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# MULTISECTORAL ACTION PLAN OF TURKEY FOR NONCOMMUNICABLE DISEASES

2017-2025



Ankara 2017



# Multisectoral Action Plan of Turkey for Noncommunicable Diseases 2017-2025

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## Abbreviations

BMI	: Body mass index
NCD	: Noncommunicable diseases
CREDIT	: Chronic Renal Disease in Turkey
DALY	: Disability-adjusted life-year
GARD	: Global Alliance against Chronic Respiratory Diseases
ICD-10	: International Statistical Classification of Diseases and Related Health Problems, 10 <sup>th</sup> edition
SALTurk	: Survey on the relationship between hypertension and salt intake in Turkish population
FCTC	: Framework Convention on Tobacco Control
TURDEP	: Turkish Epidemiology Survey of Diabetes, Obesity and Hypertension





## Preface

*Chronic diseases are quickly snowballing into a formidable problem in both developed and developing countries, pushing health services beyond their limits and swallowing the lion's share of health services' budgets. With their rapidly increasing prevalence rate, chronic diseases have emerged as the major cause of deaths and disabilities around the world. As a consequence of the lengthening in life expectancy during the last half century, chronic diseases have come to be considered as the main cause of mortality and morbidity in our country and around the globe, necessitating new approaches to health care by health authorities. Risk factors for chronic diseases can be dealt with successfully only through national policies and long-term strategies. In line with worldwide trends, the incidence of chronic diseases and their risk factors is gradually increasing in our country.*

*It has become a priority concern for modern societies to review all factors affecting health via an integrated and multisectoral approach. To assert a common vision and roadmap and to counter the ever-growing threat more strongly, the Ministry of Health has developed the Programme for Developing Multistakeholder Health Responsibility. This Programme consists of 12 main components, of which the ninth is the Development of Noncommunicable Disease Management.*

*The Multistakeholder Action Plan on Noncommunicable Diseases has been formulated to improve our health sector in terms of noncommunicable diseases, to facilitate multisectoral cooperation, to ensure the implementation of health policy by all institutions and to develop a common perspective. Preparation of the Action Plan has been carried out jointly by the relevant institutions and civil society and other organizations.*

*The Ministry of Health has drawn up programmes geared towards the prevention and control of chronic diseases and risk factors. The Multistakeholder Action Plan on Noncommunicable Diseases 2017–2025 is a framework document covering all existing programmes.*

*National health policies seek primarily to create a healthy community of healthy individuals. This goal can be attained if the programmes we have developed to promote the health of our citizens to the highest level are implemented patiently, with diligence and on an ongoing basis. I believe this effort will give a boost to the fight against noncommunicable diseases and I would like to thank everyone involved in it.*

*Professor İrfan ŞENCAN  
President, Turkish Public Health Institution*





Anatolian Fortress





## Introduction

The rises in education and income levels, changing dietary habits and improvements in the prevention of noncommunicable diseases (NCDs) in the 20th century have resulted in increased life expectancy. Meanwhile, the growth in the number of elderly people versus the child population has shifted the focus of health problems in society from childhood diseases to NCDs in the elderly population.

Although a desirable phenomenon *per se*, increased life expectancy has also increased the incidence of NCDs (1). In 2012 there were 56 million deaths globally. Of these, 38 million were associated with NCDs, principally cardiovascular diseases, diabetes, cancers and chronic respiratory diseases. One-third of these deaths (28 million) were in low- and middle-income countries (2).

NCDs have major financial and economic implications and threaten the sustainability of health services in both developed and developing economies. The burden of NCDs is heavier on low- and middle-income countries where the costs of health care and treatment often drive individuals quickly beneath the poverty line (1).

With a large proportion of young people, the demographic structure of Turkey resembles developing countries. In recent years, considerable achievements have been attained in maternal and child health, immunization and communicable diseases. Under the Health Transformation Programme, fundamental changes have been made to the health system, which have led to a rapid increase in health insurance coverage, improved access to health services and reduced regional inequalities in access to care, with a demonstrated impact on infant, child and maternal mortality (3,4).

Now, as in developed countries, causes of death are increasingly related to NCDs. Unless contained, such diseases will continue to rise in the coming decade in parallel with the growth in the elderly population, resulting in high rates of NCD-related deaths and disabilities. The adverse impacts of NCDs on health systems increase constantly and threaten socioeconomic development, and also drain a significant portion of Turkey's health resources (1).

Discussions of measures against NCDs are taking place in several international contexts as these diseases are on the rise globally regardless of the development levels of countries and structures of social groups.





## Multisectoral Action Plan of Turkey for Noncommunicable Diseases 2017–2025

Turkey, like many countries, is facing a growing burden from NCDs. Not only do they cause 87% of all deaths but, most worryingly, the probability of dying prematurely (before the age of 70 years) from NCDs in Turkey is 18%, which means that nearly one in every five adults dies before they should. Nearly half (47%) of all deaths are from cardiovascular diseases such as heart attacks and strokes (5). At 15g a day, levels of salt intake in the population are three times higher than recommended by WHO and FAO; as a result, just under a quarter of the population has hypertension (6,7). In addition, 42% of men are tobacco smokers (8), while nearly one in three adults (29%) are obese (9).

Premature death or living long-term with an NCD or related disability have socioeconomic consequences and constitute a double burden to sustainable social and economic development. Reduced income and early retirement caused by NCDs can lead individuals and households into poverty. At the societal level, in addition to surging health care costs there are increased demands for social care and welfare support as well as the burden arising from absenteeism at school or work, decreased productivity and the turnover of employees. The high levels of risk factors for NCDs in Turkey indicate that unless action is taken rapidly, their costs will become an even greater socioeconomic burden for the country. The response needs to be faster and more far-reaching than at any time in the past.

For that reason, a Multisectoral Action Plan of Turkey for Noncommunicable Diseases 2017–2025 has been drawn up. Coordinated by the Public Health Institute of the Ministry of Health, and with the participation of other related ministries, authorities, universities and civil society, this Action Plan adopts a holistic and high-level multidisciplinary approach, with the priority objectives of ensuring effective implementation and the sustainability of prevention and protection activities. National targets and mechanisms are included for coordination of the government's response. The most cost-effective targets will require rapid multisectoral action and enforcement. A coordinated and significantly scaled up whole-of-government and whole-of-society approach is required to:

- reduce avoidable premature mortality and meet the NCD-relevant targets of the Sustainable Development Goals (SDGs);
- reduce the economic, social, environmental and public health threat of NCDs;
- meet all four commitments agreed by member states at the United Nations General Assembly high-level review in 2014 (10);
- provide a comprehensive report to the third high-level meeting at the United Nations General Assembly in New York in 2018.

The Ministry of Health has prioritized a set of key recommendations for the four strategic pillars of the Action Plan:

- strengthen national capacities, leadership, governance and partnerships;
- reduce modifiable and preventable risk factors;
- strengthen the response of the health system; and
- monitor trends and determinants of NCDs and evaluate progress in their prevention and control.



The *vision* for the Action Plan is a health-promoting Turkey free of preventable NCDs, premature death and avoidable disability.

The *goal* is to raise the health and wellbeing of the population through reducing preventable deaths and the disability burden attributable to NCDs and thus enabling citizens to maintain the highest attainable health status at all ages.

The *scope* of the Action Plan provides a national road map for all stakeholders to take coordinated and consistent steps to attain the national targets set for reducing NCDs, including cardiovascular diseases, cancer, chronic heart diseases and diabetes, which are associated with the highest number of deaths and burden of diseases as well as the common major risk factors including tobacco use, unhealthy diets, physical inactivity and alcohol consumption.

The *strategic approach* of the Action Plan includes the development of health promotion and disease prevention programmes at society level aiming to reduce both health inequalities and the incidence rate of NCDs. These include the early detection of high-risk groups, systematic and integrated policies for effective treatment and care accessible to the whole of society and a comprehensive approach to strengthen multisectoral collaboration at national level.

The Action Plan contains the following six targets:

1. to ensure the prioritization of prevention and control of NCDs in the national agenda and in internationally agreed development targets;
2. to strengthen national capacities, leadership, governance and partnerships for the prevention and control of NCDs through leadership, advocacy and partnerships;
3. to reduce modifiable risk factors and underlying social determinants for NCDs through establishing environments for health promotion;
4. to strengthen and guide health systems in their response to prevention and control of NCDs and to address the underlying social determinants through people-centred primary health care and universal health insurance;
5. to strengthen and support national capacity for quality research and development on prevention and control of NCDs;
6. to monitor the trends in and determinants for NCDs and assess progress on prevention and control.












## Global and national targets for NCDs

In September 2011, at the 66th session of the United Nations General Assembly, heads of state and government adopted resolution No. 66/2: Political Declaration on Noncommunicable Diseases (11), and committed themselves to develop and strengthen multisectoral policies and plans for the prevention and control of NCDs and to develop national targets and indicators based on national situations by 2013 (Table 1).

**Table 1. Global and national targets for NCDs**

	Global Targets	National Targets
	A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes or chronic airway diseases	A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes or chronic airway diseases
	At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	Halt the rise in alcohol consumption
	A 10% relative reduction in the prevalence of insufficient physical activity	A 10% reduction in the prevalence of insufficient physical activity
	A 30% relative reduction in the mean population intake of salt/sodium	A 30% relative reduction in the mean population intake of salt/sodium
	A 30% relative reduction in the prevalence of current tobacco use in persons aged 15+ years	A 30% relative reduction in the prevalence of current tobacco use in persons aged 15+ years
	A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	A 20% reduction in the prevalence of raised blood pressure
	Halt the rise in diabetes and obesity	Halt the rise in diabetes and obesity
	At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	At least 50% improvement in cardiovascular drug therapy and counselling (including people who had heart attack and strokes)
	An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities	Not included in national targets since Turkey has achieved the target of above 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities.



In Turkey, the following action was taken in order to set national NCD monitoring and evaluation targets to be achieved by 2025 (Annexes 1–3):

- working areas were reviewed with the participation of nongovernmental organizations and professional societies and in the light of examples of NCD prevention and control efforts;
- the current status was assessed in line with the 2010 data;
- nine voluntary global NCD prevention and control targets set by the World Health Organization (WHO) were reviewed and adapted to Turkey by academics;
- 25 country-specific indicators were identified and target-specific priority areas were discussed.

Eight of the nine global targets set by WHO were adapted for the national context. The requirement for 80% availability of the affordable basic technologies and essential medicines (including generics) required to treat major NCDs in both public and private facilities was not included in national targets since this is already the case in Turkey.



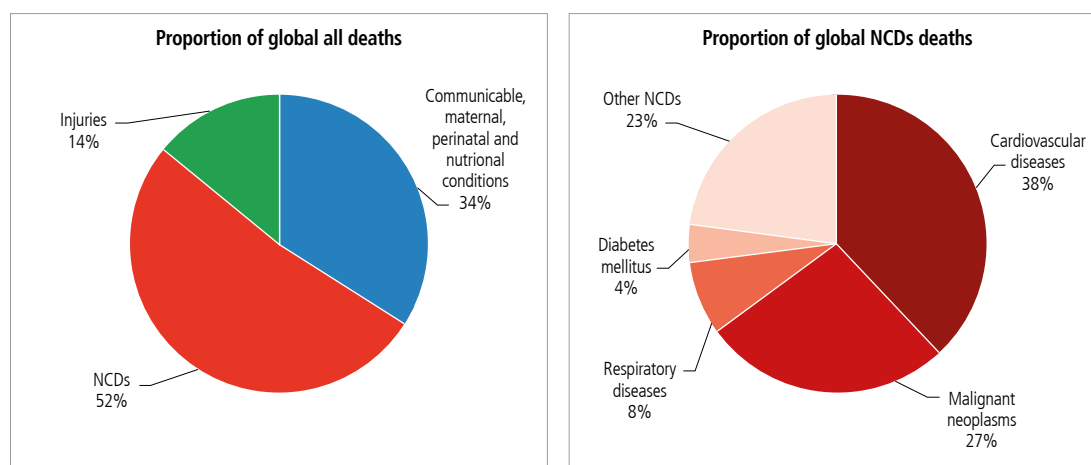
## Prevention and control of NCDs

NCDs are the leading cause of deaths worldwide, particularly in low and middle-income communities. It can be said that there is an epidemic of NCDs worldwide. These diseases can, however, be prevented by control of related risk factors, early diagnosis and prompt treatment. In 2012, of the estimated 56 million deaths worldwide, NCDs (in particular cardiovascular diseases, cancers and chronic airway diseases) were responsible for 38 million deaths, up from 31 million in 2000. It is estimated that by 2030, NCDs will cause 52 million deaths (2). One third (28 million) of deaths related to NCDs occur in low- and middle-income countries.

Of these deaths, 46.2% (17.5 million) are caused by cardiovascular diseases, 21.7% (8.2 million) are caused by cancer, 10.7% (4 million) are caused by chronic airway diseases including chronic obstructive pulmonary diseases, and 4% (1.5 million) are caused by diabetes. These four major diseases are responsible for 82% of NCD deaths.

Premature deaths among people aged under 70 years can also be attributed to NCDs. In 2012, an estimated 42% of NCD-related deaths occurred in this age group (16 million premature deaths, up from 14.6 million in 2000), of which 82% occurred in low and middle-income countries. Forty-eight percent of NCD-related deaths are premature in low and middle-income countries while 28% of premature deaths occur in high-income countries (Fig. 1) (2).

**Fig. 1. Proportion of all deaths and deaths from NCDs, worldwide, population aged 30–70 years, 2012**



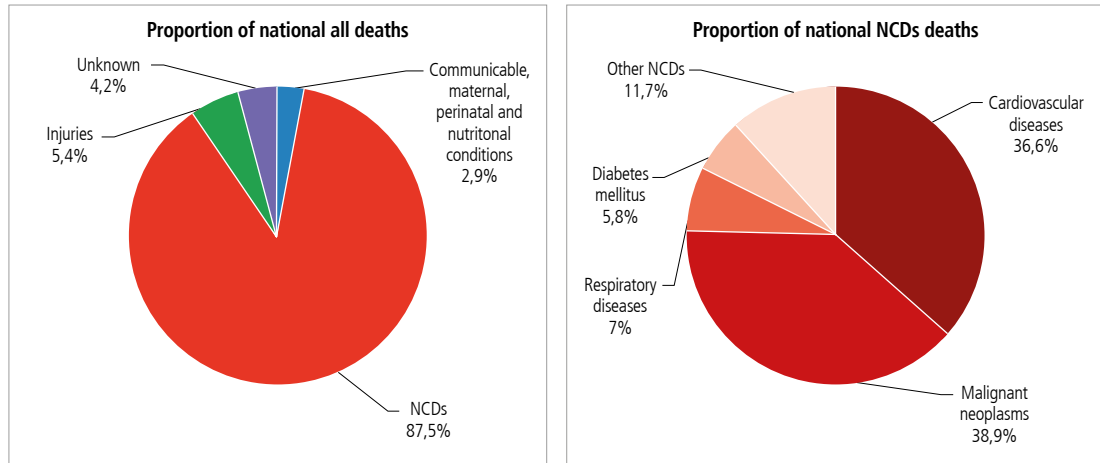
Source: WHO (2).

Chronic diseases are increasing in Turkey as a result of an ageing population and changing lifestyles (Fig. 2).

In 2002–2012, there was a decrease in the number of disability-adjusted life-years (DALYs) for communicable diseases, pregnancy, neonatal and nutrition-related diseases (Group 1) and injuries (Group 3) but an increase in NCD-related DALYs (Group 2) (Fig. 3,4) (13).

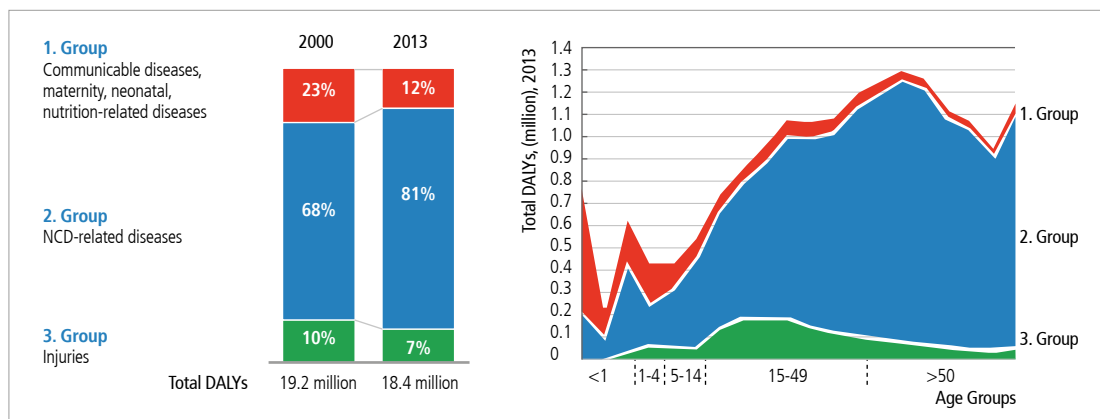


**Fig. 2. Proportion of all deaths and deaths from NCDs, Turkey, population aged 30–70 years, 2012**



Source: Turkish Statistical Institute (12).

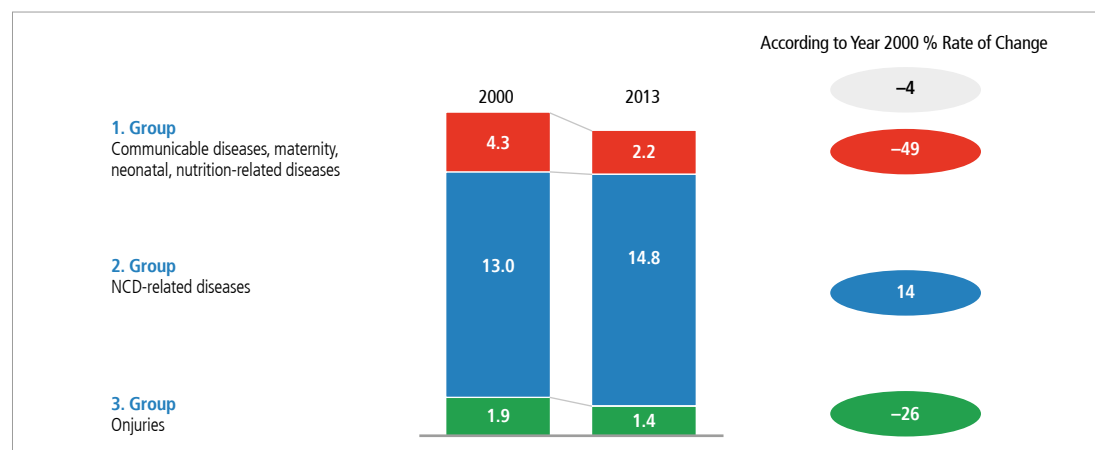
**Fig. 3. Share and impact of NCDs in total burden of disease, total DALYs, both genders, Turkey, 2000–2013**



Source: Ministry of Health, General Directorate of Health Research 2016 (13).



**Fig. 4. Rate of change in disease groups causing the total burden of disease, million DALYs, both genders, Turkey, 2000–2013**



Source: Ministry of Health, General Directorate of Health Research 2016 (13).

## Evidence-based programmes to counter risk factors for NCDs

To prevent premature mortality caused by avoidable NCDs, specific evidence-based programmes are being developed and implemented to prevent tobacco use and smoking, unhealthy nutrition and alcohol consumption and to encourage physical activity (Annex 4).

### National tobacco programme (2015–2018)

On 21 May 2003, the Framework Convention on Tobacco Control (FCTC) was adopted by the 56th World Health Assembly as the first international treaty to respond to the globalization of the tobacco epidemic and to counter the marketing strategies of the tobacco companies. The Convention was adopted in Turkey by law No. 5261 and came into force after its publication in Official Gazette No. 25656 of 30 November 2004. A national tobacco control programme was developed by the Ministry of Health for the period 2006–2010, in order to plan activities within the scope of the Convention, to control tobacco consumption in Turkey and to protect the population, in particular younger people, from smoking (14). The programme has been updated to cover the period 2015–2018 and is currently being implemented by the Ministry.

Turkey was the first country to adopt all six MPOWER strategies defined by WHO in support of the Convention (15). The first law to restrict smoking in health and training institutions and on public transport vehicles came into force in 1996. This law also: (i) banned all types of advertisement and promotion of tobacco products; (ii) held television companies responsible for producing educational programmes explaining the harms of smoking; (iii) banned the sale of tobacco to young people under 18 years; and (iv) introduced pictorial health warnings on cigarette packs. The law was amended in 2008 in line with the provisions and requirements of the Convention. The amended law expanded to include smoke-free areas, facilities such as restaurants, bars and cafes, taxis and open spaces at schools. The law also banned all types of promotion and sponsorship related to tobacco products.

As part of the law enforcement process, tobacco taxes were regularly increased between 2010 and 2011 and adjusted to levels advised by WHO. As of 2016, the tax rate per pack is 83.6%. Pictorial health warnings have been placed on tobacco packs since May 2010. Both text and

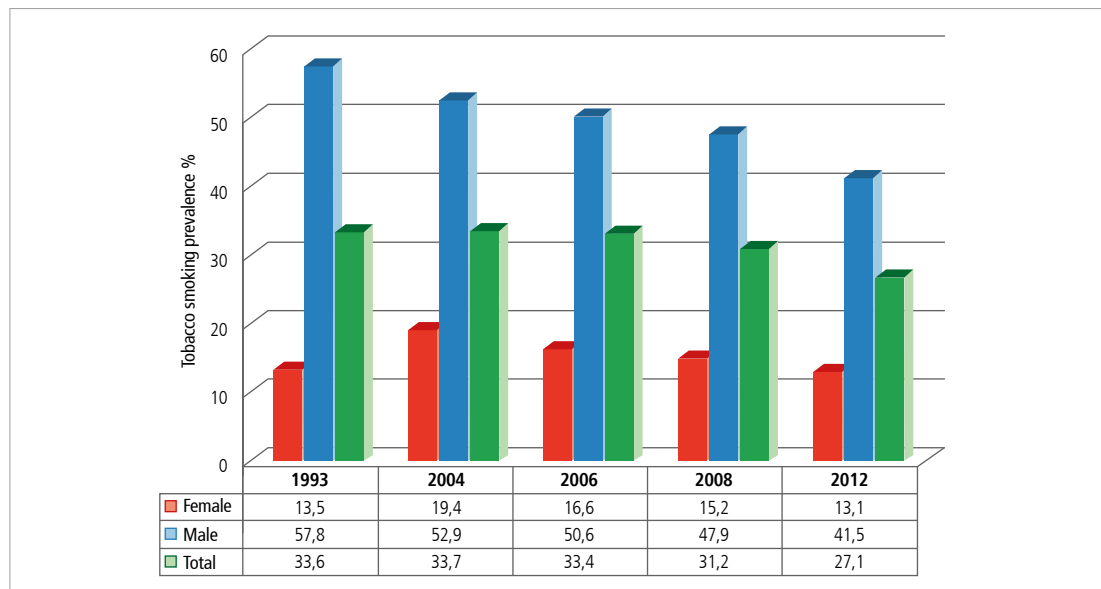




pictorial health warnings cover 65% of both the front and back of tobacco packs. Enforcement of comprehensive smoke-free air zones has been established. Between 2009 and May 2016, 12 217 604 closed area inspections were conducted. Free national landlines to support people who are willing to quit smoking were established in 2010. Smoking cessation clinics (415 as of March 2016) have been providing free services for applicants. In addition, within the scope of the law, bans on tobacco advertising, promotion and sponsorship have been comprehensively enforced (15).

In 2012, there were 1.1 billion known smokers worldwide (2). The risks related to tobacco use include not only direct risks but also second-hand smoking. Each year an estimated 6 million people die due to tobacco use or second-hand smoking (2). According to the Global Adult Tobacco Survey 2012, there are a total of 14.8 million smokers in Turkey (18). Smoking prevalence is higher in men (41.5%) compared to women (13.1%). The prevalence of tobacco use did, however, decrease in 1993–2012 (Fig. 5).

**Fig. 5. Smoking prevalence in Turkey, 1993–2012**



Source: WHO Regional Office for Europe (16), WHO (17).

Turkey is one of only two countries in the world that have carried out the Global Tobacco Adult Survey twice. The 2008 and 2012 survey results are comparable as the same methodology was used. A comparison of the two surveys indicates significant changes in the course of the four-year period when the national tobacco control programme and action plan were in place. Smoking prevalence declined from 31.2% in 2008 to 27.1% in 2012. This is true for both men (from 47.9% to 41.5%) and women (from 15.2% to 13.1%) (18). This means a total reduction of 13.1% (13.4% for men and 13.8% for women).



## Healthy Nutrition and Physical Activity Programme (2014–2017)

As a reaction to the rising obesity epidemic, Turkey hosted the WHO European Ministerial Conference on Counteracting Obesity on 15–17 November 2006. The Conference addressed different aspects of the epidemic and discussed recommendations for solutions. It was attended by relevant ministries and by senior decision-makers in various sectors such as trade, economy, finance, agriculture, sport, transport, labour, urban planning, education and local government, representatives of international and nongovernmental organizations, expert bodies and the media. During the Conference, Turkey's Minister of Health Professor Recep Akdağ and the WHO European Regional Director Dr Marc Danzon signed the European Charter on Counteracting Obesity.

Faced with the need to expedite obesity prevention efforts, attain the goals set, design new goals and strategies based on needs and provide a framework for the activities, Turkey developed the Obesity Prevention Programme 2010–2014 in order to create the scientific and political will needed to counteract the rising obesity epidemic and strengthen intersectoral cooperation. As the programme included sufficient and balanced nutrition and promotion of regular physical activity to combat obesity, it was renamed the Healthy Nutrition and Physical Activity programme of Turkey and published as a Circular from the Prime Minister's Office in Official Gazette No. 27714 of 29 September 2010. The Programme was updated later to cover 2014–2017 (19).

The Programme provides for various measures including physical training and regulation of food items sold in school canteens in order to promote healthy diets and physical activity in schools. The National Physical Activity Guide was published in 2014.

The Law on Establishment and Broadcasting Services of Radio Stations and TV Channels, which was adopted in 2011, includes restrictions on the marketing of products or services that may harm the mental, physical and moral values of children. The law also lays down that commercial communications for foodstuffs and beverages with ingredients that are not recommended to be excessively consumed in general diets shall not be broadcast immediately before or after or during children's programmes.

The school milk programme is the broadest and only government initiative aiming to protect and improve community health as part of food and health policies. The programme is implemented in cooperation between the Ministry of Food, Agriculture and Livestock, the Ministry of Health and the National Milk Council. It aims to promote milk consumption among pre- and elementary school children and thus contribute to sufficient and balanced nutrition and support their growth and development.



### Programme for reducing high salt consumption in Turkey (2017–2021)

The government works in cooperation with the food industry to reduce the amount of salt in food. The salt content in bread, tomato paste and other various processed food items were reduced by the Turkish Food Codex – Communiqué on Bread and Bread Types (January 2012) and Turkish Food Codex – Communiqué on Tomato Paste and Mashed Food (June 2014). The salt content in olives was reduced by the Communiqué on Table Olives in August 2014. The government and the Ministry of Food, Agriculture and Livestock are currently working on reducing salt in cheese. The sale of all kinds of chips in school canteens was banned in July 2011. Power drinks, carbonated drinks, flavoured drinks, fries and chips may not be sold in school canteens nor may they be made available in vending machines in schools pursuant to the relevant circular published in 2011. Instead, canteens are to offer milk, yogurt drink, yogurt, juice, fresh fruit juice and fruit in individual pieces (20).

### Activities to reduce alcohol consumption

In 2013, a comprehensive programme similar to the tobacco control programme was established to support the control of alcohol consumption. Turkey hosted a global alcohol control symposium in April 2013, after which the Grand National Assembly, under the leadership of the Prime Minister, adopted the most recent alcohol control law. The law restricted the sale, advertisement and promotion of alcohol and banned the retail sale of alcohol in shops between 10 pm and 6 am. Alcohol cannot be displayed in shop windows and cannot be sold in shops in the vicinity of schools and places of worship. Alcohol manufacturers can no longer advertise or sponsor organizations. The Ministry of Health will develop a new action plan to define the methodology for the enforcement of these new policies.

In line with a Ministerial Resolution in 2012 amending the Tax Law No. 4760, the special consumption taxes on beer, wine and alcoholic beverages are raised twice a year adjusted to the consumer price index. A decree adopted in 2011 restricts the sale, marketing and consumption of alcohol.

### Programmes to prevent and control NCDs

Over 14 million people die prematurely (between the ages of 30 and 70 years) each year from NCDs, 85% of whom live in developing countries. Up to two thirds of these deaths are linked to exposure to risk factors, namely the consumption of tobacco and alcohol, an unhealthy diet and physical inactivity. The remaining third are linked to weak health systems that do not respond effectively and equitably to the health care needs of people with NCDs. Most of these premature deaths from NCDs can be prevented by implementing a set of simple, effective and affordable solutions, tailored to each country's needs. Some common characteristics of chronic diseases are included in prevention and control efforts:

- they have shared causative agents: smoking is one of the common causes of cancer, chronic obstructive pulmonary disease and cardiovascular diseases;
- co-existence is seen in some individuals: obesity, diabetes and hypertension may occur as comorbidities;
- social measures are also needed for prevention and control: NCD patients from low education and income settings may need economic support to access and maintain proper treatment.



### Prevention and control programme for chronic airway diseases (2014–2017)

The Global Alliance against Chronic Airway Diseases (GARD) of WHO is a voluntary alliance of national and international organizations, institutions and agencies from a range of countries working towards the common goal of reducing the global burden of chronic airway diseases. Its vision is a world where all people breathe freely.

The Turkish National Society of Allergy and Clinical Immunology was the second association to join GARD (2007) from Turkey after the Turkish Thoracic Society (2005). The latter introduced GARD practices with the agreement and support of the Ministry of Health. The preparations for Turkey's prevention and control of chronic airway diseases programme were launched with the establishment of committees and start of the project drafting process. Once the project was approved by the Ministry, the first GARD Turkey General Assembly was held in Ankara on 26 October 2007, where the roles and responsibilities of the stakeholders were identified and short-, medium- and long-term action plans were elaborated (21).

The action plan for the prevention and control of chronic airway diseases programme of Turkey 2009–2013 was developed in order to prevent chronic airway diseases (asthma and chronic obstructive pulmonary disease), develop related preventive measures, reduce mortality and morbidity attributable to chronic airway diseases, and monitor and control chronic airway diseases and thus reduce the resulting disease and economic burden. The plan was revised in 2014, renamed as the prevention and control of chronic airway diseases programme of Turkey 2014–2017, published and steps taken to implement it.

The programme aims to inform the public about chronic airway diseases, raise public awareness, create and maintain positive behavioural change concerning the major risk factors, diagnose diseases at early stages and prevent their progression, deliver effective care, prevent complications, provide rehabilitation and carry out effective surveillance to help citizens attain healthy lifestyles.

### Prevention and control programme for cardiovascular diseases (2015–2020)

The European Union and WHO have opened the European Heart Health Charter for signature in order to significantly reduce cardiovascular disease in the WHO European Region and curb inequities and inequalities in disease burdens within and among countries. The national signature ceremony of the European Heart Health Charter was held in Ankara on 25 December 2007, when the Charter was signed by the Minister of Health and chairpersons of nine professional societies.

In cooperation with civil society organizations, the Ministry of Health developed the prevention and control of cardiovascular disease programme of Turkey together with the strategic and action plans for risk factors in order to inform the public about cardiovascular diseases, raise public awareness and create positive and sustainable behavioural change concerning risk factors. The integrated community-based programme mainly targets the major risk factors, namely tobacco, obesity and physical inactivity. The Turkey Cardiovascular Disease Prevention and Control Programme 2015–2020 was launched during the signature ceremony for the European Heart Health Charter.



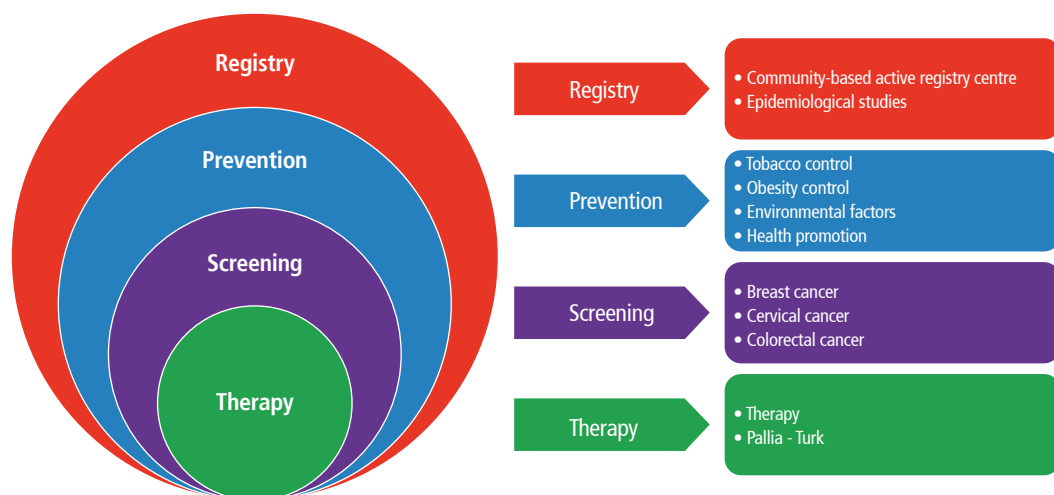
Later, the need to develop a national programme to incorporate other approaches for secondary and tertiary prevention became apparent. Therefore, a sequel to the first plan, namely the strategic and action plan for secondary and tertiary prevention in cardiovascular diseases 2010–2014, was prepared. This plan was revised in 2014 and published as the Turkey cardiovascular disease prevention and control programme 2015–2020 (1).

### National cancer programme (2013–2018)

Cancer is a major public health concern which causes the second highest number of deaths after cardiovascular diseases globally as well as in Turkey. Deaths attributable to cancer increased from 12% in 2002 to 21% in 2009 in Turkey. Prevention is very important considering the preventable types of cancer, avoidance of death through proper screening and increased quality of life when detected at an early stage. Turkey has made significant progress in establishing cancer registries, prevention and early diagnosis. A comprehensive national cancer programme was developed with the aim of addressing the detection of cancers at advanced stages (III–IV), including breast and cervical cancers. The first phase of the national cancer programme was implemented in 2008–2013. The programme was later revised and prepared as the national cancer programme 2013–2018.

Cancer early detection, screening and education centres are at the heart of the screening process. The number of these centres increased from 11 in 2002 to 127 in 2015, with at least one in every province and eight mobile centres. It is planned to increase their number to 285 by 2018. Even though the first centres were established in hospital premises, in line with Law No. 663 on the Organization and Duties of the Ministry of Health and its Affiliates adopted in 2012, they are structured under relevant community health centres and have been working in close collaboration with family health centres (22) (Fig. 6).

**Fig. 6. Organization of the Turkish cancer control programme**



Source: Ministry of Health (22)



### Diabetes programme (2015–2020)

Diabetes control programmes have been developed and implemented in the Ministry of Health since 1999. The St Vincent Declaration, developed under the aegis of WHO and the International Diabetes Federation (IDF) and adopted in 1989, set out a diabetes strategy. The Declaration was signed by Turkey in 1992. In 1994, under the guidance of the Ministry of Health, a national diabetes programme was developed and implemented. On the tenth anniversary of the St Vincent Declaration, the fifth follow-up meeting was hosted by the Ministry of Health in Istanbul, where the Istanbul Declaration was published. The national diabetes programme was revised in 2003 and amended as the national diabetes, obesity and hypertension control programme. A programme on the prevention and control of diabetes in Turkey 2011–2014 was developed and implemented in line with the WHO strategy and action plans and up-to-date control methods. The programme was revised in 2014 and named the diabetes programme of Turkey 2015–2020 (23).

### Prevention and control programme for chronic kidney diseases (2014–2017)

Chronic kidney disease is a major public health problem in Turkey and worldwide. The mortality rate for dialysis patients is 10–30 times higher than for the rest of the population. More than 50% of deaths are attributable to cardiovascular causes. Despite the preventable nature of the disease and the opportunity to slow down its progress through early detection, the level of awareness and early detection are very low. In Turkey, the level of awareness for chronic kidney disease is 1.6% (24).

Chronic kidney disease is a common disease with high morbidity and mortality rates. It has a negative impact on the quality of life and is a burden on health budgets. It can, however, be prevented and slowed down before the advanced stages if it is detected early. In order to reduce the medical, social and economic burden of the disease, the Turkey renal disease prevention and control programme 2014–2017 has been developed with a focus on preventing the progress of the disease through early detection and appropriate treatment methods, and increasing life-years and quality of life rather than treatment (24).

### Prevention and control programme for musculoskeletal system diseases (2015–2020)

Diseases of the musculoskeletal system are important causes of disability and seriously affect the quality of life and living conditions of patients. In addition, the diseases cause a significant socioeconomic burden. The quality of life may be enhanced through early diagnosis and treatment.

The prevention and control of musculoskeletal diseases programme in Turkey was developed in order to take effective and sustainable steps for the prevention, early diagnosis and treatment of musculoskeletal diseases, thereby enhancing rehabilitation services and reducing disability (25).









## Priority activity areas

NCDs are major public health problems. They hinder social and economic development worldwide and, in addition to other consequences, they increase inequalities between and within countries. In order to reduce inequalities, there is a need to develop leadership and action plans at global, regional and national levels. Scientific studies show that the burden of NCDs can be reduced by the effective and sustainable implementation of cost-effective preventive and curative measures in addition to interventions to prevent and control NCDs. The success rate is expected to increase with the prioritization of activities and with simultaneous implementation. The priority activity areas are:

- in governance, strengthening national capacities, leadership, governance, advocacy and the establishment of partnerships in relation to prevention and control of NCDs;
- in prevention, reducing modifiable and avoidable risk factors for NCDs and promoting health;
- in health system response, strengthening the health system response to NCDs and their risk factors;
- in monitoring and evaluation, monitoring the trends in and determinants of NCDs and evaluating progress in prevention and control.

## Governance

Although several NCDs need special attention, the majority of preventable diseases and deaths are due to cardiovascular disease, cancer, diabetes and chronic airway diseases and their common risk factors (tobacco use, harmful use of alcohol, physical inactivity and an unhealthy diet). Real improvements in the health of the population can be achieved if the Ministry of Health, through its Strategic Plan 2013–2017, new plan for 2017–2021 (which includes NCDs), the Multisectoral Action Plan of Turkey for Noncommunicable Diseases 2017–2025 (which is aligned with Health 2020, WHO's European policy framework for health and well-being (26)) and the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020, works across government to fulfil two linked strategic objectives:

- (i) improving health for all and reducing inequalities, and
- (ii) improving leadership and participatory governance for health.

The underlying determinants of NCDs and their shared risk factors mean that multisectoral, whole-of-government and whole-of-society responses are required to prevent and control them. The influence of public policy in sectors such as trade, taxation, agriculture, urban development and food production is frequently required for health gains to be made in the area of NCDs. Intersectoral action can be complex and challenging but there is now adequate experience as to which institutional processes promote intersectoral policy practice, and strong examples exist such as the Programme for Developing Multistakeholder Health Responsibility (27) (Annex 5).





NCDs have significant negative impacts on human and social development. The adoption of the SDGs provides an imperative for mobilizing efforts to address determinants across sectors. Most of the 17 goals are in fact social, economic and environmental determinants of health for which many sectors other than health have primary responsibility (28). The UN Political Declaration (11) called upon WHO and all other relevant parts of the United Nations system to work together in a coordinated manner to support national efforts to prevent and control NCDs and to mitigate their impact. United Nations country teams have been asked to work with government counterparts to integrate NCDs into the processes of design and implementation of the United Nations Development Assistance Framework, and are encouraged to scale up their capacities to support governments in implementing these priority activities (29).

Specific policy dialogues with the private sector should be initiated to address priority issues on a regular basis. Themes might include: salt reduction, banning of trans fats, marketing of foods to children and health-promoting workplaces. The themes would attract specific industries and not all would have broad relevance.

In addition, the promotion of chronic care models and control of obesity and tobacco use will have a beneficial effect not just on cardiovascular disease, cancer, diabetes and chronic airway diseases but also a range of other conditions, including musculoskeletal disorders. Attention to the socioeconomic environments and settings in which people grow, play, live and age, such as schools and workplaces, could contribute further to such common approaches.

Environmental and occupational exposure is responsible for most of the burden from NCDs. For instance, physical activity is affected by urban environments and transport policies. Potential interventions include the development of safe infrastructures and accessible enabling environments for physical activity during leisure time and the promotion of behavioural change such as encouraging walking and cycling. Occupational health and safety programmes could support occupational health programmes.

Lessons from climate change and sustainable development initiatives on a broader scale serve as a model for advocating the development of measures to prevent and control NCDs. The causes of air and noise pollution are closely related to control efforts. Robust and sustainable environmental and health policies (from agricultural practices and policies to protection of children from adverse environmental exposure) directly contribute to reducing the burden of NCDs.



## International and national content for the Action Plan

In order to achieve the sustainable development goals and Health 2020 targets, including the reduction of poverty, hunger, diseases, gender inequalities and lack of access to water and sanitation, activities related to the prevention and control of NCDs need to be increased and supported.

In September 2011, heads of state and government adopted United Nations General Assembly resolution No. 66/2: Political Declaration on Noncommunicable Diseases (11), committing them to take action by: (i) developing national targets and indicators based on national situations; (ii) developing, allocating and implementing budgets for national multisectoral NCD policies and plans; (iii) prioritizing the implementation of cost-effective and affordable interventions; and (iv) strengthening the national surveillance systems for NCDs and measuring the results.

In 2013, WHO developed the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020, comprising a set of actions which, when carried out collectively by the Member States, international partners and WHO, will help to achieve a global target of a 25% reduction in premature mortality from NCDs by 2025. The Plan defines nine global targets for NCD, including achieving such a reduction, as well as a roadmap and policy options that will contribute to progress towards achieving these targets (30).

In 2003, the Health Transformation Programme was initiated in Turkey with the aims of ensuring effective, efficient and equitable organization in the health sector. Under this Programme, the financing and provision of health services is part of the mandate of the Ministry of Health to eliminate inequalities in health. The Programme contains all relevant dimensions of the health sector, linking each component with a coherent approach. It aims to bring about a transformation within a framework of eight themes:

- Ministry of Health as the planner and supervisor;
- universal health insurance for everyone under a single umbrella;
- widespread, easily accessible and strengthened primary health care (with an effective and staged referral chain and administrative and financial autonomy for health facilities);
- highly motivated health personnel equipped with knowledge and skills;
- education and science institutions to support the system;
- quality and accreditation for qualified and effective health services;
- institutional structuring in the rational management of medicine and supplies;
- access to effective information in the decision-making process (health information system).

Three additional themes were included in 2007 in the light of experienced gained during implementation:

- promotion of health and healthy lifestyle programmes for a better future;
- multisectoral health responsibility for activating relevant stakeholders and intersectoral cooperation;
- cross-border health services to strengthen the international role of Turkey.



Equitable protection and promotion of public health is included in the 2013–2017 strategic action plan of the Ministry of Health in order to ensure “reducing and reviewing NCDs risk factors” (31).

Turkey’s 10th Development Plan (for government) includes a healthy lifestyle and physical activity programme as a target for the Ministry of Health (Annex 6). The programme includes the control of NCDs and their risk factors as priorities as well as curative health services for a healthy lifestyle and preventive health services for disability and outbreaks. It has four main components: cancer, cardiovascular diseases, reducing the prevalence of NCDs and reducing the risk factors for NCDs. The last-named component defines the organization of training courses and campaigns for raising awareness and knowledge as policy 4.1. Policy 4.2 includes establishing a surveillance system for monitoring and managing NCDs (32).

The Ministry of Health is responsible for the planning and provision of health promotion and preventive, curative and rehabilitative health services within a coherent approach. For health prevention, individuals’ environment (residence, drinking water, air, food) is crucial. Other sectors besides the Ministry of Health have roles and responsibilities for the health and wellbeing of people and society. Similarly, external stakeholders are essential in many areas such as the financing of curative and rehabilitative health services, planning of human resources for health and provision of medical supplies. In order to define clearly the roles and responsibilities of other sectors, the Ministry of Health has established the multisectoral health responsibility development programme, which aims to “prioritize health in all policies by ensuring adoption of a multisectoral health approach” (33).

The prevention of chronic diseases was the responsibility of the former Section of Chronic Diseases in the General Directorate of Curative Care. The section subsequently became the Department of Noncommunicable Diseases and Chronic Conditions, under the same General Directorate, with the tasks of preventing risk factors related to chronic diseases, conducting national surveys on these diseases, raising public awareness about the diseases and associated risk factors, taking effective measures against risk factors and reducing the threats to public health. In 2011, the Ministry of Health and its affiliated agencies were reorganized and the Turkish Public Health Institution was created by Decree Law No. 663 on the Organization and Duties of the Ministry of Health and its Affiliated Agencies. The Department of Chronic Diseases, Elderly Health and Disabled People was established under the Office of the Deputy President of the Public Health Institution in charge of Noncommunicable Diseases, Programmes and Cancers.

The multisectoral health responsibility approach is important in achieving the 2025 targets for NCDs. Efforts have been initiated to strengthen the capacity of the Ministry of Health to develop and implement policies to counter NCDs. In this regard, an assessment was undertaken with WHO of the health system in Turkey and prevention and control programmes for NCDs in the light of determinants of health. As a consequence:

- the report Better non-communicable disease outcomes: challenges and opportunities for health systems, No. 2, Turkey country assessment was published (7);
- a Meeting on Strengthening the Health System with a focus on Noncommunicable Diseases was held in 2014;
- national NCD targets were identified jointly with academics in December 2014;



- in January 2015, the Ministry of Health held an internal stakeholder meeting on the NCD Multisectoral Action Plan with its affiliated agencies including, in addition to the Ministry, the Turkish Drugs and Medical Devices Authority and Turkish Public Hospitals Authority, to discuss the roles and responsibilities of these internal stakeholders;
- in February 2015, an external stakeholder meeting on the NCD Multisectoral Action Plan was held to discuss the roles and responsibilities of different ministries.

### Implementation phases of the Action Plan

The health transformation programme launched in 2003 aimed to: eliminate inequalities in health; organize and finance health services effectively, efficiently and equitably; conduct targeted surveys to determine the national status in NCD prevention; raise public awareness concerning NCDs and risk factors; counter risk factors effectively; and reduce threats to public health. Within this structure, programmes for health promotion and healthy lifestyles were developed, preparations for multisectoral action under the health responsibility programme were started for multisectoral action and international health services were planned and implemented.

Since 2003, Turkey has carried out numerous activities relating to community awareness of NCDs and risk factors, awareness-raising among health professionals, legislation, improvements in the scope and accessibility of health services and monitoring and evaluation.

The Multisectoral Action Plan of Turkey for Noncommunicable Diseases 2017–2025 is a framework document encompassing current programmes. It was developed by considering, and in consistency with, the following documents:

- Global Action Plan for the Prevention and Control of NCDs 2013-2020;
- Health 2020: The European Policy for Health and Wellbeing;
- Action Plan for Implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012-2016;
- Global Status Report on Noncommunicable Diseases 2014;
- Republic of Turkey, Ministry of Health Strategic Plan 2013-2017;
- Prevention and Control of Chronic Airway Disease Programme of Turkey 2014-2017;
- Prevention and Control of Cardiovascular Disease Programme of Turkey 2015-2020;
- National Tobacco Control Programme Action Plan 2015-2018;
- Healthy Nutrition and Physical Activity Programme of Turkey (2014-2017);
- Programme for Reducing High Salt Consumption in Turkey 2017-2021;
- Turkey Diabetes Programme 2015-2020;
- Prevention and Control of Kidney Diseases Programme of Turkey 2014-2017;
- Prevention and Control of Musculoskeletal System Diseases Programme of Turkey 2015-2020;
- National Cancer Control Programme 2013-2018.



Experience from implementation of the national programmes showed that there was a need to adopt a common framework to ensure better promotion of healthy lifestyle programmes and prevention and control programmes to stakeholders, appropriate and effective stakeholder engagement and strengthened cooperation.

The following activities are planned for the first phase of the Action Plan 2017-2020 to engage stakeholders and find solutions to challenges in its first phase:

- set up and activate high-level committees;
- maintain activities for: community awareness of NCDs and risk factors, awareness-raising among health professionals, legislation, improvements in the scope and accessibility of health services and monitoring and evaluation;
- expand stakeholder support for healthy lifestyle and prevention and control programmes;
- ensure that programmes are considered in workforce and budget planning;
- launch monitoring practices in health information systems related to NCDs, complications and costs.

The Action Plan will be updated in 2019, if appropriate.

The following activities are planned for the second phase of the Action Plan regarding a common working culture between the government and the stakeholders involved:

- maintain stakeholder support for: activities for community awareness of NCDs and their risk factors, awareness-raising among health professionals, legislation, improvements in the scope and accessibility of health services, and monitoring and evaluation;
- obtain support for efforts related to workforce and budget planning;
- complete work on health information systems.









## Stakeholders in the Action Plan

Gender and other social determinants need to be considered in the design, development and implementation of public health programmes for countering NCDs. The consideration of social determinants, firstly, enhances the coverage and effectiveness of the programmes and, secondly, lowers the economic costs related to reduced productivity and increased demands on the health and social protection systems arising from inequalities (34). There is considerable scope for health systems to act to reduce inequalities, particularly given that the accessibility, appropriateness and acceptability of health services are socially determined (35,36).

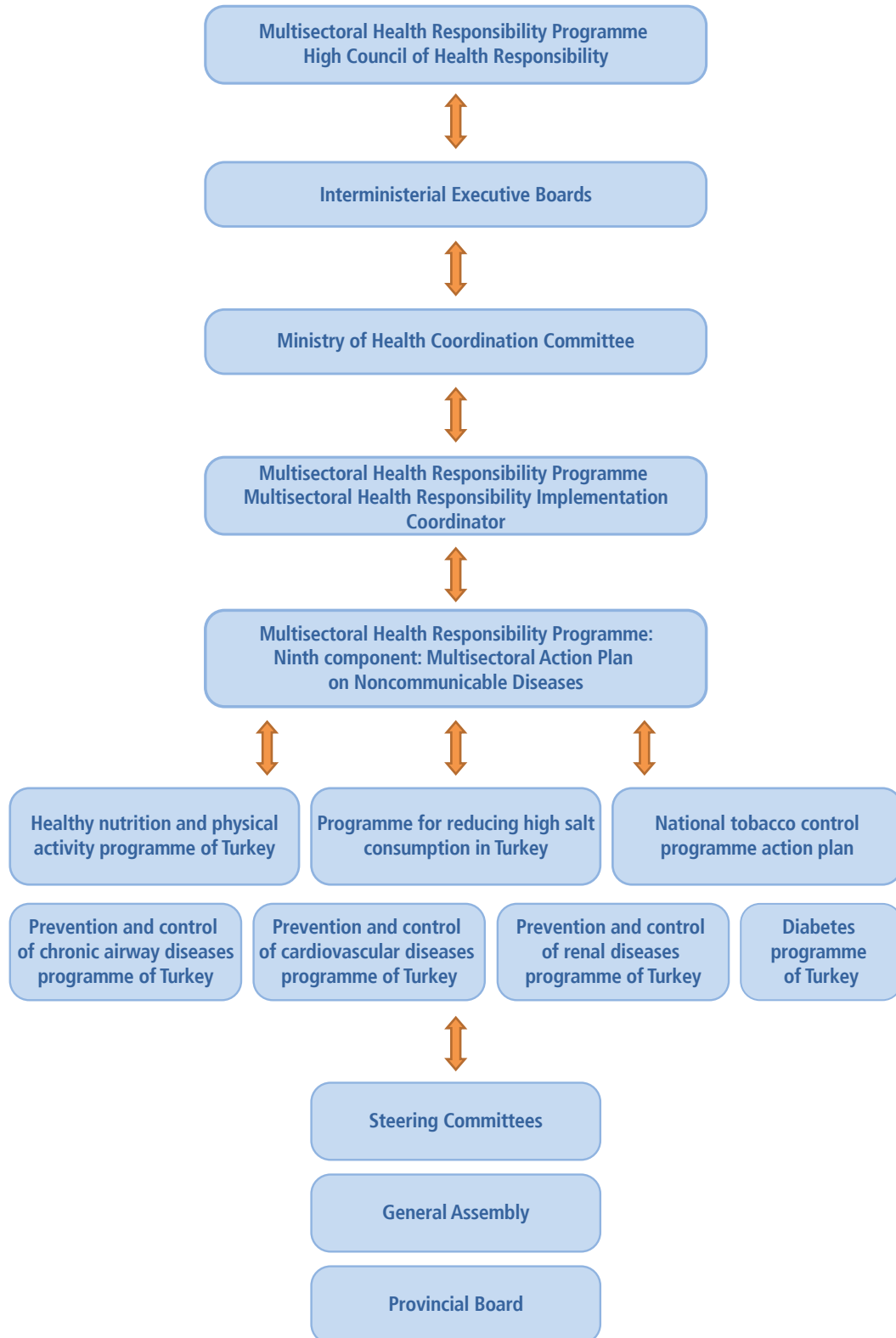
Given that many of the influences on health lie outside the health sector and may operate across national boundaries, governance for NCD prevention and control requires mechanisms that are participatory, cross-sectoral and multilevel and that extend from local to global arenas. Such mechanisms include action to define shared goals and resources, identify the co-benefits of NCD prevention, assess the health impact of policies and implement intersectoral action accountably and sustainably.

Establishing and ensuring the functionality of high-level committees is essential to support awareness-raising activities so as to increase health literacy for NCDs and their risk factors, prioritize legislative amendments on risk factors, and combine efforts to plan and finance human resources. It is expected that such high-level committees will make, implement and monitor participatory, effective and inclusive decisions (Fig. 7, Tables 2–6).





**Fig. 7. Stakeholders and committees of the Action Plan**





**Table 2. High Council of Multisectoral Health Responsibility**

Stakeholder	Ministry	Role
Prime Minister/Deputy Prime Minister	Office of the Prime Minister	Chairperson
Minister	Ministry of Health	Member
Minister	Ministry of National Education	Member
Minister	Ministry of Food, Agriculture and Livestock	Member
Minister	Ministry of Finance	Member
Minister	Ministry of Labour and Social Security	Member
Minister	Ministry of Science, Industry and Technology	Member
Minister	Ministry of Environment and Urbanization	Member
Minister	Ministry of Youth and Sports	Member
Minister	Ministry of Interior	Member
Minister	Ministry of Development	Member
Minister	Ministry of Family and Social Policies	Member
Minister	Ministry of Foreign Affairs	Member
Minister	Ministry of Culture and Tourism	Member
Minister	Ministry of National Defence	Member
Minister	Ministry of Energy and Natural Resources	Member
Minister	Ministry of Customs and Trade	Member

**Table 3. Interministerial Coordination Committee for Noncommunicable Diseases**

Stakeholder	Ministry	Role
Representative	Office of the Prime Minister	Chairperson
Undersecretary	Ministry of Health	Member/Secretary
Undersecretary	Ministry of National Education	Member
Undersecretary	Ministry of Food, Agriculture and Livestock	Member
Undersecretary	Ministry of Finance	Member
Undersecretary	Ministry of Labour and Social Security	Member
Undersecretary	Ministry of Science, Industry and Technology	Member
Undersecretary	Ministry of Environment and Urbanization	Member
Undersecretary	Ministry of Youth and Sports	Member
Undersecretary	Ministry of Interior	Member
Undersecretary	Ministry of Development	Member
Undersecretary	Ministry of Family and Social Policies	Member
Undersecretary	Ministry of Foreign Affairs	Member
Undersecretary	Ministry of Culture and Tourism	Member
Undersecretary	Ministry of National Defence	Member
Undersecretary	Ministry of Energy and Natural Resources	Member
Undersecretary	Ministry of Customs and Trade	Member



**Table 4. Ministry of Health Coordination Committee for Noncommunicable Diseases**

Stakeholder	Institution/Department	Role
Undersecretary	Ministry of Health	Chairperson
President	Public Health Institution of Turkey	Member/Secretary
President	Turkish Public Hospitals Union	Member
President	Turkish Drug and Medical Device Authority	Member
Director-General	General Directorate of Health Services	Member
Director-General	General Directorate of Health Information Systems	Member
Director-General	General Directorate of Emergency Health Services	Member
Director-General	General Directorate of Health Promotion	Member
Director-General	General Directorate of Health Research	Member
Director-General	General Directorate of Management Services	Member
Director-General	General Directorate of Foreign Relations and European Union Affairs	Member
Head	Department of Strategy Development	Member

**Table 5. Ministry of Health Steering Committees for Noncommunicable Diseases Prevention and Control Programmes**

Stakeholder	Institution	Role
Vice President in charge of	Public Health Institution of Turkey Noncommunicable Diseases, Programmes and Cancers	Chairperson
Head of Department/technical staff	Public Health Institution of Turkey Department of Chronic Diseases, Elderly Health and Disabled People	Secretary
Head of Department/technical staff	Turkish Public Hospitals Union	Member
Head of Department/technical staff	Turkish Drug and Medical Device Authority	Member
Head of Department/technical staff	General Directorate of Health Services	Member
Head of Department/technical staff	General Directorate of Health Information Systems	Member
Head of Department/technical staff	General Directorate of Emergency Health Services	Member
Head of Department/technical staff	General Directorate of Health Promotion	Member
Head of Department/technical staff	General Directorate of Health Research	Member
Head of Department/technical staff	General Directorate of Management Services	Member
Related civil society organizations	Technical staff	Member
Related public institutions	Technical staff	Member

**Table 6. Ministry of Health Provincial Boards for Prevention and Control of Noncommunicable Diseases**

Stakeholder	Ministry of Health	Role
Public Health Directorate	Noncommunicable Diseases Section	Secretary
Related public institutions	Technical staff	Member
Related civil society organizations	Technical staff	Member



## Roles and responsibilities of Action Plan stakeholders

Governance for health is defined as “attempts of governments and others to steer communities, whole countries or groups of countries in the pursuit of health and wellbeing as a collective goal” (37).

Governance for health is a key element in the development of Health 2020, the European policy framework for health and wellbeing (26). Policies, strategies and plans can set the direction and targets for NCD prevention and control, as well as give policy coherence.

NCDs also share common determinants that are influenced by policies in a range of sectors, from agriculture and the food industry to education, the environment and urban planning. Additionally, obesity merits specific attention in that it is both a result of many of the same basic risk factors and a cause of other NCDs.

The most challenging health problems require engagement with stakeholders outside government: international bodies, bilateral agencies, professional associations and civil society organizations, the private sector and academia. Governing for NCDs in ways that impact on the socioeconomic determinants of health and their distribution means providing leadership, a mandate, incentives, budgets and mechanisms for collaborative working and problem-solving across government and sectors.

It is crucial to establish common ground among the stakeholders about roles, mandates and responsibilities for proper leadership, division of tasks, utilization of incentives/budgets and the running of mechanisms for decision-making (Table 7).

**Table 7. Roles and responsibilities of Action Plan stakeholders**

Stakeholder	Activity field			
	Tobacco	Obesity	Physical activity	Alcohol
Office of the Prime Minister	√	√	√	√
Ministry of Health	√	√	√	√
Ministry of National Education	√	√	√	√
Ministry of Food, Agriculture and Livestock	√	√		√
Ministry of Finance	√	√	√	√
Ministry of Labour and Social Security	√	√	√	√
Ministry of Science, Industry and Technology	√	√	√	√
Ministry of Environment and Urban Planning	√	√	√	
Ministry of Youth and Sport	√	√	√	√
Ministry of Interior	√	√	√	√
Ministry of Development	√	√	√	√
Ministry of Family and Social Policies	√	√	√	√
Ministry of Foreign Affairs	√	√	√	√
Ministry of Energy and Natural Resources	√	√	√	√
Ministry of Customs and Trade	√	√		√



## Health promotion and reduction of health risks

Activities related to promoting health and reducing health risks aim to achieve the third target of the Global Action Plan for Prevention and Control of Noncommunicable Diseases (30). The main approach of the interventions targeting behavioural risk factors is to reduce health risky health behaviour and promote healthy lifestyles.

It is necessary to carry out awareness-raising activities about the harms of tobacco and alcohol, promote physical activity among children, adolescents and young people, strengthen existing programmes, raise awareness of adults about physical activity and offer enabling environments for such activity, raise awareness about reducing salt intake, and implement awareness-raising activities at community level regarding obesity and associated health hazards and therapies.

Joint work on legislation should also be conducted with other ministries to implement interventions such as developing life skills among children, adolescents and young people for the avoidance of tobacco products, preventing accessibility to tobacco products, regulating the sales and accessibility of tobacco and alcohol (strengthening enforcement of advertising, promotion and sponsorship bans) and reducing the salt content in food items.

Relevant institutions and agencies should develop concurrent and consistent capacity-building plans, workforce plans and budgets and report spending dedicated to the implementation of legislation and interventions for awareness-raising and behavioural change activities for individuals at risk (for example, on quit-lines).

The National Tobacco Control Programme – Action Plan (2015–2018), the Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017) and the Programme for Reducing High Salt Consumption in Turkey (2017–2021) include various activities such as activities to raise awareness about the interventions to risk factors, training of health personnel and legislative work.

## Strengthening the response of the health system

The aim is to promote early admission for diagnosis and effective treatment of NCDs (such as hypertension and diabetes) and to improve the population's quality of life through raising public awareness about these NCDs and increasing health literacy.

A second aim is to identify risk groups, apply effective/appropriate/the right treatment approaches and improve health service standards by raising awareness among health professionals about NCDs such as hypertension and diabetes.

It is expected that improvement in the process management of NCDs will reduce complications, prevent disability through rehabilitation, and reduce spending on health care requiring high technology interventions for NCDs such as hypertension and diabetes.

Banning the advertising, use and sales of non-pharmacological products which are not scientifically evidence-based and which pose potential health hazards is expected to prevent complications among patients with NCDs such as hypertension and diabetes.





A holistic health system response (awareness-raising, emergency health services, outpatient services, intensive care and cardiac/stroke rehabilitation) should be developed concurrent with all legislation and budgeting work in order to achieve the target of reducing premature deaths attributable to NCDs (cardiovascular diseases, cancer, diabetes and chronic airway diseases) by 25%.

As part of social interventions to NCDs, activities such as awareness-raising, health personnel training and legislative amendments are included within the scope of the Chronic Airway Disease Prevention and Control Programmes of Turkey (2014–2017), the Cardiovascular Disease Prevention and Control Programme of Turkey (2015–2020), the Diabetes Programme of Turkey (2015–2020), the Kidney Diseases Prevention and Control Programme of Turkey (2014–2017) and the National Cancer Control Programme (2013–2018).

## Monitoring and evaluation

Evidence is needed to monitor pragmatic and contextualized policies and to develop policy recommendations to form the basis of action so as to accelerate gains in NCD outcomes.

Action and strategies need to be implemented by all sectors with the health in all policies approach for eliminating socioeconomic inequalities and reducing income inequities which constitute important underlying factors in all health problems.

The effectiveness of the policies implemented can be measured through surveys of NCD status at the national level and studies on NCDs and their risk factors to obtain essential data and maintenance of the data flow.

Political commitment and continuity are important in reducing mortalities, morbidities and the economic burden associated with NCDs. The effectiveness of activities and policies will promote constant commitment by stakeholders.

Monitoring and evaluation of the implementation of activities will enable the impact of action plans on health systems at national, regional and provincial levels to be measured, gaps in NCD interventions to be identified and addressed, and promising approaches promoted for exchange of information and experience in improving activities.



## Current status for monitoring parameters

### *Tobacco use*

In 2012, there were 1.1 billion tobacco smokers in the world (2). The risks of tobacco use are related both to direct consumption and exposure to tobacco smoke. Almost 6 million people die from tobacco use each year, both from direct tobacco use and exposure to tobacco smoke (2).

Turkey is one of the two countries that have repeated the Global Adult Tobacco Survey. The 2008 and 2012 survey results are comparable as the same methodology was used. A comparison of the two surveys indicates significant changes in the course of the four years when the National Tobacco Control Programme and Action Plan were in place. Smoking prevalence declined from 31.2% in 2008 to 27.1% in 2012. This is true for both men (from 47.9% to 41.5%) and women (from 15.2% to 13.1%), giving a total reduction of 13.4% (13.5% in men and 13.7% in women) (18).

### *Insufficient physical activity*

Insufficient physical activity is defined as less than five periods of 30 minutes moderate activity per week, or less than three periods of 20 minutes vigorous activity per week. In 2010, approximately 3.2 million deaths and 69.31 million DALYs (representing about 2.8% of global DALYs) were attributable to insufficient physical activity. People who are insufficiently physically active have a 20–30% increased risk of mortality compared to those who engage in at least 30 minutes of moderately intense physical activity most days of the week (2,38). In 2010, 23% of adults aged 18 or above (20% of men and 27% of women) were insufficiently physically active (2).

According to the Chronic Diseases and Risk Factors Survey in Turkey, the level of engagement in physical activity by men in leisure time is sufficient in 23%, moderate in 22% and low in 55%. These rates are 13%, 18% and 69% in women, respectively. Sufficient and moderate physical activity decreases parallel to the increase in age in both genders. Nearly half of men and women reported spending more than four hours watching TV or sitting at the computer. According to the survey, almost a quarter of men and one fifth of women climb up the stairs for five or more floors a day. A very small proportion of people in work (6% of men and 9% of women) walk at least 30 minutes to their workplace. Physical activity in the work environment is higher in men than women: two out of ten employed men are engaged in moderate physical activity and three out of ten are engaged in vigorous physical activity, as against 10% of working women with moderate physical activity and 18% with vigorous physical activity. The physical activity level is lower among women as they age and in urban areas. Regional discrepancies are not significant (39).

### *Alcohol consumption*

In 2012, alcohol consumption caused 3.3 million deaths (5.9%) around the world. More than 50% of these deaths were due to cardiovascular diseases, diabetes, liver cirrhosis and cancer. An estimated 5.1% of the global burden disease is attributable to alcohol consumption (2,40,41). Based on the results in the Turkey Health Statistics Yearbook 2014, Table 8 shows the age of first use of alcohol in the population aged 15 years and above by gender and area of residence (42).



**Table 8. Alcohol consumption by gender and residential area, individuals aged 15 years and above (%), 2012**

Status of consumption	Rural			Urban			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Drinker	13,9	1,2	7,3	18,7	5,0	11,8	17,2	3,8	10,4
Non-drinker	16,4	1,7	8,7	14,9	5,3	10,1	15,4	4,2	9,7
Never consumed	69,7	97,1	84,0	66,4	89,7	78,1	67,4	92,0	79,9
Total	100	100	100	100	100	100	100	100	100

Source: Ministry of Health (42).

### Unhealthy nutrition

High dietary intakes of saturated fat, trans-fat cholesterol and salt and low intake of fruits, vegetables and fish are linked to cardiovascular risk (2,30,38,43). Approximately 16 million (1.0%) DALYs and 1.7 million (2.8%) of deaths worldwide are attributable to low fruit and vegetable consumption. The amount of dietary salt consumed is an important determinant of blood pressure levels and overall cardiovascular risk (38,44). Adequate consumption of fruit and vegetables reduces the risk of cardiovascular diseases. Frequent consumption of high-energy foods, such as processed foods high in fats and sugars, promotes obesity (38,44).

WHO recommends a salt intake of less than 5 g/person/day to help prevent cardiovascular diseases (2,38).

Salt intake is high in the Turkish population. The SALTurk 2008 study conducted by the Turkish Society of Hypertension and Renal Diseases found an adult salt intake of 18 g a day. According to the results of the SALTurk 2 conducted by the same Society in 2012, daily salt intake declined to 14.8 g as a consequence of the reduction of salt in bread (45,46). Table 9 shows the fresh fruit and vegetable eating habits of individuals aged 18 years and over in Turkey (42).

**Table 9. Consumption of fresh fruit and vegetables, adults aged 18+ years (%), 2013**

Frequency of consumption	Fresh fruits %	Fresh vegetables %
Once a day	44,6	40,6
Once every two days	22,3	23,8
Once every three days	14,6	16,5
Once or twice a week	14,1	16,6
Never	4,4	2,4

Source: Turkish Statistical Institute (8).



### *Obesity*

In 2014, 39% of adults aged 18 years and older (38% of men and 40% of women) were overweight (body mass index (BMI)  $\geq 25$  kg/m<sup>2</sup>). The worldwide prevalence of obesity nearly doubled between 1980 and 2014. In 2014, 11% of men and 15% of women worldwide were obese (BMI  $\geq 30$  kg/m<sup>2</sup>) (2). Obesity is a growing health concern in both developed and developing countries. Overweight and obesity were estimated to account for 3.4 million deaths per year and 93.6 million DALYs in 2010 (2).

According to the Survey on Prevalence of Cardiac Diseases and Risk Factors in Adults in Turkey by the Turkish Cardiology Society, covering 3681 individuals aged 30+ years, 25.2% of men and 44.2% of women were obese in Turkey. When disaggregated by middle-aged (31–49 years) and elderly (50+ years) people, the difference in prevalence was not significant in men (24.8% and 25.7%) whereas it was significant in women (38% and 50.2%, respectively). The prevalence of obesity has increased since 1990: it doubled from 12.5% among men in similar age groups and rose from 40% to 50% in women aged 40 years and over (19).

The Turkey Obesity and Hypertension Survey of 23 888 adults aged 20+ years carried out in 1999–2000 reported an obesity prevalence of 35.4% in women and a 1.8-fold increased risk of obesity among women compared to men (19). The Turkish Epidemiology Survey of Diabetes, Obesity and Hypertension in 1998 (TURDEP I), which covered 24 788 adults aged 20 years and over, found a prevalence of obesity of 29.9% in women and 12.9% in men. The same study found a central obesity prevalence (waist circumference:  $\geq 88$  cm in women and  $\geq 102$  cm in men) of 34.3% (48.4% in women and 16.9% in men).

The high prevalence of central obesity among women is indicative of potential future health concerns for women, including cardiovascular diseases in particular and type II diabetes. The second TURDEP study, which was conducted 12 years after TURDEP I, suggested a 40% increase in obesity in adult Turkish population from 22.3% in 1998 to 31.2% in 2010. The prevalence of obesity was 44% in men and 27% in women, increasing by 34% in women and 107% in men (19).

According to the results of the National Household Survey 2003, based on self-reported declarations by the former Public Hygiene School of the Refik Saydam Public Hygiene Institute, the prevalence among adults aged 18 years and over of overweight was 31.4% and of obesity 12%: 28.9% and 14.6% among women and 33.6% and 9.7% in men (19).

The Turkey Nutrition and Health Survey 2010 of 7466 individuals aged 19 years and over reported prevalence rates for overweight and obesity at 39.1% and 20.5% in men and 29.7% and 41.0% in women, respectively. The prevalence of overweight was 34.6% and of obesity 30.3% in all adults. The incidence of morbid obesity (BMI  $\geq 40$  kg/m<sup>2</sup>) was 2.9%. Overweight and obesity rates are considerably higher among adults according to the BMI classification (19).

According to the Turkey Demographic Health Survey 2013, only 3.6% of women were underweight (BMI  $< 18.5$  kg/m<sup>2</sup>) whereas 55.2% were overweight or obese. Overweight and obesity increase with age: among women aged 15–19 years it was 19.4% but among women in the group aged 40–49 years morbid obesity (BMI  $\geq 40$  kg/m<sup>2</sup>) was 83.8%. The rate of overweight and obesity declines as welfare level increases. The prevalence of overweight and obesity was 58.7% among women in households with the lowest welfare levels and 46.3%



among women in households with the highest welfare levels. The rate of underweight women, on the other hand, rose from 2.8% to 4.5% (47).

The Chronic Diseases and Risk Factors Survey in Turkey, carried out in 2011, found a prevalence of obesity of 15% in men and 29% in women. According to the same survey, the prevalence of overweight was 37% in men and 29% in women (39).

### *Hypertension*

Raised blood pressure is estimated to have caused 9.4 million deaths and 7% of the disease burden worldwide in 2010 (2). The prevalence of hypertension in Turkey was estimated at 31.8% in 2003 by the Turkish Hypertension Prevalence Survey (Patent). The prevalence of hypertension is higher in women (36.1%) than in men (27.5%). It increases with age and is significantly higher among women than men in the group aged 40–79 years. In rural areas it is 32.9% and in urban areas 31.1%, and is higher among women in both rural and urban settings. It is particularly high in the Central Anatolian, Marmara and Black Sea regions (48).

The second Turkish Hypertension Prevalence Survey (Patent2), conducted in 2012, estimated the prevalence of hypertension at 30.3% (28.4% in men and 32.3% in women). The rate was 32.5% in rural and 29.6% in urban areas. The hypertension awareness rate was 40% in Patent and 54.7% in Patent2. The control rate of hypertension was 8% in Patent and 28.7% in Patent 2 (49).

According to the results of the national Survey on Chronic Renal Disease in Turkey (CREDIT) conducted by the Turkish Society of Nephrology in 2008, the prevalence of hypertension was 32.7% (35.7% in women and 29.4% in men) (50). In 2011, the Chronic Diseases and Risk Factors Survey in Turkey found a hypertension prevalence of 24% (21% in men and 26% in women) (39).

### *Diabetes*

Diabetes was directly responsible for 1.5 million deaths in 2012 and 89 million DALYs. The global prevalence of diabetes (defined as a fasting plasma glucose value  $\geq 7.0$  mmol/L [126 mg/dl] or being on medication for raised blood glucose) was estimated to be 9% in 2014. In general, low-income countries showed the lowest prevalence and upper-middle-income countries showed the highest prevalence of diabetes (2). This prevalence is constantly rising in the Turkish population. The CREDIT survey estimated it at 12.7% (50).

The Chronic Diseases and Risk Factors Survey in Turkey in 2011 found a prevalence of diabetes 11% (39). The exponential increase of diabetes prevalence from 7.2% in 1998, when TURDEP 1 was carried out, to 13.7% in 2012 when TURDEP 2 was conducted is worrying (51,52).





### *Raised blood cholesterol*

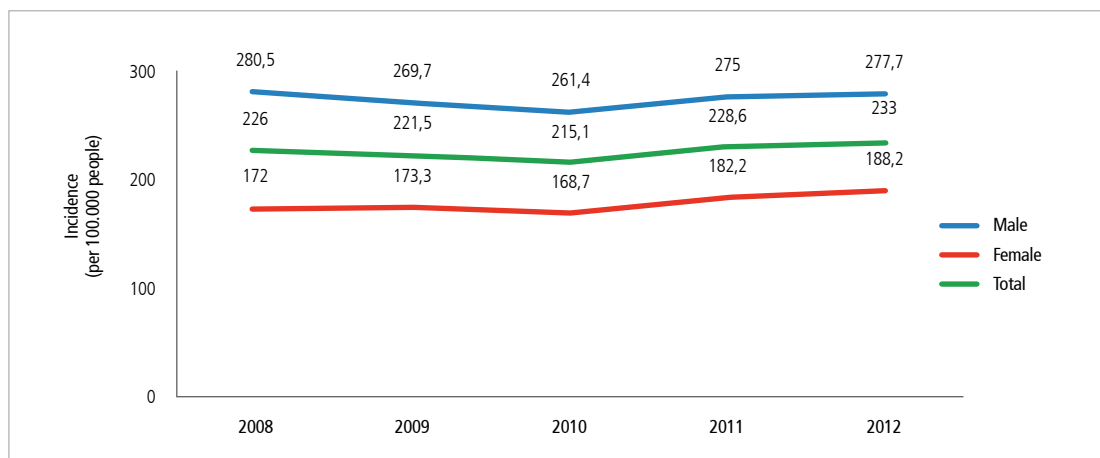
Raised cholesterol is estimated to cause 2.6 million deaths (4.5% of total) and 29.7 million DALYS, or 2% of total DALYS globally (20).

According to the 2011 Chronic Diseases and Risk Factors Survey in Turkey, the raised low density lipoprotein cholesterol prevalence was 12.5% (11% in men and 14% in women). Hyperlipidaemia prevalence is rising in both genders. The prevalence of hyperlipidaemia is higher among women in all age groups from 45–54 years and above, and is high in urban areas. The highest prevalence is in the Western Anatolia region (39). The 2008 CREDIT survey by the Turkish Society of Nephrology estimated the prevalence of dyslipidaemia at 76.3% (50).

### *Cancer*

Cancer is a major public health concern globally. In Turkey it is the second leading cause of death. It is estimated to be the first leading cause of death by 2030. In 2012, about 175 000 new cancer cases were diagnosed in Turkey (Fig. 8). Complete and effective prevention and control of this common and rapidly increasing disease is only possible through a dynamic, multidimensional, multidisciplinary and cost-effective programme. The current status of cancer in the population is provided below by age, sex and type of most common cancers (Fig. 9,10) (22).

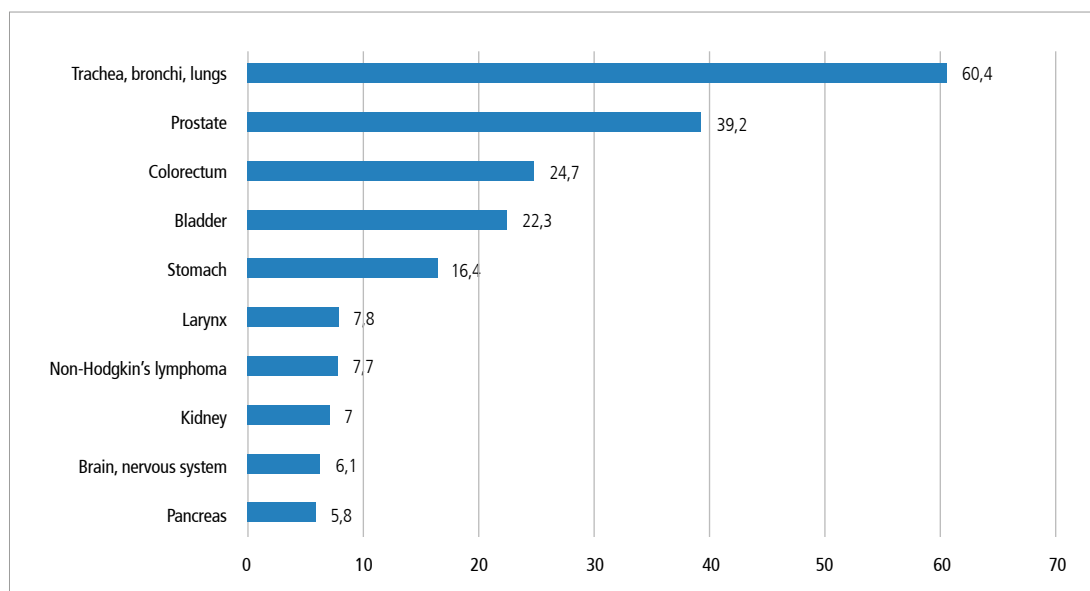
**Fig. 8. Age-adjusted incidence rate of all cancers by age, Turkey, 2008–2012**



Note. Standard global population, per 100 000 people.  
Source: Ministry of Health (53).

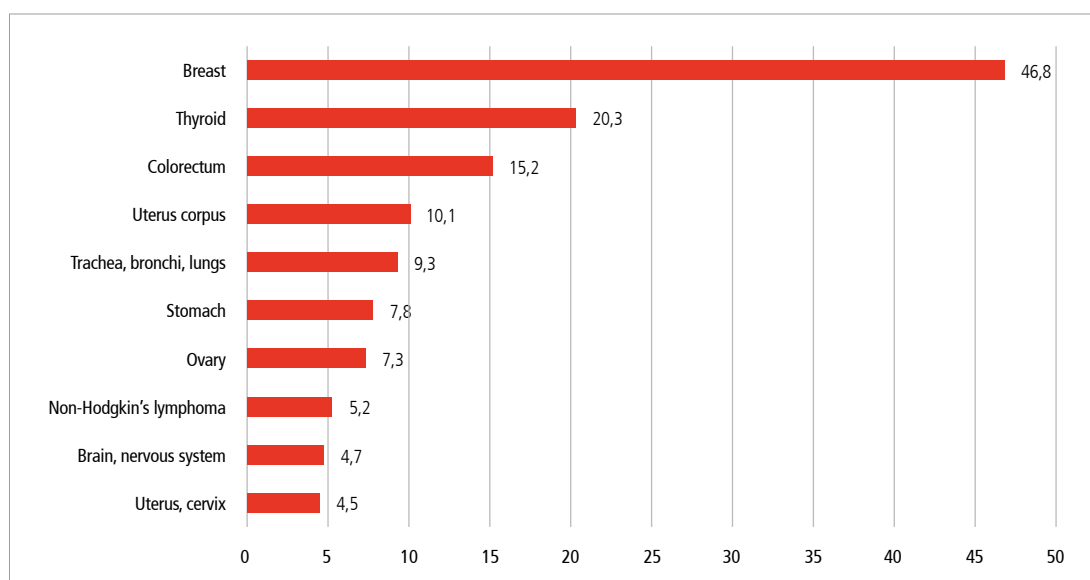


**Fig. 9. Age-adjusted incidence rates of 10 most common types of cancer in males, Turkey, 2008–2012**



Note. Standard global population, per 100 000 people.  
Source: Ministry of Health (53).

**Fig. 10. Age-adjusted incidence rates of 10 most frequent types of cancer in females, Turkey, 2008–2012**



Note. Standard global population, per 100 000 people.  
Source: Ministry of Health (53).



## Monitoring and evaluation studies

### *National Burden of Disease (2002–2004)*

The National Burden of Disease study was conducted between 2002 and 2004. Life tables were created for national, urban, rural and five regional levels; causes of death were identified; health-adjusted life expectancy was calculated for all age groups; disease burdens were calculated for the diseases included in the global burden of disease list and risk factor analyses, projections and sensitivity analyses were conducted within the scope of the study (54).

### *Chronic Diseases and Risk Factors Survey in Turkey (2011)*

The aim of the study was to estimate the prevalence of chronic diseases and risk factors, determine the framework of surveillance tasks for family physicians and take steps for integrating surveillance into their daily work. The scope of the study included surveying, testing and examining two individuals aged 15+ years from the patient list of every family physician in 81 provinces to be randomly selected by the Turkish Statistical Institute. The survey results were evaluated and analyses were disaggregated by: (i) age and sex, and (ii) urban and rural based on the nomenclature of territorial units for statistics-1 (NUTS-1) regions.

The survey was implemented by family physicians, who provided information about the current situation. Regular repetitions of the survey with the same respondents yielded information about surveillance and contributed to the follow-up work of family physicians concerning chronic diseases and risk factors (39).

### *Turkish Health Survey*

First carried out in 2008, the Turkish Health Survey is conducted every two years with the aim of collecting information on health indicators which are important for the development indicators of a country. It is a nationally representative survey comparable to international studies and provides valuable input about national needs.

The survey includes modules recommended by the Statistical Office of the European Union (Eurostat) to candidate countries with questions targeting the group aged 0–14 years in order to close the data gap at national level. The survey method includes face-to-face interviews and four different questionnaires ("main characteristics of households", "0–6 age group", "7–14 age group" and "15+ age group").

### *Death reporting system*

An important component of vital records involves the complete and accurate compiling of birth and death records in order to generate reliable and scientific official data on the levels, trends and structural characteristics of births and deaths.

Turkey has focused on improving death records and data reliability since 2009. Since early that year, underlying causes of death have been collected on the basis of the International Statistical Classification of Diseases and Related Health Problems 10<sup>th</sup> edition (ICD-10). Nearly 70% of deaths were registered that year, and causes of death were stated in 76% of them. The rates of registered deaths and stated causes of death in 2010–2012 were 85% and 90%, respectively.



The system was revised in 2013. A web-based system with automatic error checks and warning systems was launched. The data are confirmed by the Ministry of Health before they are given to the Turkish Statistical Institute. Since 2013, it has been possible to include optional additional socioeconomic variables in death registry forms. The changes have resulted in significant progress (7).

### *Decision support system*

The decision support system is designed to serve as a structure for collecting, storing and analysing data to be used in management decisions and enabling easy access to data so as to facilitate their use in planning, strategy development and critical decisions. The reporting function provides access to examination and performance reports. The following are possible in the system:

- access to sufficient details
- cross-query across different levels
- backward-forward scan, parsing and filtering
- detailed information at province, district or facility level
- portable reports in different formats (.doc, .pdf, .Excel)
- ability to create charts in different forms (pie chart, bar chart, histogram).

The NCD component of the decision support system was launched in 2012. Hospitals in 81 provinces can input information on people with chronic diseases based on the ICD-10 classification, including selected NCDs (55).









## Priority approaches to NCDs

The main approach of interventions targeting behavioural risk factors is to reduce behaviour that is risky for health and to promote healthy lifestyles.

For this purpose, it is necessary to: implement awareness-raising activities about the harms from tobacco and alcohol; promote physical activity among children, adolescents and young people; strengthen existing programmes; raise adults' awareness about physical activity and provide enabling environments; raise awareness about reducing salt intake; and carry out awareness-raising activities at community level regarding obesity and the associated health hazards and therapies.

This section lists approaches geared towards the community and individuals together with supportive approaches towards achieving these aims, and describes the vision animating them as well as the objectives set for them, their framework and anticipated activities.

### Community-based priority approaches

The Ministry of Health needs to work jointly with other ministries on legislation to implement interventions to (among other things): develop life skills among children, adolescents and young people so as to help them avoid tobacco products; make tobacco products inaccessible; regulate the sales and accessibility of tobacco and alcohol (by, for example, strengthening the enforcement of bans on advertising, promotion and sponsorship); and reduce the salt content in food items (Table 10).

**Table 10. Community-based priority approaches targeting behavioural risk factors**

***Financial and marketing policies, health promotion and reduction of health risks***

Vision	The vision is to employ financial and marketing policies to influence the demand for, access to and affordability of tobacco products, alcoholic beverages and foods with a high amount of saturated fat, salt and sugar.
Objectives	The approaches will help to achieve SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD targets 2, 4, 5, 6 and 7 (Annex 1).
Framework	The approaches are defined within the framework of activities defined in the National Tobacco Control Programme – Action Plan (2015–2018), the Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017) and the Programme for Reducing High Salt Consumption in Turkey (2017–2021).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.



### ***Product reformulation and improvement***

Vision	The vision is to eliminate the use of trans fatty acids by mainly focusing on processed food and through the use of unsaturated fat instead of saturated fat and less sugar in food products.
Objectives	The approaches will help to achieve SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD targets 6 and 7 (Annex 1).
Framework	The framework is defined within the scope of the Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.

### ***Salt reduction***

Vision	The vision is to reduce salt consumption to less than 5 g (2000 mg sodium) salt consumption per day per person.
Objectives	The objectives are to help achieve the SDGs, Health 2020 targets, the global target to reduce NCD premature mortality and national NCD targets 6 and 7 (Annex 1).
Framework	The framework is defined in the Programme for Reducing High Salt Consumption in Turkey (2017–2021).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.

## **Individual-centred priority approaches**

Turkey has made steady progress in the development and organization of health services and improving the accessibility of preventive and curative health services

The Health Transformation Programme aims to give priority of power and control to primary health care over other levels of the health services. It is centred around programmes to reduce maternal and child mortality, prevent communicable and noncommunicable diseases, improve the abilities of individuals to manage matters related to their health and give priority to preventive care (Table 11).



**Table 11. Individual-centred priority approaches targeting behavioural risk factors**

***Cardiovascular risk assessment and management***

Vision	The vision is to conduct cardiovascular risk analysis and reduce the risk for people at high risk.
Objectives	The approaches will help to achieve the SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD targets 2, 3, 5, 6, 7 and 8 (Annex 1).
Framework	Cardiovascular risk assessment is defined within the scope of the Cardiovascular Diseases Prevention and Control Programme of Turkey (2015–2020). Interventions related to risk factors are defined within the framework of the National Tobacco Control Programme – Action Plan (2015–2018), the Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017) and the Programme for Reducing High Salt Consumption in Turkey (2017–2021).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.

***Early diagnosis and effective treatment of NCDs and cancer***

Vision	The vision is to reduce the burden of NCD-related diseases (cardiovascular diseases, diabetes, chronic airway diseases and musculoskeletal diseases) and cervical, breast and colorectal cancers.
Objectives	The approaches will help to achieve the SDGs, Health 2020 targets, the global target to reduce NCD premature mortality and national NCD targets 6, 7 and 8 (Annex 1).
Framework	The framework is defined within the scope of the Chronic Diseases Prevention and Control Programme of Turkey (2014–2017), the Cardiovascular Diseases Prevention and Control Programme of Turkey (2015–2020), the Diabetes Programme of Turkey (2015–2020), the Kidney Diseases Prevention and Control Programme of Turkey (2014–2017), the Musculoskeletal Diseases Prevention and Control Programme of Turkey (2016–2020) and the National Cancer Programme (2013–2018).
Activities	The goal of improved access to family- and community-based primary health care by 2010 is furthered by the Health for All approach of WHO. The Health Transformation Programme aims to achieve this goal by providing family-based primary health care through appropriately trained and skilled health staff. The family medicine approach which is successfully implemented in different countries is supported in Turkey. The Family Physician Programme was piloted in Düzce province in 2005. The programme was expanded throughout the country in late 2010.

In this regard, family medicine specialty training was introduced. Physicians involved in primary health care were trained in family medicine and organized under autonomous family physician practices (instead of serving as public servants in health centres) with registered patient lists. They are subject to performance-based supplementary payment contracts. Patients are free to choose the practice and physicians. The performance targets of family physicians have so far focused on maternal and child health and control of communicable diseases. However, work is going on to integrate NCD targets into a performance-based payment system. In the current practice, every family physician employs a nurse or a family health staff member. Turkey plans to improve the skills of existing physicians through continuous in-service training and increase the number of family specialists steadily (7).

Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.



### ***Immunization and control of related communicable diseases***

**Vision** The vision is to promote the allocation of funds for immunization and control of related communicable diseases in order to prevent or avoid an increase in NCDs.

The targets of: (i) free vaccination for all children within the scope of the childhood immunization programme of Turkey as well as for people with chronic diseases within the scope of universal health insurance, and (ii) the availability of essential medicines have been achieved and are not, therefore, included in the national targets.

## **Supportive approaches**

Turkey has been at the forefront of the fight against obesity and other NCDs related to diet and physical activity. In recent years levels of obesity and physical inactivity have unfortunately risen, resulting in one of the highest prevalences of obesity among women in the Region. Even so, Turkey has prioritized the fight against overweight and obesity, especially through innovative solutions. In collaboration with the Ministry of National Education and the Ministry of Youth and Sports, the Ministry of Health has started a bicycle distribution programme and a related cycle path development scheme to raise awareness and focus on changing the environment towards a culture geared to physical activity and the encouragement of active modes of travel (Table 12).

**Table 12. Supportive approaches towards behavioural risk factors**

### ***Promoting physical activity***

<b>Vision</b>	The vision is to promote an increase in the level of physical activity through health system and environment changes.
<b>Objectives</b>	Approaches will help to achieve SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD targets 3, 6, 7 and 8 (Annex 1).
<b>Framework</b>	The framework is defined on the basis of the Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017), the Chronic Airway Diseases Prevention and Control Programme of Turkey (2014–2017), the Programme for Reducing High Salt Consumption in Turkey (2017–2021), the Cardiovascular Diseases Prevention and Control Programme of Turkey (2015–2020), the Diabetes Programme of Turkey (2015–2020), the Kidney Diseases Prevention and Control Programme of Turkey ((2014–2017), the Musculoskeletal Diseases Prevention and Control Programme of Turkey (2016–2020) and the National Cancer Control Programme of Turkey (2013–2018).
<b>Activities</b>	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.



### ***Health promotion***

Vision	The vision is to support health through changes in school and workplaces and to increase personal wellbeing.
Objectives	The approaches will help to achieve the SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD targets 2, 3, 5, 6 and 7 (Annex 1).
Framework	The framework is defined on the basis of the National Tobacco Control Programme – Action Plan (2015–2018), the Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017), the Chronic Airway Diseases Prevention and Control Programme of Turkey (2014–2017), the Cardiovascular Diseases Prevention and Control Programme of Turkey (2015–2020), the Diabetes Programme of Turkey (2015–2020), the Kidney Diseases Prevention and Control Programme of Turkey ((2014–2017), the Musculoskeletal Diseases Prevention and Control Programme of Turkey (2016–2020) and the National Cancer Control Programme of Turkey (2013–2018).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.

### ***Promoting clean air***

Vision	The vision is to reduce air pollution and promote clean air in open and closed areas for the benefit of cardiovascular diseases, acute and chronic respiratory diseases and cancer.
Objectives	The approaches will help to achieve the SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD target 5 (Annex 1).
Framework	The framework is defined within the scope of the National Tobacco Control Programme – Action Plan (2015–2018).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.

### ***Promoting oral health***

Vision	The vision is to promote oral health.
Objectives	The approaches will help to achieve the SDGs, Health 2020 targets, the global target to reduce premature mortality from NCDs and national NCD targets 2, 5 and 7 (Annex 1).
Framework	The framework is defined on the basis of the National Tobacco Control Programme – Action Plan (2015–2018), the Healthy Nutrition and Physical Activity Plan of Turkey (2014–2017) and the Diabetes Programme of Turkey (2015–2020).
Activities	Annex 2 summarizes the contribution of existing action plans to the Multisectoral Action Plan of Turkey for Noncommunicable Diseases and cross-references activities.







**Annex 1**  
**CONTRIBUTION OF MULTISECTORAL ACTION PLAN OF TURKEY FOR NONCOMMUNICABLE DISEASES TO ACHIEVING SPECIFIC GLOBAL AND EUROPEAN TARGETS**

Targets	Priority activity areas				Priority approaches							Supportive approaches			
	Governance	Monitoring and evaluation	Prevention	Health system	Financial and marketing policies, health promotion and reducing health risks	Product reformulation and improvement	Reducing salt intake	Cardiometabolic risk assessment and management	Early detection and effective treatment of NCDs and cancer	Immunization and control of related communicable diseases	Promoting physical activity	Health promotion	Promoting clean air	Promoting oral health	
Sustainable Development Goal 3.4. By 2030, reduce by one third premature mortality from NCDs through prevention and treatment and promote mental health and well-being	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Sustainable Development Goal 3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol					✓										
Sustainable Development Goal 3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination													✓		
Sustainable Development Goal 3.a. Strengthen the implementation of the WHO Framework Convention on Tobacco Control in all countries, as appropriate					✓							✓			
Health 2020 Target 1. Reduce premature mortality in Europe by 2020 (1.5% relative annual reduction in overall premature mortality from cardiovascular diseases, cancer, diabetes and chronic airway diseases)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Health 2020 Target 2. Increase life expectancy in Europe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Health 2020 Target 3. Reduce inequities in Europe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Health 2020 Target 4. Enhance the well-being of the European population	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	



Targets	Priority activity areas				Priority approaches						Supportive approaches			
	Governance	Monitoring and evaluation	Prevention	Health system	Financial and marketing policies, health promotion and reducing health risks	Product reformulation and improvement	Reducing salt intake	Cardiometabolic risk assessment and management	Early detection and effective treatment of NCDs and cancer	Immunization and control of related communicable diseases	Promoting physical activity	Health promotion	Promoting clean air	Promoting oral health
National NCD Target 1. A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes or chronic airway diseases	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
National NCD Target 2. Halt the rise in alcohol consumption	✓	✓	✓	✓	✓			✓						✓
National NCD Target 3. A 10% reduction in the prevalence of insufficient physical activity	✓	✓	✓	✓			✓				✓			
National NCD Target 4. A 30% relative reduction in the mean population intake of salt/sodium	✓	✓	✓		✓		✓							
National NCD Target 5. A 30% relative reduction in the prevalence of current tobacco use in persons aged 15+ years	✓	✓	✓	✓	✓			✓				✓	✓	✓
National NCD Target 6. A 20% reduction in the prevalence of raised blood pressure	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
National NCD Target 7. A Halt the rise in diabetes and obesity	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
National NCD Target 8. At least 50% improvement in cardiovascular drug therapy and counselling (including people who had heart attack and strokes)	✓	✓	✓	✓				✓			✓	✓		
National NCD Target 9. Not included in national targets since Turkey has achieved the target of above 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Annex 2  
CONTRIBUTION OF EXISTING PLANS TO MULTISECTORAL ACTION PLAN OF TURKEY FOR  
NONCOMMUNICABLE DISEASES

Targets	Priority activity areas				Priority approaches							Supportive approaches			
	Governance	Monitoring and evaluation	Prevention	Health system	Financial and marketin reducing health risks	Product reformulation and improvement	Reducing salt intake	Cardiometabolic risk assessment and management	Early detection and effective treatment of NCDs and cancer	Immunization and control of related communicable diseases	Promoting physical activity	Health promotion	Promoting clean air	Promoting oral health	
Health 2020: the European policy for health and well-being	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Ministry of Health Strategic Plan 2013–2017	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Healthy Nutrition and Physical Activity Programme of Turkey (2014–2017)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
National Tobacco Control Programme-Action Plan (2015–2018)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Programme for Reducing High Salt Consumption in Turkey (2017 - 2021)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chronic Airway Diseases Prevention and Control Programme of Turkey (2014–2017)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Cardiovascular Diseases Prevention and Control Programme of Turkey (2015–2020)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Diabetes Programme of Turkey (2015–2020)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Kidney Diseases Prevention and Control Programme of Turkey (2014–2017)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Musculoskeletal Diseases Prevention and Control Programme of Turkey (2016–2020)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
National Cancer Control Programme (2013–2018)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Healthy Aging Action Plan and Implementation Programme (2015–2020)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	









				2017	2018	2019	2020
<b>Monitoring and evaluation framework</b>							
<b>Behavioural risk factors</b> Salt/sodium consumption	Monitoring indicator Age-adjusted average intake of salt/sodium in persons aged 18+ years by g/day	Target A 30% relative reduction in mean population intake of salt/sodium	Current status SALTurk-1 2008: 18 g/day (46) SALTurk-2 2012: 15 g/day (6)				
<b>Behavioural risk factors</b> Tobacco use	Monitoring indicator 1. Prevalence of tobacco use in adolescents (13–15 years) 2. Age-adjusted tobacco use prevalence	Target A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	Current status Prevalence of current tobacco smoking among young people aged 13–15 years 2003: Total 6.9% (59) 2012: Total 10.4% (60).  Prevalence of tobacco use in persons aged 15+ years 2008: 31.2% (61) 2012: 27.1% (18)				
<b>Biological risk factors</b> Raised blood pressure diabetes and obesity	Monitoring indicator Age-adjusted prevalence of raised blood pressure in persons aged 18+ years (systolic blood pressure $\geq$ 140 mmHg and/or diastolic blood pressure $\geq$ 90 mmHg)  Age-adjusted prevalence of raised blood pressure in persons aged 18+ years (fasting plasma glucose concentration $\geq$ 7.0 mmol/l (126 mg/dl) or medicine treatment due to raised blood glucose)	Target A 20% reduction in prevalence of raised blood pressure  Halt the rise in diabetes	Current status 2010: prevalence of raised blood pressure in persons aged 18 years and above: 30.8%  Türk Hipertansiyon Prevalans Çalışması (Patent 1) (2003) 31.8% (48) Patent 2 (2012) 30.3% (49)  Raised blood glucose prevalence among those aged 20+ years (fasting blood glucose $\geq$ 7.0mmol/L(126mg/dl or taking medication for diabetes): 11.1% (39)				



Monitoring and evaluation framework	Monitoring indicator	Target	Current status	2017	2018	2019	2020
<p><b>Biological risk factors</b></p> <p>Diabetes and obesity</p>	<p>1. Prevalence of overweight and obesity among school children (overweight and obesity definitions are taken from WHO's growth reference: two types of standard deviation by age and BMI)</p> <p>2. Age-adjusted overweight and obesity prevalence among people aged 18+ years (BMI for overweight 25–29, 9 kg/ m2 and obesity <math>\geq</math> 30 kg/m2)</p> <p>Additional indicators:</p> <p>1. Diabetes control percentage</p> <p>2. Prevalence of impaired blood glucose (<math>&gt;</math> 100mg/dl)</p>	<p>Halt the rise in obesity</p>	<p>2010 People aged 19+ years: overweight: 35.6% obese: 30.3% (58)</p> <p>Children and young people aged up to 18 years: overweight:14.2% obese: 8.3% (62)</p>				
<p><b>National system response</b></p> <p>Drug therapy to prevent heart attacks and strokes</p>	<p>Rate of people receiving drug therapy (40 years and above with <math>\geq</math>30% cardiovascular risk within the least 10 years, including people currently with heart diseases and including glycaemic control) and counselling to prevent heart attacks and strokes</p> <p>80% availability of the affordable basic technologies and essential medicines required to treat major NCDs in both public and private facilities</p>	<p>At least 50% improvement in drug therapy and counselling for people who had heart attack and strokes</p>	<p>Initial data not available; cardiovascular risk assessment for family doctors will be prepared in 2017</p>				
<p><b>Essential medicines and basic technologies required to treat major NCDs</b></p>		<p>80% availability of essential medicines and basic technologies required to treat chronic diseases</p>	<p>Not included in national targets since this target has already been achieved in Turkey</p>				

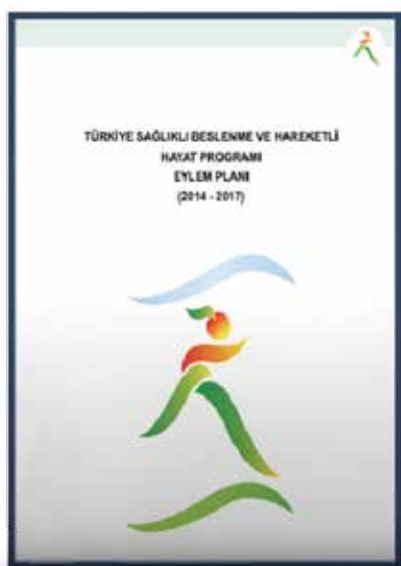




*Annex 4*  
NATIONAL PROGRAMMES TO PREVENT PREMATURE  
MORTALITY CAUSED BY AVOIDABLE NCDS



National Tobacco Control Programme – Action Plan  
(2015 - 2018) (14)



Healthy Nutrition and Physical Activity Programme  
of Turkey (2014 - 2017) (19)



Programme for Reducing High Salt Consumption in Turkey (2017 - 2021) (20)



Prevention and Control of Chronic Airway Diseases Programme of Turkey (2014 - 2017) (21)





Prevention and Control of Cardiovascular Diseases Programme of Turkey) (1)



Diabetes Programme of Turkey (2015–2020) (23)



Renal Disease Prevention and Control Programme of Turkey (2014–2017) (24)



National Cancer Control Programme (22)



## *Annex 5* PROGRAMME FOR DEVELOPING MULTISECTORAL HEALTH RESPONSIBILITY

Health is influenced by numerous direct or indirect factors and complex processes. All interventions related to society and the environment need to be addressed through a multisectoral approach prioritizing health protection and promotion. The Programme for Developing Multisectoral Health Responsibility has been developed with the participation of academics and representatives of the Ministry of Health and other institutions and agencies so as to identify key stakeholders and their roles.

The Programme aims to promote a multisectoral approach in health among all related institutions and agencies and place health at the heart of all policies.

After preliminary preparations began in August 2009, the Programme was developed in March 2011 following two workshops held with representatives of the health and other sectors. It consists of two sections, as under.

- The Multisectoral Approach to Health Protection and Promotion includes 12 components and 43 subcomponents. Its development involved 759 representatives of more than 100 institutions and agencies. The document, which has more than 3000 pages in 13 volumes, is available in both English and Turkish and will serve as an important guide for improving the health status of the population through mobilizing stakeholders and creating collaboration.
- Work on the Multisectoral Approach to Curative and Rehabilitative Services started in February 2013. This part has eight main components and 16 subcomponents.

The Programme for Developing Multisectoral Health Responsibility is one of the four main targets of the Ministry of Health Strategic Plan 2013–2017. Moreover, it was the first of the health policies in the 10th National Development Plan 2014–2018 to be published by the Ministry of Development.

The Programme envisages that steps will be taken to improve factors affecting human health with a view to protecting and promoting health, reducing general expenditure on health, and enhancing life expectancy and quality of life through health promotion interventions at individual and community level. In addition, the quality of curative and rehabilitative services will be improved.

The Health Transformation Programme, which has been implemented over the past 13 years, has shown the value of stakeholders' contributions in several major achievements in and interventions for reducing maternal and infant mortality rates, increasing immunization rates, raising life expectancy at birth, reducing the prevalence of smoking, reducing salt content in food, introducing the use of whole wheat in bread, adding iodine to table salt and introducing regulations on food items sold in school canteens. The Programme has enabled experience in multisectoral work to be gained.

Circular 2014/21 of the Office of the Prime Minister on the implementation of the Programme was published in the Official Gazette No. 29214 of 23 December 2014. The Higher Council of Multi-Stakeholder Health Policies was established by the Circular to ensure Programme-related cooperation and coordination among institutions and to identify the main strategies and take



measures to address relevant issues. The members of the Council, which is chaired by the Prime Minister, includes the Minister of Family and Social Policies, the Minister of Science, Industry and Technology, the Minister of Labour and Social Security, the Minister of Environment and Urban Planning, the Minister of Foreign Affairs, the Minister of Youth and Sports, the Minister of Food, Agriculture and Livestock, the Minister of Internal Affairs, the Minister of Development, the Minister of Culture and Tourism, the Minister of Finance, the Minister of National Education and the Minister of Health. The Council meets in May each year and is convened by the Chairman when necessary. Other ministers may be invited depending on the agenda.

The Programme is also important in that it is consistent with the principles of the WHO Health 2020 policy framework, which was developed to help countries improve multisectoral responsibility for health, although it was started before the Health 2020 declaration.

The Health 2020 policy framework defines two main strategic objectives and four priority activity areas in line with its principles and those of health for all. The two strategies are: (i) achieving better health for all and eliminating health inequalities, and (ii) improving leadership and participatory governance for health.

The main principles of the Health 2020 policy framework are contained in three approaches: health in all policies, whole of government and whole of society. The health in all policies approach requires the prioritization of health and well-being of society beyond the health sector, ensuring that all sectors understand and act in line with their responsibilities for health. The whole of government approach highlights the need for better coordination and integration at all levels of government by ensuring the participation of nongovernmental groups to achieve sustainability in health and well-being in the context of the government's overall goals for society. The whole of society approach strengthens resilience against threats to the health, safety and well-being of society, including among the private sector, nongovernmental organizations, civil societies and individuals.

Over the years a variety of governance models have been developed on different topics by countries in regard to intersectoral participatory governance. For example, Albania has developed the Food and Nutrition Action Plan (2010) jointly implemented by five ministries; France has established a National Committee on Public Health (2004) with the whole of government approach; Slovakia has established the Traffic Safety Committee (2004); Hungary has established the Interdepartmental Public Health Committee (2002); and the United States (California) has established the Health in All Policies Task Force (2010). There was, however, no example that systematically and comprehensively brought together all intersectoral health topics with all relevant stakeholders in a holistic approach before the Programme for Developing Multisectoral Health Responsibility was developed in Turkey.

The Programme for Developing Multisectoral Health Responsibility is a crucial example of what can be done in this context, given that it was initiated before WHO undertook relevant work to meet international requirements with a more comprehensive framework than existed in international examples. Its unique structure, bringing together all intersectoral health topics with all relevant stakeholders, is cited by WHO as a model which may well influence global health policies with respect to the way it was developed and in terms of content and scope. Effective participation by and contributions from public institutions and agencies, universities, the private sector and civil society organizations are, therefore, crucial for sustainable success in its implementation.



## Annex 6 10TH DEVELOPMENT PLAN 2014–2018

In 2012, the administration of Prime Minister (now President) Recep Tayyip Erdoğan released a list of goals to coincide with the centenary of the Republic of Turkey in 2023 (Vision 2023). These covered the economy, justice, health, transport, tourism, the arts and promotion of Turkey, with the aim of making Turkey one of the world's 10 most developed economies by 2023.

Based on Vision 2023, the Ministry of Development, in collaboration with all relevant ministries, prepared a new Development Plan in line with the 2023 targets. This was approved at the 127th plenary session of the Grand National Assembly of Turkey on 1 July 2013, in accordance with Law No. 3067 dated 30 October 1984.

The 10<sup>th</sup> Development Plan 2014–2018 includes priority transformation programmes that are important for the achievement of the goals and objectives of the Plan. These programmes have been designed for critical areas for reform. They offer solutions to the main structural problems and contribute to the processes of transformation, which are generally the responsibility of several ministries and which require the responsibility and effective coordination of the respective institutions.

The priority transformation programmes are limited in number so as to have a manageable pool of programmes and measurable outcomes. Within the scope of each programme, which has been developed with the relevant sector and across other sectors, the guiding objectives and scope of the programme, performance indicators and components, and central implementation mechanism and intervention tools are identified and the institutions responsible for the components and coordination are listed.

By design, the priority transformation programmes are linked to the Government's policies in all sectors and include the main elements for effective implementation of these policies. Once approved by Parliament, the details, subcomponents, implementation activities and projects, budget requirements and legal infrastructure of the programmes will be translated into action plans by the coordinators and ministries in charge of the components and the final design. The principles and procedures of implementation will be determined by the decision of the Higher Planning Council.

The Ministry of Development is the coordinating body for the development, implementation, monitoring and evaluation of the action plans related to the priority transformation programmes.

The Higher Planning Council has the authority to revise the programmes if necessary by taking account of the implementation results.

The programmes will be given priority by all public institutions and agencies in respect to legal requirements, administrative decisions and funding.

One of the action plans developed as part of the priority transformation programmes under the 10th Development Plan is the Healthy Lifestyle and Physical Activity Action Plan.









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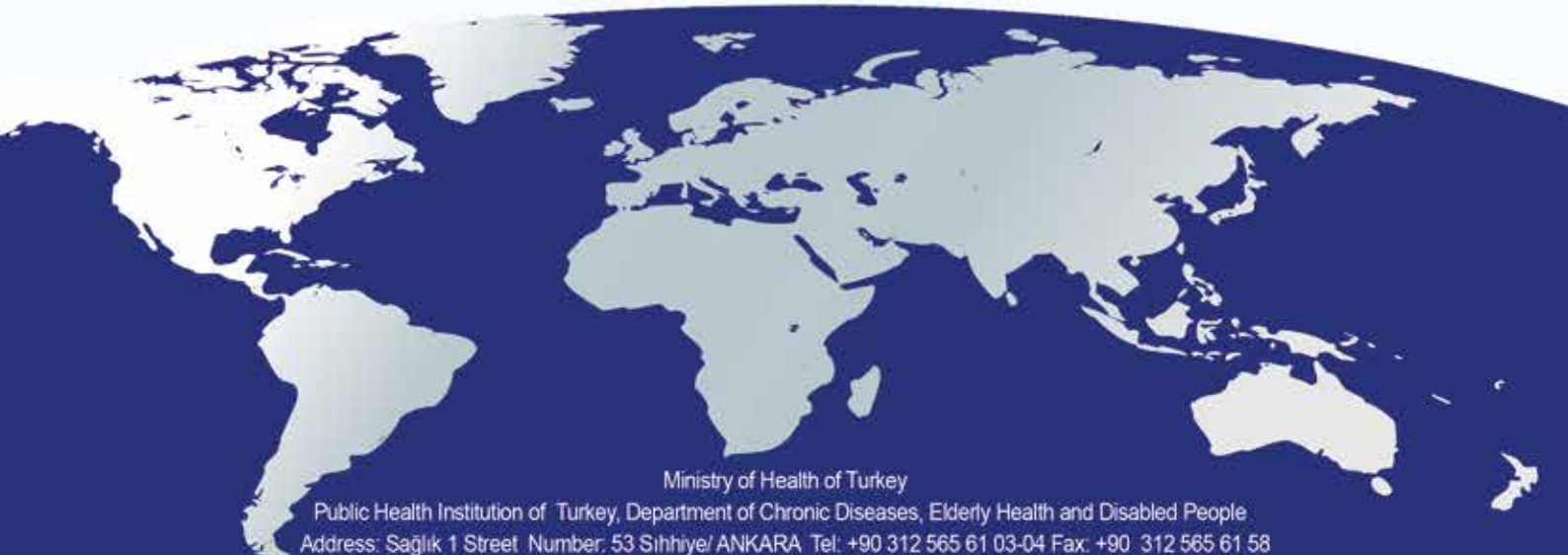








# Republic of Turkey Ministry of Health



Ministry of Health of Turkey

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