.7–10.9]	5.3	[3.4–7.8]	6.3	[4.7–8.2]	Italy
8.8	[5–14.4]	11.9	[7.1–18.9]	10.4	[6.3–14]	Jamaica
8.9	[6.1–12.4]	5.8	[3.9–8.2]	7.3	[5.4–9.1]	Japan
13.7	[8.7–20]	14.7	[9.8–20.7]	14.2	[10.6–18.3]	Jordan
12.4	[7.3–19.3]	12.1	[7.3–18.3]	12.2	[8–16.5]	Kazakhstan
6.5	[3.7–10.4]	7.3	[4.4–11.2]	6.9	[4.7–9.1]	Kenya
20.6	[13.9–29]	19.8	[13.1–28]	20.2	[15.2–25.7]	Kiribati
18.8	[12.2–26.8]	17.3	[10.9–25]	18.2	[13–23.2]	Kuwait
9.1	[5.3–14.2]	10.7	[6.4–16.2]	9.9	[6.4–13.8]	Kyrgyzstan
7.7	[4.4–11.7]	8.0	[4.9–11.8]	7.8	[5.4–10.4]	Lao People's Democratic Republic
8.1	[4.2–13.5]	6.8	[3.4–12.2]	7.4	[4.4–10.5]	Latvia
11.3	[6.5–17.8]	9.8	[5.6–15.5]	10.6	[6.7–14.6]	Lebanon
8.1	[4.3–13]	11.3	[6.5–17.6]	9.7	[6.1–13.6]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	5.1	[2.4–9.1]	5.1	[2.6–8.7]	5.1	[2.9–7.2]
Libya	EMR	11.7	[7.9–16.7]	12.6	[8.4–17.8]	12.1	[9–15.4]
Lithuania	EUR	10.3	[5.6–16.9]	10.6	[6.2–17.2]	10.5	[6.6–14.2]
Luxembourg	EUR	9.1	[5.3–14]	6.2	[3.7–9.5]	7.6	[5–10.2]
Madagascar	AFR	4.8	[2.6–8]	4.3	[2.4–6.9]	4.5	[2.8–6.3]
Malawi	AFR	5.0	[2.7–7.9]	5.3	[3–8.2]	5.1	[3.2–7]
Malaysia	WPR	9.3	[5.8–14]	8.2	[5–12.4]	8.7	[5.9–11.4]
Maldives	SEAR	7.8	[3.8–13.4]	7.2	[3.4–12.6]	7.5	[4.2–11]
Mali	AFR	5.5	[2.9–9.2]	5.1	[2.8–8.4]	5.3	[3.3–7.6]
Malta	EUR	10.1	[6.1–16.2]	8.4	[5.2–12.9]	9.3	[6–12.4]
Marshall Islands	WPR	18.3	[11.8–26.3]	18.2	[12–26.3]	18.2	[13.4–23.5]
Mauritania	AFR	6.1	[3.2–10.3]	7.2	[4–11.6]	6.7	[3.9–9.3]
Mauritius	AFR	11.6	[6.9–18.1]	11.1	[6.8–16.7]	11.3	[7.5–14.9]
Mexico	AMR	8.9	[5.3–13.5]	9.3	[5.7–14.1]	9.1	[6.1–12.2]
Micronesia (Federated States of)	WPR	15.4	[10.4–22]	18.3	[12.5–25.6]	16.8	[12.6–21]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	7.6	[4.2–12.2]	8.1	[4.6–12.7]	7.8	[5–10.7]
Montenegro	EUR	8.2	[4.6–13.4]	8.0	[4.6–12.6]	8.1	[5.1–10.9]
Morocco	EMR	10.6	[6.4–16]	10.6	[6.7–15.7]	10.6	[7.3–13.9]
Mozambique	AFR	5.2	[2.9–8.5]	5.4	[3.1–8.6]	5.3	[3.2–7.4]
Myanmar	SEAR	4.9	[2.6–8.1]	6.1	[3.4–9.7]	5.6	[3.4–7.9]
Namibia	AFR	6.3	[3.2–10.6]	7.5	[4.1–12.1]	6.9	[4.2–9.6]
Nauru	WPR	25.2	[14.6–37.6]	22.6	[13.2–34.1]	23.9	[16.1–31.6]
Nepal	SEAR	8.3	[4.9–12.5]	6.8	[3.9–10.5]	7.5	[5.1–10]
Netherlands	EUR	7.7	[4.7–11.5]	6.4	[4–9.3]	7.0	[4.9–9.3]
New Zealand	WPR	9.9	[6.5–14.1]	8.0	[5.4–11.4]	8.9	[6.3–11.3]
Nicaragua	AMR	6.8	[3.6–11.1]	8.0	[4.5–12.6]	7.4	[4.7–10.3]
Niger	AFR	5.3	[2.7–9]	4.7	[2.5–7.8]	5.0	[3–7.1]
Nigeria	AFR	5.2	[2.9–8.4]	5.1	[2.9–8]	5.1	[3.4–6.9]
Niue	WPR	24.0	[16.3–32.9]	24.1	[16.8–32.8]	24.0	[18.2–29.7]
Norway	EUR	9.6	[5.8–14.4]	7.2	[4.5–10.4]	8.4	[5.7–10.9]
Oman	EMR	9.5	[5.8–14.4]	9.2	[5.8–13.8]	9.4	[6.3–12.2]
Pakistan	EMR	7.7	[4.5–12.1]	7.8	[4.4–12.3]	7.7	[5–10.3]
Palau	WPR	22.4	[15.1–31.1]	19.3	[12.7–27.6]	20.9	[15.8–26.6]
Panama	AMR	8.3	[4.8–13.1]	9.0	[5.3–13.7]	8.7	[5.9–11.5]
Papua New Guinea	WPR	11.1	[6.2–17.5]	10.5	[5.9–16.8]	10.8	[6.6–14.8]
Paraguay	AMR	5.7	[2.9–9.3]	5.6	[3.1–9.1]	5.6	[3.6–7.9]
Peru	AMR	6.2	[3.2–9.8]	7.1	[3.8–11.1]	6.7	[4.1–9]
Philippines	WPR	4.9	[2.7–8]	5.8	[3.3–9.1]	5.3	[3.4–7.4]
Poland	EUR	9.8	[5.9–15]	9.3	[5.6–14]	9.5	[6.5–12.7]
Portugal	EUR	9.8	[5.6–15.3]	8.0	[5–12.1]	8.9	[6–11.8]
Qatar	EMR	14.4	[8.7–21.7]	13.8	[8.3–20.8]	14.2	[8.7–19.5]
Republic of Korea	WPR	9.2	[5.9–13.4]	7.5	[5–10.7]	8.4	[6–10.7]
Republic of Moldova	EUR	8.5	[4.3–14.2]	10.9	[6.1–17.8]	9.7	[5.8–13.8]
Romania	EUR	8.1	[4.5–12.9]	8.5	[5–13.3]	8.3	[5.3–11.4]
Russian Federation	EUR	8.6	[4.5–14.2]	11.0	[6.3–18.3]	9.9	[6.1–13.7]
Rwanda	AFR	3.4	[1.5–6.5]	3.7	[1.7–6.7]	3.6	[1.7–5.4]
Saint Kitts and Nevis	AMR	12.7	[6.4–21.5]	15.0	[8.1–24.6]	13.9	[8.4–19]
Saint Lucia	AMR	11.8	[5.5–20.3]	12.7	[6.4–21.9]	12.3	[7.2–17.6]
Saint Vincent and the Grenadines	AMR	8.5	[4.6–14.2]	9.9	[5.6–16.3]	9.2	[5.7–12.8]

## Annex 4.8a: Raised blood glucose

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
7.2	[3.6–12.5]	6.9	[3.8–11.4]	7.1	[4.3–10]	Liberia
14.7	[10.1–20.5]	15.7	[10.7–21.7]	15.2	[11.3–19.3]	Libya
9.6	[5.1–15.8]	8.2	[4.4–14]	8.8	[5.4–12.2]	Lithuania
7.8	[4.5–12.1]	4.7	[2.7–7.4]	6.2	[4–8.5]	Luxembourg
6.9	[3.9–11]	6.1	[3.6–9.4]	6.5	[4.1–8.7]	Madagascar
7.3	[4.2–11.4]	7.2	[4.2–11]	7.2	[4.8–9.9]	Malawi
10.7	[6.8–15.9]	9.8	[6.2–14.4]	10.2	[7.1–13.1]	Malaysia
10.2	[5.1–16.9]	9.8	[4.9–16.4]	10.0	[5.8–14.1]	Maldives
8.3	[4.6–13.5]	7.1	[4.1–11.4]	7.8	[4.8–10.5]	Mali
8.3	[4.9–13.4]	6.3	[3.8–10]	7.3	[4.6–9.8]	Malta
19.1	[12.6–27.1]	19.2	[13–27.5]	19.2	[13.9–24.2]	Marshall Islands
8.6	[4.8–14]	9.5	[5.5–14.7]	9.0	[5.8–12.2]	Mauritania
11.4	[6.9–17.5]	10.3	[6.4–15.6]	10.8	[7.1–14.5]	Mauritius
10.3	[6.3–15.4]	10.2	[6.3–15.2]	10.2	[7–13.3]	Mexico
19.1	[13.1–26.9]	21.3	[14.8–29.1]	20.2	[15.1–25.1]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
10.2	[6–15.9]	10.2	[6.1–15.6]	10.2	[6.7–13.6]	Mongolia
7.2	[4–11.8]	6.4	[3.5–10.4]	6.8	[4.1–9.6]	Montenegro
12.4	[7.7–18.3]	12.1	[7.8–17.7]	12.3	[8.5–15.8]	Morocco
7.4	[4.2–11.9]	7.2	[4.2–11.1]	7.3	[4.8–10]	Mozambique
6.1	[3.3–9.7]	7.1	[4.1–11]	6.6	[4.3–9.1]	Myanmar
9.0	[4.8–14.6]	9.7	[5.6–15.3]	9.4	[5.9–12.5]	Namibia
26.0	[15.5–38.3]	23.7	[14.1–35.3]	24.9	[17.1–33.2]	Nauru
9.4	[5.6–14]	8.3	[4.9–12.5]	8.8	[6–11.7]	Nepal
6.0	[3.6–9.1]	4.5	[2.7–6.8]	5.3	[3.5–6.9]	Netherlands
8.4	[5.4–12.2]	6.5	[4.3–9.5]	7.4	[5.3–9.6]	New Zealand
8.9	[4.8–14.2]	10.1	[5.9–15.7]	9.5	[6.3–12.8]	Nicaragua
6.8	[3.7–11.2]	6.5	[3.7–10.5]	6.7	[4.3–9.2]	Niger
7.4	[4.3–11.5]	7.0	[4.2–10.7]	7.2	[4.9–9.6]	Nigeria
25.3	[17.5–34.2]	25.2	[17.8–34.1]	25.3	[19.6–31.4]	Niue
7.9	[4.6–12.1]	5.2	[3.1–7.9]	6.5	[4.4–8.7]	Norway
15.3	[10–21.8]	13.9	[9.1–19.9]	14.7	[10.6–18.9]	Oman
9.8	[5.8–15.1]	10.0	[5.8–15.4]	9.9	[6.6–13.2]	Pakistan
23.3	[16–32]	20.3	[13.6–28.8]	21.8	[16.4–27.3]	Palau
9.2	[5.3–14.3]	9.6	[5.7–14.5]	9.4	[6.3–12.6]	Panama
14.6	[8.6–22]	13.3	[7.9–20.4]	13.9	[9.2–18.4]	Papua New Guinea
6.9	[3.6–11.2]	6.7	[3.7–10.8]	6.8	[4.2–9.3]	Paraguay
7.2	[3.9–11.3]	8.0	[4.3–12.4]	7.6	[5–10.4]	Peru
6.5	[3.7–10.2]	7.1	[4.2–10.9]	6.8	[4.5–9.1]	Philippines
8.8	[5.2–13.5]	7.3	[4.1–11.4]	8.0	[5.3–10.9]	Poland
8.0	[4.4–12.8]	5.7	[3.3–9.1]	6.8	[4.4–9.5]	Portugal
20.3	[13.2–28.7]	19.3	[12.4–27.6]	20.0	[13.2–26.6]	Qatar
8.6	[5.6–12.4]	6.3	[4.1–9.2]	7.5	[5.4–9.7]	Republic of Korea
8.1	[4.2–13.5]	9.3	[5–15.7]	8.7	[5.3–12.4]	Republic of Moldova
7.2	[3.9–11.6]	6.7	[3.7–10.8]	6.9	[4.3–9.7]	Romania
8.2	[4.3–13.4]	8.8	[4.7–15.3]	8.5	[5.2–12]	Russian Federation
5.4	[2.5–9.8]	5.7	[2.8–9.8]	5.6	[3.1–8.2]	Rwanda
13.0	[6.6–21.9]	14.9	[7.9–24.6]	13.9	[8.4–20.1]	Saint Kitts and Nevis
12.1	[5.8–20.7]	12.9	[6.4–22.2]	12.5	[7.1–18]	Saint Lucia
9.3	[5.2–15.2]	10.5	[6–17.3]	9.9	[6–13.8]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	18.5	[11.2–27.5]	21.9	[13.6–31.6]	20.2	[14.3–26.1]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	6.1	[3.2–10.1]	5.8	[3.1–9.5]	5.9	[3.5–8.2]
Saudi Arabia	EMR	14.1	[8.9–20.6]	11.9	[7.6–17.4]	13.1	[9.1–17.2]
Senegal	AFR	5.7	[3.1–9.3]	6.0	[3.4–9.5]	5.8	[3.7–7.9]
Serbia	EUR	9.0	[5–14.3]	8.6	[5–13.4]	8.8	[5.7–11.9]
Seychelles	AFR	12.9	[7.7–20.1]	12.8	[7.7–19.3]	12.8	[8.5–17.2]
Sierra Leone	AFR	5.1	[2.7–8.5]	5.0	[2.7–8.1]	5.0	[3.2–7]
Singapore	WPR	10.8	[6.9–15.6]	7.7	[4.9–11.1]	9.2	[6.6–12]
Slovakia	EUR	9.6	[5.5–14.7]	8.8	[5.3–13.3]	9.2	[6–12.4]
Slovenia	EUR	11.0	[6–17.7]	10.4	[6.1–16.1]	10.7	[7.2–14.5]
Solomon Islands	WPR	11.1	[6.6–17.2]	12.0	[7.2–18.2]	11.6	[8.2–15.2]
Somalia	EMR	4.8	[2.3–8.7]	4.5	[2.2–8]	4.7	[2.5–6.9]
South Africa	AFR	8.7	[4.9–13.8]	11.6	[6.9–17.9]	10.2	[6.6–13.7]
South Sudan	AFR	6.3	[3.6–10.1]	7.5	[4.3–11.7]	6.9	[4.4–9.3]
Spain	EUR	10.2	[6.6–14.9]	8.3	[5.6–12]	9.3	[6.7–11.8]
Sri Lanka	SEAR	7.7	[4.1–12.7]	9.1	[5.1–14.4]	8.4	[5.1–11.5]
Sudan	EMR	6.3	[3.6–10.1]	7.5	[4.3–11.7]	6.9	[4.4–9.3]
Suriname	AMR	9.4	[5.3–15.5]	11.0	[6.5–17.7]	10.2	[6.4–14]
Swaziland	AFR	6.2	[3.1–10.4]	9.4	[5–15.3]	7.8	[4.7–11.1]
Sweden	EUR	9.3	[5.8–13.5]	7.3	[4.7–10.4]	8.3	[5.8–10.8]
Switzerland	EUR	7.9	[4.8–11.6]	5.7	[3.5–8.3]	6.8	[4.7–8.8]
Syrian Arab Republic	EMR	9.0	[5.4–13.7]	10.0	[6.2–14.9]	9.5	[6.5–12.3]
Tajikistan	EUR	7.5	[4–12.8]	7.9	[4.2–12.8]	7.7	[4.8–10.7]
Thailand	SEAR	9.0	[5.3–13.6]	9.8	[6.2–14.5]	9.4	[6.4–12.2]
the former Yugoslav Republic of Macedonia	EUR	8.7	[4.8–13.9]	8.1	[4.6–13]	8.4	[5.3–11.6]
Timor–Leste	SEAR	5.0	[2.5–8.5]	5.0	[2.7–8.2]	5.0	[3–7.1]
Togo	AFR	5.4	[3–8.6]	5.3	[3–8.4]	5.3	[3.2–7.2]
Tonga	WPR	18.3	[11.9–25.9]	22.5	[15.2–31.2]	20.4	[15–25.9]
Trinidad and Tobago	AMR	12.9	[5.1–24.2]	14.9	[6.6–27]	13.9	[6.9–20.7]
Tunisia	EMR	10.9	[7.1–15.7]	11.6	[7.7–16.4]	11.2	[8.1–14.6]
Turkey	EUR	10.6	[7.1–15]	12.1	[8–16.9]	11.4	[8.4–14.5]
Turkmenistan	EUR	9.8	[6–15]	10.6	[6.5–15.9]	10.2	[7.2–13.3]
Tuvalu	WPR	18.1	[11.9–25.6]	17.8	[12.1–24.8]	17.9	[13.1–22.4]
Uganda	AFR	3.2	[1.3–6.2]	3.6	[1.7–6.7]	3.4	[1.7–5.1]
Ukraine	EUR	8.6	[4.3–14.2]	10.2	[5.8–16.6]	9.4	[5.8–13.1]
United Arab Emirates	EMR	8.0	[4.7–12.6]	7.9	[4.6–12.4]	8.0	[5–11.1]
United Kingdom	EUR	10.0	[7.3–13.4]	8.5	[6.2–11.2]	9.2	[7.4–11]
United Republic of Tanzania	AFR	4.8	[2.8–7.4]	5.3	[3.2–8.1]	5.0	[3.4–6.6]
United States of America	AMR	10.0	[6.9–13.9]	8.7	[6.2–12]	9.4	[6.9–11.5]
Uruguay	AMR	9.4	[5.3–14.9]	9.9	[5.9–15]	9.6	[6.7–13]
Uzbekistan	EUR	7.7	[4.2–12.6]	8.8	[4.9–13.9]	8.2	[5–11.2]
Vanuatu	WPR	13.8	[8.5–20.2]	13.1	[8–19.5]	13.4	[9.4–17.8]
Venezuela (Bolivarian Republic of)	AMR	8.5	[5–12.9]	7.6	[4.6–11.3]	8.0	[5.4–10.8]
Viet Nam	WPR	4.7	[2.6–7.5]	5.7	[3.4–8.6]	5.2	[3.4–7]
Yemen	EMR	9.4	[5.2–15.2]	10.2	[5.9–16.2]	9.8	[6.4–13.3]
Zambia	AFR	4.7	[2.6–7.7]	5.2	[3.1–8.1]	4.9	[3.2–6.7]
Zimbabwe	AFR	3.7	[1.7–6.7]	5.3	[2.6–9.3]	4.5	[2.5–6.4]



## Annex 4.8a: Raised blood glucose

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
20.8	[12.9–30.2]	23.8	[15.1–33.9]	22.3	[16.1–28.2]	Samoa
...	...	...	...	...	...	San Marino
9.2	[5.1–14.9]	8.1	[4.6–13]	8.6	[5.4–12.1]	Sao Tome and Principe
17.5	[11.6–24.8]	15.9	[10.6–22.5]	16.8	[12.5–21]	Saudi Arabia
8.5	[4.8–13.5]	8.3	[4.9–12.8]	8.4	[5.7–11.4]	Senegal
7.7	[4.2–12.5]	6.8	[3.7–10.9]	7.2	[4.3–10]	Serbia
13.9	[8.6–21.2]	13.0	[7.9–19.6]	13.5	[9.1–17.7]	Seychelles
7.4	[4.2–11.8]	7.2	[4.2–11.2]	7.3	[4.6–9.8]	Sierra Leone
9.8	[6.3–14]	6.8	[4.4–9.9]	8.3	[5.7–10.6]	Singapore
8.9	[5.1–13.7]	7.2	[4.2–11.1]	8.0	[5.4–10.9]	Slovakia
9.2	[4.9–15]	7.7	[4.2–12.5]	8.4	[5.3–11.8]	Slovenia
14.4	[8.8–21.4]	15.8	[9.9–23.1]	15.1	[10.5–19.4]	Solomon Islands
6.8	[3.3–11.8]	6.2	[3.2–10.5]	6.5	[3.9–9.4]	Somalia
11.0	[6.5–17]	12.7	[7.6–19.4]	11.8	[8.1–16]	South Africa
8.8	[5.2–13.5]	9.9	[5.9–15.2]	9.4	[6.3–12.5]	South Sudan
8.6	[5.4–12.8]	6.0	[3.8–9.1]	7.3	[5–9.7]	Spain
7.8	[4.2–12.7]	8.8	[5–13.9]	8.3	[5.2–11.7]	Sri Lanka
8.8	[5.2–13.5]	9.9	[5.9–15.2]	9.4	[6.3–12.5]	Sudan
10.4	[6–16.9]	11.5	[6.8–18.3]	10.9	[7–14.8]	Suriname
9.4	[4.9–15.3]	12.6	[6.9–19.8]	11.0	[6.9–15.3]	Swaziland
7.3	[4.4–10.8]	4.9	[3–7.4]	6.1	[4–8.2]	Sweden
6.3	[3.8–9.4]	3.8	[2.3–5.8]	5.0	[3.2–6.7]	Switzerland
11.9	[7.4–17.6]	13.0	[8.3–18.8]	12.4	[8.9–15.9]	Syrian Arab Republic
10.4	[5.8–16.8]	10.7	[6–16.6]	10.5	[6.8–14.6]	Tajikistan
8.6	[5.2–13]	9.1	[5.7–13.4]	8.9	[6.3–11.5]	Thailand
7.9	[4.3–12.7]	6.9	[3.8–11.3]	7.4	[4.6–10.2]	the former Yugoslav Republic of Macedonia
6.9	[3.6–11.3]	6.5	[3.7–10.4]	6.7	[4–9.5]	Timor-Leste
8.0	[4.7–12.4]	7.6	[4.5–11.5]	7.8	[5.1–10.2]	Togo
21.3	[14.1–29.5]	24.9	[17.1–34.2]	23.1	[17–29.4]	Tonga
13.0	[5.3–24.2]	14.5	[6.4–26.3]	13.7	[6.9–20.3]	Trinidad and Tobago
11.8	[7.9–16.9]	12.4	[8.3–17.5]	12.1	[8.9–15.3]	Tunisia
11.8	[8–16.5]	12.6	[8.3–17.5]	12.2	[8.9–15.3]	Turkey
12.5	[7.9–18.6]	12.6	[8–18.5]	12.6	[8.5–16.2]	Turkmenistan
19.3	[13–27]	18.8	[12.9–25.9]	19.1	[14.1–23.8]	Tuvalu
5.1	[2.2–9.5]	5.6	[2.7–10]	5.4	[2.9–7.9]	Uganda
7.8	[3.9–13.2]	7.7	[4.1–13.4]	7.8	[4.5–11.2]	Ukraine
17.4	[11.5–24.6]	16.5	[10.7–23.7]	17.2	[12.2–21.9]	United Arab Emirates
8.1	[5.8–11]	6.2	[4.4–8.5]	7.2	[5.5–8.9]	United Kingdom
7.0	[4.2–10.6]	7.3	[4.5–10.9]	7.1	[4.8–9.4]	United Republic of Tanzania
8.6	[5.9–12]	6.9	[4.7–9.6]	7.7	[6–9.7]	United States of America
8.6	[4.7–13.8]	8.0	[4.5–12.7]	8.3	[5.4–11.1]	Uruguay
10.0	[5.6–15.9]	10.7	[6.2–16.6]	10.3	[6.8–14.1]	Uzbekistan
16.9	[10.8–24.1]	16.2	[10.3–23.4]	16.5	[11.9–21.4]	Vanuatu
9.6	[5.8–14.4]	8.4	[5.2–12.4]	9.0	[6–11.9]	Venezuela (Bolivarian Republic of)
5.8	[3.3–9]	6.1	[3.7–9.2]	6.0	[4.1–8]	Viet Nam
13.7	[7.9–20.9]	14.2	[8.5–21.4]	13.9	[9.1–18.6]	Yemen
7.3	[4.2–11.6]	7.9	[4.8–11.9]	7.6	[5.3–10.4]	Zambia
5.8	[2.6–10.4]	7.5	[3.7–12.9]	6.6	[3.7–9.6]	Zimbabwe

## 4.8b Raised blood glucose

### Comparable estimates of prevalence of raised blood glucose (population aged 18+ years), 2014

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	6.8	[2.8–13]	6.6	[2.8–12.3]	6.7	[3.3–10.3]
Albania	EUR	9.4	[4–17]	8.5	[3.8–15.4]	8.9	[4.5–13.3]
Algeria	AFR	11.9	[5.9–19.9]	12.3	[6.3–20.6]	12.1	[7.2–16.7]
Andorra	EUR	12.0	[5.6–20.9]	9.8	[5.2–16.5]	10.9	[6.1–15.5]
Angola	AFR	9.2	[3.6–18.4]	8.1	[3.1–17]	8.6	[3.8–13.8]
Antigua and Barbuda	AMR	13.0	[4.5–26]	15.1	[5.8–29.4]	14.0	[6.2–22]
Argentina	AMR	10.0	[4.3–18.2]	9.3	[4.4–16.4]	9.6	[5–14.2]
Armenia	EUR	11.0	[5.1–19.6]	13.6	[7–22.9]	12.2	[6.6–17.5]
Australia	WPR	9.1	[4.9–14.4]	7.2	[4.1–11.5]	8.1	[5–11]
Austria	EUR	8.9	[4–15.9]	6.6	[3.4–11.3]	7.7	[4.3–11.4]
Azerbaijan	EUR	13.1	[6.1–22.5]	15.5	[7.7–26.1]	14.3	[8.1–20.9]
Bahamas	AMR	12.6	[5.4–23.3]	13.5	[6–24.4]	13.1	[6.9–19.5]
Bahrain	EMR	13.9	[6.9–23.5]	13.3	[6.3–22.3]	13.6	[7.5–19.6]
Bangladesh	SEAR	8.0	[3.6–14.5]	7.4	[3.4–13]	7.7	[4.2–11.5]
Barbados	AMR	15.8	[5.8–30.5]	18.5	[7.6–34.4]	17.1	[8–26.6]
Belarus	EUR	10.5	[4.3–19.8]	10.7	[5–19.9]	10.6	[5–16.8]
Belgium	EUR	8.0	[3.7–14.7]	6.5	[3.2–11]	7.2	[4.1–10.5]
Belize	AMR	8.5	[3.4–16.9]	11.1	[4.6–21.7]	9.8	[4.5–15]
Benin	AFR	6.7	[2.7–12.6]	6.4	[2.8–11.8]	6.5	[3.1–9.6]
Bhutan	SEAR	10.3	[5.2–16.7]	9.4	[4.7–15.5]	9.8	[6.1–13.7]
Bolivia (Plurinational State of)	AMR	5.4	[1.9–10.7]	7.3	[2.8–13.9]	6.3	[2.9–9.7]
Bosnia and Herzegovina	EUR	12.2	[5.4–22.3]	11.3	[5.2–19.9]	11.8	[6–17.3]
Botswana	AFR	7.8	[3.1–15]	9.4	[4.2–17.4]	8.6	[4.1–12.7]
Brazil	AMR	8.0	[3.6–14.8]	7.3	[3.4–12.5]	7.6	[4.3–11.1]
Brunei Darussalam	WPR	11.7	[4.7–21.4]	10.8	[4.4–20.5]	11.2	[5.1–17.1]
Bulgaria	EUR	11.8	[5.4–20.9]	10.8	[5.2–19]	11.3	[6.1–16.2]
Burkina Faso	AFR	5.9	[2.5–11.3]	5.1	[2.2–9.5]	5.5	[2.8–8.3]
Burundi	AFR	3.2	[1–7.2]	3.3	[1.2–7.1]	3.3	[1.2–5.5]
Cabo Verde	AFR	8.0	[3.5–14.9]	7.8	[3.8–13.9]	7.9	[4.1–11.2]
Cambodia	WPR	6.4	[2.7–12.1]	7.2	[3.2–13.2]	6.8	[3.6–10.3]
Cameroon	AFR	6.5	[2.8–12.8]	6.2	[2.6–11.8]	6.3	[3–9.9]
Canada	AMR	10.1	[5–17]	8.2	[4.5–13.6]	9.1	[5.2–12.7]
Central African Republic	AFR	6.1	[2.2–12.8]	6.3	[2.5–13]	6.2	[2.3–10.2]
Chad	AFR	7.4	[3–14.2]	6.0	[2.5–11.6]	6.7	[3.1–10]
Chile	AMR	11.1	[5.2–19.8]	10.6	[5.1–18.3]	10.8	[5.8–15.7]
China	WPR	11.3	[5.6–20.2]	8.9	[4.3–15.9]	10.1	[5.4–14.7]
Colombia	AMR	7.8	[3.3–14.6]	8.3	[3.8–14.9]	8.0	[3.9–12]
Comoros	AFR	6.7	[3–12.1]	7.0	[3.2–12.4]	6.8	[3.7–10]
Congo	AFR	7.3	[2.7–15.5]	7.0	[2.7–14.7]	7.1	[3–11.6]
Cook Islands	WPR	30.0	[18–43.7]	26.8	[16.2–39.8]	28.5	[19.5–36.9]
Costa Rica	AMR	8.8	[3.9–16.1]	8.5	[4–14.8]	8.7	[4.7–12.6]
Côte d'Ivoire	AFR	6.5	[2.5–12.6]	5.0	[2–9.7]	5.7	[2.5–9.2]
Croatia	EUR	11.5	[5.1–21]	9.6	[4.6–17]	10.5	[5.8–15.2]
Cuba	AMR	9.7	[3.9–19.2]	11.6	[5.2–21.4]	10.7	[4.9–16.3]
Cyprus	EUR	10.2	[4.6–17.9]	8.0	[3.9–13.9]	9.1	[4.6–13.2]
Czech Republic	EUR	11.2	[5.2–20.2]	9.4	[4.5–16.6]	10.3	[5.4–15.3]



... Indicates no data were available

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
9.9	[4.4–17.8]	9.3	[4.3–16.5]	9.6	[5–14.2]	Afghanistan
8.6	[3.6–15.9]	7.5	[3.3–13.9]	8.0	[4–11.9]	Albania
14.0	[7.2–23.1]	14.3	[7.5–23.3]	14.2	[8.7–19.6]	Algeria
9.8	[4.3–17.5]	7.1	[3.3–12.9]	8.4	[4.3–12.5]	Andorra
13.0	[5.5–24.5]	11.2	[4.7–21.9]	12.1	[5.6–18.9]	Angola
12.9	[4.5–25.8]	14.5	[5.4–28.7]	13.7	[5.6–21]	Antigua and Barbuda
9.9	[4.2–18.2]	8.2	[3.6–15.3]	9.1	[4.4–14.1]	Argentina
10.9	[5–19.6]	12.1	[6–20.9]	11.5	[6.1–17.1]	Armenia
7.6	[4–12.4]	5.6	[3–9.3]	6.6	[3.9–9.2]	Australia
7.0	[3–12.8]	4.4	[2–8.1]	5.7	[2.7–8.6]	Austria
14.3	[6.9–23.9]	15.8	[8.1–26.3]	15.0	[8.9–20.9]	Azerbaijan
12.7	[5.6–23.3]	13.0	[5.8–23.4]	12.8	[6.8–19.6]	Bahamas
18.0	[9.8–28.9]	16.2	[8.4–26]	17.3	[10.8–24]	Bahrain
9.6	[4.5–16.8]	9.2	[4.5–15.7]	9.4	[4.9–13.5]	Bangladesh
14.2	[5.2–27.8]	15.7	[6.2–30.1]	15.0	[7.2–23.5]	Barbados
9.5	[4–18.1]	8.1	[3.4–16.2]	8.8	[4–13.7]	Belarus
6.1	[2.6–11.6]	4.2	[1.8–7.8]	5.1	[2.5–7.8]	Belgium
11.0	[4.7–21]	13.7	[6.1–25.7]	12.4	[6.1–19.3]	Belize
9.4	[4.2–16.9]	8.6	[4–15.1]	9.0	[5–13.3]	Benin
12.7	[6.7–20.3]	12.1	[6.3–19.4]	12.4	[7.4–17.1]	Bhutan
6.7	[2.6–13]	8.5	[3.3–16]	7.6	[3.3–11.7]	Bolivia (Plurinational State of)
10.4	[4.4–19.3]	8.8	[3.6–16.3]	9.6	[5.1–14.4]	Bosnia and Herzegovina
11.4	[4.9–21.3]	12.4	[5.6–22.2]	11.9	[6–17.9]	Botswana
8.5	[3.9–15.4]	7.2	[3.3–12.4]	7.8	[4.1–11.6]	Brazil
11.9	[5.2–21.4]	11.2	[4.9–20.4]	11.6	[6.2–17.1]	Brunei Darussalam
9.4	[4.1–17.3]	7.5	[3.2–14.3]	8.4	[3.9–12.7]	Bulgaria
9.1	[4.3–16.5]	7.2	[3.4–12.8]	8.2	[4.3–11.7]	Burkina Faso
5.0	[1.8–10.4]	5.2	[2.1–10.4]	5.1	[1.9–8.3]	Burundi
10.6	[4.9–19]	9.1	[4.4–16]	9.8	[5.1–14.7]	Cabo Verde
8.2	[3.5–15.1]	8.2	[3.7–14.9]	8.2	[4.1–12.5]	Cambodia
9.3	[4.2–17.5]	8.6	[3.9–15.8]	9.0	[4.6–13.5]	Cameroon
8.1	[3.9–14]	6.1	[3–10.7]	7.1	[3.8–10.3]	Canada
8.5	[3.3–17.1]	8.2	[3.4–16.6]	8.3	[3.6–13.4]	Central African Republic
11.0	[4.8–20.1]	8.8	[3.9–16.2]	9.9	[5.4–15.3]	Chad
10.6	[4.9–18.9]	9.5	[4.4–16.8]	10.0	[5.5–14.7]	Chile
10.6	[5.3–18.9]	8.2	[4–14.7]	9.5	[5–13.7]	China
8.5	[3.8–15.8]	8.5	[4–15.1]	8.5	[4.4–12.4]	Colombia
9.1	[4.3–15.7]	9.1	[4.5–15.7]	9.1	[5.2–13]	Comoros
9.7	[3.9–19.6]	9.1	[3.8–18.3]	9.4	[3.6–14.9]	Congo
30.8	[18.7–44.4]	27.2	[16.6–40.3]	29.1	[20.5–37.7]	Cook Islands
9.3	[4.2–16.7]	8.7	[4.1–15.1]	9.0	[4.5–12.9]	Costa Rica
8.4	[3.5–15.7]	7.0	[3.1–13]	7.7	[3.5–11.8]	Côte d'Ivoire
9.1	[3.8–17.3]	6.5	[2.7–12.7]	7.8	[3.5–11.7]	Croatia
8.2	[3.2–16.3]	9.5	[4–17.9]	8.8	[3.8–13.8]	Cuba
9.6	[4.3–17]	6.8	[3.1–12.4]	8.2	[4–12.4]	Cyprus
9.3	[4.1–17.3]	6.9	[2.9–13.1]	8.1	[4–12]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	5.2	[1.4–12.2]	6.7	[2.4–14.6]	6.0	[1.8–10.2]
Democratic Republic of the Congo	AFR	4.3	[1.2–10.5]	4.2	[1.3–9.8]	4.3	[1–7.9]
Denmark	EUR	8.2	[3.9–15]	6.3	[3.2–10.8]	7.2	[3.8–10.7]
Djibouti	EMR	7.0	[2.5–14.6]	6.4	[2.3–12.7]	6.7	[2.5–10.9]
Dominica	AMR	8.5	[3.6–16.4]	12.0	[5.6–22.1]	10.3	[5.1–15.6]
Dominican Republic	AMR	8.7	[3.6–16.9]	9.7	[4.2–18.6]	9.2	[3.8–14]
Ecuador	AMR	7.1	[2.7–13.7]	8.0	[3.2–15.1]	7.6	[3.6–11.4]
Egypt	EMR	15.3	[8.4–24.3]	19.0	[11–28.9]	17.2	[11.2–23.1]
El Salvador	AMR	8.6	[3.9–15.5]	9.7	[4.6–16.9]	9.2	[4.7–13.3]
Equatorial Guinea	AFR	15.2	[5.6–30.2]	11.9	[4.1–25.7]	13.6	[6.1–21.6]
Eritrea	AFR	4.2	[1.7–8.3]	4.4	[1.8–8.4]	4.3	[2.1–6.6]
Estonia	EUR	11.1	[4.6–20.8]	9.7	[4.5–18.1]	10.4	[5.1–15.3]
Ethiopia	AFR	5.4	[2.2–10.4]	5.2	[2.2–9.8]	5.3	[2.3–8]
Fiji	WPR	15.6	[8.3–25.8]	18.3	[10.3–29.1]	16.9	[11.1–23]
Finland	EUR	10.3	[5.4–17.2]	8.6	[4.8–13.8]	9.4	[5.9–13.2]
France	EUR	9.9	[4.5–17.2]	7.4	[3.9–12.4]	8.6	[4.8–12.3]
Gabon	AFR	10.3	[4.1–20.9]	9.3	[3.7–18.9]	9.8	[4.3–15.3]
Gambia	AFR	7.1	[2.9–13.6]	6.5	[2.7–12.6]	6.8	[2.9–10.5]
Georgia	EUR	16.0	[8.5–26.5]	16.6	[9.3–26.1]	16.4	[10.2–22.7]
Germany	EUR	9.9	[4.9–16.8]	8.0	[4.3–13.2]	9.0	[5.4–12.5]
Ghana	AFR	6.4	[2.4–12.8]	6.0	[2.4–12.2]	6.2	[2.7–9.9]
Greece	EUR	10.1	[4.7–17.9]	9.3	[4.9–15.6]	9.7	[5.6–14]
Grenada	AMR	9.0	[3.2–17.9]	12.1	[5.2–22.8]	10.5	[4.8–16.5]
Guatemala	AMR	7.9	[3.4–15.1]	8.4	[3.7–15.5]	8.2	[4.1–12.1]
Guinea	AFR	5.8	[2.4–11]	5.4	[2.4–10.4]	5.6	[2.5–8.6]
Guinea-Bissau	AFR	6.0	[2.4–11.7]	5.9	[2.5–11.2]	5.9	[2.9–9.1]
Guyana	AMR	8.6	[3–18.1]	11.5	[4.4–22.2]	10.0	[4.3–16.1]
Haiti	AMR	6.1	[2.1–13.1]	6.4	[2.3–13.5]	6.3	[2.5–10]
Honduras	AMR	6.9	[2.9–13.3]	7.9	[3.5–14.6]	7.4	[3.7–11.1]
Hungary	EUR	11.3	[5.4–20]	9.4	[4.5–16.7]	10.3	[5.5–14.9]
Iceland	EUR	9.6	[4.3–17.6]	6.2	[2.9–11.4]	7.9	[3.9–11.9]
India	SEAR	8.6	[3.9–15.1]	8.3	[3.7–14.5]	8.5	[4.5–12.1]
Indonesia	SEAR	7.7	[3.2–14.3]	8.3	[3.8–15]	8.0	[4–11.8]
Iran (Islamic Republic of)	EMR	9.8	[5–17]	11.0	[5.8–18.1]	10.4	[6.3–14.8]
Iraq	EMR	12.3	[6–21]	13.6	[7.1–22.6]	12.9	[7.6–18.1]
Ireland	EUR	10.6	[5.2–18.1]	7.9	[4.1–13.6]	9.2	[5.3–12.8]
Israel	EUR	7.4	[3.2–13.6]	6.9	[3.3–12.1]	7.2	[3.8–10.6]
Italy	EUR	10.5	[5.6–17.5]	8.6	[5–13.5]	9.5	[6–13.1]
Jamaica	AMR	9.6	[4.2–18.5]	13.2	[6.2–24.1]	11.5	[5.7–17.3]
Japan	WPR	13.1	[7.8–20]	9.5	[5.9–14.4]	11.2	[7.7–15.1]
Jordan	EMR	11.4	[5.3–20]	12.0	[6–20.3]	11.7	[6.5–16.6]
Kazakhstan	EUR	12.6	[5.5–22.9]	13.2	[6.5–22.8]	12.9	[7.3–18.8]
Kenya	AFR	4.8	[2–9.1]	5.6	[2.5–10.3]	5.2	[2.4–7.9]
Kiribati	WPR	21.5	[12.2–33.9]	20.6	[11.5–32]	21.1	[13.9–28.5]
Kuwait	EMR	16.1	[8.1–26.9]	14.2	[6.7–24.8]	15.4	[9.1–22.1]
Kyrgyzstan	EUR	8.1	[3.6–14.6]	10.4	[5.2–17.9]	9.3	[5–13.8]
Lao People's Democratic Republic	WPR	6.2	[2.7–11.2]	6.6	[3.2–11.4]	6.4	[3.4–9.4]
Latvia	EUR	10.2	[4.3–19.2]	9.8	[4.5–18.3]	10.0	[5.1–14.7]
Lebanon	EMR	13.4	[6.6–23]	10.4	[5.1–17.8]	11.9	[6.3–16.8]
Lesotho	AFR	5.6	[2.3–10.7]	9.3	[4.2–16.6]	7.5	[3.3–11.4]

## Annex 4.8b: Raised blood glucose

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
5.4	[1.6–12.1]	5.9	[2–13.2]	5.6	[1.6–9.7]	Democratic People's Republic of Korea
6.2	[1.9–14.4]	6.0	[2.1–12.9]	6.1	[1.5–10.6]	Democratic Republic of the Congo
6.2	[2.8–11.8]	4.1	[1.9–7.8]	5.2	[2.5–7.8]	Denmark
9.2	[3.5–18.2]	8.2	[3.2–15.8]	8.7	[4.2–13.5]	Djibouti
8.4	[3.6–16.2]	11.4	[5.2–21.3]	9.9	[5.2–15.3]	Dominica
9.5	[4–18.3]	10.4	[4.5–19.8]	10.0	[4.7–15.6]	Dominican Republic
7.9	[3–15.1]	8.5	[3.4–16]	8.2	[3.9–12.8]	Ecuador
17.2	[9.6–26.9]	20.6	[12.1–31.2]	18.9	[12.5–25.3]	Egypt
10.3	[4.7–18.3]	10.7	[5–18.6]	10.5	[5.8–15.3]	El Salvador
17.3	[6.9–33.2]	14.2	[5.5–28.9]	15.8	[7.2–24.4]	Equatorial Guinea
6.8	[3–12.6]	6.6	[3–12]	6.7	[3.6–10.2]	Eritrea
9.5	[3.8–18.1]	6.7	[2.6–13.9]	8.0	[3.6–12.6]	Estonia
7.6	[3.3–14.2]	7.2	[3.3–13.1]	7.4	[4.1–11.1]	Ethiopia
16.6	[9.1–27]	18.8	[10.8–29.8]	17.7	[11.3–24.1]	Fiji
7.8	[3.9–13.4]	5.6	[2.7–9.8]	6.7	[3.7–9.6]	Finland
7.7	[3.3–14]	5.0	[2.3–9.2]	6.3	[3–9.4]	France
12.9	[5.3–25.1]	11.2	[4.4–22.2]	12.0	[5.4–18.8]	Gabon
10.2	[4.6–18.7]	9.6	[4.4–17.4]	9.9	[4.9–14.5]	Gambia
14.3	[7.4–24.1]	13.6	[7.2–22.2]	13.9	[8.5–19.4]	Georgia
7.3	[3.3–12.8]	5.1	[2.4–9.1]	6.2	[3.1–9.2]	Germany
8.7	[3.5–16.6]	7.9	[3.4–15.3]	8.3	[3.7–12.6]	Ghana
7.9	[3.3–14.4]	6.4	[2.9–11.6]	7.1	[3.8–10.4]	Greece
10.6	[3.9–20.7]	13.2	[5.6–25.4]	11.9	[5.8–18.2]	Grenada
10.3	[4.5–19.2]	10.6	[4.7–19]	10.5	[5.3–15.6]	Guatemala
7.9	[3.5–14.5]	7.2	[3.4–13.3]	7.5	[4–11]	Guinea
8.2	[3.5–15.4]	7.8	[3.6–14.5]	8.0	[4.1–12]	Guinea-Bissau
10.6	[4.1–21]	13.1	[5.4–24.5]	11.8	[5.9–18.3]	Guyana
7.9	[2.8–16.3]	8.0	[3–16.2]	7.9	[3.6–12.7]	Haiti
9.0	[3.9–16.7]	9.9	[4.6–17.7]	9.5	[5.1–14]	Honduras
9.6	[4.4–17.3]	6.6	[2.8–12.7]	8.0	[4–12.2]	Hungary
8.3	[3.5–15.5]	4.9	[2.1–9.5]	6.6	[3.2–10.1]	Iceland
9.7	[4.6–16.8]	9.2	[4.3–15.7]	9.5	[5.4–13.4]	India
8.5	[3.7–15.5]	9.0	[4.3–15.8]	8.7	[4.6–12.7]	Indonesia
11.6	[6.1–19.6]	12.7	[6.9–20.4]	12.2	[7.3–16.8]	Iran (Islamic Republic of)
16.5	[8.6–26.9]	17.2	[9.4–27.4]	16.8	[11–22.7]	Iraq
9.3	[4.5–16.2]	6.7	[3.2–11.8]	8.0	[4.5–11.6]	Ireland
6.9	[2.8–12.9]	5.8	[2.6–10.8]	6.3	[3.3–9.8]	Israel
7.9	[3.9–13.7]	5.4	[2.7–9.3]	6.6	[3.7–9.7]	Italy
9.8	[4.3–18.7]	13.2	[6.2–24.1]	11.5	[5.6–17.5]	Jamaica
9.4	[5.2–15.2]	5.7	[3.1–9.6]	7.5	[4.5–10.4]	Japan
14.6	[7.3–24.4]	15.3	[8–24.8]	14.9	[8.8–21]	Jordan
13.7	[6.2–24.5]	12.8	[6.3–22.2]	13.2	[7.4–19.3]	Kazakhstan
7.2	[3.2–13.1]	8.0	[3.8–14]	7.6	[4.1–11.2]	Kenya
21.8	[12.6–34.1]	21.0	[11.8–32.4]	21.4	[14.2–28.5]	Kiribati
21.0	[11.5–32.9]	18.9	[9.7–30.4]	20.1	[12.1–28.3]	Kuwait
10.2	[4.9–17.8]	12.0	[6.2–20.2]	11.1	[6.3–15.7]	Kyrgyzstan
8.6	[4–15]	8.7	[4.3–14.5]	8.6	[5–12.7]	Lao People's Democratic Republic
8.7	[3.5–16.9]	6.8	[2.6–13.9]	7.6	[3.4–11.8]	Latvia
13.7	[6.8–23.5]	11.5	[5.5–19.8]	12.6	[7.1–17.8]	Lebanon
8.9	[3.8–16.4]	12.1	[5.5–21.2]	10.5	[5.8–15.7]	Lesotho



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	5.7	[2–11.9]	5.9	[2.3–11.8]	5.8	[2.5–9.2]
Libya	EMR	14.6	[8–23.6]	15.0	[8.2–23.9]	14.8	[9.1–20]
Lithuania	EUR	11.6	[4.9–21.4]	11.0	[5.3–20.1]	11.3	[5.5–17]
Luxembourg	EUR	10.3	[4.7–18.5]	6.7	[3.3–11.8]	8.5	[4.7–12.4]
Madagascar	AFR	5.1	[2–9.9]	4.6	[1.9–8.8]	4.8	[2–7.5]
Malawi	AFR	5.5	[2.4–10.2]	5.8	[2.5–10.6]	5.6	[2.9–8.4]
Malaysia	WPR	10.6	[5.2–18.5]	9.1	[4.3–16]	9.9	[5.5–14.2]
Maldives	SEAR	8.6	[3.5–16.4]	7.8	[3–15.4]	8.2	[3.6–12.8]
Mali	AFR	6.3	[2.6–12.6]	5.6	[2.4–10.7]	6.0	[2.9–9.3]
Malta	EUR	10.5	[4.8–19.5]	8.7	[4.4–15.2]	9.6	[5–14.3]
Marshall Islands	WPR	19.6	[10.5–31.2]	19.5	[10.7–31.4]	19.6	[12.1–26.9]
Mauritania	AFR	6.9	[2.8–13.7]	7.9	[3.3–14.8]	7.4	[3.7–11.3]
Mauritius	AFR	13.6	[6.3–23.8]	12.4	[6–21.3]	13.0	[7.2–18.8]
Mexico	AMR	9.7	[4.5–17.2]	10.1	[4.8–17.8]	9.9	[4.9–14.4]
Micronesia (Federated States of)	WPR	17.1	[9.7–27]	20.3	[11.8–31.1]	18.7	[12.2–25.7]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	9.2	[4.3–16.5]	9.8	[4.6–17.1]	9.5	[5.2–13.9]
Montenegro	EUR	8.8	[3.8–16.6]	8.2	[3.6–15.1]	8.5	[4.5–12.8]
Morocco	EMR	12.4	[6.1–21.5]	12.1	[6.1–20.6]	12.2	[7.4–17.8]
Mozambique	AFR	5.6	[2.4–10.6]	5.9	[2.7–11]	5.7	[3–8.6]
Myanmar	SEAR	5.7	[2.1–11.2]	6.8	[2.9–12.9]	6.3	[2.8–9.5]
Namibia	AFR	7.3	[2.9–14]	8.2	[3.7–15.3]	7.8	[3.5–11.8]
Nauru	WPR	25.3	[11.9–42]	23.2	[10.8–38.9]	24.2	[13.7–34.8]
Nepal	SEAR	9.0	[4.3–15.2]	7.4	[3.4–13]	8.2	[4.6–12]
Netherlands	EUR	8.6	[4–15.1]	7.0	[3.6–11.9]	7.8	[4.4–11.3]
New Zealand	WPR	10.7	[5.5–17.9]	8.7	[4.7–14.4]	9.7	[5.6–13.5]
Nicaragua	AMR	7.3	[2.9–14.2]	8.7	[3.9–16.4]	8.0	[3.7–12.4]
Niger	AFR	6.0	[2.3–11.8]	5.2	[2.1–10.2]	5.6	[2.3–8.6]
Nigeria	AFR	5.9	[2.6–11.4]	5.4	[2.3–10.3]	5.7	[2.9–8.7]
Niue	WPR	27.1	[16.4–39.7]	27.0	[16.5–39.5]	27.0	[19–35.2]
Norway	EUR	10.2	[4.8–17.9]	7.2	[3.7–12.3]	8.7	[4.7–12.6]
Oman	EMR	9.1	[4.5–15.9]	10.4	[5.1–17.8]	9.5	[5.5–13.7]
Pakistan	EMR	8.5	[3.9–15.1]	8.6	[3.9–15.5]	8.6	[4.4–13]
Palau	WPR	24.3	[14.3–36.7]	21.0	[12.1–33.2]	22.7	[15.1–30.5]
Panama	AMR	9.8	[4.3–17.8]	10.3	[4.8–18.3]	10.0	[4.9–14.8]
Papua New Guinea	WPR	13.1	[5.9–22.8]	12.5	[5.8–22.1]	12.8	[6.9–17.9]
Paraguay	AMR	6.4	[2.6–12.2]	6.2	[2.6–11.8]	6.3	[3–9.7]
Peru	AMR	7.0	[2.7–13.1]	7.9	[3.2–14.8]	7.4	[3.4–11.5]
Philippines	WPR	5.6	[2.3–11]	6.4	[2.8–11.8]	6.0	[2.7–9.2]
Poland	EUR	11.6	[5.4–20]	10.2	[4.9–17.6]	10.9	[6.1–15.5]
Portugal	EUR	10.9	[4.7–19.6]	8.6	[4.4–14.6]	9.7	[4.7–14.1]
Qatar	EMR	16.5	[8.3–27.6]	15.6	[7.8–26.3]	16.3	[8.5–24]
Republic of Korea	WPR	10.7	[5.6–17.4]	8.1	[4.5–13.5]	9.4	[5.7–12.8]
Republic of Moldova	EUR	9.7	[4.1–18.4]	11.6	[5.6–20.7]	10.7	[5.3–15.7]
Romania	EUR	9.0	[3.9–16.6]	9.0	[4.1–16.1]	9.0	[4.4–13.4]
Russian Federation	EUR	9.7	[4–18.6]	11.6	[5.5–21.6]	10.7	[4.8–16.3]
Rwanda	AFR	3.9	[1.4–8.1]	4.2	[1.6–8.3]	4.0	[1.8–6.4]
Saint Kitts and Nevis	AMR	15.1	[6–28.5]	17.4	[7.4–31.8]	16.2	[8.5–24.5]
Saint Lucia	AMR	15.0	[5.3–29]	15.6	[6.1–30.5]	15.3	[6.4–23.3]
Saint Vincent and the Grenadines	AMR	9.7	[3.9–19]	11.0	[4.8–20.9]	10.3	[4.5–16]

## Annex 4.8b: Raised blood glucose

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
7.8	[3–15.6]	7.8	[3.3–15]	7.8	[3.4–12]	Liberia
16.8	[9.5–26.6]	17.3	[9.7–27.1]	17.0	[10.7–23.1]	Libya
10.6	[4.5–19.6]	8.4	[3.5–16.3]	9.4	[4.3–14.6]	Lithuania
8.7	[3.9–15.9]	5.1	[2.3–9.5]	6.9	[3.7–10.4]	Luxembourg
7.2	[3.1–13.4]	6.4	[2.8–11.6]	6.8	[3.4–10.1]	Madagascar
8.1	[3.7–14.7]	8.0	[3.7–14.1]	8.0	[4.1–11.6]	Malawi
11.8	[5.9–20.4]	10.3	[5.1–17.7]	11.1	[6.5–16.1]	Malaysia
10.8	[4.6–20.2]	10.0	[4.2–18.9]	10.4	[4.8–15.9]	Maldives
9.4	[4.1–17.8]	7.8	[3.6–14.3]	8.6	[4.4–12.9]	Mali
8.3	[3.6–15.9]	6.3	[2.9–11.7]	7.3	[3.6–11.2]	Malta
20.0	[10.8–31.5]	19.8	[11–31.7]	19.9	[12.1–27.4]	Marshall Islands
9.3	[4–17.5]	10.0	[4.6–18.2]	9.7	[4.9–14.4]	Mauritania
12.7	[5.9–22.1]	11.1	[5.3–19.4]	11.9	[6.6–17.2]	Mauritius
10.8	[5.2–18.9]	10.5	[5.1–18.5]	10.7	[6.3–15.3]	Mexico
21.4	[12.5–32.8]	23.6	[14.1–35.3]	22.5	[14.8–29.6]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
11.6	[5.8–19.8]	11.5	[5.8–19.4]	11.5	[6.6–16.6]	Mongolia
7.5	[3.2–14.4]	6.4	[2.6–12.3]	7.0	[3.3–10.6]	Montenegro
13.8	[7–23.4]	13.1	[6.8–21.8]	13.5	[7.6–19]	Morocco
8.0	[3.6–14.7]	7.7	[3.7–14]	7.8	[4.3–11.6]	Mozambique
6.6	[2.7–12.6]	7.5	[3.4–13.7]	7.1	[3.4–10.6]	Myanmar
10.2	[4.4–18.7]	10.5	[4.9–18.9]	10.4	[5.3–15.4]	Namibia
25.6	[12.3–42.4]	23.5	[11.2–39.1]	24.5	[14.6–34.8]	Nauru
10.0	[4.9–16.7]	8.9	[4.2–15.3]	9.4	[5.4–13.2]	Nepal
6.5	[2.9–11.9]	4.7	[2.2–8.7]	5.6	[2.9–8.3]	Netherlands
8.9	[4.5–15.2]	6.9	[3.5–11.8]	7.9	[4.6–11.2]	New Zealand
9.3	[3.9–17.5]	10.7	[4.8–19.5]	10.0	[5.1–14.6]	Nicaragua
7.6	[3.2–14.4]	7.3	[3.2–13.6]	7.5	[3.5–11.3]	Niger
8.3	[3.9–15.2]	7.5	[3.5–13.4]	7.9	[3.9–11.4]	Nigeria
27.9	[17.1–40.4]	27.4	[16.8–39.9]	27.6	[19.2–36.1]	Niue
8.3	[3.7–14.9]	5.2	[2.4–9.5]	6.7	[3.1–10.2]	Norway
17.2	[9.3–27.4]	15.1	[7.9–24.5]	16.4	[9.1–22.4]	Oman
10.7	[5.1–18.5]	10.9	[5.2–18.8]	10.8	[6–15.3]	Pakistan
24.5	[14.6–37]	21.4	[12.4–33.4]	23.0	[15–30.9]	Palau
10.4	[4.6–18.6]	10.5	[4.9–18.7]	10.4	[5.5–15.1]	Panama
16.6	[8.1–27.6]	15.2	[7.6–25.9]	15.9	[8.9–22.7]	Papua New Guinea
7.6	[3.1–14.3]	7.2	[3.1–13.6]	7.4	[3.4–11.1]	Paraguay
7.8	[3.2–14.5]	8.5	[3.5–15.9]	8.2	[3.9–12.3]	Peru
7.2	[3.1–13.4]	7.5	[3.4–13.6]	7.3	[3.8–10.9]	Philippines
10.0	[4.5–17.7]	7.8	[3.4–14.4]	8.9	[4.7–13.2]	Poland
8.7	[3.5–16.2]	5.9	[2.7–10.9]	7.2	[3.6–10.9]	Portugal
23.4	[13.1–36.1]	21.4	[11.7–33.8]	23.0	[14.6–32.5]	Qatar
9.4	[4.9–15.3]	6.5	[3.4–11]	7.9	[4.7–11.2]	Republic of Korea
9.0	[3.8–17.1]	9.8	[4.5–17.9]	9.4	[4.9–14.2]	Republic of Moldova
7.8	[3.2–14.7]	6.8	[2.8–13]	7.3	[3.4–11.4]	Romania
9.0	[3.7–17.2]	9.1	[3.9–17.9]	9.0	[4.5–14.1]	Russian Federation
6.0	[2.4–11.8]	6.2	[2.6–11.7]	6.1	[2.9–9.5]	Rwanda
14.9	[5.9–28.1]	16.8	[7–31]	15.9	[7.3–24]	Saint Kitts and Nevis
15.0	[5.4–29]	15.4	[5.9–30]	15.2	[6.5–24.6]	Saint Lucia
10.1	[4.2–19.3]	11.1	[4.9–21.2]	10.6	[4.9–16]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	21.7	[11.2–35.5]	25.3	[13.8–39.8]	23.5	[14.1–31.6]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	6.6	[2.7–12.8]	6.3	[2.7–12.4]	6.4	[2.9–10]
Saudi Arabia	EMR	16.3	[8.3–26.6]	13.8	[7–23.1]	15.3	[9.1–21.8]
Senegal	AFR	6.3	[2.6–11.9]	6.5	[2.8–12.1]	6.4	[2.9–9.6]
Serbia	EUR	10.1	[4.4–18.5]	9.2	[4.3–16.4]	9.6	[4.8–14.4]
Seychelles	AFR	15.3	[7.4–25.9]	14.0	[7.1–23.7]	14.6	[8.2–20.4]
Sierra Leone	AFR	5.8	[2.3–11.4]	5.6	[2.3–10.9]	5.7	[2.5–8.7]
Singapore	WPR	11.7	[6.1–19.1]	7.9	[4.2–12.8]	9.8	[6.1–13.9]
Slovakia	EUR	11.4	[5.1–20.2]	9.7	[4.8–16.6]	10.5	[5.9–15.4]
Slovenia	EUR	12.9	[5.5–23.4]	11.3	[5.3–20.1]	12.1	[6.1–17.7]
Solomon Islands	WPR	12.8	[6.2–22.2]	14.0	[7–24]	13.4	[7.3–19]
Somalia	EMR	5.0	[1.8–10.3]	4.7	[1.8–9.4]	4.9	[1.8–7.8]
South Africa	AFR	10.0	[4.4–18.4]	12.5	[5.9–22.2]	11.3	[5.9–16.7]
South Sudan	AFR	7.0	[3–12.9]	8.1	[3.7–14.5]	7.5	[3.8–11.3]
Spain	EUR	11.0	[5.4–18.8]	8.8	[4.9–14.7]	9.9	[5.5–14]
Sri Lanka	SEAR	9.7	[4–18.5]	10.9	[4.8–19.9]	10.3	[4.6–15.3]
Sudan	EMR	7.0	[3–12.9]	8.1	[3.7–14.5]	7.5	[3.8–11.3]
Suriname	AMR	10.9	[4.6–21.1]	12.5	[5.7–22.7]	11.7	[6–17.5]
Swaziland	AFR	7.2	[2.8–13.9]	10.6	[4.5–19.5]	8.9	[4.4–13.4]
Sweden	EUR	10.0	[5–16.7]	7.6	[4–12.6]	8.8	[5.2–12.1]
Switzerland	EUR	8.9	[4.4–15.3]	6.0	[3–10.2]	7.4	[4.2–10.5]
Syrian Arab Republic	EMR	10.7	[5.2–18.5]	12.0	[6.1–19.9]	11.3	[6.5–16.3]
Tajikistan	EUR	9.0	[3.9–17.1]	9.6	[4.3–17.3]	9.3	[4.8–13.6]
Thailand	SEAR	10.7	[5–18.7]	11.1	[5.6–18.9]	10.9	[6.3–15.5]
the former Yugoslav Republic of Macedonia	EUR	9.6	[4–17.7]	8.5	[3.8–15.6]	9.0	[4.4–13.5]
Timor–Leste	SEAR	5.4	[2.1–10.7]	5.3	[2.2–10.2]	5.4	[2.4–8.3]
Togo	AFR	5.8	[2.5–11.2]	5.9	[2.6–11]	5.8	[2.8–8.8]
Tonga	WPR	21.3	[11.8–33]	26.0	[15.7–39.2]	23.6	[15.7–31.4]
Trinidad and Tobago	AMR	17.2	[5.3–34.8]	18.4	[6.1–36.3]	17.8	[6.7–28.2]
Tunisia	EMR	12.8	[6.6–21.2]	13.2	[7.1–21.5]	13.0	[8.1–17.9]
Turkey	EUR	12.5	[6.9–20.1]	13.6	[7.4–21.4]	13.0	[8–18]
Turkmenistan	EUR	12.3	[6.5–20.7]	13.4	[7.1–22]	12.8	[7.6–18]
Tuvalu	WPR	20.2	[11.3–31.3]	19.7	[11.4–30.7]	19.9	[13.3–26.5]
Uganda	AFR	3.8	[1.3–8]	4.1	[1.6–8.3]	4.0	[1.5–6.3]
Ukraine	EUR	9.2	[3.7–17.9]	10.4	[4.8–19.2]	9.8	[4.7–14.8]
United Arab Emirates	EMR	10.7	[4.8–19.3]	10.2	[4.6–18.7]	10.6	[5–15.8]
United Kingdom	EUR	11.1	[6.6–17.4]	9.2	[5.7–14.1]	10.1	[6.9–13.7]
United Republic of Tanzania	AFR	5.2	[2.5–9.2]	5.7	[2.8–9.8]	5.5	[3–7.9]
United States of America	AMR	11.3	[6.3–18.2]	9.7	[5.7–15.4]	10.5	[6.6–13.9]
Uruguay	AMR	10.5	[4.6–19.1]	10.5	[5.2–18]	10.5	[5.7–15]
Uzbekistan	EUR	9.3	[4.1–17.1]	10.6	[5–18.9]	9.9	[5.4–14.7]
Vanuatu	WPR	16.4	[8.8–26.7]	15.6	[8.2–26]	16.0	[9.4–22.2]
Venezuela (Bolivarian Republic of)	AMR	8.9	[4–15.7]	7.9	[3.6–13.9]	8.4	[4.2–12.2]
Viet Nam	WPR	5.6	[2.3–10.8]	6.3	[2.9–11.2]	6.0	[3.1–8.9]
Yemen	EMR	10.5	[4.7–19.2]	11.4	[5.3–20.3]	11.0	[5.4–16]
Zambia	AFR	5.2	[2.2–10.1]	5.7	[2.6–10.4]	5.5	[2.9–8.1]
Zimbabwe	AFR	3.7	[1.2–8.3]	5.4	[2.1–11.2]	4.6	[1.7–7.5]

## Annex 4.8b: Raised blood glucose

Raised blood glucose (fasting glucose $\geq 7.0$ mmol/l (126 mg/dl) or on medication for raised blood glucose or with a history of diagnosis of diabetes) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
23.7	[12.5–37.8]	26.7	[14.8–41.2]	25.2	[16.1–34.8]	Samoa
...	...	...	...	...	...	San Marino
9.7	[4.3–18.1]	8.5	[3.8–16.2]	9.1	[4.5–13.8]	Sao Tome and Principe
19.3	[10.4–30.1]	16.9	[9–27]	18.3	[11.2–25.3]	Saudi Arabia
9.3	[4.1–16.9]	8.9	[4.2–15.8]	9.1	[4.6–13.2]	Senegal
8.5	[3.6–16.1]	7.1	[3–13.4]	7.8	[3.5–11.9]	Serbia
15.9	[8.1–26.4]	13.8	[7–23.4]	14.9	[8.9–21.3]	Seychelles
8.2	[3.6–15.5]	7.8	[3.6–14.3]	8.0	[4.1–12.1]	Sierra Leone
10.3	[5.4–16.8]	6.7	[3.5–11.1]	8.5	[5.2–11.9]	Singapore
10.2	[4.6–18.2]	7.6	[3.5–13.7]	8.9	[4.7–13.1]	Slovakia
10.4	[4.3–19.3]	8.2	[3.4–15.7]	9.3	[4.6–14]	Slovenia
16.1	[8.2–26.7]	17.6	[9.3–28.6]	16.8	[10.3–23]	Solomon Islands
7.1	[2.7–14]	6.6	[2.7–12.5]	6.8	[3.1–10.5]	Somalia
12.3	[5.7–21.8]	13.5	[6.4–23.8]	12.9	[7.1–19.1]	South Africa
9.5	[4.3–16.8]	10.6	[5.2–18.1]	10.0	[5.8–14.5]	South Sudan
8.9	[4.1–15.6]	6.1	[3–11]	7.5	[4.1–10.7]	Spain
9.4	[3.9–17.7]	10.0	[4.4–18.5]	9.7	[5–14.5]	Sri Lanka
9.5	[4.3–16.8]	10.6	[5.2–18.1]	10.0	[5.8–14.5]	Sudan
11.5	[5.1–21.8]	12.5	[5.8–22.7]	12.0	[6–17.8]	Suriname
11.1	[4.6–20.4]	14.2	[6.3–25.4]	12.7	[6.5–19.2]	Swaziland
7.7	[3.6–13.5]	5.1	[2.4–9.3]	6.4	[3.6–9.6]	Sweden
7.0	[3.3–12.4]	4.0	[1.8–7.4]	5.5	[2.8–8.2]	Switzerland
13.3	[6.7–22.5]	14.5	[7.6–23.3]	13.9	[8.3–19.2]	Syrian Arab Republic
12.0	[5.6–21.6]	12.3	[5.9–21.3]	12.1	[6.1–17.8]	Tajikistan
9.7	[4.6–16.9]	9.7	[4.8–16.6]	9.7	[5.6–14.3]	Thailand
8.5	[3.5–15.9]	7.0	[3–13.2]	7.7	[3.7–11.9]	the former Yugoslav Republic of Macedonia
7.6	[3.1–14.4]	7.1	[3.1–13.2]	7.4	[3.7–11.2]	Timor-Leste
8.5	[3.9–15.6]	8.1	[3.9–14.6]	8.3	[4.5–11.9]	Togo
24.1	[13.7–36.4]	27.9	[17–41.4]	26.0	[17.7–34.9]	Tonga
16.4	[5.1–33.5]	17.1	[5.5–34.6]	16.8	[5.9–27.9]	Trinidad and Tobago
13.3	[6.9–21.9]	13.4	[7.2–21.6]	13.3	[8–18.4]	Tunisia
13.3	[7.4–21.2]	13.5	[7.4–21.4]	13.4	[8.4–18.5]	Turkey
15.0	[8.3–24.4]	15.2	[8.3–24.5]	15.1	[9.6–20.9]	Turkmenistan
20.9	[12–32.2]	20.1	[11.7–31.1]	20.5	[13.9–27.6]	Tuvalu
6.0	[2.3–12]	6.4	[2.6–12.3]	6.2	[2.9–9.9]	Uganda
8.3	[3.2–16.2]	7.7	[3.2–15.4]	8.0	[3.5–12.2]	Ukraine
19.1	[10.1–30.6]	17.6	[9.2–28.4]	18.6	[11.2–26.4]	United Arab Emirates
8.9	[5–14.3]	6.7	[3.9–11]	7.8	[4.8–10.7]	United Kingdom
7.5	[3.7–12.8]	7.7	[3.9–13.1]	7.6	[4.4–11]	United Republic of Tanzania
9.4	[5.2–15.5]	7.5	[4.2–12.4]	8.4	[5.2–11.4]	United States of America
9.5	[4.1–17.8]	8.5	[3.8–15.6]	9.0	[4.7–13.4]	Uruguay
11.6	[5.4–20.5]	12.4	[6.1–21.5]	12.0	[6.7–17.1]	Uzbekistan
19.6	[10.8–31]	18.5	[10.2–29.7]	19.0	[12.6–25.9]	Vanuatu
9.7	[4.5–16.9]	8.4	[3.9–14.6]	9.0	[4.9–13.2]	Venezuela (Bolivarian Republic of)
6.5	[2.9–12.2]	6.5	[2.9–11.5]	6.5	[3.4–9.9]	Viet Nam
15.4	[7.4–26.4]	15.7	[7.7–26.4]	15.5	[9.4–22.5]	Yemen
8.0	[3.7–14.6]	8.5	[4.2–14.9]	8.3	[4.7–12]	Zambia
6.0	[2–12.8]	7.8	[3–15.9]	6.9	[2.8–11]	Zimbabwe

## 4.9a Raised blood pressure

### Comparable estimates of prevalence of raised blood pressure (population aged 18+ years), 2010

Country name	Region	Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	21.9	[15.1–29.8]	21.0	[14.4–28.8]	21.5	[16.3–26.5]
Albania	EUR	33.7	[25.2–42.8]	28.2	[20.4–36.7]	31.0	[24.7–37.4]
Algeria	AFR	24.5	[18–31.7]	23.4	[17.5–30]	24.0	[19.5–28.8]
Andorra	EUR	29.7	[21.6–38.2]	23.0	[16.6–30.2]	26.3	[21.1–31.6]
Angola	AFR	25.5	[16.6–36]	23.8	[15.8–33.5]	24.6	[17.9–31.7]
Antigua and Barbuda	AMR	25.1	[15.9–35.6]	20.5	[13.1–29.8]	22.8	[16.4–29.2]
Argentina	AMR	27.5	[19.3–36.6]	21.7	[15.2–28.8]	24.6	[19.2–29.8]
Armenia	EUR	29.1	[20.9–38.5]	28.1	[20.8–36.2]	28.6	[23–34.6]
Australia	WPR	23.5	[18.4–28.8]	18.3	[14.3–22.5]	20.8	[18–24.3]
Austria	EUR	30.0	[22.3–38.2]	23.7	[17.4–30.7]	26.8	[21.7–31.6]
Azerbaijan	EUR	25.2	[17.3–34.5]	23.2	[16.3–31.1]	24.2	[18.4–30.3]
Bahamas	AMR	26.3	[18.1–35.8]	19.5	[13.4–27.2]	22.9	[17.4–28.5]
Bahrain	EMR	21.7	[15.3–28.9]	17.5	[12.2–23.8]	20.1	[15.5–24.8]
Bangladesh	SEAR	21.7	[15.1–28.7]	20.3	[14.3–27]	21.0	[16.2–25.8]
Barbados	AMR	27.8	[18.2–38.6]	25.3	[16.9–34.9]	26.5	[20.2–33.6]
Belarus	EUR	37.6	[28.2–48]	33.5	[24.4–43.6]	35.4	[29.1–42.2]
Belgium	EUR	29.8	[22.2–37.4]	22.2	[16–28.8]	25.9	[21.2–31.2]
Belize	AMR	20.5	[13.9–28.4]	16.2	[10.8–23.1]	18.3	[13.4–23.1]
Benin	AFR	24.5	[18.3–31.1]	23.7	[18.1–30.1]	24.1	[19.4–28.7]
Bhutan	SEAR	23.4	[17.2–30.7]	20.5	[15.1–27]	22.0	[17.5–26.4]
Bolivia (Plurinational State of)	AMR	17.1	[10.4–25]	13.9	[8.4–20.6]	15.5	[10.8–20.1]
Bosnia and Herzegovina	EUR	34.9	[25.5–45]	33.5	[24.7–43.3]	34.2	[28.1–40.7]
Botswana	AFR	24.3	[17.2–32.5]	24.0	[17.2–31.6]	24.2	[18.6–29.7]
Brazil	AMR	25.4	[19.2–32.3]	20.8	[15.6–26.8]	23.1	[18.8–27.5]
Brunei Darussalam	WPR	21.8	[14.1–31]	14.1	[8.7–20.9]	18.0	[12.7–23.4]
Bulgaria	EUR	39.4	[30.2–48.6]	34.4	[25.9–43.6]	36.8	[30.3–43.2]
Burkina Faso	AFR	24.5	[17.6–32]	25.0	[18.3–32.3]	24.8	[19.5–29.8]
Burundi	AFR	22.1	[13.8–32.1]	21.6	[13.8–31.1]	21.9	[15.4–28.1]
Cabo Verde	AFR	28.0	[20.9–35.9]	26.4	[19.9–33.5]	27.2	[22.3–32.2]
Cambodia	WPR	20.1	[13.9–26.8]	20.7	[14.9–27.1]	20.4	[15.9–24.6]
Cameroon	AFR	23.1	[16.9–29.7]	20.8	[15.3–27]	22.0	[17.7–26.3]
Canada	AMR	20.6	[14.9–26.4]	17.0	[12.5–22]	18.8	[15.2–22.6]
Central African Republic	AFR	26.3	[17.7–36.3]	25.7	[17.8–35.1]	26.0	[20–32.4]
Chad	AFR	25.6	[18.3–33.2]	24.4	[18–32.3]	25.0	[19.8–30.1]
Chile	AMR	26.5	[19.4–34.9]	20.6	[15–27.4]	23.6	[18.6–28.9]
China	WPR	21.6	[16.3–27.5]	18.7	[14.1–24.1]	20.2	[16.6–24.3]
Colombia	AMR	22.7	[16.5–29.7]	19.1	[13.7–25.3]	20.9	[16.8–25.5]
Comoros	AFR	22.9	[16.1–30.4]	21.7	[15.4–28.8]	22.3	[17.2–27.6]
Congo	AFR	25.6	[17.4–35.5]	22.4	[15.1–31.5]	24.0	[17.7–30.2]
Cook Islands	WPR	23.9	[16.9–32.5]	19.8	[13.5–27.4]	21.9	[16.6–27.6]
Costa Rica	AMR	23.0	[17–29.7]	18.4	[13.4–23.9]	20.7	[16.7–25]
Côte d'Ivoire	AFR	26.1	[19.4–34]	21.5	[15.6–28.1]	23.9	[19.2–29]
Croatia	EUR	39.2	[30.3–48.5]	34.0	[25.5–43.2]	36.5	[30.1–43.2]
Cuba	AMR	26.5	[17.5–37.3]	24.3	[16.4–33.9]	25.4	[18.9–31.7]
Cyprus	EUR	26.5	[18.9–35.1]	20.4	[14.2–27.2]	23.5	[18.5–28.4]
Czech Republic	EUR	38.6	[30.2–47.2]	29.7	[22–37.6]	34.0	[28.2–40]





... Indicates no data were available

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
28.4	[20.1–37.5]	29.0	[21–37.7]	28.7	[23.1–34.7]	Afghanistan
32.1	[24–41.1]	25.7	[18.4–33.9]	28.9	[23.4–34.7]	Albania
28.9	[21.6–36.8]	28.9	[22.3–36.3]	28.9	[24–33.8]	Algeria
26.1	[18.7–34]	16.6	[11.4–22.8]	21.3	[16.5–25.9]	Andorra
32.6	[22.1–44.3]	32.1	[22.7–42.9]	32.3	[25.2–39.7]	Angola
25.5	[16.2–36]	20.0	[12.6–29.3]	22.7	[16.5–29.1]	Antigua and Barbuda
27.6	[19.2–36.7]	19.0	[12.9–25.9]	23.2	[17.8–28.8]	Argentina
29.5	[21.1–38.9]	25.4	[18.5–33.3]	27.5	[21.4–32.9]	Armenia
20.9	[16.3–25.9]	14.1	[10.8–17.9]	17.5	[14.5–20.5]	Australia
25.7	[18.9–33.1]	16.6	[11.8–22.4]	21.1	[16.3–25.2]	Austria
28.2	[19.8–37.8]	25.5	[18.3–33.5]	26.8	[20.6–32.7]	Azerbaijan
27.8	[19.4–37.3]	19.6	[13.5–27.1]	23.6	[18–29.2]	Bahamas
27.8	[20.4–35.8]	24.7	[18.3–31.7]	26.6	[21.4–31.9]	Bahrain
25.2	[17.9–32.9]	26.2	[19.2–33.7]	25.7	[20.6–30.5]	Bangladesh
26.5	[17.4–36.9]	21.4	[14–30.1]	23.9	[17.7–30.1]	Barbados
35.9	[26.8–46.2]	26.3	[18.3–35.7]	30.7	[24.5–36.9]	Belarus
25.1	[18.4–32]	15.1	[10.3–20.5]	20.0	[15.7–23.9]	Belgium
25.4	[17.7–34.2]	21.7	[15–29.7]	23.5	[18–29.1]	Belize
30.9	[23.8–38.3]	31.0	[24.3–38]	30.9	[26.1–35.9]	Benin
28.0	[20.8–36.1]	27.2	[20.7–34.8]	27.7	[22.3–32.7]	Bhutan
20.3	[12.6–29.3]	16.7	[10.3–24.3]	18.5	[13.1–23.9]	Bolivia (Plurinational State of)
31.3	[22.7–40.9]	26.9	[19.1–35.8]	29.1	[23.6–35.1]	Bosnia and Herzegovina
31.8	[23.2–41]	31.4	[23.2–40.2]	31.6	[25.9–37.6]	Botswana
27.2	[20.8–34.4]	21.6	[16.2–27.7]	24.4	[20.2–28.6]	Brazil
24.2	[16.2–33.5]	17.4	[11.3–24.5]	20.8	[15.4–26.6]	Brunei Darussalam
34.2	[25.8–43]	24.8	[17.8–33]	29.4	[23.8–34.8]	Bulgaria
32.6	[24.2–41.1]	33.1	[25.3–41.1]	32.9	[27–38.7]	Burkina Faso
28.6	[18.5–40.3]	30.9	[21–41.8]	29.8	[22.4–37.4]	Burundi
34.3	[26.2–42.8]	30.6	[23.4–38.5]	32.5	[26.8–38.1]	Cabo Verde
24.4	[17.3–32.2]	24.3	[17.8–31.5]	24.4	[19.1–29.5]	Cambodia
29.4	[22–36.8]	28.2	[21.3–35.4]	28.8	[23.8–33.8]	Cameroon
17.9	[12.9–23.1]	12.4	[9–16.5]	15.1	[12.1–18.3]	Canada
32.5	[22.4–43.6]	32.4	[23.2–42.9]	32.4	[25.2–39.8]	Central African Republic
33.1	[24.5–41.7]	33.4	[25.7–42]	33.2	[27.1–39.5]	Chad
26.6	[19.5–34.8]	19.0	[13.6–25.4]	22.7	[18.2–27.4]	Chile
21.8	[16.5–27.5]	18.3	[13.8–23.6]	20.1	[16.5–23.9]	China
25.1	[18.5–32.6]	20.8	[15.1–27.3]	22.9	[18.6–27.3]	Colombia
28.6	[20.8–37.1]	28.6	[21.2–36.7]	28.6	[22.8–34.2]	Comoros
31.4	[21.9–42.2]	29.1	[20.5–39.5]	30.3	[23.1–37.8]	Congo
25.8	[18.6–34.7]	21.5	[14.8–29.3]	23.7	[18.3–29.1]	Cook Islands
24.8	[18.6–31.8]	19.8	[14.6–25.5]	22.4	[18–26.4]	Costa Rica
30.8	[23.2–39.4]	29.1	[21.9–36.5]	30.0	[24.6–35.2]	Côte d'Ivoire
34.0	[25.9–42.8]	24.5	[17.3–32.6]	29.1	[23.1–34.8]	Croatia
24.4	[16–34.3]	20.4	[13.5–29.2]	22.4	[16.6–28.8]	Cuba
25.8	[18.3–34.3]	17.6	[11.9–24]	21.8	[17–26.8]	Cyprus
34.8	[27–43.1]	22.4	[15.8–29.4]	28.5	[23.2–33.8]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood pressure (SBP≥140 and/or DBP≥90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	21.0	[11.7–32]	21.7	[12.9–32.2]	21.4	[14.7–28.4]
Democratic Republic of the Congo	AFR	24.7	[15.3–35.6]	23.3	[14.8–33.9]	24.0	[17–30.2]
Denmark	EUR	34.5	[26.9–42.8]	23.2	[17.2–29.6]	28.8	[23.8–33.8]
Djibouti	EMR	26.7	[17.8–36.3]	22.3	[14.8–31.4]	24.5	[17.7–30.9]
Dominica	AMR	26.4	[18.5–35.4]	21.6	[15.1–29.6]	24.0	[18.6–29.6]
Dominican Republic	AMR	24.4	[16.9–33.3]	19.8	[13.7–27.4]	22.1	[16.9–26.9]
Ecuador	AMR	18.7	[11.9–26.5]	14.8	[9.2–21.1]	16.7	[12.3–21.6]
Egypt	EMR	23.1	[17.5–29.2]	24.3	[18.8–30.2]	23.7	[19.9–27.9]
El Salvador	AMR	21.5	[15.5–28.5]	19.1	[13.8–24.9]	20.3	[16.3–24.7]
Equatorial Guinea	AFR	28.1	[17.1–41.3]	24.0	[14.3–35.9]	26.1	[18.2–33.9]
Eritrea	AFR	21.4	[14.8–28.4]	20.7	[14.5–27.4]	21.0	[16.6–25.8]
Estonia	EUR	43.1	[33.6–53.4]	37.2	[27.6–47.6]	39.9	[33–46.6]
Ethiopia	AFR	24.0	[16.9–31.7]	24.0	[17.3–31.3]	24.0	[19.1–29.2]
Fiji	WPR	22.2	[15.4–30.1]	19.7	[13.5–26.7]	20.9	[16–26]
Finland	EUR	32.3	[26.1–38.6]	26.0	[20.8–31.3]	29.1	[24.9–33.2]
France	EUR	34.2	[26.1–42.4]	25.7	[19.2–32.7]	29.8	[24.3–35]
Gabon	AFR	28.2	[19.3–38.5]	23.9	[16.1–33.2]	26.0	[19.8–32.4]
Gambia	AFR	25.8	[19–33.4]	21.1	[15.2–27.8]	23.4	[18.9–28.2]
Georgia	EUR	32.0	[23–41.6]	31.7	[23.8–40.3]	31.8	[25.8–37.8]
Germany	EUR	32.9	[25.7–40.3]	25.9	[19.4–32.3]	29.3	[24.4–34.3]
Ghana	AFR	24.6	[18.3–31.8]	21.8	[16.2–28.4]	23.1	[18.7–27.5]
Greece	EUR	28.2	[20.5–36.2]	24.3	[17.6–31.2]	26.2	[21–31.6]
Grenada	AMR	22.6	[15.3–30.9]	19.8	[14–26.9]	21.2	[16.2–26.6]
Guatemala	AMR	20.1	[14–26.7]	17.5	[12.2–23.3]	18.8	[14.6–22.9]
Guinea	AFR	24.9	[18.4–32.4]	24.9	[18.8–31.8]	24.9	[20.1–29.7]
Guinea-Bissau	AFR	26.4	[19.5–34.3]	25.1	[18.4–33]	25.8	[20.9–30.9]
Guyana	AMR	19.2	[12.2–27.7]	17.0	[10.9–24.6]	18.1	[12.9–23.2]
Haiti	AMR	21.9	[14.1–31.2]	20.9	[13.7–29.7]	21.4	[15.5–27.1]
Honduras	AMR	20.4	[14.4–27.3]	17.2	[12.2–23.3]	18.8	[14.5–23.1]
Hungary	EUR	40.0	[31.5–48.9]	33.3	[24.9–41.7]	36.5	[30.3–42.5]
Iceland	EUR	31.3	[22.8–40.1]	19.8	[13.8–26.5]	25.6	[20.4–31.1]
India	SEAR	23.4	[18.2–29.1]	22.3	[17.5–27.5]	22.9	[19.1–26.7]
Indonesia	SEAR	21.9	[16.5–28.2]	20.4	[15.6–26.3]	21.2	[17.2–25.2]
Iran (Islamic Republic of)	EMR	21.8	[16.7–27.2]	20.0	[15.5–24.9]	20.9	[17.2–24.4]
Iraq	EMR	22.3	[15.8–29.6]	21.9	[15.8–28.7]	22.1	[17.3–26.5]
Ireland	EUR	26.3	[19.9–33.9]	19.5	[14.5–25.5]	22.9	[18.3–27.7]
Israel	EUR	24.6	[17.6–31.9]	18.6	[13–24.6]	21.6	[16.7–26.3]
Italy	EUR	32.2	[25.6–38.9]	28.0	[22.2–34]	30.0	[25.5–34.4]
Jamaica	AMR	24.5	[17.3–32.7]	20.3	[14.4–27.5]	22.4	[17.5–27.3]
Japan	WPR	29.3	[23.7–35.3]	23.8	[19–28.8]	26.5	[23.1–30.2]
Jordan	EMR	21.4	[15.4–28.1]	17.4	[12.5–23]	19.4	[15.1–23.6]
Kazakhstan	EUR	28.4	[19.5–37.9]	25.4	[18–33.6]	26.8	[21.1–32.9]
Kenya	AFR	21.8	[15.5–29.2]	19.3	[13.5–26]	20.6	[16.1–25.6]
Kiribati	WPR	20.7	[14–28.7]	17.9	[12–25.1]	19.3	[14.4–24.5]
Kuwait	EMR	24.9	[17.6–33.1]	16.7	[11.1–23.3]	21.6	[16–26.8]
Kyrgyzstan	EUR	23.8	[16.3–32.6]	22.5	[15.9–29.8]	23.1	[17.5–28.4]
Lao People's Democratic Republic	WPR	19.1	[13.3–25.3]	18.9	[13.9–24.7]	19.0	[15.3–22.9]
Latvia	EUR	40.2	[30.4–50.8]	36.0	[26.6–46.2]	37.9	[30.5–44.6]
Lebanon	EMR	25.3	[18.1–33.9]	20.3	[14.5–26.6]	22.8	[17.9–28.3]
Lesotho	AFR	21.0	[14.7–28.2]	25.6	[18.7–33.3]	23.3	[18.2–28.2]

## Annex 4.9a: Raised blood pressure

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
22.0	[12.6–32.9]	19.9	[11.6–29.7]	20.9	[13.9–28]	Democratic People's Republic of Korea
31.0	[20–43.2]	30.4	[20.4–42.3]	30.7	[23–38.7]	Democratic Republic of the Congo
29.1	[22.2–36.7]	16.2	[11.4–21.4]	22.6	[18.3–27]	Denmark
32.6	[22.5–43.1]	28.9	[20–39]	30.7	[24–37.7]	Djibouti
26.8	[18.9–35.8]	21.1	[14.6–29]	23.9	[19–29.5]	Dominica
26.7	[18.7–35.9]	22.3	[15.6–30.4]	24.5	[18.7–29.9]	Dominican Republic
20.7	[13.3–29.2]	16.5	[10.4–23.4]	18.6	[13.4–23.7]	Ecuador
26.2	[20.1–32.8]	27.1	[21.1–33.4]	26.6	[22.2–31.3]	Egypt
24.3	[17.5–32]	21.1	[15.2–27.4]	22.6	[17.8–27]	El Salvador
32.2	[20.5–45.6]	29.8	[19.1–42]	31.0	[22.3–39.9]	Equatorial Guinea
29.2	[21–37.5]	29.7	[21.9–37.5]	29.4	[23.6–35]	Eritrea
39.6	[30.6–49.7]	27.4	[19.1–37]	33.0	[26.6–39.9]	Estonia
29.7	[21.4–38.3]	31.2	[23.3–39.4]	30.4	[24.9–36]	Ethiopia
24.7	[17.4–33.1]	22.2	[15.6–29.5]	23.5	[18.5–28.8]	Fiji
27.0	[21.6–32.7]	17.3	[13.5–21.5]	22.1	[18.5–25.6]	Finland
29.3	[21.9–37]	18.0	[12.7–23.9]	23.5	[19.1–28.1]	France
32.8	[22.9–44.1]	27.8	[19–38.2]	30.3	[23–37.8]	Gabon
32.7	[24.7–41.1]	30.7	[23.4–38.5]	31.7	[26–37.2]	Gambia
29.7	[21.2–38.9]	25.5	[18.4–33.4]	27.5	[21.8–33]	Georgia
27.1	[21–33.7]	17.1	[12.3–22.1]	22.0	[18.1–26.2]	Germany
30.2	[23.1–38.1]	28.1	[21.5–35.5]	29.1	[24.1–33.9]	Ghana
23.6	[16.8–30.8]	16.6	[11.5–22.3]	20.1	[15.6–24.5]	Greece
26.0	[17.8–35.2]	21.5	[15–29.4]	23.7	[18.1–29.8]	Grenada
24.0	[17.1–31.6]	22.3	[15.9–29.2]	23.1	[18.7–27.9]	Guatemala
30.4	[22.8–38.5]	31.5	[24.6–39.1]	31.0	[25.7–36.4]	Guinea
32.4	[24.3–41]	32.3	[24.6–40.7]	32.3	[26.7–37.9]	Guinea-Bissau
23.8	[15.8–33.1]	21.4	[14.3–29.9]	22.6	[17.4–28.4]	Guyana
26.3	[17.3–36.7]	25.9	[17.5–35.8]	26.1	[19.1–33.2]	Haiti
24.8	[17.7–32.6]	22.3	[16.3–29.5]	23.6	[18.8–28.3]	Honduras
36.3	[28.3–44.9]	24.7	[17.5–32.3]	30.2	[24.6–36.2]	Hungary
28.8	[20.7–37.2]	16.2	[10.9–22.2]	22.5	[17.8–27.6]	Iceland
26.3	[20.7–32.3]	25.2	[20–30.8]	25.8	[21.6–29.8]	India
24.6	[18.8–31.2]	23.4	[18.1–29.5]	24.0	[19.7–28.2]	Indonesia
25.8	[20–31.8]	25.3	[20.1–31]	25.6	[21.6–29.6]	Iran (Islamic Republic of)
28.3	[20.7–36.7]	28.7	[21.4–36.4]	28.5	[22.7–33.8]	Iraq
24.7	[18.5–32]	16.8	[12.3–22.4]	20.7	[16.4–24.9]	Ireland
23.6	[16.7–30.9]	15.7	[10.5–21.4]	19.6	[15.3–24.2]	Israel
26.4	[20.7–32.4]	18.4	[13.9–23.5]	22.3	[18.5–25.8]	Italy
25.4	[18–33.6]	20.5	[14.4–27.8]	22.9	[18–28.1]	Jamaica
22.8	[18.1–28.1]	13.9	[10.5–17.8]	18.2	[15.1–21.4]	Japan
26.8	[19.8–34.4]	24.1	[18–30.7]	25.5	[20.4–30.3]	Jordan
31.1	[21.8–40.9]	25.5	[18.1–33.8]	28.2	[22.1–34.4]	Kazakhstan
28.7	[20.9–37.3]	27.4	[20.2–35.4]	28.0	[22.3–33.3]	Kenya
22.4	[15.4–30.7]	19.8	[13.6–27.3]	21.1	[16.2–26.2]	Kiribati
31.1	[23–40.1]	25.0	[18–32.7]	28.6	[22.7–34.3]	Kuwait
28.7	[20.2–38.2]	26.8	[19.5–34.6]	27.7	[21.6–33.4]	Kyrgyzstan
24.2	[17.2–31.4]	24.7	[18.5–31.6]	24.4	[19.6–29.1]	Lao People's Democratic Republic
36.8	[27.4–47.1]	26.1	[18.1–35.3]	31.0	[24.7–37.3]	Latvia
25.7	[18.5–34.3]	21.5	[15.3–28.4]	23.6	[18.8–28.9]	Lebanon
27.9	[19.8–36.6]	31.6	[23.4–40.3]	29.8	[24.1–35.4]	Lesotho

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	25.0	[17.6–33.2]	23.7	[17–31.4]	24.3	[18.8–29.8]
Libya	EMR	23.6	[17.5–30.4]	20.1	[15.1–26.2]	21.9	[17.7–26]
Lithuania	EUR	38.0	[28.9–48]	33.6	[24.8–43.4]	35.6	[29.4–41.9]
Luxembourg	EUR	33.8	[25.6–42.4]	22.6	[16.3–29.6]	28.2	[22.8–33.3]
Madagascar	AFR	23.8	[17.1–31.5]	22.0	[15.7–29.1]	22.9	[18.2–27.9]
Malawi	AFR	22.4	[16–29.7]	22.2	[16.1–29.4]	22.3	[17.5–27.2]
Malaysia	WPR	23.2	[17.4–30]	17.2	[12.7–22.7]	20.1	[16.3–24.3]
Maldives	SEAR	19.5	[12.3–28.7]	14.7	[9.1–22]	17.2	[12.2–22.4]
Mali	AFR	25.3	[18–33]	25.4	[18.7–33.1]	25.3	[20.4–30.5]
Malta	EUR	31.0	[22.3–40.1]	23.1	[15.9–30.9]	27.1	[21.7–32.8]
Marshall Islands	WPR	22.5	[15.5–31.1]	18.7	[12.6–25.9]	20.6	[15.4–26.1]
Mauritania	AFR	28.9	[20.8–38.1]	26.2	[18.5–34.7]	27.6	[21.8–33.4]
Mauritius	AFR	28.8	[20.8–37.5]	25.7	[18.2–33.9]	27.2	[21.5–32.8]
Mexico	AMR	22.2	[16.8–28.1]	18.0	[13.5–23]	20.0	[16.2–23.7]
Micronesia (Federated States of)	WPR	19.3	[14–25.7]	18.0	[13.1–23.8]	18.7	[14.5–22.9]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	28.7	[20.6–37.9]	22.9	[16.2–30.6]	25.8	[20.6–31.5]
Montenegro	EUR	37.0	[28–46.2]	30.1	[21.9–39]	33.5	[26.9–39.6]
Morocco	EMR	24.7	[17.8–32.6]	25.1	[18.4–32.7]	24.9	[20.1–29.9]
Mozambique	AFR	24.0	[17.4–31.9]	23.9	[17.4–31.6]	24.0	[18.6–29.2]
Myanmar	SEAR	20.5	[13.9–27.7]	20.8	[14.5–28.1]	20.7	[15.9–25.4]
Namibia	AFR	24.7	[17.6–33]	24.3	[17.5–31.9]	24.5	[19.5–29.6]
Nauru	WPR	24.1	[15.2–35.2]	19.1	[11.8–28.8]	21.6	[15.2–28.1]
Nepal	SEAR	23.5	[16.7–31.4]	22.4	[16.2–29.7]	22.9	[18–27.8]
Netherlands	EUR	29.5	[22.7–36.7]	22.0	[16.5–28]	25.8	[21.3–30.2]
New Zealand	WPR	23.9	[18.3–30.4]	18.7	[14.3–23.9]	21.2	[17.5–25.2]
Nicaragua	AMR	20.4	[14.1–27.7]	18.0	[12.6–24.2]	19.2	[14.5–23.4]
Niger	AFR	28.1	[20.2–36.8]	27.0	[19.7–35]	27.5	[22–33.3]
Nigeria	AFR	23.1	[17–29.8]	21.2	[15.6–27.6]	22.2	[17.9–26.4]
Niue	WPR	22.5	[16.2–30]	20.2	[14.5–26.9]	21.4	[16.7–25.8]
Norway	EUR	29.6	[22.4–37.4]	21.7	[16–28]	25.6	[21.1–30.5]
Oman	EMR	20.3	[14.6–26.5]	17.3	[12.4–23.3]	19.0	[14.8–23.4]
Pakistan	EMR	24.4	[17.8–31.9]	21.1	[15.3–27.8]	22.8	[18.2–27.4]
Palau	WPR	24.6	[17.3–33.8]	20.1	[13.8–28.1]	22.4	[16.9–28.1]
Panama	AMR	23.0	[16.3–30.4]	18.4	[12.9–24.8]	20.8	[16–25.4]
Papua New Guinea	WPR	17.6	[10.6–25.5]	17.2	[10.5–24.8]	17.4	[12.1–22.6]
Paraguay	AMR	23.6	[16.2–31.9]	18.1	[12.3–25]	20.8	[16.3–26.4]
Peru	AMR	16.0	[10.9–21.6]	12.4	[8.4–17]	14.2	[10.9–17.7]
Philippines	WPR	19.9	[13.9–26.4]	17.0	[12.1–22.7]	18.4	[14.4–22.4]
Poland	EUR	37.4	[29.9–45.6]	31.0	[23.6–38.9]	34.1	[28.5–39.9]
Portugal	EUR	33.5	[25.5–41.8]	27.8	[20.7–35.4]	30.6	[24.8–35.8]
Qatar	EMR	21.9	[15.2–29.6]	15.7	[10.5–22.1]	20.4	[14.9–25.9]
Republic of Korea	WPR	16.3	[11.7–21.7]	12.7	[9.1–16.6]	14.5	[11.7–17.7]
Republic of Moldova	EUR	34.5	[25.3–44.4]	33.0	[24.3–42.7]	33.7	[27–40.3]
Romania	EUR	35.3	[26.7–44.6]	30.5	[22.6–39]	32.8	[26.4–38.6]
Russian Federation	EUR	35.7	[27.2–44.8]	32.8	[24.5–41.9]	34.1	[28–40]
Rwanda	AFR	21.4	[13.8–30.7]	20.6	[13.2–29.3]	21.0	[15.1–26.6]
Saint Kitts and Nevis	AMR	26.7	[18–36.2]	22.7	[15.4–31.2]	24.7	[19.1–30.3]
Saint Lucia	AMR	26.9	[17.9–36.9]	22.2	[14.9–30.9]	24.5	[18.4–31.1]
Saint Vincent and the Grenadines	AMR	24.5	[17–33.3]	20.4	[14.2–28]	22.5	[16.9–27.6]

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
31.0	[22.5–40.1]	30.6	[22.8–39.1]	30.8	[24.4–36.8]	Liberia
28.0	[21.3–35.7]	25.7	[19.9–32.5]	26.9	[22.1–31.6]	Libya
36.2	[27.5–46]	26.0	[18.3–35]	30.7	[24.9–37.2]	Lithuania
30.3	[22.8–38.3]	17.5	[12.3–23.6]	23.9	[19–28.5]	Luxembourg
29.8	[22–38.2]	29.1	[21.8–37.3]	29.5	[23.5–35.5]	Madagascar
28.7	[21–37.3]	29.3	[21.9–37.5]	29.0	[23.3–34.7]	Malawi
25.9	[19.6–33.1]	21.0	[15.9–27]	23.4	[19.2–28]	Malaysia
23.6	[15.2–33.9]	20.4	[13.2–29.2]	22.0	[16–28.3]	Maldives
32.7	[24.1–41.4]	33.5	[25.5–41.8]	33.1	[26.9–39]	Mali
26.9	[19.1–35.3]	17.2	[11.4–23.6]	22.0	[17–27.3]	Malta
24.3	[17.1–33]	20.6	[14.2–28.1]	22.5	[17.3–27.5]	Marshall Islands
35.5	[26.4–45.2]	33.2	[24.4–42.2]	34.3	[27.9–40.4]	Mauritania
28.7	[20.9–37.1]	24.0	[17–31.9]	26.3	[20.8–31.7]	Mauritius
24.7	[18.9–31]	19.9	[15.1–25.3]	22.2	[18.5–26]	Mexico
23.6	[17.2–30.9]	21.9	[16.1–28.5]	22.8	[18.2–27.6]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
34.8	[25.8–44.5]	28.8	[21.1–37.2]	31.8	[25.7–37.9]	Mongolia
34.0	[25.5–43]	24.6	[17.4–32.7]	29.2	[23.2–34.9]	Montenegro
28.1	[20.7–36.5]	28.8	[21.7–36.8]	28.5	[23.1–33.9]	Morocco
30.2	[22.2–39.1]	30.4	[22.9–39]	30.3	[24.7–36.2]	Mozambique
23.5	[16.3–31.2]	23.9	[17–31.4]	23.7	[18.8–28.9]	Myanmar
31.1	[22.9–40.3]	30.9	[23.1–39.1]	31.0	[25.2–36.8]	Namibia
25.9	[16.6–37.2]	21.1	[13.3–31]	23.5	[16.8–29.9]	Nauru
25.8	[18.6–34.2]	26.9	[19.8–34.9]	26.4	[21–31.7]	Nepal
25.0	[19–31.5]	15.7	[11.4–20.5]	20.3	[16.6–24.3]	Netherlands
21.1	[16.1–27.1]	14.7	[11–19.1]	17.8	[14.5–21.4]	New Zealand
24.7	[17.4–32.9]	22.9	[16.5–30.1]	23.8	[18.6–28.6]	Nicaragua
32.8	[24.2–41.8]	34.8	[26.5–43.4]	33.8	[27.5–40.4]	Niger
28.9	[22–36.5]	28.2	[21.6–35.4]	28.6	[23.4–33.3]	Nigeria
24.4	[17.8–32]	21.8	[15.9–28.7]	23.1	[18.4–27.8]	Niue
25.7	[19.3–33]	15.7	[11.2–21.1]	20.7	[16.5–25]	Norway
28.4	[21.2–36.1]	26.6	[19.9–33.9]	27.6	[22.1–32.8]	Oman
28.9	[21.4–37.1]	27.0	[20.1–34.5]	28.0	[22.9–33.1]	Pakistan
26.4	[18.9–35.7]	22.1	[15.6–30.3]	24.3	[18.8–29.9]	Palau
24.7	[17.5–32.4]	19.7	[13.8–26.3]	22.2	[17.5–27.1]	Panama
22.4	[14–31.7]	22.8	[14.7–31.4]	22.6	[16.5–28.4]	Papua New Guinea
26.9	[18.6–35.9]	21.5	[14.9–29.1]	24.2	[18.6–29.1]	Paraguay
18.0	[12.5–24.1]	14.1	[9.7–19.1]	16.1	[12.5–19.5]	Peru
24.0	[17.3–31.3]	20.9	[15.4–27.2]	22.4	[18–26.7]	Philippines
34.9	[27.7–43]	24.5	[18.1–31.8]	29.6	[24–34.4]	Poland
28.8	[21.6–36.5]	20.0	[14.1–26.4]	24.3	[19.4–28.8]	Portugal
29.4	[21.6–38]	25.0	[18.3–32.6]	28.3	[21.6–34.8]	Qatar
15.7	[11.4–20.8]	10.4	[7.4–13.9]	13.1	[10.3–15.8]	Republic of Korea
33.6	[24.6–43.4]	28.5	[20.4–37.7]	30.9	[25–37.3]	Republic of Moldova
32.8	[24.6–41.9]	24.3	[17.3–32.2]	28.5	[22.7–34.5]	Romania
34.6	[26.3–43.4]	26.2	[18.9–34.7]	30.1	[24.4–35.7]	Russian Federation
28.2	[18.7–39.2]	29.3	[20–39.4]	28.8	[21.9–36.2]	Rwanda
27.1	[18.4–36.7]	22.2	[14.9–30.6]	24.6	[18.6–30.3]	Saint Kitts and Nevis
27.5	[18.3–37.5]	22.1	[14.7–30.9]	24.8	[18.3–30.8]	Saint Lucia
26.3	[18.5–35.3]	21.7	[15.2–29.5]	24.0	[18.4–29.4]	Saint Vincent and the Grenadines



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	20.9	[14.2–28.7]	18.0	[12.4–24.5]	19.5	[15–24.3]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	24.1	[17.7–31.6]	21.2	[15.4–28]	22.6	[17.8–27.5]
Saudi Arabia	EMR	24.4	[18–31.6]	19.2	[13.9–25.5]	22.1	[17.5–26.6]
Senegal	AFR	25.0	[18.1–32.7]	23.5	[17.3–30.9]	24.2	[19.8–29]
Serbia	EUR	38.0	[30.2–46.3]	32.7	[24.7–41.2]	35.3	[29.1–40.8]
Seychelles	AFR	27.1	[18.7–36.7]	21.6	[14.7–29.8]	24.4	[18.6–30.3]
Sierra Leone	AFR	25.1	[18.7–32.6]	23.9	[17.7–31]	24.5	[20.1–29.2]
Singapore	WPR	20.8	[15.4–27]	14.6	[10.7–19.4]	17.7	[13.9–21.3]
Slovakia	EUR	35.9	[27.6–44.2]	29.1	[21.6–36.7]	32.4	[27.2–37.9]
Slovenia	EUR	39.0	[29–49.1]	32.9	[23.7–42.8]	35.9	[29.1–42.9]
Solomon Islands	WPR	17.9	[12.1–24.5]	17.5	[12.2–24]	17.7	[13.7–21.8]
Somalia	EMR	28.0	[19–37.7]	24.7	[16.6–33.9]	26.3	[19.8–31.9]
South Africa	AFR	25.8	[20.1–32.2]	26.1	[20.4–32.1]	26.0	[21.6–30.1]
South Sudan	AFR	26.0	[18.7–34.2]	22.4	[16–29.8]	24.2	[18.7–29.4]
Spain	EUR	29.3	[23–35.9]	23.6	[18.1–29.3]	26.4	[22.1–30.7]
Sri Lanka	SEAR	21.9	[14.7–30.1]	21.5	[14.9–29.1]	21.7	[16.8–26.9]
Sudan	EMR	26.0	[18.7–34.2]	22.4	[16–29.8]	24.2	[18.7–29.4]
Suriname	AMR	24.1	[16.4–33.1]	20.9	[14.4–28.7]	22.5	[17–28]
Swaziland	AFR	21.9	[15.1–30.3]	22.5	[15.6–30.4]	22.2	[16.9–27.4]
Sweden	EUR	32.6	[26.2–40.3]	24.5	[18.8–30.5]	28.6	[24.3–33.3]
Switzerland	EUR	28.3	[21.6–35.5]	21.4	[15.9–27.1]	24.8	[20.3–28.6]
Syrian Arab Republic	EMR	21.8	[15.9–28.7]	19.6	[14.1–25.6]	20.8	[16.6–25.2]
Tajikistan	EUR	21.4	[13.9–30.6]	19.9	[13.1–27.7]	20.7	[15–26]
Thailand	SEAR	23.9	[17.2–31.1]	22.0	[16–28.6]	22.9	[18.7–28.3]
the former Yugoslav Republic of Macedonia	EUR	34.0	[25.3–43.4]	28.7	[20.8–37.5]	31.4	[25–37.5]
Timor–Leste	SEAR	21.1	[14.5–28.3]	21.4	[14.9–28.6]	21.2	[16.7–26.2]
Togo	AFR	24.4	[17.8–31.7]	23.3	[17.3–29.8]	23.8	[19.4–28.3]
Tonga	WPR	20.1	[13.9–27.8]	18.5	[13.1–24.9]	19.3	[14.8–23.6]
Trinidad and Tobago	AMR	25.2	[14.8–37.2]	22.5	[13.5–33.5]	23.9	[16.4–31]
Tunisia	EMR	24.7	[18.6–31.4]	24.1	[18.3–30.9]	24.4	[19.9–28.8]
Turkey	EUR	22.5	[17.7–27.9]	23.8	[18.8–29.2]	23.1	[19.6–26.6]
Turkmenistan	EUR	23.6	[16.4–32]	21.6	[15.3–28.7]	22.6	[17.1–27.9]
Tuvalu	WPR	22.6	[15.8–30.7]	20.0	[14.1–27.3]	21.3	[16.3–26]
Uganda	AFR	21.1	[13.3–30.9]	19.1	[12.3–27.8]	20.1	[14.5–25.8]
Ukraine	EUR	36.1	[26.8–46.1]	34.3	[25.4–44.2]	35.2	[28.5–42.1]
United Arab Emirates	EMR	16.4	[11.4–22.3]	9.7	[6–14.3]	14.4	[10.3–18.2]
United Kingdom	EUR	24.3	[20–28.8]	20.9	[17.3–24.7]	22.6	[19.7–25.1]
United Republic of Tanzania	AFR	22.7	[17.1–29.3]	21.7	[16.4–27.6]	22.2	[18.2–26.3]
United States of America	AMR	19.7	[14.6–25]	16.5	[12.6–20.9]	18.1	[14.8–21.1]
Uruguay	AMR	29.5	[20.9–38.9]	25.3	[18.2–33.2]	27.3	[21.6–32.9]
Uzbekistan	EUR	22.3	[14.8–31]	20.9	[14.3–28.5]	21.6	[16.5–27.2]
Vanuatu	WPR	20.6	[14.4–28.2]	18.2	[12.8–24.8]	19.4	[15–23.8]
Venezuela (Bolivarian Republic of)	AMR	22.9	[16.9–29.9]	17.3	[12.6–22.9]	20.1	[16.2–24.3]
Viet Nam	WPR	20.5	[14.7–26.9]	20.1	[14.5–25.9]	20.3	[16.2–24.2]
Yemen	EMR	23.0	[15.8–30.9]	23.4	[16.6–31.1]	23.2	[17.7–28.2]
Zambia	AFR	22.8	[16.5–30.1]	19.3	[14–25.9]	21.0	[16.5–25.4]
Zimbabwe	AFR	21.5	[14.3–30]	22.6	[15.5–31.4]	22.1	[16.2–27.8]

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
23.6	[16.4–31.9]	20.0	[13.9–27.1]	21.9	[16.8–26.9]	Samoa
...	...	...	...	...	...	San Marino
31.3	[23.6–39.9]	28.7	[21.7–36.7]	30.0	[24.4–35.8]	Sao Tome and Principe
29.4	[22.4–37.2]	26.6	[20.3–33.9]	28.2	[23.3–33.4]	Saudi Arabia
32.1	[24–40.8]	31.3	[23.9–39.5]	31.7	[26.1–37.5]	Senegal
34.6	[27.2–42.6]	26.2	[19.1–34]	30.4	[24.7–36]	Serbia
29.2	[20.6–38.8]	21.9	[15–30.1]	25.6	[19.6–31.6]	Seychelles
31.7	[24.3–39.9]	32.2	[24.9–40]	31.9	[26.6–37.5]	Sierra Leone
19.6	[14.6–25.3]	13.0	[9.5–17.3]	16.3	[13–19.4]	Singapore
34.3	[26.3–42.5]	23.9	[17.2–31]	29.0	[23.5–34.2]	Slovakia
34.6	[25.4–44.2]	24.5	[16.7–33.3]	29.5	[23.7–35.6]	Slovenia
22.1	[15.3–29.7]	24.3	[17.7–32]	23.2	[17.9–28.4]	Solomon Islands
34.4	[24–45.2]	31.8	[22.4–41.6]	33.1	[25.7–40.6]	Somalia
30.4	[23.9–37.2]	28.6	[22.5–34.9]	29.4	[25.1–34]	South Africa
32.1	[23.6–41]	29.4	[21.8–37.8]	30.7	[24.9–36.8]	South Sudan
25.7	[20–31.8]	17.0	[12.4–21.8]	21.3	[17.4–25]	Spain
22.2	[15–30.3]	20.9	[14.4–28.3]	21.5	[16.6–26.7]	Sri Lanka
32.1	[23.6–41]	29.4	[21.8–37.8]	30.7	[24.9–36.8]	Sudan
26.2	[18.2–35.3]	21.9	[15.3–29.8]	24.1	[18.3–29.7]	Suriname
29.1	[20.6–39]	30.1	[21.5–39.3]	29.6	[23.2–35.8]	Swaziland
27.3	[21.6–34.3]	16.7	[12.3–21.7]	22.0	[18–25.9]	Sweden
24.1	[18.1–30.6]	15.0	[10.8–19.6]	19.5	[15.9–23.3]	Switzerland
26.8	[19.8–34.6]	26.0	[19.3–32.9]	26.4	[21.5–31]	Syrian Arab Republic
27.0	[18.2–37.2]	26.8	[18.5–35.6]	26.9	[20.5–33]	Tajikistan
23.4	[17–30.4]	20.4	[14.9–26.5]	21.9	[17.6–26.3]	Thailand
32.0	[23.7–41.1]	24.7	[17.4–32.9]	28.4	[22.4–34.5]	the former Yugoslav Republic of Macedonia
26.1	[18.4–34.5]	26.9	[19.3–35]	26.5	[20.6–32.5]	Timor–Leste
31.3	[23.6–39.6]	31.3	[24.2–38.6]	31.3	[26–36.6]	Togo
22.9	[16.1–31.3]	20.5	[14.5–27.5]	21.7	[16.3–26.9]	Tonga
25.7	[15.3–37.7]	21.8	[13–32.5]	23.7	[16.6–31.5]	Trinidad and Tobago
26.5	[20.2–33.4]	25.9	[19.8–33]	26.2	[21.5–30.7]	Tunisia
24.4	[19.4–30.1]	24.7	[19.6–30.2]	24.6	[21.1–28.2]	Turkey
28.5	[20.4–37.9]	26.1	[19–33.9]	27.3	[21.5–32.8]	Turkmenistan
24.4	[17.3–32.7]	21.7	[15.4–29.2]	23.1	[17.7–28.2]	Tuvalu
28.0	[18.3–39.6]	27.8	[19.1–38.2]	27.9	[20.7–35.1]	Uganda
34.2	[25.2–43.9]	26.5	[18.7–35.6]	30.0	[23.7–36.5]	Ukraine
27.5	[20–35.4]	23.3	[16.9–30.7]	26.3	[20.7–31.8]	United Arab Emirates
20.6	[16.8–24.7]	14.5	[11.6–17.6]	17.5	[15.1–20]	United Kingdom
28.8	[22.1–36.3]	28.8	[22.4–35.7]	28.8	[23.8–33.7]	United Republic of Tanzania
17.5	[12.9–22.2]	12.3	[9.1–15.9]	14.8	[12–17.7]	United States of America
27.6	[19.3–36.7]	19.7	[13.5–27.1]	23.5	[17.9–29]	Uruguay
27.0	[18.4–36.5]	25.5	[18–33.8]	26.2	[20.5–32.5]	Uzbekistan
24.5	[17.4–33]	23.7	[17.2–31.3]	24.1	[18.8–29.2]	Vanuatu
25.3	[18.9–32.6]	19.4	[14.2–25.3]	22.4	[17.9–26.7]	Venezuela (Bolivarian Republic of)
23.6	[17.2–30.4]	21.4	[15.5–27.5]	22.5	[18.1–26.6]	Viet Nam
30.1	[21.4–39.4]	32.3	[23.9–40.9]	31.2	[24.9–36.9]	Yemen
30.0	[22.5–38.6]	28.1	[21.4–36]	29.1	[23.8–34.4]	Zambia
28.7	[19.4–39]	30.9	[21.6–41.6]	29.8	[22.9–36.8]	Zimbabwe

## 4.9b Raised blood pressure

### Comparable estimates of prevalence of raised blood pressure (population aged 18+ years), 2014

Country name	Region	Raised blood pressure (SBP≥140 and/or DBP≥90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Afghanistan	EMR	28.5	[18.6–39.8]	29.5	[19.6–40.5]	29.0	[21.4–36.8]
Albania	EUR	31.4	[21.2–42.9]	24.5	[15.4–35.2]	28.0	[20.9–35.6]
Algeria	AFR	28.1	[19.1–38.9]	27.6	[19–37.5]	27.8	[21–34.3]
Andorra	EUR	23.2	[14.6–32.8]	14.4	[8.3–21.7]	18.8	[13–24.8]
Angola	AFR	31.8	[19.7–45.7]	31.1	[19.9–44]	31.5	[22.4–40.2]
Antigua and Barbuda	AMR	24.5	[13.6–38.3]	19.4	[10.3–31.4]	21.9	[13.8–30.3]
Argentina	AMR	26.3	[16.3–37.6]	17.6	[10.5–26.6]	21.9	[15.3–28.2]
Armenia	EUR	29.0	[18.7–40.5]	24.2	[15.7–34]	26.6	[19.9–34.2]
Australia	WPR	18.4	[12.5–25.1]	12.4	[8.2–17.2]	15.4	[11.7–19]
Austria	EUR	23.1	[14.8–32.6]	14.8	[9–22]	18.8	[13.5–24.8]
Azerbaijan	EUR	27.7	[17.8–39.2]	24.5	[15.7–34.7]	26.1	[19.1–33.2]
Bahamas	AMR	26.1	[16.1–38]	18.0	[10.7–27.2]	22.0	[15.3–28.2]
Bahrain	EMR	26.1	[17.3–36.4]	22.6	[14.7–31.9]	24.8	[18–31.5]
Bangladesh	SEAR	25.1	[16.1–34.9]	26.1	[17.5–35.6]	25.6	[18.8–31.9]
Barbados	AMR	25.2	[14.3–38.5]	20.4	[11.5–31.7]	22.8	[15.2–31.2]
Belarus	EUR	34.4	[23.4–47.2]	24.3	[14.9–35.9]	29.0	[21.4–36.1]
Belgium	EUR	22.5	[14.3–31.6]	13.3	[7.6–19.9]	17.8	[12.8–23]
Belize	AMR	24.4	[14.7–36.1]	21.2	[12.8–31.6]	22.8	[15.6–29.9]
Benin	AFR	30.3	[21.1–40.2]	30.7	[22.1–40.1]	30.5	[23.8–37.4]
Bhutan	SEAR	27.7	[18.9–37.8]	26.9	[18.7–36.5]	27.3	[21.1–33.6]
Bolivia (Plurinational State of)	AMR	19.7	[11.1–30.3]	15.9	[8.5–25]	17.8	[11.4–24]
Bosnia and Herzegovina	EUR	30.9	[20.3–42.7]	25.9	[16.2–37.6]	28.4	[20.2–35.7]
Botswana	AFR	30.3	[19.8–41.8]	29.7	[19.6–40.7]	30.0	[22.8–37.3]
Brazil	AMR	26.4	[17.8–36.3]	20.4	[13.6–28.8]	23.3	[18–29.2]
Brunei Darussalam	WPR	22.6	[13.3–33.7]	16.0	[9.1–24.7]	19.3	[12.4–26.3]
Bulgaria	EUR	33.4	[22.5–45]	23.7	[14.7–34.6]	28.4	[21.6–35.7]
Burkina Faso	AFR	32.8	[22.3–43.6]	33.5	[24–43.6]	33.1	[26.1–39.5]
Burundi	AFR	29.5	[17.6–43]	32.2	[20.4–44.9]	30.9	[22.2–40.6]
Cabo Verde	AFR	33.7	[23.5–44.9]	29.8	[20.4–40.1]	31.7	[24.3–38.7]
Cambodia	WPR	24.4	[15.6–34.4]	24.4	[15.9–34.2]	24.4	[17.8–30.9]
Cameroon	AFR	28.8	[19.1–39]	27.9	[19.1–38.2]	28.3	[21.3–35.4]
Canada	AMR	15.7	[9.8–22.4]	11.0	[6.8–16.3]	13.3	[9.5–17.2]
Central African Republic	AFR	32.9	[20.9–45.8]	33.0	[21.7–45.7]	32.9	[23.8–41.8]
Chad	AFR	33.1	[22.4–44.3]	34.2	[24.2–45.3]	33.7	[26.4–41]
Chile	AMR	25.4	[16.6–36.1]	17.6	[11.1–26.1]	21.4	[15.5–27.3]
China	WPR	20.4	[13.6–29]	17.0	[11.1–24.6]	18.8	[13.6–23.5]
Colombia	AMR	24.2	[15.6–34.3]	19.7	[12.6–28.7]	21.9	[15.8–28.1]
Comoros	AFR	28.8	[19.2–39.6]	29.2	[19.8–39.5]	29.0	[22.3–36.5]
Congo	AFR	31.0	[19.4–44.3]	28.4	[18.1–40.6]	29.7	[21.3–38.1]
Cook Islands	WPR	25.3	[16.3–37]	21.0	[12.7–31.1]	23.2	[15.7–29.8]
Costa Rica	AMR	23.8	[15.7–33]	18.6	[12–26.4]	21.2	[15.2–26.8]
Côte d'Ivoire	AFR	30.7	[20.9–41.7]	28.9	[20.1–38.8]	29.8	[23.2–36.7]
Croatia	EUR	33.0	[22.6–44.7]	23.0	[14–33.4]	27.8	[20.3–35.8]
Cuba	AMR	23.3	[13.6–35.6]	19.3	[11.1–30]	21.3	[14.1–28.4]
Cyprus	EUR	23.5	[14.8–34]	15.8	[9.2–23.6]	19.7	[13.9–25.9]
Czech Republic	EUR	33.2	[23.1–44.3]	21.0	[12.9–30.8]	27.0	[20.3–33.9]



... Indicates no data were available

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
22.0	[13.7–31.8]	21.4	[13.3–31]	21.7	[15.3–28]	Afghanistan
33.2	[22.6–44.9]	27.7	[17.9–38.9]	30.5	[23.1–38.1]	Albania
24.6	[16.4–34.7]	23.3	[15.5–32.6]	24.0	[17.5–30.2]	Algeria
27.5	[17.6–38.3]	21.3	[13.3–30.5]	24.4	[17.8–31.1]	Andorra
24.9	[14.8–37.3]	23.0	[13.7–34.3]	23.9	[16.3–31.1]	Angola
24.7	[13.7–38.5]	20.6	[11.2–32.9]	22.6	[14.2–31]	Antigua and Barbuda
26.6	[16.6–37.8]	20.6	[13–29.9]	23.5	[16.5–29.8]	Argentina
29.1	[19–40.5]	27.9	[18.7–38.1]	28.5	[21.3–35.4]	Armenia
21.2	[14.7–28.6]	16.8	[11.6–22.6]	19.0	[14.6–23.4]	Australia
27.7	[18–38.3]	22.0	[14.1–30.8]	24.8	[18.2–31]	Austria
25.4	[16–36.7]	23.4	[14.6–33.5]	24.4	[17.5–31.5]	Azerbaijan
25.5	[15.6–37.5]	18.9	[11.2–28.4]	22.1	[14.3–29.4]	Bahamas
20.6	[13–29.9]	16.8	[9.9–25.2]	19.2	[13.2–24.6]	Bahrain
22.0	[13.8–31.1]	21.0	[13.4–29.6]	21.5	[15.7–27.3]	Bangladesh
27.1	[15.4–41.1]	25.0	[14.6–37.6]	26.0	[17.5–34.1]	Barbados
36.5	[24.9–49.7]	31.9	[20.8–44.7]	34.1	[25.6–43.4]	Belarus
27.4	[17.9–37.6]	20.4	[12.7–28.7]	23.8	[17.3–29.9]	Belgium
20.1	[11.8–30.4]	16.4	[9.4–25.7]	18.2	[11.8–24.5]	Belize
24.1	[16.3–33.2]	23.6	[16.2–31.9]	23.8	[18.4–29.4]	Benin
23.8	[16–33]	20.8	[14–29.3]	22.4	[16.4–27.9]	Bhutan
16.7	[9.1–26.1]	13.4	[7–21.5]	15.1	[9.4–20.4]	Bolivia (Plurinational State of)
34.8	[23.3–47.3]	33.2	[22.1–46.1]	34.0	[25.9–42.7]	Bosnia and Herzegovina
23.4	[14.8–33.3]	22.7	[14.6–32.1]	23.0	[16.5–29.7]	Botswana
25.4	[17–35.2]	20.7	[13.8–29.2]	23.0	[16.4–28.9]	Brazil
21.4	[12.2–32.8]	14.3	[7.5–23.1]	17.9	[11–24.3]	Brunei Darussalam
39.1	[27–51.4]	33.8	[23–46.1]	36.4	[28.1–44.6]	Bulgaria
24.8	[16.2–34.5]	25.3	[17.2–34.7]	25.1	[18.5–31.3]	Burkina Faso
23.0	[13.2–34.7]	22.8	[13.4–34.1]	22.9	[15.7–30.4]	Burundi
28.1	[19.1–38.6]	26.2	[17.8–35.7]	27.1	[20.8–33.5]	Cabo Verde
20.5	[12.9–29.3]	21.6	[13.9–30.5]	21.1	[14.9–27.2]	Cambodia
22.6	[14.6–31.6]	20.5	[13.4–29.4]	21.6	[16.1–27.4]	Cameroon
18.8	[11.9–26.4]	15.9	[10.2–22.5]	17.3	[12.7–21.9]	Canada
26.6	[16.4–38.4]	26.1	[16.5–37.8]	26.4	[18.7–34.3]	Central African Republic
25.5	[16.5–35.5]	24.8	[16.6–35.1]	25.1	[18–31.6]	Chad
26.2	[17.2–37.1]	20.1	[12.9–29.1]	23.1	[17–29.8]	Chile
21.1	[13.9–30.1]	18.4	[12–26.7]	19.8	[14.5–24.9]	China
22.5	[14.3–32.3]	19.0	[12–28]	20.7	[14.7–26.7]	Colombia
23.4	[15–33]	22.7	[14.7–32.1]	23.0	[16.6–29]	Comoros
25.6	[15.4–37.5]	22.2	[13.4–33.2]	23.9	[16.5–30.9]	Congo
24.0	[15.2–35.4]	20.3	[12.2–30.3]	22.2	[15.2–29]	Cook Islands
22.7	[14.9–31.7]	18.1	[11.6–25.8]	20.5	[15.3–25.8]	Costa Rica
25.9	[17.1–36]	21.5	[14–30]	23.7	[17.7–29.9]	Côte d'Ivoire
38.9	[27.3–51.4]	33.0	[21.9–44.9]	35.8	[27.7–44.2]	Croatia
26.4	[15.5–39.9]	24.4	[14.7–36.6]	25.4	[16.7–34.1]	Cuba
24.8	[15.7–35.4]	19.0	[11.6–27.4]	21.9	[15.6–28.3]	Cyprus
37.7	[26.7–49.3]	28.8	[19.1–39.8]	33.2	[26.1–40.7]	Czech Republic

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood pressure (SBP≥140 and/or DBP≥90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Democratic People's Republic of Korea	SEAR	22.1	[11.1–35.7]	20.0	[10.3–32.7]	21.0	[12.8–29.3]
Democratic Republic of the Congo	AFR	32.1	[18.5–46.9]	31.5	[19.1–46.1]	31.8	[21.7–41.6]
Denmark	EUR	26.0	[17.7–35.6]	14.2	[8.7–20.7]	20.0	[14.5–25.3]
Djibouti	EMR	31.8	[19.8–44.7]	28.0	[17.4–40.7]	29.9	[21.8–38.2]
Dominica	AMR	25.8	[16.4–37]	20.2	[12.3–30]	23.0	[16–30.3]
Dominican Republic	AMR	25.7	[15.9–37.5]	21.1	[12.8–31.2]	23.4	[16.4–30.2]
Ecuador	AMR	19.9	[11.6–29.9]	15.5	[8.7–23.8]	17.7	[11.7–23.3]
Egypt	EMR	25.6	[17.5–34.8]	26.3	[18.3–35.1]	26.0	[20.1–31.9]
El Salvador	AMR	23.3	[14.7–33.6]	20.0	[12.6–28.8]	21.6	[15.6–27.6]
Equatorial Guinea	AFR	30.9	[17.6–46.5]	28.6	[16.4–43.2]	29.8	[19.6–39.6]
Eritrea	AFR	29.6	[19.2–40.7]	30.6	[20.5–41.2]	30.1	[22.9–36.9]
Estonia	EUR	38.3	[26.9–50.6]	26.0	[16.1–38]	31.7	[24.2–40.7]
Ethiopia	AFR	30.2	[19.9–41.6]	32.2	[22.3–43.1]	31.2	[23.7–38.9]
Fiji	WPR	25.2	[16.2–36.2]	22.8	[14.7–32.6]	24.0	[17.2–30.5]
Finland	EUR	24.5	[17.6–32.2]	15.4	[10.5–21.1]	19.9	[15.3–24.6]
France	EUR	26.3	[17.2–36.1]	16.0	[9.5–23.4]	21.0	[14.9–26.5]
Gabon	AFR	31.7	[19.9–45.1]	26.3	[16–38.3]	29.0	[20.5–37.5]
Gambia	AFR	32.6	[22.2–43.8]	30.6	[21.2–40.7]	31.6	[24.3–38.8]
Georgia	EUR	30.0	[20.2–41.2]	25.4	[16.9–35.2]	27.6	[20.3–34.3]
Germany	EUR	24.2	[16.1–33.3]	14.9	[9–21.3]	19.5	[14.1–24.8]
Ghana	AFR	29.9	[21–40]	27.6	[19.2–37.2]	28.7	[22.1–35.6]
Greece	EUR	21.9	[13.6–31.2]	15.0	[9–22.2]	18.4	[12.8–23.5]
Grenada	AMR	25.1	[15.4–37]	20.8	[12.7–30.5]	23.0	[16.1–30]
Guatemala	AMR	23.3	[14.7–33.2]	21.7	[13.7–31.4]	22.5	[16.4–28.6]
Guinea	AFR	30.8	[21.2–41.3]	32.2	[23.1–42.2]	31.5	[24.9–37.8]
Guinea-Bissau	AFR	32.6	[22.3–44.3]	32.7	[23–43.7]	32.7	[24.7–39.9]
Guyana	AMR	23.4	[13.9–35.3]	21.5	[12.8–32.6]	22.5	[15.2–30]
Haiti	AMR	26.4	[15.2–39.6]	26.0	[15.9–38.8]	26.2	[17.7–34.7]
Honduras	AMR	24.3	[15.5–34.5]	21.8	[14.1–31.3]	23.1	[16.9–29.2]
Hungary	EUR	34.6	[24.3–45.7]	23.1	[14.2–33.3]	28.6	[21.9–35.9]
Iceland	EUR	26.1	[16.8–36.5]	14.0	[8–21.1]	20.1	[14.5–26.4]
India	SEAR	25.9	[18.1–34.4]	24.8	[17.4–32.9]	25.4	[20.4–30.5]
Indonesia	SEAR	24.0	[16.2–32.6]	22.6	[15.6–30.8]	23.3	[17.7–29.1]
Iran (Islamic Republic of)	EMR	24.1	[16.4–32.7]	23.3	[16–31.4]	23.7	[18.1–29.2]
Iraq	EMR	28.0	[18.6–38.5]	27.8	[18.5–37.6]	27.9	[21.2–34.8]
Ireland	EUR	21.3	[13.9–30.2]	14.9	[9.3–21.7]	18.1	[13.3–23.6]
Israel	EUR	21.5	[13.1–30.9]	13.8	[7.9–20.8]	17.7	[12.5–23.3]
Italy	EUR	23.4	[15.8–31.7]	16.0	[10.4–22.3]	19.6	[14.9–24.4]
Jamaica	AMR	24.5	[15.3–35.4]	19.8	[12.3–29.2]	22.1	[14.8–28.8]
Japan	WPR	21.4	[14.9–28.9]	12.7	[8.3–17.8]	16.9	[12.8–21.2]
Jordan	EMR	26.3	[17.1–36.2]	22.9	[15.1–31.6]	24.6	[18.5–30.7]
Kazakhstan	EUR	30.4	[19.4–42.8]	24.2	[15.2–34.4]	27.2	[19.3–34.6]
Kenya	AFR	28.7	[19.2–39.7]	27.6	[18.6–37.8]	28.1	[20.9–35.1]
Kiribati	WPR	23.0	[14.2–33.7]	20.6	[12.6–30.6]	21.8	[15–28.1]
Kuwait	EMR	29.1	[19–40.6]	22.6	[14.3–32.3]	26.5	[19.6–33.7]
Kyrgyzstan	EUR	28.8	[19.1–40.1]	27.1	[18.3–37.1]	27.9	[20.9–34.9]
Lao People's Democratic Republic	WPR	23.7	[15.3–33]	24.5	[16.7–33.4]	24.1	[18.3–30.4]
Latvia	EUR	36.1	[24.3–48.8]	24.4	[14.8–36.4]	29.8	[22.2–37.1]
Lebanon	EMR	25.8	[16.9–36.1]	20.6	[13.4–29.5]	23.3	[17–29.4]
Lesotho	AFR	27.7	[18.1–38.7]	32.0	[22.1–43]	29.9	[22.1–37.6]

## Annex 4.9b: Raised blood pressure

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
21.6	[10.4–35.6]	22.6	[11.9–36.2]	22.1	[13.3–30.8]	Democratic People's Republic of Korea
25.6	[14–39.2]	24.0	[13.7–37.3]	24.8	[16.2–32.7]	Democratic Republic of the Congo
31.5	[21.9–42.2]	21.1	[13.7–29.2]	26.3	[20.5–32.5]	Denmark
26.6	[16–38.5]	22.2	[13.1–33.8]	24.4	[16.6–31.4]	Djibouti
26.0	[16.5–37.3]	21.5	[13.3–31.5]	23.7	[16.9–30.9]	Dominica
24.0	[14.7–35.4]	19.5	[11.7–29.2]	21.8	[15.6–28.8]	Dominican Republic
18.4	[10.7–27.9]	14.5	[8.1–22.3]	16.5	[10.8–21.8]	Ecuador
23.0	[15.5–31.6]	24.0	[16.5–32.4]	23.5	[17.8–29.6]	Egypt
20.6	[13–29.9]	18.4	[11.7–26.5]	19.5	[13.9–24.8]	El Salvador
27.2	[14.8–42.3]	23.2	[12.2–36.9]	25.2	[15.8–34.6]	Equatorial Guinea
22.1	[13.8–31.7]	21.8	[13.7–31.1]	21.9	[16.3–28.1]	Eritrea
42.4	[30.4–55.1]	36.3	[24.6–49.6]	39.2	[30.5–47.8]	Estonia
24.2	[15.4–34.4]	24.7	[16.5–34.5]	24.4	[17.8–30.9]	Ethiopia
23.4	[14.8–34]	21.5	[13.5–31.2]	22.5	[16.2–28.6]	Fiji
30.2	[22.1–38.7]	24.2	[17.5–31.4]	27.1	[21.7–32.7]	Finland
31.4	[21.2–42]	23.9	[15.6–32.8]	27.5	[20.3–33.7]	France
27.2	[16.7–39.5]	22.2	[13.3–32.8]	24.7	[16.8–32.2]	Gabon
25.7	[17–36]	21.4	[13.8–30.4]	23.5	[16.5–29.8]	Gambia
32.9	[22.6–44.6]	32.6	[22.8–43.3]	32.8	[25.3–40.4]	Georgia
30.4	[20.7–40.9]	23.9	[15.6–32.1]	27.1	[20.7–33.2]	Germany
24.4	[16.7–33.7]	21.5	[14.4–30.3]	23.0	[17.3–29]	Ghana
27.0	[17.3–37.6]	23.1	[15–32.2]	25.0	[18.3–31.3]	Greece
22.4	[13.5–33.2]	19.5	[12–28.4]	20.9	[15.1–27.3]	Grenada
19.3	[12–27.9]	17.2	[10.6–25.4]	18.2	[12.7–23.4]	Guatemala
25.2	[16.8–34.8]	25.4	[17.4–34.5]	25.3	[18.6–32.1]	Guinea
26.8	[17.9–37.5]	25.6	[17.1–36]	26.2	[19.9–33]	Guinea–Bissau
19.6	[11–30.8]	18.0	[10.1–28.3]	18.8	[11.9–25.2]	Guyana
22.3	[12.5–34.1]	21.3	[12.5–32.8]	21.8	[14.8–29.2]	Haiti
20.2	[12.6–29.2]	17.2	[10.8–25.4]	18.7	[13.2–24.4]	Honduras
38.7	[27.7–50.4]	32.1	[21.3–43.4]	35.2	[26.8–43]	Hungary
29.1	[19.1–40.1]	18.0	[10.9–26]	23.6	[17–30.3]	Iceland
23.4	[16.2–31.5]	22.6	[15.6–30.4]	23.0	[18.1–28.7]	India
22.0	[14.7–30.4]	20.7	[14–28.8]	21.3	[16.1–26.7]	Indonesia
21.2	[14.3–29.2]	19.6	[13.1–27.1]	20.4	[15.3–25.5]	Iran (Islamic Republic of)
22.1	[14.2–31.5]	21.4	[13.6–30.1]	21.8	[16–28]	Iraq
23.6	[15.5–33.1]	18.2	[11.7–25.8]	20.9	[15.4–26.5]	Ireland
22.7	[14–32.3]	16.8	[10.2–24.3]	19.7	[13.6–25.6]	Israel
29.5	[20.3–39]	25.8	[18.1–33.8]	27.6	[21.8–33.9]	Italy
24.0	[14.9–34.8]	20.2	[12.6–29.6]	22.1	[15.6–28.5]	Jamaica
28.3	[20.5–37.3]	23.1	[16.6–30.3]	25.7	[20.5–31.1]	Japan
21.5	[13.5–30.5]	16.9	[10.5–24.5]	19.3	[13.9–25]	Jordan
28.2	[17.7–40.3]	24.9	[15.7–35.2]	26.5	[19.4–34.6]	Kazakhstan
22.3	[14.4–31.9]	19.9	[12.7–28.6]	21.1	[15.4–26.7]	Kenya
21.9	[13.4–32.4]	19.7	[11.9–29.6]	20.8	[14.1–27.5]	Kiribati
23.1	[14.4–33.6]	15.0	[8.5–23.4]	19.9	[14–26.6]	Kuwait
24.3	[15.5–34.6]	23.3	[15.3–32.7]	23.8	[16.9–30.6]	Kyrgyzstan
18.7	[11.8–26.7]	18.8	[12.5–26.5]	18.8	[13.5–24.1]	Lao People's Democratic Republic
39.9	[27.3–53]	34.7	[23.1–47.7]	37.1	[28.2–45.6]	Latvia
25.2	[16.4–35.5]	18.9	[12.3–27]	22.1	[16.1–28.3]	Lebanon
20.5	[13–29.4]	25.1	[16.9–34.7]	22.8	[16.6–28.7]	Lesotho



## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Liberia	AFR	31.5	[20.7–43.1]	31.4	[21.3–42.6]	31.5	[23.8–38.9]
Libya	EMR	27.0	[18.4–37.3]	24.0	[16.3–33]	25.5	[19.4–31.7]
Lithuania	EUR	35.2	[24–47.6]	24.3	[14.9–35.7]	29.3	[21.2–36.5]
Luxembourg	EUR	27.2	[18.3–37.2]	15.2	[9.2–22.9]	21.2	[15.6–27]
Madagascar	AFR	30.0	[20.2–40.8]	29.6	[20.1–40.1]	29.8	[22.6–37.3]
Malawi	AFR	29.1	[19.3–40.7]	30.1	[20.6–40.6]	29.6	[22.6–36.5]
Malaysia	WPR	24.5	[16.4–34.1]	19.8	[13.1–27.9]	22.1	[16.4–27.8]
Maldives	SEAR	23.0	[13.7–34.4]	20.1	[12–29.9]	21.6	[14.4–28.6]
Mali	AFR	33.2	[22.4–44.5]	34.0	[23.9–45]	33.6	[26–41.1]
Malta	EUR	24.5	[15.4–35.1]	15.2	[8.5–23.2]	19.8	[13.7–26.1]
Marshall Islands	WPR	24.6	[15.5–36.2]	20.9	[12.6–31.1]	22.8	[15.5–29.6]
Mauritania	AFR	35.0	[23.8–47.4]	32.8	[22.3–44.1]	33.9	[25.7–41.9]
Mauritius	AFR	27.4	[17.7–38.9]	23.1	[14.5–33.5]	25.2	[18.2–32.6]
Mexico	AMR	23.7	[16.2–32.2]	18.5	[12.4–25.9]	21.0	[15.3–26.3]
Micronesia (Federated States of)	WPR	24.2	[15.9–34.4]	23.0	[15.4–32.1]	23.6	[17.4–30]
Monaco	EUR	...	...	...	...	...	...
Mongolia	WPR	34.3	[23.7–45.9]	28.0	[18.9–38]	31.1	[23.4–38.2]
Montenegro	EUR	32.8	[22.1–43.9]	23.1	[14.3–33.6]	27.9	[19.8–34.8]
Morocco	EMR	27.7	[18.4–38.7]	28.0	[19–38.4]	27.8	[20.7–34.7]
Mozambique	AFR	30.3	[20.3–41.8]	31.0	[21.5–41.9]	30.7	[23.1–38.3]
Myanmar	SEAR	23.6	[14.8–33.8]	23.9	[15.4–33.8]	23.7	[17.7–30.4]
Namibia	AFR	30.0	[19.8–41.7]	29.9	[20.2–40.6]	30.0	[22.5–37.1]
Nauru	WPR	25.9	[14.2–40.8]	21.1	[11.3–34.4]	23.6	[15.4–32.5]
Nepal	SEAR	25.9	[17.2–36.6]	27.1	[18.3–37.2]	26.6	[19.1–33.3]
Netherlands	EUR	22.4	[15.1–31.1]	13.8	[8.6–20.2]	18.1	[13.2–23.1]
New Zealand	WPR	19.1	[13–26.7]	13.1	[8.6–18.9]	16.1	[11.9–20.1]
Nicaragua	AMR	24.2	[14.9–34.9]	22.5	[14.2–32.1]	23.4	[16.8–30.2]
Niger	AFR	33.1	[22.3–44.8]	35.9	[25.8–46.9]	34.5	[26.9–42.2]
Nigeria	AFR	28.1	[19.4–38.2]	27.5	[18.9–37.1]	27.8	[20.7–34.7]
Niue	WPR	24.6	[16.3–35.1]	22.2	[14.6–31.8]	23.5	[17–29.3]
Norway	EUR	23.2	[15.3–32.3]	13.7	[8.1–20.2]	18.4	[13.5–23.7]
Oman	EMR	27.0	[18.1–37.1]	24.7	[16.2–34.4]	26.2	[19.5–33.5]
Pakistan	EMR	28.9	[19.5–39.3]	26.8	[18.1–36.8]	27.9	[21.5–34.7]
Palau	WPR	26.5	[17–38.8]	22.1	[13.8–32.5]	24.3	[16.3–31.1]
Panama	AMR	23.7	[14.9–33.7]	18.6	[11.4–27.1]	21.1	[15.2–27]
Papua New Guinea	WPR	23.2	[13.1–35.2]	24.2	[14.4–35.8]	23.7	[16–31.1]
Paraguay	AMR	25.9	[16.1–37.1]	20.8	[12.8–30.6]	23.4	[16.6–30]
Peru	AMR	16.4	[10.2–24]	12.5	[7.6–18.3]	14.5	[10.1–18.9]
Philippines	WPR	23.5	[15.2–33.3]	20.7	[13.4–29.5]	22.1	[16.2–28.2]
Poland	EUR	33.4	[23.9–44.6]	23.1	[14.6–32.7]	28.1	[21.3–34.9]
Portugal	EUR	26.6	[17.5–36.6]	18.0	[10.9–26.1]	22.1	[16.2–27.8]
Qatar	EMR	27.0	[17.2–38.1]	22.1	[14–31.8]	25.9	[17.9–34.3]
Republic of Korea	WPR	13.2	[8.1–19.6]	8.4	[5.1–12.6]	10.8	[7.5–14]
Republic of Moldova	EUR	33.9	[22.8–45.7]	28.2	[18.5–39.5]	30.9	[22.9–38.9]
Romania	EUR	31.8	[21.3–43.4]	23.2	[14.2–33.5]	27.4	[19.9–34.8]
Russian Federation	EUR	33.5	[23–44.9]	24.5	[15.4–35.5]	28.7	[21.2–35.9]
Rwanda	AFR	28.3	[17.4–40.8]	29.7	[19–41.4]	29.0	[21.1–36.7]
Saint Kitts and Nevis	AMR	26.1	[15.6–38.6]	21.6	[12.6–32.4]	23.9	[16.4–31.3]
Saint Lucia	AMR	26.5	[15.7–39.3]	21.8	[12.7–33.1]	24.2	[17–32.1]
Saint Vincent and the Grenadines	AMR	25.2	[15.6–36.6]	20.6	[12.6–30.8]	22.9	[16.2–29.7]

Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
25.6	[16.3–36.2]	24.6	[15.8–34.8]	25.1	[18.3–32]	Liberia
23.9	[16–33.6]	20.0	[13.1–28.3]	21.9	[15.9–28.1]	Libya
37.4	[25.7–50.1]	32.4	[21.4–44.6]	34.7	[26.9–43.4]	Lithuania
30.8	[20.8–41.6]	20.2	[12.8–29.1]	25.5	[19.2–32.9]	Luxembourg
24.1	[15.7–34]	22.5	[14.5–32.1]	23.3	[17.5–29.7]	Madagascar
22.5	[14.4–32.5]	22.5	[14.8–31.6]	22.5	[16.6–28.4]	Malawi
22.4	[14.8–31.5]	16.9	[10.9–24.5]	19.6	[14.3–25]	Malaysia
19.5	[11.5–29.7]	15.2	[8.6–23.6]	17.4	[12.1–24.2]	Maldives
25.8	[16.6–36]	25.9	[17.3–36.1]	25.9	[19.1–32.2]	Mali
29.1	[18.8–40.6]	21.6	[12.9–31.4]	25.4	[18.6–32.8]	Malta
23.5	[14.6–34.9]	20.0	[11.9–30]	21.8	[15.2–29.3]	Marshall Islands
28.9	[19–40.6]	26.3	[17.1–37.1]	27.6	[20.2–34.8]	Mauritania
28.4	[18.2–40.2]	25.8	[16.4–36.9]	27.1	[19.2–34.8]	Mauritius
21.8	[14.7–30]	17.6	[11.6–24.7]	19.6	[14.2–24.7]	Mexico
20.0	[13–28.7]	19.1	[12.6–26.9]	19.5	[14.2–24.6]	Micronesia (Federated States of)
...	...	...	...	...	...	Monaco
29.3	[19.4–40.4]	23.5	[15.1–33.1]	26.4	[19.8–33.1]	Mongolia
36.2	[24.8–47.9]	29.2	[18.9–40.6]	32.6	[25–40.4]	Montenegro
25.0	[16.3–35.6]	25.5	[16.9–35.7]	25.3	[18.5–31.8]	Morocco
24.1	[15.6–34.1]	24.6	[16.4–34.5]	24.3	[18.4–30.7]	Mozambique
21.2	[13.1–31]	21.8	[13.7–31.4]	21.5	[15.4–27.8]	Myanmar
23.9	[15.2–34.3]	23.7	[15.3–33.5]	23.8	[16.9–30]	Namibia
24.8	[13.4–39.5]	20.2	[10.6–33.4]	22.6	[14.1–31.4]	Nauru
23.7	[15.5–33.9]	22.8	[15–32.2]	23.3	[17–29.4]	Nepal
27.4	[18.7–37.3]	20.5	[13.5–28.7]	23.9	[18.1–30.1]	Netherlands
22.2	[15.2–30.5]	17.6	[11.9–24.4]	19.8	[15.2–25]	New Zealand
20.4	[12.4–29.9]	18.3	[11.2–26.7]	19.4	[13.8–25.1]	Nicaragua
28.2	[18.4–39.4]	27.8	[18.9–38.1]	28.0	[20.5–35.1]	Niger
22.5	[15.1–31.5]	20.7	[13.4–29.3]	21.6	[16.2–27]	Nigeria
23.3	[15.2–33.6]	21.5	[14–30.9]	22.4	[15.9–28.8]	Niue
27.2	[18.2–37.2]	19.5	[12.4–27.5]	23.3	[17.5–29.6]	Norway
17.6	[11.4–24.8]	16.5	[10.2–24.2]	17.2	[12.4–22.1]	Oman
24.6	[16.2–34]	21.3	[13.8–30.2]	23.0	[16.6–28.6]	Pakistan
25.4	[16.1–37.5]	21.1	[12.9–31.5]	23.3	[16.6–30.5]	Palau
22.7	[14.2–32.5]	18.2	[11.3–26.6]	20.5	[15–26.5]	Panama
18.5	[10.1–29.2]	18.9	[10.5–29.4]	18.7	[11.9–26]	Papua New Guinea
23.1	[14.2–33.3]	17.9	[10.8–26.7]	20.5	[14.3–26.9]	Paraguay
14.9	[9.1–22]	11.5	[7–16.9]	13.2	[9.1–17.5]	Peru
19.8	[12.4–28.7]	17.4	[10.9–25.4]	18.6	[13.3–24]	Philippines
36.8	[26.7–48.2]	30.4	[20.6–41]	33.5	[26.1–40.5]	Poland
31.8	[21.4–42.9]	26.3	[17.2–36]	29.0	[22.1–35.5]	Portugal
19.5	[11.5–29.2]	13.6	[7.6–21.6]	18.1	[11.8–24.6]	Qatar
14.4	[8.8–21.4]	11.3	[7–16.4]	12.8	[8.7–16.6]	Republic of Korea
35.3	[24–47.3]	33.3	[22.8–45.1]	34.3	[26.3–42.2]	Republic of Moldova
35.1	[24–47.3]	30.1	[19.6–41.5]	32.5	[24.8–40]	Romania
35.2	[24.4–47]	31.7	[21.2–43.7]	33.3	[25–41.8]	Russian Federation
21.8	[12.9–32.7]	21.4	[12.8–31.7]	21.6	[14.9–28.3]	Rwanda
26.3	[15.7–38.9]	23.0	[13.6–34]	24.6	[16.9–32.3]	Saint Kitts and Nevis
26.4	[15.6–39.2]	22.6	[13.3–34.1]	24.5	[16.9–32.2]	Saint Lucia
24.4	[14.9–35.6]	20.2	[12.4–30.3]	22.3	[15.3–28.9]	Saint Vincent and the Grenadines

## Global status report on NCDs 2014

... Indicates no data were available

Country name	Region	Raised blood pressure (SBP $\geq$ 140 and/or DBP $\geq$ 90) Crude adjusted estimates					
		Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]
Samoa	WPR	23.7	[14.7–34.5]	20.6	[12.9–30.1]	22.2	[15.9–28.6]
San Marino	EUR	...	...	...	...	...	...
Sao Tome and Principe	AFR	30.8	[21.1–42.1]	28.1	[19.4–38.3]	29.5	[22.2–37.1]
Saudi Arabia	EMR	28.0	[19–38.5]	24.6	[16.5–33.9]	26.6	[19.9–33.5]
Senegal	AFR	31.7	[21.7–43]	31.3	[22–41.8]	31.5	[24.1–38.6]
Serbia	EUR	33.2	[23.5–43.6]	24.9	[15.9–35.7]	29.0	[21.9–35.6]
Seychelles	AFR	27.7	[17.5–39.1]	20.5	[12.4–30.4]	24.1	[17–31]
Sierra Leone	AFR	31.7	[22–42.9]	32.4	[23.2–42.5]	32.1	[25.3–38.8]
Singapore	WPR	17.2	[11.3–24.3]	11.1	[7–16.4]	14.1	[10–17.9]
Slovakia	EUR	32.5	[22.2–43.5]	22.4	[14–32]	27.3	[20.4–34.4]
Slovenia	EUR	33.0	[21.6–45.2]	23.0	[13.6–34.4]	28.0	[20.1–35.4]
Solomon Islands	WPR	22.9	[14.5–33.3]	25.7	[17.1–36]	24.3	[17.9–30.7]
Somalia	EMR	34.6	[22.1–47.8]	32.4	[20.7–44.4]	33.5	[24.9–42.3]
South Africa	AFR	29.3	[20.8–38.4]	27.1	[19.3–35.9]	28.2	[22.2–33.8]
South Sudan	AFR	31.9	[21.5–43.2]	29.3	[19.9–39.9]	30.6	[23.4–38.4]
Spain	EUR	23.0	[15.4–31.4]	15.0	[9.3–21.5]	19.0	[14.2–23.7]
Sri Lanka	SEAR	21.6	[12.8–32.4]	20.8	[12.7–30.7]	21.2	[14.4–27.9]
Sudan	EMR	31.9	[21.5–43.2]	29.3	[19.9–39.9]	30.6	[23.4–38.4]
Suriname	AMR	25.2	[15.5–36.3]	21.0	[12.8–30.9]	23.1	[15.9–29.7]
Swaziland	AFR	28.1	[17.7–40.4]	29.7	[19.3–41.4]	28.9	[21–37]
Sweden	EUR	24.4	[16.7–33.4]	14.5	[9–20.9]	19.4	[14.2–24.4]
Switzerland	EUR	22.2	[14.6–31.1]	13.6	[8.4–19.8]	17.8	[12.8–22.2]
Syrian Arab Republic	EMR	26.3	[17.5–36.2]	25.3	[16.9–34.6]	25.8	[19.1–32.3]
Tajikistan	EUR	27.3	[16.7–39.5]	27.1	[17.1–38.2]	27.2	[19.7–35.6]
Thailand	SEAR	22.9	[14.7–32.3]	19.9	[12.8–28.1]	21.3	[15.8–26.9]
the former Yugoslav Republic of Macedonia	EUR	31.0	[20.6–42.6]	23.5	[14.5–34]	27.3	[19.1–34.7]
Timor–Leste	SEAR	26.0	[16.5–36.8]	27.4	[18–37.9]	26.7	[19.8–33.6]
Togo	AFR	31.4	[21.5–42.3]	31.7	[22.3–41.6]	31.6	[24.6–39]
Tonga	WPR	23.4	[15–34]	21.4	[13.8–30.9]	22.4	[15.9–28.7]
Trinidad and Tobago	AMR	24.7	[12.2–40.4]	21.2	[10.3–35.1]	22.9	[13.4–32.1]
Tunisia	EMR	25.5	[17.2–34.8]	24.6	[16.6–33.7]	25.0	[18.9–30.8]
Turkey	EUR	23.0	[16.1–31.2]	22.9	[15.8–30.6]	23.0	[17.8–28.1]
Turkmenistan	EUR	28.0	[18.6–39]	25.4	[17.1–34.9]	26.7	[19.7–33.6]
Tuvalu	WPR	24.9	[16–35.8]	22.1	[14.1–32.2]	23.5	[16.8–30.4]
Uganda	AFR	28.4	[17.4–41.3]	28.4	[18.1–40.4]	28.4	[19.6–36.7]
Ukraine	EUR	33.4	[22.4–46]	25.2	[15.8–36.5]	29.0	[21.5–37.3]
United Arab Emirates	EMR	25.5	[16.3–36.1]	21.5	[13.5–31.2]	24.3	[17.2–32]
United Kingdom	EUR	18.0	[12.5–23.8]	12.5	[8.8–16.9]	15.2	[11.9–18.6]
United Republic of Tanzania	AFR	28.8	[20.3–38.5]	28.9	[20.5–37.9]	28.9	[22.8–35.3]
United States of America	AMR	15.9	[10.3–22.4]	11.1	[7.2–15.9]	13.4	[10–17.1]
Uruguay	AMR	25.9	[16–37.5]	18.2	[10.8–27.6]	21.9	[15.2–28.7]
Uzbekistan	EUR	26.8	[17–38.4]	25.5	[16.5–36]	26.1	[18.7–33.2]
Vanuatu	WPR	25.0	[16–35.9]	24.7	[16.2–34.8]	24.8	[18.2–31.9]
Venezuela (Bolivarian Republic of)	AMR	23.7	[15.4–33.3]	17.8	[11.2–25.7]	20.8	[14.9–26.3]
Viet Nam	WPR	23.4	[15.2–32.9]	21.1	[13.7–29.7]	22.2	[16.3–28.3]
Yemen	EMR	30.3	[19.6–42.2]	32.6	[22.1–43.8]	31.4	[23.4–39.6]
Zambia	AFR	30.0	[20.6–41.2]	28.1	[19.2–38.5]	29.1	[21.9–36]
Zimbabwe	AFR	28.8	[17.3–41.8]	31.6	[19.8–45]	30.2	[21.1–38.2]

Raised blood pressure (SBP≥140 and/or DBP≥90) Age-standardized adjusted estimates						Country name
Males	[95% CI]	Females	[95% CI]	Both sexes	[95% CI]	
21.3	[13–31.5]	19.2	[12–28.2]	20.3	[14.1–26.2]	Samoa
...	...	...	...	...	...	San Marino
24.1	[16–33.9]	21.3	[13.9–30.4]	22.7	[16.5–28.2]	Sao Tome and Principe
23.8	[15.4–33.8]	19.1	[12.1–27.5]	21.8	[15.3–28.2]	Saudi Arabia
24.6	[16.2–34.7]	23.7	[15.9–33.3]	24.2	[18.1–30.6]	Senegal
37.1	[26.7–47.9]	32.0	[21.5–43.7]	34.5	[26.3–41.9]	Serbia
26.1	[16.2–37.6]	20.7	[12.6–30.8]	23.5	[16.1–30.9]	Seychelles
25.3	[16.9–35.4]	24.4	[16.4–33.8]	24.9	[18–30.8]	Sierra Leone
18.8	[12.3–26.5]	13.2	[8.4–19.3]	16.0	[11.5–20]	Singapore
35.0	[24.2–46.4]	28.4	[18.7–39]	31.6	[23.9–38.8]	Slovakia
38.4	[25.9–51.6]	32.2	[20.7–45.3]	35.3	[26.8–43.7]	Slovenia
18.7	[11.5–27.9]	19.4	[12.1–28.3]	19.0	[13.5–24.7]	Solomon Islands
27.9	[17.1–40]	24.9	[15.2–36]	26.4	[18.8–33.7]	Somalia
25.2	[17.6–33.6]	25.2	[17.9–33.5]	25.2	[19.5–30.8]	South Africa
26.1	[17–36.5]	22.7	[14.6–32.1]	24.4	[17.8–30.9]	South Sudan
27.4	[18.6–36.6]	22.2	[14.8–30.2]	24.8	[18.7–30.4]	Spain
22.1	[13.1–33.1]	22.6	[14–33.1]	22.4	[15.5–29.6]	Sri Lanka
26.1	[17–36.5]	22.7	[14.6–32.1]	24.4	[17.8–30.9]	Sudan
23.9	[14.4–35]	20.8	[12.7–30.7]	22.3	[15.7–29.3]	Suriname
21.0	[12.8–31.5]	22.0	[13.8–32.1]	21.5	[14.9–28]	Swaziland
29.7	[20.9–39.7]	22.1	[14.8–29.9]	25.9	[20–31.7]	Sweden
26.6	[17.8–36.6]	19.9	[13–27.7]	23.2	[17.2–29.2]	Switzerland
22.2	[14.5–31.2]	20.4	[13.2–28.9]	21.3	[15.6–27]	Syrian Arab Republic
22.0	[13–32.8]	21.0	[12.5–30.9]	21.5	[15–28.3]	Tajikistan
24.4	[15.7–34.5]	22.9	[14.9–32.2]	23.6	[16.8–29.5]	Thailand
33.6	[22.7–45.5]	28.3	[18.2–39.7]	31.0	[23.4–39]	the former Yugoslav Republic of Macedonia
20.5	[12.6–29.8]	21.0	[13.5–29.9]	20.8	[14.8–26.6]	Timor–Leste
24.6	[16.3–34.5]	24.0	[15.9–33]	24.3	[18.1–30.5]	Togo
20.7	[13–30.6]	20.0	[13–28.9]	20.4	[14.3–26.2]	Tonga
25.3	[12.5–41.4]	23.3	[11.4–37.9]	24.3	[14.4–33.6]	Trinidad and Tobago
24.7	[16.5–33.7]	24.1	[16.2–33.3]	24.4	[18.6–30.7]	Tunisia
21.8	[15.1–29.6]	23.0	[15.9–30.7]	22.4	[17.5–27.9]	Turkey
23.7	[15.2–33.9]	21.7	[14.2–30.6]	22.7	[16.2–29]	Turkmenistan
23.5	[15–34.3]	21.4	[13.5–31.4]	22.5	[15.7–29.2]	Tuvalu
21.5	[12.6–32.6]	19.5	[11.5–29.8]	20.5	[13.4–27.2]	Uganda
35.9	[24.4–48.7]	33.4	[22.4–45.9]	34.6	[26.4–43]	Ukraine
16.7	[9.8–25]	10.3	[5.3–17.4]	14.7	[9.1–20.4]	United Arab Emirates
21.8	[15.5–28.3]	18.9	[13.9–24.4]	20.3	[16.5–24.5]	United Kingdom
22.9	[15.6–31.4]	21.8	[14.9–29.6]	22.3	[16.8–27.5]	United Republic of Tanzania
18.5	[12.1–25.8]	15.6	[10.6–21.5]	17.0	[13.2–21.3]	United States of America
27.9	[17.6–40]	23.8	[15.2–34.2]	25.8	[18.3–33.3]	Uruguay
22.6	[14–33.3]	21.5	[13.5–31.3]	22.1	[15–28.4]	Uzbekistan
21.3	[13.4–31.3]	19.8	[12.5–28.9]	20.5	[14.5–26.4]	Vanuatu
22.1	[14.2–31.3]	16.6	[10.4–24.2]	19.4	[13.9–24.9]	Venezuela (Bolivarian Republic of)
21.2	[13.5–30.3]	20.7	[13.4–29.2]	21.0	[15.3–26.8]	Viet Nam
23.0	[14.4–33.3]	23.5	[15–33.1]	23.3	[17–29.6]	Yemen
22.9	[15.2–32.6]	19.4	[12.4–28]	21.1	[15.2–26.7]	Zambia
21.5	[12.6–32.2]	22.7	[13.7–33.7]	22.1	[15.5–28.5]	Zimbabwe





# Index

## A

- .....
- accountability with national multisectoral action plans 117, 126-127, 130
- acetylsalicylic acid (aspirin) xiii, 18, 101, 105
- action plans, NCD *see* Global NCD Action Plan; national multisectoral action plans
- actions required to attain targets
  - alcohol 29-30
  - diabetes 90-91
  - in Global NCD Action Plan, national multisectoral NCD action plans and 113-115, 117- 119
  - heart attack and stroke 98-101
  - hypertension 73-74
  - obesity 90-91
  - physical activity improvement 39-42
  - salt/sodium intake 48-49
  - tobacco 61-63
- acute conditions, availability of medicines 106-107
- adolescents and young people
  - alcohol 28
  - obesity and overweight 85-88
  - physical inactivity 34-38, 39
  - tobacco 58
- advertising
  - alcohol 18,22, 29
  - tobacco xi, 18, 55, 58, 59, 60, 128
- affordability *see* prices
- Africa (African Region)
  - progress in 128
  - tobacco control 60
- age
  - blood pressure elevation and 67, 68,69
  - death rates and 10-11
  - diabetes/raised blood glucose 84, 85
  - heavy drinking and 28
  - obesity/overweight and 79, 80, 84, 85
  - physical inactivity and 33-39
  - salt/sodium intake and 46
  - tobacco use and 53-57
- alcohol x, 23-30
  - actions required to achieve targets 29-30
  - cost-effective interventions *see* cost-effectiveness
  - heavy episodic drinking x, 26, 27, 28
  - impact on health 25-27
  - monitoring harmful use 28
  - progress achieved 29
  - taxation 16, 18, 30

## Americas

- progress in 128
- salt reduction 45-46
- angiotensin-converting enzyme inhibitor xiii, 96, 97, 101, 105
- antihypertensive drugs/medication 96
- Argentina, salt/sodium intake 46, 48
- aspirin xiii, 18, 101, 105
- asthma xiii, 9, 105, 106
- atenolol 106
- audit 101
- Australia
  - alcohol labelling/packaging/marketing 30
  - tobacco packaging 59

## B

- .....
- Bahrain
  - health system strengthening 98, 99
  - salt/sodium intake 48
- behavioural risk factors 118, 119
  - hypertension 68, 72, 74, 101
- best buys (WHO) 18, 28, 58, 120, 125
  - tobacco xi, 18, 54, 58, 59, 61
- beta-blockers xiii, 96, 97, 101, 105
- Bhutan, hypertension 74,
- bicycle hire, Iran 41
- blood glucose/sugar *see* glucose
- blood pressure, raised *see* hypertension
- body mass index (BMI) 79, 80,81, 82
  - children and adolescents 88
- Brazil
  - Curitiba walkability areas 40
  - primary care access, expansion 100
  - school food policy 89
- burden of NCD, reducing ix

## C

- .....
- calcium channel blocker xiii, 101, 105
- Canada, alcohol and fiscal interventions 30
- cancer
  - alcohol and 23
  - cervical 14, 18
  - liver 11, 14, 26
  - medicines 105
  - mortalities x, 9, 10, 14, 17



captopril 106  
cardiovascular disease (incl. ischaemic heart disease)  
  medicines used in treatment and prevention of 106  
  mortalities/deaths ix, x, xi, 2, 9, 10, 23, 45, 94, 95  
  salt and xi, 45, 46  
  risk 67, 72, 95, 96, 97, 98  
    investment in programmes relating to 74  
  *see also* heart attacks; stroke  
cause of death  
  global NCD deaths before age 70 years (2012) 10  
  in registration systems 14, 15, 17  
  tobacco as largest preventable 53  
cerebrovascular disease *see* stroke  
cervical cancer 14, 18  
children  
  food and beverage marketing 89, 91  
  marketing of food/beverages 89, 91  
  overweight and obesity xii, 81, 84, 85, 88, 89  
  physical inactivity 32, 34, 38  
  salt/sodium intake 47  
    Pacific islands and Kiribati 47  
  tobacco  
    secondhand smoke exposure 53  
    use xi, 53  
  *see also* adolescents; school-based interventions  
cholesterol measurement xiii, 97, 101, 105  
chronic conditions, availability of medicines 107  
civil registration systems 14-15, 118  
collaboration  
  intersectoral xiv, 49, 126  
  multisectoral ix, xiv, 1, 3, 49, 126  
commitment and willpower  
  eating outlets, salt reduction 48  
  political/state/government xiv, 1, 30, 62, 125, 130  
  high-level/head of state ix, 17  
  move to action from, by prioritizing high impact affordable interventions xiv, 125  
  primary care for heart attack and stroke prevention in Pacific islands 99  
  tobacco 61, 62  
  public, smoking cessation 61, 62  
community interventions, obesity and diabetes 89  
consultations with stakeholders (in national action plans) 115, 116  
cost (economic) ix  
  *see also* prices  
cost-effectiveness (of policies and interventions) 18-19, 120, 123  
  actions required to attain targets 90, 91  
  alcohol x, 28, 29, 30  
  cost and expenditure on cost-effective interventions 19  
  diabetes 88, 89  
  heart attack and stroke 95-97  
  hypertension 69, 72

  medicines and technologies 105, 109-110  
  obesity 88-89  
  physical inactivity 38  
  primary care, technologies and essential medicines and xiii  
  tobacco 54-55, 58  
  *see also* best buys  
Costa Rica, mobile phones and tobacco cessation 61  
counselling, stroke and heart attack prevention xii-xiii, 8, 95-97  
Curitiba (Brazil), walkability areas 40  
cycle hire, Iran 41

## D

.....  
deaths (mortalities)  
  alcohol-related 23, 28  
  cancer x, 8, 9, 10, 11, 14, 17, 18  
  cardiovascular disease *see* cardiovascular disease  
  cause *see* cause of death  
  diabetes x, 8-11, 18  
  premature ix x, 8, 10, 17, 18  
    leading worldwide causes 94-95  
    monitoring 10-14  
  probability from 30 to 70 11, 12, 13  
  registration systems *see* registration systems  
  respiratory diseases (chronic) x, 8, 9, 10, 11  
  25×25 reduction target achievement/attainment  
    actions required 17  
    risk factors contributing to 17-18, 126  
developed countries *see* high-income countries  
diabetes xii, 79, 84-91, 101  
  actions required to attain targets 90-91  
  cost-effective policies and interventions 88, 89, 90  
  drug therapy 18  
  impact on health 84  
  insulin xiii, 105, 107  
  integrated primary care programmes for hypertension and 74  
  monitoring rates of 84-85, 90  
  mortalities x, 8, 10, 11, 18  
  self-care promotion 75  
diet (and food and drinks/beverages)  
  healthy food 49, 90, 91  
  prices 88  
  salt *see* salt/sodium  
  unhealthy food  
    hypertension and xii  
    taxation 88, 89, 128  
  *see also* Global strategy on diet, physical activity and health  
drink-driving measures 30  
driving and alcohol 30  
drugs (medications) 95-103

diabetes/glycaemic control 18  
 essential xiii, 105-111  
 generic xiii, 107, 109, 110  
 heart attack prevention xii-xiii, 95-103  
 smoking cessation 58  
 stroke prevention xii-xiii, 95-103  
*see also* specific (types of) drugs

## E

Eastern Mediterranean Region, progress in 128  
 economic dimensions *see* cost; cost-effectiveness; fiscal interventions; funding; income level; investment; prices  
 endgame approach to reduce tobacco consumption 60, 61  
 environment and physical inactivity 38  
 European countries (and European Region)  
   heart attack and stroke prevention 98  
   progress in 128  
 evidence-based content of national multisectoral action plans 115  
 exercise *see* physical activity

## F

females (women)  
   diabetes/raised blood glucose 85  
   hypertension 68  
   obesity 79, 80  
   physical inactivity 34-38  
     Tonga 40  
 Fiji, unhealthy food policies 89, 129  
 Finland  
   obesity 90  
   salt intake 47  
   tobacco 60  
 fiscal interventions 16  
   alcohol 29, 30  
   food 91  
     salt/sodium 49  
   *see also* taxation  
 food *see* diet  
 Framework Convention on Tobacco Control (WHO FCTC) xi-xii, 52, 54, 55, 56, 60, 61, 128  
 Freiburg (Germany), sustainable transport 41  
 funding 15, 16

## G

gender *see* females; males  
 generic drugs xiii, 107, 109, 110  
 Germany  
   sustainable transport in Freiburg 41

Global NCD Action Plan (WHO 2013-2020) ix, xiv, 1-4  
   alcohol 28  
   commitments to building on guidance provided 4  
   heart attacks and stroke 98, 100  
   national multisectoral action plans to attain national targets and 113, 114, 115, 117, 118, 119  
   physical activity 39  
   status of implementation 124  
   tobacco 61  
 global NCD targets (general aspects)  
   in executive summary ix-xiii, 1-3  
   most countries off course to meet xiv, 124-125  
 Global strategy on diet, physical activity and health 39  
 glucose, blood (glycemia; blood sugar)  
   control (=glycaemic control) xii-xiii 18, 95, 97  
   raised 84, 85  
 glycaemia *see* glucose  
 governance, national multisectoral action plans 117  
   Eastern Mediterranean Region 128

## H

HAI/WHO survey methods 106, 107  
 Health Action International/WHO survey methods 106-107  
 health impact  
   alcohol 23-27  
   diabetes and raised blood glucose 84-88  
   hypertension 67-69  
   obesity 79-84  
   physical inactivity 33-38  
   salt/sodium intake 45-46  
   tobacco *see* tobacco  
   warning about *see* health warnings  
 health ministers *see* ministers of health  
 health policies *see* public health policies  
 health promotion  
   school-based dietary and physical inactivity interventions 90  
   self-care, in hypertension and diabetes 75  
   Tonga, physical activity 40  
   workplace wellness programmes 75  
 health systems  
   hypertension management 72  
   infrastructure status 15-16  
   investment xiv, 118, 126  
   monitoring quality of services 101  
   in national action plans 118-120  
   reorientation and addressing gaps 100-101  
   strengthening 99, 118  
     at all levels 17  
   surveillance and monitoring 118  
   universal coverage xiii, xiv, 99-100, 101, 118, 126,  
 health warnings  
   alcoholic drinks 30

tobacco products xi, xii, 18, 53-55, 58-61, 128-129

health workers/professionals 126-127

- alcohol and 22, 28
- hypertension and 74
- tobacco and 97

heart attacks (myocardial infarction) 95-103

- actions required to attain targets 98-101
- cost-effective policies and interventions 95-97
- drug therapy xii-xiii, 95-103
- progress achieved 97-98
- recurrent 96
- see also* cardiovascular disease

heart disease *see* cardiovascular disease

high impact affordable interventions 99, 100

- prioritizing xiv, 125
- in WHO best buys 18

high-income (and developed) countries x

- alcohol consumption 27
- cancer deaths 14
- cardiovascular disease 95
- diabetes 84
- heart attack and stroke prevention 97
- hypertension 72-73, 74
- overweight and obesity 81, 82
- physical activity/inactivity x-xi, 34, 39, 90
- risk factor targets 16
- tobacco use 54, 60

household surveys 109

human resources xv, 126-127

Hungary, unhealthy food policies 88

hypertension (raised blood pressure) xii, 67-77

- cost-effective policies and interventions 69
- drug therapy 18, 69, 72, 73, 96, 97, 107
- impact on health 67-68
- progress achieved 72-73, 73-74
- risk factors 69
- total risk approach xii, 18, 72-74, 96, 97

## I

.....

inclusiveness in national multisectoral action plans 114

income level and economic wealth countries, alcohol consumption 28

- see also* high-income countries; low-income countries; middle-income countries

individual interventions 18, 105, 125

- alcohol x
- heart attacks and strokes 98
- hypertension 69
- obesity and diabetes 88, 89-90

inequality

- in national action plans 118
- infrastructure of health systems, status 15-16

innovation 101

institutional resources xv, 126-127

insulin xiii, 105, 107

integrated programmes for hypertension and diabetes in primary care 74

Interagency Task Force (UN) xv, 3, 12, 127

International Society of Hypertension (ISH)/WHO cardiovascular risk prediction charts 96, 97

international stakeholders, medicines 110

intersectoral collaboration xiv, 49, 126

investment 41

- cardiovascular risk management 74
- health systems xiv, 120, 126

Iran, physical activity improvement 41

Ireland, tobacco 60

ischaemic heart disease *see* cardiovascular disease

ISH/WHO cardiovascular risk prediction charts 96, 97

## K

.....

Kampala, tobacco control 60

Kiribati, unhealthy foods and beverages 47

Korea (Republic of), salt/sodium intake 48

Kuwait, salt/sodium intake 48

## L

.....

labelling

- alcoholic drinks 30
- nutrition products 46, 48, , 49, 89, 128
- tobacco 53, 49, 60

law *see* regulation

liver cancer 11, 14, 26

losartan 106

low-income countries

- cardiovascular disease 95, 97
- cost effective interventions 18
- deaths 9, 10, 11-14, 95

  - cancer and chronic respiratory disease 10
  - premature x, 10, 95

- diabetes/raised blood glucose xii, 84
- funding and spending 15-16, 19
- heart attack and strokes xiii, 97, 100
- hypertension 74
- medicine availability 106
- national multisectoral NCD action plan implementation 120
- national target attainment 123
- overweight and obesity xii, 81
- physical activity/inactivity 34
- risk factor targets 16
- salt/sodium intake xi
- tobacco use 54
- universal health coverage 99

## M

- Madagascar, tobacco 58
- males (men)
  - diabetes/raised blood glucose 85
  - hypertension 67, 68
  - obesity 80, 81
  - physical inactivity 33, 37
- Mauritius, unhealthy food policies 89
- medications *see* drugs
- men *see* males
- Mexico, unhealthy food policies 89
- middle-income countries
  - alcohol consumption 27
  - cardiovascular disease 95, 97
  - cost effective interventions 30, 18
  - deaths 9, 10, 11-14, 95
    - cancer and chronic respiratory disease 10
    - premature x, 10, 95
  - diabetes xii, 84
  - heart attack and strokes xiii, 97, 100
  - hypertension 74
  - medicine availability 106
  - national multisectoral NCD action plan implementation 120
  - national targets
    - attaining 123
    - setting, for reducing premature mortality 10
  - overweight and obesity xii, 81
  - physical inactivity x-xi, 34, 39
  - risk factor targets 16
  - salt/sodium intake xi
  - spending in 15-16
  - tobacco use 54, 60
  - universal health coverage 99
  - Pacific Island countries, heart attack and stroke prevention 99
- mobile phones and tobacco cessation, Costa Rica 61
- Model List of Essential Medicines (WHO) WHO 106
- Mongolia
  - alcohol interventions 29
  - salt reduction 129
  - monitoring 118
  - alcohol harmful use 28
  - heart attack and stroke prevention 95-96
  - heart attack and stroke targets 97
  - hypertension prevalence 72
  - obesity and diabetes rates 84-88, 90
  - physical inactivity 38-39
  - premature mortality 10-13
  - progress achieved 47-48
  - quality of services 101
  - salt/sodium intake 46-47
  - technology and essential medicine affordability 107-109

- tobacco use 58
- mortalities *see* deaths
- motivation
  - political leaders and xiv
  - to reduce tobacco consumption 61
  - multisectoral action plans x, 126
  - national *see* national multisectoral action plans
- multisectoral collaboration ix, xiv, 17, 49, 62, 63, 91, 126
- multisectoral problem for whole government, tobacco as 62
- myocardial infarction *see* heart attacks

## N

- national multisectoral action plans xiii, 17, 19, 113-121
  - accountability 118, 125-126, 127, 130
  - governance 118
  - health care 118-119
  - implementation 119-120
  - key domains 117-118
  - key elements 114-115
  - key steps in development 115-116
  - prevention in 117-118
  - prioritization 115
  - progress by WHO regions 128-129
- national NCD targets 113-131
  - attaining xiv, 113-131
  - setting ix, xiv, xv, 17, 18, 19, 125, 126
  - factors to consider when 115, 116
  - salt/sodium intake xi, 48-49
- national surveillance systems x, 17, 124
- nifedipine 106

## O

- obesity and overweight xii, 79-91
  - actions required to attain targets 90-91
  - cost-effective policies and interventions 88-89
  - impact on health 79-84
  - monitoring rates of 84-88, 90
  - population-based policies and interventions xii, 88-90
- OneHealth Tool (UN) 120
- outcomes improved by investment in health systems xiv, 126
- overweight *see* obesity and overweight

## P

- Pacific islands
  - primary care for heart attack and stroke prevention 99
  - progress in 129
  - unhealthy foods and beverages 47
- package of essential NCD interventions (WHO PEN) 99, 129
- Palestine, health system strengthening 99
- partnership to promote female physical activity in Tonga 40

pharmaceutical industry 110  
Philippines, health system strengthening 98  
physical activity (exercise)  
  healthy diet and 89  
  lack (physical inactivity) x-xi, 33-43  
    actions required to attain targets 39-41  
    cost-effective interventions 38  
    monitoring 38-39  
    progress achieved 39  
political commitment *see* commitment  
Political Declaration (UN General Assembly 2011) ix, 1, 2, 3, 4 4, 113, 125  
population-based interventions  
  alcohol 28, 29-30  
  hypertension 69  
  in national action plans 118  
  obesity xii, 88-90  
  salt/sodium intake 46  
population intake of salt *see* salt  
prices (and affordability)  
  alcohol 29, 30  
  healthy food 88  
  medicines and technologies xiii, 105-111  
  tobacco 58, 59, 60  
primary care  
  audit 101  
  Brazil, expanding access 100  
  interventions  
    affordable technologies and essential medicines xiii, 105,107,108, 109  
    heart attack and stroke 98  
    hypertension and diabetes 74  
prioritization  
  high impact affordable interventions xiv, 125  
  national multisectoral action plans 115, 117  
private sector  
  affordable technologies and essential medicines xiii, 105-111  
  salt consumption and 48  
progress, achieving/making ix  
  alcohol 29  
  heart attack and stroke 97-98  
  hypertension 72-73  
  majority of countries off course for xiv, 125  
  physical inactivity 29  
  salt/sodium intake 47, 48  
  tobacco and smoking 58-61  
  in WHO regions since 2011 128-129  
promotion  
  health *see* health promotion  
  tobacco use xi-xii, 18, 55, 58-59, 128  
public commitment and willpower, smoking cessation 61, 62  
public health policies 17, 72-73, 118  
  diet 48

    salt/sodium intake 72  
    hypertension 74  
public places, smoking ban 128  
public sector, affordable technologies and essential medicines xiii, 105.111

## Q

.....  
Qatar, salt/sodium intake 48  
quality of services, monitoring 101

## R

.....  
registration systems 10-14, 17  
  civil 10-14, 118  
  vital 10-14  
regulation(s) (and law/legal measures/litigation) 17, 114, 115, 118, 119, 128  
  alcohol x, 18, 29  
  food 88, 89  
    and salt/sodium intake 46, 47, 48, 49  
  medicines 107, 108  
  tobacco 55, 59, 60, 62-63  
Republic of Korea, salt intake 48  
resources  
  adapting to limitations in 101  
  human xv, 126-127  
  institutional xv, 126-127  
respiratory diseases, chronic, mortalities x, 8, 9, 10, 11  
risk factors  
  behavioural *see* behavioural risk factors  
  contribution to achieving reduction in deaths 26-28, 127  
  hypertension 69, 73  
  in national action plans 118  
  WHO STEPwise approach to surveillance of NCD risk factors 86, 128, 129  
  *see also* cardiovascular disease; total risk approach  
Russian Federation, alcohol interventions 29

## S

.....  
salbutamol 106  
salt/sodium intake xi, 18, 45-59  
  actions required to achieve target 48-49  
  impact on health 45-46  
  monitoring of population intake 46  
  progress achieved 47-48, 128, 129  
SARA (Service Availability and Readiness Assessment) 107-109  
school-based interventions  
  diet 89, 90  
  physical inactivity 38, 90  
screening, cardiovascular risk 72, 101



- secondary prevention of heart attacks and stroke 96, 97
- self-care promotion in hypertension and diabetes 75
- Service Availability and Readiness Assessment (SARA) 109
- settings-based interventions, obesity and diabetes 89-91
- sexes *see* females; males
- situation analysis 98, 114, 116
- smoking *see* tobacco
- social marketing to promote female physical activity in Tonga 40
- sodium intake *see* salt/sodium intake
- South Africa
  - alcohol advertising ban 29
  - salt/sodium intake 48, 128
- South-East Asia Region, progress in 129
- sponsorship, tobacco industry xi-xii, 18, 55, 60, 128
- stakeholders 116, 118, 130
  - pharmaceuticals 110
- state commitment *see* commitment
- statins xiii, 96, 101
- STEPwise approach to surveillance of NCD risk factors 88, 128, 129
- strategic actions with national multisectoral action plans 117, 118, 119
- strategic planning 119
  - tobacco 60
- stroke (cerebrovascular disease) 95-103
  - actions required to attain targets 98-101
  - alcohol and 23
  - cost-effective policies and interventions 95
  - drug therapy in prevention of xii-xiii, 95-103
  - monitoring targets 97
  - progress achieved 97-98
  - recurrent 96
- surveillance systems, national x, 17, 88, 90, 119, 124
  - Eastern Mediterranean Region 128
  - see also* STEPwise approach to surveillance of NCD risk factors
- sustainability and sustainable development ix, xiii-xiv, 2, 124-125
  - transport 41
- ## T
- .....
- taxation
  - alcohol 16, 18, 30
  - food 16, 88, 128
  - medicines and tax exemption 110
  - physical activity and tax exemption 39
  - tobacco xi-xii, 16, 18, 55, 58, 59, 60, 61, 62
- technologies, available and affordable xiii, 105-111
- Thailand
  - salt/sodium intake 47
  - tobacco 59
- tobacco and smoking xi-xii, 18
  - actions required to attain targets 61-63
  - best buys (WHO) xi-xii, 18, 55, 58, 59, 60, 61, 62,
  - cost-effective policies and interventions 54-55
  - health impact 53-54
    - warnings about xi-xii, 18, 55, 58, 59, 60, 61, 62, 129-130
  - monitoring use 58
  - progress achieved 58-61
  - taxation xi-xii, 16, 18, 55, 58, 59, 60, 61, 62,
- Tonga, partnership and social marketing to promote female physical activity 40
- total risk approach
  - heart attack and stroke prevention in primary care 95-98, 100, 101
  - hypertension (and other cardiovascular risk factors) xii, 18, 72, 74, 96-97
- training 49, 127
  - health workers 17, 49, 74, 100, 110, 127
  - Philippines 99
- transport, sustainable 41
- Turkey, tobacco 58
- ## U
- .....
- Uganda, Kampala, tobacco control 60
- United Kingdom
  - alcohol 29
  - salt/sodium intake 48
  - tobacco 60
- United Nations (UN)
  - General Assembly Political Declaration (2011) ix, 1, 4, 113, 125
  - Interagency Task Force xv, 4, 128
  - OneHealth Tool 119,-120
- universal health coverage xiii, xv, 99-100, 101, 118, 126
- ## V
- .....
- vital registration systems 14-15
- ## W
- .....
- walkability areas, Curitiba (Brazil) 40
- wellness programmes, workplace 75
- Western Pacific Region, progress in 129
- WHO 127
  - accountability framework 130
  - Framework Convention on Tobacco Control (FCTC) xi, xii, 52, 54, 55, 56, 60, 61, 62, 128
  - Global strategy on diet, physical activity and health 39
  - Model List of Essential Medicines 106
  - Package of essential NCD interventions (PEN) 74, 99, 128, 129

## Global status report on NCDs 2014

role in prevention and control of NCDs 127

Service Availability and Readiness Assessment (SARA)  
109

STEPwise approach to surveillance of NCD risk factors  
88, 128, 129

WHO/Health Action International (HAI) survey methods  
106-107

WHO/ISH cardiovascular risk prediction charts 97

willpower see commitment and willpower

women see females

workplace

    dietary interventions 90

    physical inactivity interventions 38, 42

    wellness programmes 75

World Health Organization see WHO

## Y

.....

young people see adolescents and young people





A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases



At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context



A 10% relative reduction in prevalence of insufficient physical activity



A 30% relative reduction in mean population intake of salt/sodium



A 30% relative reduction in prevalence of current tobacco use



A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances



Halt the rise in diabetes and obesity



At least 50% of eligible people receive drug therapy and counseling (including glycaemic control) to prevent heart attacks and strokes

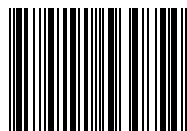


An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities



[www.who.int/ncd](http://www.who.int/ncd)

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