

# Frequently asked questions on noncommunicable diseases in the Eastern Mediterranean Region





# Frequently asked questions on noncommunicable diseases in the Eastern Mediterranean Region



## WHO Library Cataloguing in Publication Data

World Health Organization. Regional Office for the Eastern Mediterranean

Frequently asked questions on noncommunicable diseases

in the Eastern Mediterranean Region / World Health Organization. Regional Office for the Eastern Mediterranean

p.

WHO-EM/NCD/129/E

1. Chronic Disease - prevention & control - Eastern Mediterranean Region    2. Disease Management    3. Tobacco Use - prevention & control    4. Motor Activity    I. Title    II. Regional Office for the Eastern Mediterranean

(NLM Classification: WT 500)

© World Health Organization 2016

All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Publications of the World Health Organization can be obtained from Knowledge Sharing and Production, World Health Organization, Regional Office for the Eastern Mediterranean, PO Box 7608, Nasr City, Cairo 11371, Egypt (tel: +202 2670 2535, fax: +202 2670 2492; email: emrgoksp@who.int). Requests for permission to reproduce, in part or in whole, or to translate publications of WHO Regional Office for the Eastern Mediterranean – whether for sale or for noncommercial distribution – should be addressed to WHO Regional Office for the Eastern Mediterranean, at the above address: email: emrgogap@who.int.

Design, layout and printing by WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt



## Contents

Foreword.....	5
1. Burden of noncommunicable diseases.....	7
2. Regional framework for action for the prevention and control of noncommunicable diseases .....	9
3. Multisectoral action plan to prevent and control noncommunicable diseases .....	11
4. Role of legislation in preventing and controlling noncommunicable diseases .....	13
5. Reducing tobacco use to prevent and control noncommunicable diseases.....	15
6. Reducing salt/sodium consumption to prevent and control noncommunicable diseases .....	18
7. Reducing sugar consumption to prevent and control noncommunicable diseases.....	21
8. Reducing fat intake to prevent and control noncommunicable diseases.....	24
9. Preventing and controlling noncommunicable diseases through countering unopposed marketing of unhealthy foods.....	27
10. Promoting physical activity to prevent and control noncommunicable diseases .....	29
11. Importance of surveillance in preventing and controlling noncommunicable diseases .....	31
12. Management of noncommunicable diseases in primary health care .....	34
13. Prevention and control noncommunicable diseases in emergencies.....	37



# Foreword

Four main noncommunicable diseases – cardiovascular diseases, cancers, chronic respiratory diseases and diabetes – kill more than 1.7 million people in the Eastern Mediterranean Region every year. Future projections indicate that these diseases will cause as many as 2.4 million deaths a year by 2025. Over half of all deaths resulting from noncommunicable diseases are premature, occurring before the age of 70, and thus not only do they affect economically productive individuals but they impoverish families and place a huge burden on health systems and national economies. A major proportion of these premature deaths are preventable.

Member States continue to make progress in improving access to health care in general but evidence indicates that the magnitude of noncommunicable diseases and their devastating social, economic and public health impact is increasing in the Region. Countries will need to address this serious trend by scaling up implementation of the United Nations Political Declaration for Prevention and Control of Non-communicable Diseases, guided by the regional framework for action.

Since its endorsement by the WHO regional Committee in 2012, the framework has translated the recommendations of the United Nations declaration into action and represented a clear roadmap for countries. It lists strategic interventions that countries are expected to implement in the areas of: governance; prevention and reduction of risk factors; surveillance; and health care. It also includes a set of indicators – aligned with the 10 global progress indicators – which makes it easier for countries to monitor and report on progress in the short and long term.

Implementing the framework and reporting on progress are central to preventing and controlling noncommunicable diseases. While countries continue to make progress in the four areas of work within the framework they move closer to attaining the overarching target of reducing premature deaths from noncommunicable diseases by 25% by 2025. Countries must therefore continue to exert efforts for further progress to be realised.

This publication offers a response to some of the most frequently asked questions on noncommunicable diseases and the measures and interventions needed to prevent and control them. It provides information on the burden of disease and the importance of the regional framework for action, the need for effective multisectoral action, the role of legislation, and surveillance in prevention and control efforts. Other issues fundamental to the prevention and control of noncommunicable diseases in both stable and emergency settings are covered, including the rationale and approaches for reduction of salt, fat and sugar intake, tobacco control, promotion of physical activity, unopposed marketing of unhealthy foods, and hypertension, as well as improving coverage of treatment for common conditions and improving availability and affordability of technologies and essential medicines to manage them.

I hope the information covered will be useful to policy-makers as well as health professionals and other stakeholders, including civil society groups.

Dr Ala Alwan

WHO Regional Director for the Eastern Mediterranean



# 1. Burden of noncommunicable diseases

## Q: What are noncommunicable diseases?

Noncommunicable diseases, commonly known as chronic or lifestyle-related diseases, include heart diseases and stroke, cancers, chronic lung diseases and diabetes. These diseases are the world's biggest killers and a leading cause of death in the Region (1), causing 1.7 million deaths every year.

## Q: What is the impact of noncommunicable diseases?

Noncommunicable diseases represent a major burden to individuals, governments and societies. On the individual level, they cause premature death and severe disability among survivors. Noncommunicable diseases cut lives short, often claiming people at their most productive age. They can drive individuals into poverty due to their lack of productivity and the need to pay for medications and drugs for prolonged periods of time.

At a governmental level, noncommunicable diseases represent a huge burden that puts pressure on health systems and resources. They increase health care costs and out-of-pocket and catastrophic expenditure. This is especially challenging for low- and lower middle-income countries, which constitute more than half of the countries in the Region. Ultimately, they undermine economic progress and stifle growth for countries. On the societal level, they have detrimental socioeconomic consequences. In the Region, the impact is further amplified as a result of humanitarian and emergency crises (2).

## Q: What is the burden of noncommunicable diseases in the Region?

The burden is huge and continues to grow. In 2012, noncommunicable diseases claimed over 2.2 million lives in the Region and caused 57% of mortality. Four groups of diseases – cardiovascular disease, cancer, diabetes and chronic lung disease – were responsible for 80% of this mortality; 65% of deaths were linked to risk factors. 60% of people with chronic diseases die young, under the age of 70 (3).

**Heart diseases and stroke:** It is estimated that 48% of deaths from chronic diseases in the Region are due to heart diseases. Deaths attributed to heart diseases (of total deaths) are 28% (4).

**Cancers:** It is estimated that 16% of deaths from chronic diseases in the Region are due to cancer. Deaths attributed to cancer (of total deaths) are 9% (5).

**Chronic lung diseases:** It is estimated that 8% of deaths from chronic diseases in the Region are due to chronic lung disease. Deaths attributed to lung disease (of total deaths) are 4% (6).

**Diabetes:** It is estimated that 5% of deaths from chronic diseases in the Region are due to diabetes (7). Deaths attributed to diabetes (of total deaths) are 3% (8).

## Q: What is the projected estimate of the burden of noncommunicable diseases in the Region?

The burden of noncommunicable diseases is progressively increasing. Future projections indicate there will be an alarming increase in their prevalence with the four main noncommunicable diseases causing as many as 2.4 million deaths in 2025, unless serious action is taken (1).

## Q: What are the factors leading to the increased burden of noncommunicable diseases in the Region?

The four main chronic diseases are caused, to a large extent, by four common unhealthy behaviours, or risk factors – tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol. These unhealthy behaviours lead to

four key metabolic/biological changes that increase the risk of noncommunicable diseases: raised blood pressure, overweight/obesity, high blood glucose levels/diabetes, and high levels of fat in the blood (8).

In the Region, social, political, economic, environmental, epidemiological and behavioural factors also contribute to the rising trends of noncommunicable diseases and risk factors and are key barriers to prevention and control. They include:

- financial instability that further reduces investment in health and health systems;
- emergency and humanitarian crises;
- high and increasing prevalence of tobacco smoking;
- globalization that promotes diets rich in calories, salt and fat;
- rapid urbanization that contributes to physical inactivity;
- obesity resulting from changes in healthy eating habits and reduction in physical activity;
- poverty that affects affordability of healthy food and health care;
- economic growth and industrialization that increase the levels of atmospheric air pollution;
- high levels of indoor and outdoor air pollution;
- business interests that promote the sale of unhealthy food and drinks to children;
- poverty and illiteracy that deprive people of opportunities and means to protect their health;
- lack of social responsibility of certain commercial entities that deprive the poor of essential medicines and technologies;
- population ageing (3).

However, noncommunicable diseases are preventable if unhealthy behaviours are modified. They are detectable and also treatable.

## References

1. Noncommunicable diseases. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/entity/ncds/index.html>, accessed 27 June 2016).
2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en>, accessed 27 June 2016)
3. Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource setting. Geneva: World Health Organization; 2015 ([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 27 June 2016).
4. Cardiovascular diseases. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/health-topics/cardiovascular-diseases/index.html>, accessed 27 June 2016).
5. Cancer. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/health-topics/cancer/index.html>, accessed 27 June 2016).
6. Chronic obstructive pulmonary disease. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/health-topics/chronic-obstructive-pulmonary-disease-copd/index.html>, accessed 27 June 2016).
7. WHO Country and regional data on diabetes. Geneva: World Health Organization; 2015 ([http://www.who.int/diabetes/facts/world\\_figures/en/index2.html](http://www.who.int/diabetes/facts/world_figures/en/index2.html), accessed 27 June 2016).
8. Diabetes. Cairo: WHO Regional Office for the Eastern Mediterranean; 2015 (<http://www.emro.who.int/health-topics/diabetes/index.html>, accessed 27 June 2016).

## 2. Regional framework for action for the prevention and control of noncommunicable diseases

### Q: What is the *Regional framework for action*?

The *Regional framework for action* is a roadmap for countries in the Region to implement the United Nations Political Declaration on Prevention and Control of Noncommunicable Diseases. The regional framework includes 17 strategic interventions in the four components of the framework (governance; prevention and reduction of risk factors; surveillance, monitoring and evaluation; and health care), and 10 indicators against which countries can measure their progress (1).

### Q: Why was the *Regional framework for action* developed?

The *Regional framework for action* was developed to transform the global agenda into a regional vision and operationalize the United Nations Political Declaration commitments. In October 2012, the WHO Regional Committee for the Eastern Mediterranean endorsed the *Regional framework for action*.

### Q: What are the benefits of a framework for action?

The *Regional framework for action* focuses country efforts on strategic interventions that, if implemented, will prevent and control noncommunicable diseases. Moreover, implementation of the regional framework will contribute to progress on the nine global targets to be attained in 2025, which include a 25% relative reduction in premature mortality from noncommunicable diseases by 2025 (2).

### Q: What are the measures included in the framework?

All the measures included in the *Regional framework for action* are high-impact, evidence-based, cost-effective and affordable (best buys) and can be implemented by all countries irrespective of income. They include:

- developing and implementing an operational multisectoral national strategy/action plan;
- setting time-bound national targets and indicators based on WHO guidance;
- implementing four demand–reduction measures of the WHO Framework Convention on Tobacco Control at the highest level of achievement: taxation, smoke-free policies, health warnings and advertising bans;
- implementing four measures to reduce unhealthy diet:
  - developing policies to reduce population salt intake;
  - developing policies to reduce saturated fat intake and eliminate industrially produced trans fats;
  - developing guidelines on marketing to children;
  - implementing recommendations of the International Code of Marketing of Breast-Milk Substitutes;
- implementing a national public awareness programme on diet and/or physical activity;
- implementing, as appropriate, according to national circumstances, the three evidence-based measures to reduce the harmful use of alcohol: developing and enacting regulations; advertising and promotion bans; and pricing policies;
- strengthening monitoring of noncommunicable diseases and their risk factors by implementing the WHO noncommunicable diseases surveillance framework, including a functioning system for generating reliable cause-specific mortality data on a routine basis;
- integrating the management and health care of people with noncommunicable diseases into primary health care and provision of drug therapy (including glycemic control) and counselling to people at high risk of heart attacks and strokes.

## Q: How can countries use the framework document?

WHO supports countries in using the framework document by providing them with technical guidance for the implementation of cost-effective population-wide and individual interventions (also known as best buys). In addition, to complement the framework and to inspire countries to move ahead and achieve the targets, profiles are produced every six months to assess countries and benchmark their achievements (3).

## Q: What has been the progress achieved to date by using the *Regional framework for action*?

Many countries across the Region are moving forward in the prevention and control of noncommunicable diseases using the *Regional framework for action*. Profiles are being produced every six months on each country's response based on the progress indicators in the framework. The framework is referenced in all high-level briefings, meetings and conferences to encourage its effective use.

Based on the framework, WHO has developed practical technical guidance on how to implement the interventions, such as tobacco control measures, salt, sugar and saturated fat reduction and elimination of industrially produced transfat, and on legislation to reduce risk factors. These guidelines are now available and are being used by many Member States. Two other major areas of focus are considered vitally important – guidance on integration of health care into primary care and continuity of treatment during emergencies and the surveillance framework that should be used by countries to monitor progress.

## Q: How will the regional framework continue to be used in the future?

Building on the progress already achieved using the regional framework, WHO and countries will continue to use it in the future. WHO will continue to support countries and to develop the tools and guidance necessary for them to deliver on their commitments.

In 2018, all Member States will be reporting to the third United Nations high-level meeting on noncommunicable diseases on progress made in implementing the key commitments included in the 2011 Political Declaration, which are included in the *Regional framework for action*. Clear indicators have been developed and will be used to measure progress.

Progress has begun and momentum is building for political and health leaders. The way forward for Member States in confronting noncommunicable diseases – the world's biggest killers – is to ramp up the progress made so far to meet the goals between now and 2025.

For 2018 and 2025, countries need to deliver on the commitments included in the regional framework. For 2018, countries need to deliver on four-time bound commitments: setting national targets; developing multisectoral plans to achieve these targets; reducing risk factors for noncommunicable diseases; and strengthening health systems to address these diseases. For 2025, countries need to deliver on the nine voluntary global targets, to reduce premature deaths from noncommunicable diseases by 25%.

## References

1. Regional framework for action. In: WHO/ Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en>, accessed 27 June 2016).
3. The Work of WHO in the Eastern Mediterranean Region. Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

# 3. Multisectoral action plan to prevent and control noncommunicable diseases

## Q: What is a multisectoral approach?

Multisectoral refers to engagement with one or more government sectors outside of health (1). A multisectoral approach is one in which multi-stakeholder engagement takes place and action is across different sectors (2).

## Q: What is a multisectoral action plan?

A national multisectoral action plan with national targets is a necessary framework for addressing noncommunicable diseases and their risk factors through a public health approach. Instead of one plan per disease, a comprehensive plan, with a clear budget and an integrated monitoring framework, makes possible a coherent national policy response required to attain national targets.

National 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 (2).

## Q: Why is a multisectoral approach needed to prevent and control noncommunicable diseases?

Given the magnitude of the burden, no one party alone can prevent and manage noncommunicable diseases effectively. Collaboration between governments, nongovernmental organizations, industries, WHO and other organizations is essential. This approach ensures that resources are used efficiently and efforts are not duplicated. Thus, efforts complement each other rather than conflict or compete with each other. One of the strategic interventions under governance in the *Regional framework for action* is to establish a multisectoral strategy/plan and set of national targets and indicators for 2025 based on the national situation and WHO guidance (3).

## Q: What are the main challenges of multisectoral action for the prevention and control of noncommunicable diseases?

Multisectoral action for the prevention and control of noncommunicable diseases faces the following key challenges:

- engaging the non-health sector systematically across government and with other sectors to address the health dimensions of their activities;
- establishing institutionalized processes which value cross-sector problem-solving and addressing power imbalances;
- providing the leadership mandate, incentives, budgetary commitment and sustainable mechanisms that support the health sector to work collaboratively on solutions to prevent and control noncommunicable diseases.

## Q: What should be the focus of multisectoral action for the prevention and control of noncommunicable diseases?

Multisectoral action should focus on:

- creating mechanisms to achieve whole-of-government action in order to tackle noncommunicable diseases; securing political commitment at the highest levels;
- integrating specific health concerns into relevant sectors' policies, programmes and activities, where possible;

- reinforcing responsible stewardship, while safeguarding public health from any potential conflict of interest and recognizing the fundamental conflict of interest between the tobacco industry and public health;
- establishing sustainable and predictable financing mechanisms;
- investing in an appropriate workforce;
- promoting access to safe, effective, good-quality medicines and technologies;
- promoting the development and use of impact assessment methods to monitor and evaluate multisectoral action.

### Q: Are conflicting interests considered a barrier for multisectoral planning and action in preventing and controlling noncommunicable diseases?

Conflicting interests usually exist among the different parties, each having a different vested interest. It is crucial to manage and resolve any conflicts of interest to be able to manage the burden of noncommunicable diseases and put forward concerted efforts (4).

### Q: Which non-health sectors could be involved in the prevention and control of noncommunicable diseases?

The following table gives some examples of non-health sectors that could be involved in the prevention and control of noncommunicable diseases (4).

Sector	Tobacco	Physical inactivity	Harmful use of alcohol	Unhealthy diet
Sectors involved (examples)	Legislature  Stakeholder ministries across government, including ministries of agriculture, customs/revenue economy, education, finance, health, foreign affairs, labour, planning, social welfare, state media, statistics and trade	Ministries of education, finance, labour, planning, transport, urban planning, sports, and youth  Local government	Legislature  Ministries of trade, industry, education, finance and justice  Local government	Legislature  Ministries of trade, agriculture, industry, education, urban planning, energy, transport, social welfare and environment  Local government

## References

1. Key definitions and criteria for noncommunicable diseases progress indicators. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 ([http://www.emro.who.int/images/stories/ncds/documents/RFFA/key\\_defs\\_traffic\\_lights\\_oct\\_2015.pdf?ua=1](http://www.emro.who.int/images/stories/ncds/documents/RFFA/key_defs_traffic_lights_oct_2015.pdf?ua=1), accessed 27 June 2016).
2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en>, accessed 27 June 2016)
3. Regional framework for action. In: WHO/Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
4. WHO Global action plan on the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 (<http://www.who.int/nmh/publications/ncd-action-plan/en/>, accessed 27 June 2016).

## 4. Role of legislation in preventing and controlling noncommunicable diseases

### Q: How does legislation play a role in preventing and controlling noncommunicable diseases?

Laws and legislation are an effective means through which to implement population-level interventions which prevent or minimize tobacco use, unhealthy diets, and physical inactivity. They can help to address risk factors for noncommunicable diseases through: banning unhealthy behaviours, such as smoking in closed public places; discouraging unhealthy behaviours (by imposing taxes on unhealthy products); encouraging healthier behaviours (by subsidizing healthy food products); and requiring healthy behaviours (by affecting laws mandating minimum daily physical activity requirements for school students) (1).

### Q: What types of legal interventions exist?

The spectrum of legal interventions includes:

- binding laws (hard laws) which are legally mandated, including taxes and/or mandatory limits for the salt content of processed foods;
- non-binding (soft laws) which are non-binding co-regulatory interventions, such as voluntary compliance by industry to meet government-set standards;
- non-legal interventions, such as health prevention and promotion policies and/or strategies, including public education campaigns and mass media campaigns (1).

### Q: Why are non-legal interventions important?

- Laws are more effective when implemented as part of a comprehensive package of noncommunicable disease interventions. Evidence in the tobacco control field, for example, shows that taxes and price increases most effectively reduce smoking rates when implemented as part of a comprehensive package of interventions.
- Non-legal and non-legally binding interventions can lay the foundation for subsequent legal mandatory requirements. In some cases, non-legal interventions and co-regulatory schemes (private companies undertaking to comply with government-set standards) can lay the foundation for effective enforcement of legally binding interventions by expert and civil society engagement to generate public demand and political will.
- Enshrining policies, strategies, and programmes in law may lead to more effective outcomes. Some interventions can only be implemented through laws, for example, taxes on cigarettes and sugar-sweetened beverages. Some interventions need not be implemented through law to be effective. However, enshrining an intervention in law may improve effectiveness because laws typically include compliance and enforcement mechanisms. Interventions based in law tend to be accorded more esteem than non-legal interventions, which may result in additional and sustained resources to facilitate effective implementation.

### Q: What is WHO's level of commitment in supporting legislation and laws?

Regionally, WHO is committed to resolution EM/RC59/R.2 on the United Nations Political Declaration on Noncommunicable Diseases and commitments of countries:

“Develop model legal instruments to guide the development of national legislation for implementing the commitments of the United Nations Political Declaration on Noncommunicable Diseases”; and resolution EM RC59/R.3 on health systems strengthening in countries of the Region: “Review and update public health laws and develop norms and standards in order to ensure the right to health, health equity, and quality and safety of care”.

## Q: What is a "sin tax"?

A "sin tax" is simply another name for a tax imposed on certain products that are deemed unhealthy and harmful to consumers. Harmful products may include tobacco, alcohol, fat and sugar. Other products which have high fat, sugar or salt content may also be included, such as fast food and sugar-sweetened beverages. Sin taxes on unhealthy products result in a price increase for the consumer which deters consumption.

Tax increases will most likely be successful in decreasing consumption of unhealthy products when implemented in combination with other interventions and could generate revenue for health development. These might include restricting availability, limiting portions and bans or restrictions on advertising, and public education campaigns.

## Q: What are the priority legal interventions to address noncommunicable diseases in the Region?

The Regional Office, in partnership with the O'Neill Institute for National and Global Health Law, Georgetown University Law Center, delivered a comprehensive dashboard of options of potentially effective legislative and regulatory interventions drawn from international experiences in noncommunicable disease prevention to date. The mapped legal interventions address governance, unhealthy diet, physical inactivity and tobacco use based on evidence of effectiveness, regional relevance, cost-effectiveness, affordability, feasibility and suitability for implementation as binding law. Ten key noncommunicable disease legal interventions addressing governance, unhealthy diet, and tobacco use were identified following a regional extensive consultation process involving global and regional experts. The ten key legal interventions will be supported by guidelines and tools for country-level implementation based on national context (2,3).

Looking forward, WHO is currently developing the guidelines and tools to support implementation of national governance and population prevention initiatives for noncommunicable diseases, including capacity-building through the creation of multidisciplinary teams of public health experts and legislators (2).

## References

1. Noncommunicable diseases. The work of WHO in the Eastern Mediterranean Region: Annual report of the Regional Director 1 January–31 December 2015. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2015/noncommunicable-diseases.html>, accessed 16 August 2016).
2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en>, accessed 27 June 2016)
3. Noncommunicable diseases. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).
4. Summary report on the first consultation of the Regional Advisory Committee on Noncommunicable Diseases and Public Health Law. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 ([http://applications.emro.who.int/docs/IC\\_Meet\\_Rep\\_2015\\_EN\\_16304.pdf](http://applications.emro.who.int/docs/IC_Meet_Rep_2015_EN_16304.pdf), accessed 27 June 2016).

## 5. Reducing tobacco use to prevent and control noncommunicable diseases

### Q: What are tobacco products?

Tobacco products are products made entirely or partly of leaf tobacco as raw material, which is intended to be smoked, sucked, chewed or snuffed (1). Tobacco products come in different forms (manufactured, hand-rolled, filtered, unfiltered and flavoured), cigars and pipes (2). All contain the highly addictive psychoactive ingredient, nicotine.

### Q: What is the impact of tobacco use on health?

Tobacco use has a deadly impact on health. There are at least 69 established cancer-causing chemicals in tobacco smoke, and hundreds of recognized human toxins. Tobacco use is one of the main risk factors for a number of chronic diseases, including cancer, lung diseases, and heart diseases; ultimately smoking kills (1).

Furthermore, exposure to second-hand smoke is a health hazard. Second-hand smoke kills. The list of diseases and adverse health effects from exposure to second-hand smoke is long and growing, and includes cancer, heart disease, stroke and sudden infant death syndrome. No level of exposure is safe.

Although manufactured cigarettes are the most common type of smoked tobacco, other smoked tobacco products, such as *bidis*, *kreteks* and *shisha*, are gaining popularity, often in the mistaken belief that they are less hazardous to health. Tobacco use also causes economic harm to families and countries due to lost wages, reduced productivity and increased health care costs (2).

### Q: What is the percentage of tobacco use in the Region?

In the Region, 38% of men and 4% of women smoke tobacco. Smoking rates among youth can reach 42% among boys and 31% among girls. This includes smoking shisha, which is more popular among youth than cigarettes (3).

Data on adults in countries of the WHO Eastern Mediterranean Region show that there is high prevalence of male smokers compared with females; smoking by women has typically lagged behind men as a result of social and cultural barriers. However, the prevalence of smoking among youth shows the sex difference can be small in some countries, indicating that social and cultural barriers may be changing (2).

### Q: What is the impact of current tobacco use in the Region?

About one third of deaths resulting from cancer are caused by tobacco, with tobacco-attributable heart and respiratory diseases accounting for about 30% each (2).

### Q: What are the main challenges in reducing tobacco use?

Tobacco control continues to face challenges posed by sociopolitical transition, the influence of the tobacco industry and the emergence of new products (4).

These challenges are compounded in countries witnessing emergency and humanitarian situations as people turn to smoking and this has a detrimental effect on their health.

### Q: Who is responsible for reducing tobacco use?

Everyone has a role in reducing tobacco use – governments, the private sector and civil society.

## Q: What is the role of WHO in supporting countries to reduce tobacco use?

The WHO Framework Convention on Tobacco Control (WHO FCTC) is the first international treaty negotiated under the auspices of WHO. It was adopted by the World Health Assembly on 21 May 2003 and entered into force on 27 February 2005 (5). It provides a comprehensive approach to reduce the health and economic burden caused by tobacco. The WHO FCTC balances demand reduction with supply reduction, protects public health policies from the tobacco industry and calls for enhanced international cooperation to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to second-hand tobacco smoke.

In order to help countries fulfil their WHO FCTC obligations, WHO introduced MPOWER, a set of policies that build on the demand-reduction measures of the WHO FCTC and have been proven to be effective measures to reduce tobacco use (6). Full implementation of the WHO FCTC measures represented by MPOWER could reduce smoking prevalence in the Region by almost half. Accelerating the implementation of the FCTC and ratifying the Protocol to Eliminate Illicit Trade in Tobacco Products is one of the strategic interventions under the prevention and reduction of risk factors in the *Regional framework of action* (7).

It is a legal obligation for all countries that are Parties to the Convention to implement the following policies/measures:

1. **Monitor** tobacco use by investing in a robust surveillance system. This should be followed by collecting and disseminating data to catalyse action for full WHO FCTC implementation.
2. **Protect** people from second-hand smoke through implementing 100% tobacco-free public places.
3. **Offer** help and support for people to quit, through cessation services to help them quit.
4. **Warn** people about the dangers of tobacco use through graphic warnings.
5. **Enforce** a total ban on advertising, promotion and sponsorship.
6. **Increase** taxes on tobacco products.

In addition, WHO is working closely with governments to meet nine global targets to reduce the burden of noncommunicable diseases by 2025. The fifth global target aims to achieve a 30% relative reduction in prevalence of current tobacco use (8).

## Q: What are WHO-specific interventions to support countries to reduce tobacco use?

The WHO Regional Office provides support to Member States in implementing the WHO FCTC, MPOWER policies and tobacco control best buys for noncommunicable diseases.

The technical support provided by WHO includes: drafting of model legislation, reviewing country legislation and developing legal tools for countries to fully implement the WHO FCTC. Also, WHO provides support to countries to continue monitoring the tobacco epidemic.

WHO conducts country missions upon request of governments to provide technical support to countries and develops technical and informative packages for countries to use, such as a regional package that was developed on MPOWER measures and the tobacco industry (9).

## References

1. Tobacco. Geneva: World Health Organization; 2015 (<http://www.who.int/topics/tobacco/en/>, accessed on 27 June 2016).
2. Global Adult Tobacco Survey (GATS) Egypt Country Report 2009. Cairo: World Health Organization; 2015 ([http://www.who.int/tobacco/surveillance/gats\\_rep\\_egypt.pdf](http://www.who.int/tobacco/surveillance/gats_rep_egypt.pdf), accessed 27 June 2016).
3. Tobacco Free Initiative. Cairo: World Health Organization; 2015. (<http://www.emro.who.int/entity/tobacco-free-initiative/index.html>, accessed 27 June 2016).
4. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: World Health Organization; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).
5. WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2015 (<http://www.who.int/fctc/en/>, accessed 27 June 2016).
6. Tobacco Free Initiative (TFI). Cairo: World Health Organization; 2015 (<http://www.emro.who.int/tobacco/publications/mpower-measures-to-reduce-tobacco-use.html/>, accessed 27 June 2016).
7. Regional framework for action. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
8. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en>, accessed 27 June 2016)
9. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

## 6. Reducing salt/sodium consumption to prevent and control noncommunicable diseases

### Q: What is salt/sodium?

Sodium is an essential nutrient necessary for maintenance of plasma volume, acid-base balance, transmission of nerve impulses and normal cell function (1). The main source of sodium in our diet is salt, although it can come from sodium glutamate, used as a condiment in many parts of the world.

### Q: Is salt/sodium consumption unhealthy?

Salt consumption within the WHO-recommended level is healthy, however, excessive salt consumption is unhealthy. It is linked to adverse health outcomes, such as the increased risk of hypertension (raised blood pressure), which in turn leads to stroke and heart disease (2, 3).

### Q: What is the WHO-recommended level of salt intake?

WHO recommends for adults a reduction in salt intake to less than 5 g per person per day (2 g per day of sodium) (2). For children, the recommended maximum level of intake of 2 g per day of sodium for adults should be adjusted downwards on the basis of the energy requirements of children relative to those of adults.

### Q: Which foods are high in salt/sodium?

In general, processed foods, such as ready meals, processed meats, cheese, pickles, salty snack foods, and instant noodles, among others, are particularly high in salt. Salt is also added to food during cooking (bouillon and stock cubes) or at the table (soy sauce, fish sauce and table salt). Sodium is also contained in sodium glutamate, used as a food additive in many processed foods (1).

### Q: What is the current average salt/sodium intake in the Region?

The current salt intake in the Region averages more than 10 g per person per day, which is double the recommended level set by WHO. In general, people are not usually aware of how much salt they consume.

### Q: What is the impact of the current average salt/sodium intake in the Region?

The disease burden, in particular cardiovascular and coronary heart disease, resulting from salt and high blood pressure is very high in the Region. It is estimated that, overall, 47% of the Region's burden of disease is due to noncommunicable diseases, and by 2020 it is expected to rise to 60% unless efficient health and nutrition measures are implemented (4).

### Q: What are the benefits of reducing salt/sodium intake on the individual and population?

Reducing salt/sodium intake lowers specifically the risk of developing high blood pressure and heart disease. The evidence for the health benefits of population-wide reduction in salt intake is strong. Indeed, salt reduction is one of the most cost-effective measures to prevent heart disease in countries (4). Even a small (1 g per person per day) reduction in salt intake will reduce deaths from stroke and heart attacks by more than 7% in each country that takes appropriate measures.

Salt reduction is an extremely cost-effective public health policy. For example, in the United Kingdom, it was estimated that for a total campaign cost of £15 million to reduce daily salt intake, £1.5 billion per year would be saved in health care costs (3).

## **Q: Who is responsible for reducing salt/sodium intake/consumption?**

Everyone has a role in reducing salt/sodium consumption – governments, private sector and civil society.

## **Q: How can governments enable populations to reduce their salt/sodium intake/consumption?**

Government policies and strategies should create environments that enable populations to consume adequate quantities of safe and nutritious foods that make up a healthy diet, including low salt. Improving dietary habits is a societal, as well as an individual, responsibility. It demands a population-based, multisectoral and culturally relevant approach. Key broad strategies for salt reduction include:

- developing government policies, including appropriate fiscal policies and regulation, to ensure food manufacturers and retailers produce healthier foods or make healthy products available and affordable;
- working with the private sector to improve the availability and accessibility of low-salt products;
- promoting consumer awareness and empowerment of populations through social marketing and mobilization to raise awareness of the need to reduce salt intake/consumption;
- creating an enabling environment for salt reduction through local policy interventions and the promotion of “healthy food” settings, such as schools, workplaces, communities, and cities;
- monitoring levels of population salt intake, sources of salt in the diet and consumer knowledge, attitudes and behaviours relating to salt to inform policy decisions.

Salt reduction programmes and programmes that promote fortification with micronutrients of salt, condiments or seasonings high in salt (bouillon cubes, soy and fish sauce) can complement each other.

Other local practical actions to reduce salt intake include:

- integrating salt reduction into the training curriculum of food handlers;
- removing salt shakers and soy sauce from tables in restaurants;
- introducing product or shelf labels making it clear that certain products are high in sodium;
- providing targeted dietary advice to people visiting health facilities;
- advocating for people to limit their intake of products high in salt and advocating that they reduce the amount of salt used for cooking; and
- educating children and providing a supportive environment for children so that they start to adopt low salt diets early.

Actions by the food industry should include:

- incrementally reducing salt in products over time so that consumers adapt to the taste and do not switch to alternative products;
- promoting the benefits of eating reduced salt foods through consumer awareness activities in food outlets;
- reducing salt in foods and meals served at restaurants and catering outlets and labelling sodium content of foods and meals (1).

## **Q: How can individuals reduce their salt/sodium intake?**

Individuals can reduce their salt/sodium intake by:

- not adding salt during the preparation of food;
- adding herbs and condiments instead of salt;

- not having a salt shaker on the table;
- limiting the consumption of salty snacks;
- choosing products with lower sodium content (1).

## **Q: How does WHO support countries to promote a reduction in salt consumption?**

Reducing the average population salt intake as per WHO recommendations is one of the strategic interventions under the area of prevention and reduction of risk factors in the *Regional framework for action* (5). In addition, WHO is working within the *Global strategy on diet, physical activity and health* and closely with governments to meet the nine global targets to reduce noncommunicable diseases. The fourth global target aims to reduce global salt intake by a relative 30% by 2025 (2,6). The WHO Regional Office has issued a policy statement and recommended actions to lower national salt intake and death rates from high blood pressure and stroke in the Region (4).

Furthermore, technical guidance, based on in-depth review of evidence and international experience, was developed in the form of policy statements on reducing intake of salt in countries.

## **Q: How have countries in the Region managed to reduce salt intake/consumption?**

Countries in the Region have identified certain food items where salt content is high. They reviewed recipes and set standards – some mandatory and others voluntary. Countries also set targets to reduce salt by 30% in selected (and highly) consumed food items – primarily bread and processed food, followed by cheese and canned food (4).

## **References**

1. Salt reduction, Fact sheet N°393. Geneva: World Health Organization; 2015 (<http://www.who.int/mediacentre/factsheets/fs393/en/>, accessed 27 June 2016).
2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en/> accessed 27 June 2016).
3. Policy statement and recommended actions to lower national salt intake and death rates from high blood pressure and stroke in the Eastern Mediterranean Region. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/nutrition/strategy/salt-policy-statement.html>, accessed 27 June 2016).
4. Reducing population salt intake in the Eastern Mediterranean Region – time for urgent action. Eastern Mediterranean Health Journal. 2014; 20(12) (<http://www.emro.who.int/emhj-vol-20-2014/volume-20-issue-12/reducing-population-salt-intake-in-the-eastern-mediterranean-region-time-for-urgent-action.html>, accessed on 27 June 2016).
5. Regional framework for action. In: WHO/Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
6. Global strategy on diet, physical activity and health. Geneva: World Health Organization; 2015 (<http://www.who.int/dietphysicalactivity/pa/en/>, accessed 27 June 2016).

## 7. Reducing sugar consumption to prevent and control noncommunicable diseases

### Q: What is sugar?

Sugar is one of the simple forms of carbohydrates which contains mono-saccharides, such as fructose (found in fruits) and galactose (found in milk products), and disaccharides (carbohydrates with two sugars), such as sucrose (table sugar) and lactose (from dairy) (1).

Simple carbohydrates are also in candy, soda and syrups. However, these foods and beverages are made with processed and refined sugars and do not have vitamins, minerals or fibre. They are called “empty calories” and can lead to weight gain.

Free sugars include mono-saccharides and disaccharides added to foods and beverages by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.

### Q: Is sugar consumption unhealthy?

Excessive sugar consumption is a key factor in promoting overweight and obesity, tooth decay and diabetes (2). There is increasing concern that intake of free sugars – particularly in the form of sugar-sweetened beverages – increases overall energy intake and may reduce the intake of foods containing more nutritionally adequate calories, leading to an unhealthy diet, weight gain and increased risk of noncommunicable diseases. Another concern is the association between intake of free sugars and tooth decay. Dental diseases are the most prevalent noncommunicable diseases globally and, although great improvements in prevention and treatment of dental diseases have occurred in the past decades, problems still persist, causing pain, anxiety, functional limitation, including poor school attendance and performance in children, and social impediment through tooth loss (1).

### Q: What foods are high in sugar?

Sugar is available in one form or another in the majority of foods and sugar-sweetened beverages. High levels of sugar are present in sugar-sweetened beverages, sugary snacks and sweets.

### Q: What is the WHO-recommended sugar intake?

The intake of free sugars should be reduced throughout the life-course. WHO recommends less than 10% of total energy intake from free sugars, which is for a person of healthy body weight consuming approximately 2000 calories per day, but ideally less than 5% of total energy intake for additional health benefits. Considering the high prevalence of obesity and diabetes in the Region, WHO recommends that children and women should consume less than 5% (roughly 25 grams per person a day) of free sugars in their diet (3).

### Q: What is the current average sugar intake in the Region?

Data indicate that the contribution of sugar to the total average daily food energy supply is relatively high in most countries of the Region, especially in high- and middle-income countries, ranging from 9% to 15%. Even in low-income countries, it can be as high as 12% (4). Children, especially school children and young adults, usually have exceptionally high intakes. Sugar intakes are also increasing as national incomes rise. Sugar consumption in almost half the countries of the Region exceeds 70 g per person a day, with consumption in some countries even exceeding 85 g per person a day (5). The Region has the fastest growth in sugar consumption globally and this dietary transition has markedly reduced the quality of the diet of the population (5).

## **Q: What is the impact of the current average sugar intake in the Region?**

Diets high in sugar are linked to obesity and overweight, both which increase the likelihood and prospect of diabetes. There is a strong link between obesity and mortality. In the Region, both males and females suffer from being overweight and obese. It is estimated that over 50% of women are overweight. Roughly half of overweight women are obese (6). In the case of children and adolescents the picture is even more alarming. The overindulgence in high calorie food and indoor leisure activities, such as watching television, surfing the net and playing computer games, all contribute to childhood obesity. Regionally, overweight and obesity in children under-five years of age has increased from 5.8% to 8.1% between 1990 and 2012, which is above the global average of 6.7%. Overweight and obesity in adolescents (13–15 years) are highly prevalent (7).

## **Q: What are the benefits of reducing sugar intake on the individual and the population?**

Reducing sugar intake lowers specifically the risk of developing overweight and obesity, and in turn in developing diabetes. It also has a significant effect on lowering dental caries. The evidence for the health benefits of population-wide reduction in sugar intake is strong.

## **Q: Who is responsible for reducing sugar intake/consumption?**

Everyone has a role in reducing sugar consumption – governments, the private sector and civil society.

## **Q: How can governments reduce population sugar intake/consumption?**

To reduce population sugar intake/consumption, governments can implement the following evidence-based interventions.

- Reformulate sugar-rich foods and drinks to lower sugar intakes.
- Set standards for all food and drink served by government-sponsored institutions.
- Restrict promotion of sugar-enriched products, especially drinks.
- Impose restrictions on marketing, advertising and sponsorship of all sugar-enriched foods and drinks across all media platforms.
- Use nutritional profiling to establish clear definitions of foods and drinks high in sugar.
- Eliminate sugar subsidies provided by national governments and introduce progressive taxes initially on sugary drinks and then on all foods and drinks with added sugar.
- Improve accredited training on diet and health for individuals with opportunities to influence population food choices.
- Provide routine health education to populations.

## **Q: What is the role of WHO in supporting countries to promote a reduction in sugar consumption?**

One of the strategic interventions under the area of prevention and reduction of risk factors in the *Regional framework for action* is to ensure healthy nutrition in early life. The seventh global target to reduce noncommunicable diseases aims to halt the rise in diabetes and obesity (8,9). Furthermore, technical guidance has been developed to support countries in their efforts to reduce sugar consumption (10).

## References

1. Guideline: Sugars intake for adults and children. Geneva: World Health Organization; 2015 ([http://apps.who.int/iris/bitstream/10665/149782/1/9789241549028\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/149782/1/9789241549028_eng.pdf), accessed 27 June 2016).
2. Summary report on the technical consultation on reducing sugar intake in the Eastern Mediterranean Region. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 ([http://applications.emro.who.int/docs/IC\\_Meet\\_Rep\\_2015\\_EN\\_16667.pdf?ua=1](http://applications.emro.who.int/docs/IC_Meet_Rep_2015_EN_16667.pdf?ua=1), accessed 27 June 2016).
3. Healthy diet, Fact sheet N°394. Geneva: World Health Organization; 2015 (<http://www.who.int/mediacentre/factsheets/fs394/en/>, accessed 27 June 2016).
4. Abdulrahman O Musaiger. Overweight and obesity in the Eastern Mediterranean Region: prevalence and possible causes. 2011. doi:10.1155/2011/407237. *J Obes.* 2011.407237.
5. Sugar supply (kcal/capita/d) in Northern Africa and Western Asia between 1970 and 2010. In FAO/Statistics Division. Italy; Food and Agriculture Organization of the United Nations; 2013 (<http://faostat3.fao.org/browse/FB/FBS/E>, accessed 29 March 2016).
6. WHO Global Health Observatory data repository. Geneva: World Health Organization; 2015 (<http://apps.who.int/gho/data/view.main.2520?lang=en>, accessed 27 June 2016).
7. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en/>, accessed 27 June 2016).
8. Regional framework for action. In WHO/Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
9. Global strategy on diet, physical activity and health. Geneva: World Health Organization; 2015 (<http://www.who.int/dietphysicalactivity/pa/en/>, accessed 27 June 2016).
10. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

## 8. Reducing fat intake to prevent and control noncommunicable diseases

### Q: What is fat?

Fat consists of trans fatty acids (TFAs), saturated fatty acids (SFAs) and unsaturated fatty acids (UFAs). TFAs are unsaturated fats found in foods obtained from ruminants, such as dairy products and meat, and in industrially produced partially hydrogenated vegetable oils. TFAs are typically found in processed food, fast food, snack food, fried food, frozen pizza, pies, cookies, margarines and spreads (1). Saturated fats are found in some types of food such as fatty meat, butter, palm and coconut oil, cream, cheese, ghee and lard. Unsaturated fats are naturally occurring in food such as fish, avocado, nuts, sunflower, canola and olive oils.

### Q: Is fat consumption unhealthy?

Fat consumption provides the body with energy, supports cell growth, protects body organs and keeps it warm. However, excess consumption of fats is unhealthy. Moreover, consumption of TFAs, especially industrially produced partially hydrogenated vegetable oils has been associated with an increased risk of heart disease, infertility, endometriosis, gallstones, Alzheimer's disease, diabetes and some cancers.

### Q: What is WHO-recommended level of fats intake?

As part of a healthy diet, WHO recommends that less than 30% of total energy intake should be from fats. UFAs are preferable to SFAs. Industrial TFAs are not part of a healthy diet.

In practical terms, to meet the WHO recommendation for healthy diet and lifestyle, this means eating a diet containing a variety of fruits, vegetables, and grain products, especially fibre-rich whole grains; fat-free and low-fat dairy products; legumes, poultry, and lean meats; and fish, preferably oily fish, at least twice a week (2).

### Q: What is the impact of the current fat intake in the Region?

Diets high in fat are linked to obesity and overweight, both of which increase the likelihood and prospect of diabetes. There is a strong link between obesity and mortality. In the Region, both males and females suffer from being overweight and obese. It is estimated that over 50% of women are overweight. Roughly half of overweight women are obese (3). In the case of children and adolescents the picture is even more striking. The overindulgence in high calorie food and indoor leisure activities, such as watching the television, surfing the net and playing computer games, all contribute to childhood obesity. Regionally, overweight and obesity in children under-five years of age has increased from 5.8% to 8.1% between 1990 and 2012, which is above the global average of 6.7%. Overweight and obesity in adolescents (13–15 years) are highly prevalent (4).

### Q: What is the impact of fat intake reduction on health?

Reducing fat intake lowers the risk of heart disease, diabetes, infertility, endometriosis, gallstones, Alzheimer's disease, diabetes and some cancers.

### Q: Who is responsible for fat reducing intake/consumption?

Everyone has a role in reducing fat intake/consumption – governments, private sector and civil society.

## Q: How can governments reduce population fat intake/consumption?

Government policies and strategies should create environments that enable populations to consume adequate quantities of safe and nutritious foods that make up a healthy diet, including low levels of fat. Improving dietary habits is a societal as well as an individual responsibility. It demands a population-based, multisectoral, and culturally relevant approach.

## Q: How can individuals reduce their fat intake?

Individuals can reduce their fat intake by: (2)

- changing how they cook – remove the fatty part of meat; use vegetable oil (not animal oil); and boil, steam or bake rather than fry;
- avoiding processed foods containing trans fats; and
- limiting the consumption of foods containing high amounts of saturated fats (e.g. cheese, ice cream, fatty meat).

## Q: What is the role of WHO in supporting countries to reduce fat consumption?

Virtually eliminating trans-fat intake and reducing the intake of saturated fatty acids is one of the strategic interventions under the area of prevention and reduction of risk factors in the *Regional framework for action* (5). The Regional Office has issued a policy statement and recommended actions for reducing fat intake and lowering heart attack rates in the Region (6). The seventh global to reduce noncommunicable diseases target aims to halt the rise in diabetes and obesity (4,7). Technical guidance, based on in-depth review of evidence and international experience, was developed in the form of policy statements on reducing intake of fats.

## Q: How have countries in the Region managed to reduce fat intake?

22% of countries in the Region have applied regulatory measures to eliminate industrially produced trans-fat in the food supply and to replace saturated fatty acids with unsaturated fatty acids in food products. One country in the Region has issued a decree to reduce transfat content to less than 2% in oil industry products. It also reduced palm oil imports to 30% of total oil imports in 2014 and will further reduce it by 15% in 2015.

In addition, member countries of the Gulf Cooperation Council are developing legislation to eliminate transfat in all locally produced or imported foods. Five countries now have food-based dietary guidelines, while a nutrition profiling model was developed and is being tested in seven countries, to help them to improve food labelling and promote healthy food (8).

## References

1. Downs, S et al. The effectiveness of policies for reducing dietary trans fat: a systematic review of the evidence. *Bulletin of the World Health Organization* 2013;91:262-269 (<http://www.who.int/bulletin/volumes/91/4/12-111468/en/>, accessed 27 June 2016).
2. Healthy diet, Fact sheet N°394. Geneva: World Health Organization; 2015 (<http://www.who.int/mediacentre/factsheets/fs394/en/>, accessed 27 June 2016).
3. WHO Global Health Observatory data repository. Geneva: World Health Organization; 2015 (<http://apps.who.int/gho/data/view.main.2520?lang=en>, accessed 27 June 2016).
4. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2015 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en/>, accessed 27 June 2016).

5. Regional framework for action. In WHO/ Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
6. Policy statement and recommended actions for reducing fat intake and lowering heart attack rates in the Eastern Mediterranean Region. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/nutrition/strategy/policy-statement-2013.html>, accessed 27 June 2016).
7. Global strategy on diet, physical activity and health. Geneva: World Health Organization; 2015 (<http://www.who.int/dietphysicalactivity/pa/en/>, accessed 27 June 2016).
8. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

## 9. Preventing and controlling noncommunicable diseases through countering unopposed marketing of unhealthy foods

### Q: What is unopposed marketing of unhealthy foods?

Addressing unopposed marketing of unhealthy foods is about taking concrete actions to restrict exposure to marketing of foods that are high in fat, sugar or salt and promoting healthy food options. Actions to achieve this are needed in the areas of legislation, literacy and social mobilization.

### Q: What is the link between marketing and childhood obesity?

Marketing refers to any form of commercial communication or message that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service.

Evidence shows that most food advertising to children is for food high in fat, salt and sugar and influences children's food preferences, purchase requests and consumption patterns, which results in an increase in consumption not only of the product of a given brand, but also of all the products of the category in question (1). For instance, children tend to prefer one brand of fizzy sugary drinks to another if they see an advertisement for the former and will also increase their consumption of fizzy sugary drinks to the detriment of other categories of drinks such as water, milk or fruit juices.

A lack of action to restrict the marketing of unhealthy foods leads to the promotion of unhealthy diets and childhood overweight and obesity.

### Q: What are the most commonly used marketing techniques in the Region?

The most commonly used marketing techniques in the Region include television and online advertising; product placement and branding; sponsorship; direct marketing; product design and packaging; and point-of-sale.

### Q: How has unopposed marketing of unhealthy food affected children in the Region?

In the Region, child obesity is on the rise. The overindulgence in high calorie food and indoor leisure activities, such as watching television, surfing the net and playing computer games, all contribute to childhood obesity. Regionally, overweight and obesity in children under-5 years of age has increased from 5.8% to 8.1% between 1990 and 2012, which is above the global average of 6.7%. Overweight and obesity in adolescents (13–15 years) are highly prevalent (2).

### Q: What is the role of WHO in supporting countries to counter the unopposed marketing of unhealthy foods?

Regulating marketing of foods and non-alcoholic beverages to children is one of the strategic interventions as part of the prevention and reduction of risk factors in the *Regional framework for action* (3).

## Q: What are specific examples of how WHO has supported countries to counter the unopposed marketing of unhealthy foods?

Five countries now have food-based dietary guidelines, while a nutrition profiling model was developed and is being tested in seven countries to help them to improve food labelling and promote healthy food. Training is being developed, in collaboration with the University of Liverpool, on the regulation of marketing of foods high in salt, sugar and fat. The aim is to enhance capacity in Member States for implementing the WHO recommendations on marketing of food and non-alcoholic beverages to children.

In addition, an initiative to counter the unopposed marketing of unhealthy products, especially to children, was announced during the 62nd session of the Regional Committee and will be launched shortly. Lastly, WHO has worked with global experts to develop a draft roadmap to counteract unregulated and unopposed marketing of unhealthy products (5).

### References

1. G. Hastings et al., Review of research on the effects of food promotion to children, University of Strathclyde, 2003: <http://www.food.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf>.
2. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en/>, accessed 27 June 2016).
3. Regional framework for action. In WHO/ Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015. (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
4. Global strategy on diet, physical activity and health. Geneva: World Health Organization; 2015 (<http://www.who.int/dietphysicalactivity/pa/en/>, accessed 27 June 2016).
5. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

# 10. Promoting physical activity to prevent and control noncommunicable diseases

## Q: What is physical activity?

Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity includes exercise, as well as other activities which involve bodily movement and are done as part of playing, working, active transportation, household chores and recreational activities (1).

## Q: What is the intensity of physical activity?

Intensity refers to the rate at which the activity is being performed or the magnitude of the effort required to perform an activity or exercise. The intensity of different forms of physical activity varies between people. The intensity of physical activity depends on an individual's previous exercise experience and their relative level of fitness.

Moderate intensity requires a moderate amount of effort and noticeably accelerates the heart rate, such as brisk walking, dancing, gardening and housework. While vigorous intensity requires a large amount of effort and causes rapid breathing and substantial increase in heart rate, such as fast cycling, running, aerobics and climbing up a hill (2).

## Q: What are WHO-recommended levels of physical activity?

Children and youth aged 5–17 should accumulate at least 60 minutes of moderate-to-vigorous-intensity physical activity daily. This can include play, games, sports, transportation, chores, recreation, physical education, or planned exercise, in the context of family, school, and community activities (3).

Adults aged 18–64 should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity. This can include leisure time physical activity (for example: walking, dancing, gardening, hiking, swimming), transportation (e.g. walking or cycling), occupational (i.e. work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities (4).

Older adults aged 65 and above should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity (5).

## Q: What are the benefits of daily physical activity?

Being physically active is essential for good health throughout life. Regular and adequate levels of physical activity:

- reduce the risk of hypertension, coronary heart disease, stroke, diabetes, breast and colon cancer, depression and the risk of falls;
- improve bone and functional health; and
- are a key determinant of energy expenditure, and thus fundamental to energy balance and weight control.

On the other hand, physical inactivity (lack of physical activity) has been identified as the fourth leading risk factor for global mortality (6% of deaths globally). Moreover, physical inactivity is estimated to be the main cause for approximately 21–25% of breast and colon cancers, 27% of diabetes and approximately 30% of ischaemic heart disease burden (1).

## Q: What are the levels of physical activity in the Region?

In 2010, the Region had the highest prevalence of insufficient physical activity globally, which reached 31%. Women were less active than men, with differences of 10% and greater of prevalence between men and women (Insufficient is defined as attaining less than 150 minutes of moderate-intensity physical activity per week, or less than 75 minutes of vigorous-intensity physical activity per week, or equivalent) (6).

Among children and adolescents, the numbers were striking. Globally 81% of adolescents aged 11–17 were insufficiently physically active in 2010 (insufficient is defined as attaining less than 60 minutes of moderate-intensity daily physical activity). Adolescent girls were less active than adolescent boys.

## Q: What is WHO's role in supporting countries to promote physical activity?

Promoting physical activity through a life-course approach is one of the strategic interventions under the area of prevention and reduction of risk factors in the *Regional framework for action* (7). The seventh global target aims to halt the rise in diabetes and obesity (6,8). The Regional Office conducted a high-level forum on physical activity using a life course approach and has produced advocacy tools. The Regional Office also supported countries in the development of multisectoral plans of action for physical activity and developed a training course on social marketing and mass media campaign for physical activity with Sydney University, a WHO collaborating centre. Lastly, a regional advisory committee was set up to support implementation of the regional call to action on physical activity and a training package is being developed on mass media and social marketing in regard to physical activity and healthy diet (9).

## References

1. Physical activity. Geneva: World Health Organization; 2015 (<http://www.who.int/dietphysicalactivity/pa/en/>, accessed on 27 June 2016).
2. What is moderate-intensity and vigorous-intensity physical activity? Geneva: World Health Organization; 2015 ([http://www.who.int/dietphysicalactivity/physical\\_activity\\_intensity/en/](http://www.who.int/dietphysicalactivity/physical_activity_intensity/en/), accessed 27 June 2016).
3. Physical activity and young people. Geneva: World Health Organization; 2015 ([http://www.who.int/dietphysicalactivity/factsheet\\_young\\_people/en/](http://www.who.int/dietphysicalactivity/factsheet_young_people/en/), accessed on 27 June 2016).
4. Physical activity and adults. Geneva: World Health Organization; 2015 ([http://www.who.int/dietphysicalactivity/factsheet\\_adults/en/](http://www.who.int/dietphysicalactivity/factsheet_adults/en/), accessed on 27 June 2016).
5. Physical activity and older adults. Geneva: World Health Organization; 2015 ([http://www.who.int/dietphysicalactivity/factsheet\\_olderadults/en/](http://www.who.int/dietphysicalactivity/factsheet_olderadults/en/), accessed on 27 June 2016).
6. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en/>, accessed 27 June 2016).
7. Regional framework for action. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
8. Global strategy on diet, physical activity and health. Geneva: World Health Organization; 2015 (<http://www.who.int/dietphysicalactivity/pa/en/>, accessed 27 June 2016).
9. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

# 11. Importance of surveillance in preventing and controlling noncommunicable diseases

## Q: What is noncommunicable disease surveillance?

Noncommunicable disease surveillance is the ongoing, systematic collection and analysis of data to provide information on a country's noncommunicable disease burden, population groups at risk, estimates of noncommunicable disease mortality, morbidity, risk factors and determinants, as well as the response of national systems. It also allows for the tracking of health outcomes and risk factor trends over time.

Noncommunicable disease surveillance provides the information essential for programme and policy development, and is an integral tool in WHO's work to prevent and control noncommunicable diseases. (1, 2).

## Q: What is the WHO approach to noncommunicable disease surveillance?

WHO developed the global monitoring framework for noncommunicable disease surveillance, which revolves around three main pillars: 1) monitoring of mortality (specific focus on premature mortality from cardiovascular diseases, cancer, diabetes and chronic respiratory disease) and morbidity (cancer incidence); 2) monitoring of risk factors; and 3) monitoring of national system response (a core component of which is health system response and capacity) (3).

These three pillars are assessed using 25 indicators that evaluate whether or not the nine global noncommunicable disease voluntary targets are met, including a 25% relative reduction in premature mortality from noncommunicable diseases by 2025. The nine voluntary global targets address key noncommunicable disease risk factors, including tobacco use, salt intake, physical inactivity, high blood pressure and harmful use of alcohol. Under ideal national settings, these three pillars should be integrated into a comprehensive health information system.

## Q: What is the WHO STEPwise approach to surveillance?

The WHO STEPwise approach (STEPS) to surveillance is part of the WHO global noncommunicable diseases risk factor surveillance initiative. It was developed in response to the growing need for information on country-level trends in noncommunicable diseases. It is a simple, standardized method for collecting, analysing and disseminating data. The approach uses a standard survey instrument and a methodology that can be adapted to different country resource settings and assists in building country capacity.

By using the same standardized questions and protocols, all countries can use STEPS information not only for monitoring within-country trends, but also for making comparisons across countries. The approach encourages the collection of small amounts of useful information on a regular and continuing basis (2).

## Q: Why invest in noncommunicable disease surveillance?

Noncommunicable disease surveillance, monitoring and evaluation are tools that capture country performance and enhance abilities to control noncommunicable diseases. Adequate noncommunicable disease surveillance systems permit early identification of both people at high risk, as well as noncommunicable diseases that can be more easily managed with low-cost treatments, combined with other public health actions, than if otherwise later detected.

Treatment of noncommunicable diseases and their sequelae is costly, so prevention of noncommunicable diseases is a key strategy. Prevention and control of noncommunicable diseases requires surveillance of associated risk factors (tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol) and actions to promote the desired changes and risk reductions.

Hence, investing in noncommunicable disease surveillance is more cost effective (although requires funding of systems, setting up the needed resources in addition to capacity-building), compared with bearing the costly impact of noncommunicable diseases, as well as their associated treatments and control.

For example, the magnitude of the noncommunicable diseases pandemic in the Region is immense, causing 2.2 million deaths every year (4). Moreover, future projections indicate there will be an alarming increase in prevalence with the four main noncommunicable diseases causing as many as 2.4 million deaths in 2025, unless serious action is taken. These projections are based on recently gathered country-level data.

This information helps countries to formulate their strategies and national plans, focusing efforts on areas which require most attention.

Hence, better noncommunicable disease surveillance at country level provides better health information and thus better opportunities for countries to improve the health of their citizens. By using comprehensive health data, governments can formulate policies and programmes to prevent disease and measure progress, impact and efficacy of preventive efforts already in operation (5).

### **Q: Why is surveillance important?**

Surveillance is important in helping countries monitor and evaluate emerging patterns and trends of disease. Surveillance is crucial because it contributes to better prevention and management of noncommunicable diseases. Through the data collected, countries are able to set their priorities and develop targeted interventions to reverse the noncommunicable disease epidemic.

### **Q: What are the costs of surveillance (is it too expensive, especially for developing countries)?**

Surveillance costs include investment in human resources and infrastructure. Standardized protocols are available to produce comparable, as well as change-over-time, data to monitor risk factors, as well as policies being implemented. Using standardized questions, such as Tobacco Questions for Surveys is a cost-effective measure, and can be embedded in existing population-based surveys or censuses. Also, partnerships with national statistics offices or universities, research institutions and academia can expand surveillance capacity.

### **Q: How does WHO support surveillance at country level?**

Surveillance is one of the areas of the *Regional framework for action*, which has three strategic interventions (6). Accordingly, each country is expected to: implement/strengthen the WHO surveillance framework (7) that monitors mortality and morbidity, risk factors and determinants, and health system capacity and response; integrate the three components of the surveillance framework into the national health information system; and strengthen human resources and institutional capacity for surveillance, monitoring and evaluation.

In 2014, two countries completed the STEPwise survey and six countries moved forward in conducting their surveys. In addition, a training workshop on surveillance for noncommunicable diseases was conducted with the Eastern Mediterranean Public Health Network following the development of a regional training package (8). In future, the strategic priority is to strengthen country capacity to implement and strengthen the WHO surveillance framework.

## References

1. Public health surveillance. Geneva: World Health Organization; 2015 ([http://www.who.int/topics/public\\_health\\_surveillance/en/](http://www.who.int/topics/public_health_surveillance/en/), accessed 27 June 2016).
2. Surveillance. In: WHO/Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/data-statistics/index.html>, accessed 27 June 2016).
3. Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 (<http://www.who.int/nmh/publications/ncd-action-plan/en/>, accessed 27 June 2016).
4. Noncommunicable diseases. In: WHO/Noncommunicable diseases [website]. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/entity/ncds/index.html>, accessed 27 June 2016).
5. Surveillance. In: World Bank/Public health at a glance [website]. Washington: World Bank headquarters; 2016 ([http://web.worldbank.org/archive/website01213/WEB/0\\_\\_CO-79.HTM](http://web.worldbank.org/archive/website01213/WEB/0__CO-79.HTM), accessed 27 June 2016).
6. Regional framework for action. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/noncommunicable-diseases/framework-for-action/index.html>, accessed 27 June 2016).
7. Alwan A et al. Monitoring and surveillance of chronic noncommunicable diseases: progress and capacity in high-burden countries. *The Lancet*. 2010;376(9755): 1861–1868. DOI: 10.1016/S0140-6736(10)61853-3 ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)61853-3/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)61853-3/fulltext), accessed 27 June 2016).
8. The Work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director 2014. Cairo: WHO Regional Office for Eastern Mediterranean; 2015 (<http://www.emro.who.int/annual-report/2014/index.html?format=html#annual-report-of-the-regional-director-2014>, accessed 27 June 2016).

# 12. Management of noncommunicable diseases in primary health care

## Q: Why is it important to focus on primary health care as an avenue for the management of noncommunicable diseases?

People with noncommunicable diseases, or at risk of developing one, require long-term care that is proactive, patient-centred, community-based and sustainable. Such care can be delivered equitably only through health systems based on primary health care (1,2).

People with a noncommunicable disease may show no symptoms until the disease has progressed substantially – the first manifestation may be a heart attack or stroke. Screening of asymptomatic individuals for key risk factors can identify people at high risk and offer the possibility to prevent progression of the disease. Primary health care is the most frequent entry point for people to the health system and therefore offers the greatest potential to detect high-risk individuals who may be visiting health services for other health reasons.

Furthermore, the scale of the noncommunicable diseases burden means that it is no longer feasible to manage these diseases mainly through specialists or in hospitals. The volume of patients has the potential to overwhelm such referral levels services and result in high costs to both the health system and to individuals. The total risk approach is suitable for implementation by non-specialist health workers at primary health care level. Primary health care therefore represents a feasible, affordable and equitable option for reaching people in need of health care for noncommunicable diseases.

### **Health governance**

Most countries do not have adequate capacity in ministries of health to formulate evidence-informed policies and strategic plans, and have limited access to, and use of, quality data for informing policy and strategy development. There is also a lack of recognition that noncommunicable diseases are part of the essential primary health care package.

### **Health workforce**

There is a shortage in the health care workforce. In 2012, the rate of physicians per 10 000 population was very low ranging from 0.3 to 7.7 physicians per 10 000. In addition to numerical shortages there is an inequitable distribution, retention and performance (3). This is coupled with lack of sufficient training for the health workforce.

### **Essential medicine and technologies availability and affordability**

Challenges relating to regulatory authorities for medicines include: weak organizational structure and technical capacity; lack of national medicines policies; transparency and accountability in regulation and supply of medical products; weak promotion/advertising of medical products; and unregulated access to controlled medicines.

### **Health financing**

There is limited national expertise in health financing in general, and specifically health financing arrangements, such as social health insurance (4).

These challenges are compounded further when a country is experiencing a humanitarian crisis.

## **Q: What are the WHO-recommended approaches and tools to managing noncommunicable diseases in primary health care?**

WHO provides countries with a number of tools and recommended approaches to manage noncommunicable diseases and prevent complications. Heart attacks and strokes can be prevented if people at high risk can be detected early and treated effectively.

The WHO Package of Essential Noncommunicable (PEN) disease interventions (1) and the recommended total-risk approach (4,5) offer individual health care interventions that complement population-based interventions, such as reduction of tobacco use and salt consumption.

WHO PEN is designed to integrate the management of diabetes, cardiovascular diseases and chronic respiratory disease into primary health care. These tools enable early detection and management of the four common noncommunicable diseases to prevent life-threatening complications (e.g. heart attacks, stroke, kidney failure, amputations, and blindness). The package includes a list of medicines that should be available in all health care facilities and a set of necessary interventions for countries to draw on and utilize.

The WHO-recommended total risk approach 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, stroke and diabetes complications.

## **Q: What is the total cardiovascular risk approach?**

The total risk approach to prevention and management of cardiovascular disease is a cost-effective intervention available for prevention of heart attacks and stroke.

The total risk approach uses a simple score chart to calculate an individual's risk for a heart attack or stroke within the next 10 years. The person's risk score is determined by the combined effect of a number of risk factors (age, gender, tobacco use, blood pressure, blood cholesterol and presence of diabetes). The clinical management of the individual is then tailored according to their risk score, using standardized protocols. The person will receive lifestyle counselling and follow-up, with or without medications, according to their level of total risk, rather than according to thresholds of individual risk factors, such as hypertension. The total risk approach therefore enables integration of the management of hypertension, diabetes and other risk factors.

## **Q: Why should countries implement a total cardiovascular risk approach rather than focusing on single risk factors like high blood pressure and diabetes?**

The total risk approach is one of the cost-effective interventions (best buys) for addressing noncommunicable diseases – “Drug therapy and counselling, including glycaemic control for diabetes and control of hypertension, using a total risk approach to individuals who have had a heart attack or stroke and to persons with high risk ( $\geq 30\%$ ) of a fatal or nonfatal cardiovascular event in the next 10 years”.

Voluntary global noncommunicable disease target number 8 is specifically related to this best buy, with treatment eligibility determined through use of a risk score – “At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and stroke”.

Substantial evidence supports the total risk approach as both more effective and more cost-effective than the single risk factor approach. The total risk approach recognizes the high prevalence of multiple co-existent noncommunicable disease risk factors, particularly as people age. An integrated approach to addressing risk factors minimizes the risk of fragmented care or failure to diagnose co-morbidity, as well as offering a comprehensive approach that is key to addressing diseases of lifestyle. Furthermore, management decisions based on traditional single risk factor thresholds may result in large numbers of people being started on medications despite a low overall cardiovascular risk. In addition to the risk of side-effects, this has financial implications for individuals and health systems. Conversely, a single risk factor approach may fail to provide the medications needed to effectively reduce the risk of heart attack and stroke.

Provision of treatment based on a total risk threshold also allows targeting of scarce resources toward people who have the greatest potential to benefit. In low-resource settings, patients with a previous heart attack or stroke and those at >30% total risk, can be prioritized to receive drug treatment. If resources permit, the threshold for treatment can be decreased to 20% or lower.

## **Q: What are the minimum requirements for implementing the WHO-recommended total-risk approach?**

Implementation of the total risk approach requires inclusion of total risk protocols in national guidelines, training of primary health care staff on the approach, and availability of a minimum set of essential medicines, technologies and health information tools at primary health care level. These minimum requirements can be considered a starting point for integration of noncommunicable disease services in primary health care and form part of a basic services package that aims to achieve universal health coverage.

## **References**

1. Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource setting. Geneva: World Health Organization; 2015 ([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 27 June 2016).
2. WHO Global action plan on the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 (<http://www.who.int/nmh/publications/ncd-action-plan/en/>, accessed 27 June 2016).
3. Demographic, social and health indicators of the WHO Eastern Mediterranean, 2013. Cairo: WHO Regional Office for Eastern Mediterranean; 2013 ([http://applications.emro.who.int/dsaf/EMROPUB\\_2013\\_EN\\_1537.pdf](http://applications.emro.who.int/dsaf/EMROPUB_2013_EN_1537.pdf), accessed 27 June 2016).
4. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014 (<http://www.who.int/nmh/publications/ncd-status-report-2014/en/>, accessed 27 June 2016).
5. WHO prevention of cardiovascular disease: guidelines 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 27 June 2016).

# 13. Prevention and control of noncommunicable diseases in emergencies

## Q: What is an emergency?

An emergency is a sudden and usually unforeseen event that calls for immediate measures to minimize its adverse consequences. Emergencies include natural disasters, such as earthquakes and severe meteorological events, but also “complex emergencies” resulting from armed conflict and its consequences, such as civil disruption and refugee crises (1).

## Q: Why are people with noncommunicable diseases more vulnerable to the health impact of emergencies?

Common characteristics of noncommunicable diseases explain why individuals with noncommunicable diseases are more vulnerable to the health impact of emergencies.

Noncommunicable diseases are chronic conditions:

- that require the provision of continuous care over an extended period (often lifelong);
- that often create a dependence in relation to a medicine, a medical technology or an appliance;
- whose evolution can be punctuated by acute complications that require specialized medical care, incur health costs and may limit function, affect daily activities and reduce life expectancy;
- that necessitate coordination of care provision and integration between different providers and settings, with regular medical follow-up.

The elderly, children with noncommunicable diseases and people in need of palliative care are particularly vulnerable.

## Q: What are the challenges in treating and managing noncommunicable diseases in emergencies?

Noncommunicable diseases require ongoing management for optimal outcomes, which is challenging in emergency settings. In addition, natural disasters or conflicts can increase the risk of acute noncommunicable disease exacerbations and decrease the ability of health systems to respond. Finally, complex emergencies may compromise prevention and control of these diseases over a prolonged period; result in lack of access to timely treatment and poor outcomes on patients; and increase costs of managing complications for humanitarian agencies.

There are multiple potential mechanisms by which emergencies may increase the burden or interfere with the management of noncommunicable diseases.

### Physical injuries

The interaction between noncommunicable diseases and physical injuries sustained during emergencies can result in life-threatening complications. For example, after the Sichuan earthquake in May 2008, frontline medical teams found that up to 38% of survivors needed acute management of a pre-existing disease before surgery required for an earthquake-related injury (2).

### Degradation of living conditions

Loss of shelter, shortage of water and food, lack of food that is suitable for disease-related dietary restrictions, lack of storage for medications, forced displacement, unemployment and the need for physical security (i.e. from combatants) may all reduce the ability of affected people to appropriately manage their condition.

## **Interruption of treatment**

Destruction of key health infrastructure and the medical supply chain; shortage of health providers (who may have been injured or killed), and lack of access to safe health care facilities may all preclude appropriate management of noncommunicable diseases in emergency settings. Even when health infrastructure is undamaged and accessible, lack of consistent access to power or water can mean that life-sustaining treatments, like haemodialysis, are unavailable.

In general, the capacity and sophistication of the pre-emergency health system will determine the likelihood of care in the post-emergency setting. Systemic weaknesses, such as an incomplete or absent national strategy for noncommunicable diseases, fragmented medical services and limited human resources, as often observed in many low- and middle-income countries, are magnified by an emergency. In many fragile states, capacity for disease management may remain much lower than pre-emergency levels long after the acute phase has resolved.

## **Q: What should be the focus for noncommunicable disease management during emergencies?**

Humanitarian response in emergencies can be divided into three phases: preparation/mitigation, emergency response, and post-emergency/reconstruction.

Effectively managing noncommunicable diseases in emergencies will require inclusion of care for noncommunicable diseases into standard operating procedures, ideally integrated with other aspects of relief efforts.

The focus of the health sector response for the management of noncommunicable diseases during these various phases of emergencies should be to prevent and reduce excess disease, death and suffering from noncommunicable diseases.

In the acute phase of emergencies or in rapid onset emergencies, for individuals living with a chronic condition prior to the crisis, maintaining access to pre-emergency treatments should be the mainstay of the response. Minimum standards for disease management in emergencies revolve around four priority actions. First, to identify individuals with diagnosed noncommunicable diseases and to determine whether they have continued access to the treatments they were receiving before the emergency. Second, to identify treatment options for people with life-threatening acute exacerbations (e.g. heart attacks) or those for who interruption of treatment could be life-threatening or cause significant avoidable suffering (e.g. diabetes patients requiring insulin, patients requiring kidney dialysis treatment or transplant patients). Third, in situations where treatments for noncommunicable diseases are unavailable, it is important to create effective and practicable standard operating procedures for referral. Lastly, to assess and facilitate the availability of essential medication, diagnostic equipment and core laboratory tests for the routine ongoing management of noncommunicable diseases, through the primary health care system, based on the WHO model list of essential medicines.

Cancer care, in particular, requires a complex diagnostic and service delivery setup. In many low- and middle-income countries, cancer care capacity may already be limited before an emergency. Efforts should therefore be made by humanitarian actors and the ministry of health in each country to integrate care for noncommunicable diseases into its emergency preparedness and response planning for the health sector, in order to identify and resolve ethical dilemmas related to limited resources, competing priorities and distributive justice.

During the recovery phase after emergencies or during protracted emergencies, such as long-term settlements of displaced populations, the management of noncommunicable diseases should expand to include management of sub-acute and chronic presentations of previously identified noncommunicable diseases, as well as ongoing care, i.e. lifestyle-related disease prevention and palliative care.

The post-emergency phase could also offer opportunities to improve care from the baseline, including deliberate integration of management of noncommunicable diseases into the primary health care system and a concerted public health response to control risk factors at the population level. The WHO package of essential noncommunicable disease interventions for primary health care in low-resource settings provides a set of protocols, medicines and equipment for managing the four common noncommunicable diseases (3). These interventions can be used as a guide and adapted to the local context.

## References

1. Definitions: emergencies. In WHO/Humanitarian Health Action. Geneva: World Health Organization; 2015 (<http://www.who.int/hac/about/definitions/en/>, accessed 27 June 2016).
2. Chan, E. Y., and Kim, J. Chronic health needs immediately after natural disasters in middle-income countries: the case of the 2008 Sichuan, China earthquake. *European Journal of Emergency Medicine*. 2011;18(2), 111–114.
3. Package of essential noncommunicable (PEN) disease interventions for primary health care in low-resource settings. Geneva: World Health Organization; 2010 ([http://www.who.int/ncds/management/pen\\_tools/en/](http://www.who.int/ncds/management/pen_tools/en/), accessed 27 June 2016).



Noncommunicable diseases, commonly known as chronic or lifestyle-related diseases, include heart diseases, cancers, lung diseases and diabetes. These diseases are the world's biggest killers and a leading cause of death in the Region, responsible for as many as 1.7 million deaths every year. The main noncommunicable diseases are caused primarily by four major risk factors: tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol, and so many deaths could be prevented through simple lifestyle-related changes and the implementation of cost-effective interventions by governments. This booklet, intended for policy-makers, answers some frequently asked questions on noncommunicable diseases and the measures and interventions needed to prevent and control them.