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Strengthening the response to noncommunicable diseases in Turkmenistan



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Abstract

This report documents the findings of an assessment of NCD prevention and control efforts in Turkmenistan carried out in the months preceding the WHO European Ministerial Conference on the Prevention and Control of NCDs in the Context of Health 2020, hosted by the Ministry of Health and Medical Industry of Turkmenistan in Ashgabat on 3-4 December 2013. The timing of the results of the assessment offers the possibility of sharing the Turkmen experiences and challenges in NCD prevention and control on the occasion of the Conference. Prepared against the backdrop of recent global and regional developments, the report describes Turkmenistan's geopolitical, socioeconomic and health governance structures, as well as its distinctive demographic and epidemiological trends in relation to noncommunicable diseases.

Keywords

Health management and planning
Health policy
Outcome assessment (health care)
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Contents

Acknowledgements.....	iv
Introduction	1
1. Country profile.....	2
1.1 Socioeconomic and political context	2
1.2 Demographic change	2
1.3 NCD health outcomes.....	2
2. Governance for NCDs and public engagement	5
2.1 Governance structure.....	6
2.2 Intersectoral governance	7
2.3 Mass media.....	7
2.4 Civil society.....	8
2.5 Intergovernmental and international organizations	8
3. Strengthening monitoring and surveillance of NCDs	8
3.1 Governance for NCD surveillance	8
3.2 WHO STEPS survey in Turkmenistan	9
4. Disease prevention and health promotion	10
4.1 Coverage of population interventions.....	10
4.2 Coverage of individual services	13
5. Reorienting health services towards prevention and care	15
5.1 Strengths	16
5.2 Challenges.....	16
6. Conclusions and reflections	17

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Introduction

The occasion of the WHO European Ministerial Conference on the Prevention and Control of Noncommunicable Diseases in the Context of Health 2020, hosted by the Government of Turkmenistan in Ashgabat on 3-4 December 2013, offers a unique opportunity to present a situation analysis of the challenge of noncommunicable diseases (NCDs) in Turkmenistan and action being taken to respond to it.

The report is timely. At the sixty-fifth session of the World Health Assembly in 2013, WHO Member States endorsed the new Global action plan for the prevention and control of Noncommunicable Diseases 2013-2020, as well as a monitoring framework for tracking progress and a set of voluntary targets (1); within the WHO European Region, the new WHO European health policy, Health 2020 (2) is being implemented. The perspectives provided by these efforts, together with the tools developed to support them, benefited the assessment leading to this report (3). Furthermore, there is a growing insight into how to reorient health systems towards NCD prevention and care and to identify and overcome potential barriers to doing so (4). During 2012-2013, the WHO Regional Office for Europe embarked on a multicountry project (initially in five countries: Hungary, Kyrgyzstan, the Republic of Moldova, Tajikistan and Turkey) to assess health-system achievements in and challenges to NCD prevention. The country reviews resulting from this exercise, as well as the outcome of the WHO NCD Country Capacity Survey conducted for the fourth time during the first part of 2013, will allow the benchmarking of Turkmenistan's progress against that of other countries.

In April-September 2013, a joint team of experts from the Turkmen health system and WHO conducted an assessment of the challenges posed by NCDs in Turkmenistan. The framework for the analysis drew on the WHO global and European policy contexts and supporting tools referred to above.

The objectives of the assessment were twofold. Firstly, it intended to pull together, for the first time, an overview of the challenges posed by NCDs in Turkmenistan and the response being made, and to provide a baseline against which future work and the achievements of any new NCD strategy can be assessed. Secondly, alongside the results of wider global and regional exercises, and in view of its timing, which coincides with the Ministerial Conference, it will contribute to knowledge and experience sharing in the WHO European Region on strengthening the response to NCDs.

The report is structured as follows: (1) socioeconomic and political context, and overview of NCD burden with a focus on mortality-based indicators; (2) governance for NCDs and public engagement; (3) systems for NCD surveillance; (4) assessment of the coverage of core population interventions and individual services for NCD prevention, with a focus on tobacco control and breast cancer; (5) health-system achievements and barriers linked to the coverage pattern; (6) conclusions and reflections. Critical issues from the perspective of Health 2020 are considered, such as leadership and commitment, intersectoral action and supportive governance, health-system adaptation, and the engagement of all levels of government and civil society.

1. Country profile

1.1 Socioeconomic and political context

Turkmenistan is a relatively young country, which gained its independence from the former Soviet Union in 1991. Located in the south-western part of central Asia, it borders with Kazakhstan and Uzbekistan to the north, Afghanistan and the Islamic Republic of Iran to the south, and the Caspian Sea to the west. It is a large country (491.2 thousand km²) with a relatively low population density (12.9 persons/km²).¹ The Karakum Desert occupies 80% of the country. The capital, Ashgabat, is divided into five administrative regions (velayats), each subdivided into a number of districts (etraps). Turkmenistan is a presidential republic; the current president (President Gurbanguly Berdimukhamedov) was elected in 2007.

Turkmenistan has large gas and oil reserves, corresponding to one fifth of the world's deposits. The economy is based on oil and gas production, chemical industry, oil-refining industries and light industries, such as those producing textiles. In recent years, the country's economy has been on the rise with a steady increase of gross domestic product (GPD), the rate of which was 111.1% in 2012. The agriculture share of GPD in 2012 accounted for 9.1%.

Turkmenistan ranks 102 in the Human Development Index (out of 162 countries) (5) and is in the World Bank upper-middle income group. Intensive agriculture takes place in irrigated oases: one half of the land is planted with cotton but current agricultural reforms aim to increase food production and improve self-sufficiency.

Just over half (50.6%) of the population of 6.3 million is urban. Almost half of the population (49%) is under the age of 25 years and just over a quarter (26%) is under the age of 15 years.² Access to free education is almost universal for both sexes and the adult literacy rate is almost 100%. The country is multiethnic with more than 100 ethnic groups, the main ones being Turkmen (81%), Uzbek (9.9%), Russian (3.8%) and Kazakh (1%). The main religious groups are Islam (89%) and Orthodox Christianity (9%).

1.2 Demographic change

Demographic change is an important determinant of NCDs. Over the period 1990-2010, the population of Turkmenistan increased 1.4 times.³ During the same period, the number of live births rose by 11.2%. The estimated population over 65 years of age increased from 3.8% in 1990 to 3.9% in 2010, with a higher proportion of females (4.5%).⁴ Projections for 2030 and 2050 suggest that the older population will almost double each time, reaching 7.9% and 13.6% of the totals, respectively. Although this increasingly ageing population would still be comparatively low in the Region, it should be a matter of concern, particularly with respect to the development of NCDs and the demands on the health-care system.

Overall mortality in Turkmenistan appears to show some significant improvements since 1990. According to the Ministry of Health and Medical Industry of Turkmenistan, there was a 2.8-fold decrease in infant mortality from 1990 to 2010 - from 45.1 infant deaths per 1000 live births in 1990 to 15.8 per 1000 in 2010. Maternal mortality decreased from 111.7 per 100 000 live births in 1990 to 6.9 per 100000 live births in 2010, or by a factor of almost 16.2. Improvements on these causes of death are generally regarded as progress in the overall socioeconomic development of a country, a situation that may be a reflection of increasing GDP in Turkmenistan, which more than doubled from US\$2700 (adjusted for purchasing power parity) per capita in 1990 to US\$8200 in 2010 (6).

1.3 NCD health outcomes

In line with the framework for country assessments (4), this section considers NCD health outcomes using key indicators.

¹ As of 1 January 2013; data of The State Statistics Committee of Turkmenistan.

² As of 1 January 2011; data of The State Statistics Committee of Turkmenistan.

³ As of 1 January 1991 and 1 January 2011; data of The State Statistics Committee of Turkmenistan.

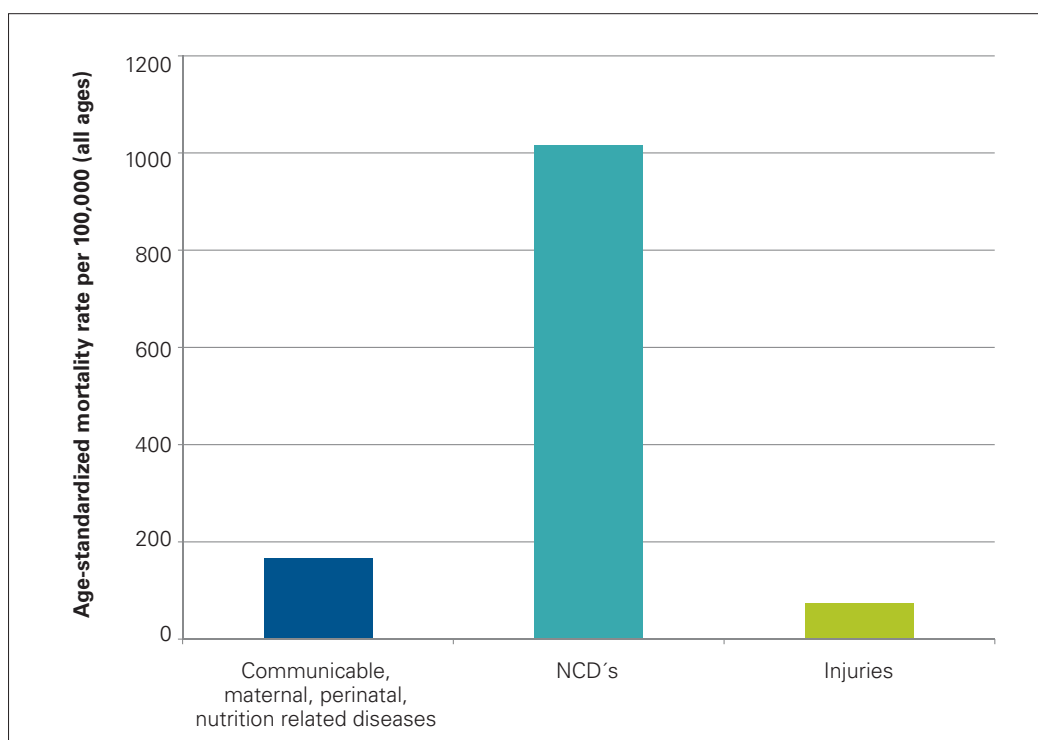
⁴ As of 1 January 2011; data of The State Statistics Committee of Turkmenistan.

Information presented here is mostly based on estimation approaches, which take into account earlier trends, socioeconomic information, risk factor data from surveys, and trends in neighbouring countries. Estimates from other sources for 2010 (7) tend to suggest that there has been some change in Turkmenistan regarding NCDs since 1998.

According to the State Statistics Committee of Turkmenistan, in 2011, the average life expectancy in country was 70.6 years (both sexes), which was 4.2 years higher than in 1990 (66.4 years), with a gap of 5.8 years between men (67.7 years) and women (73.5 years). As mortality risk was reported to be more than 10 times higher among 65 year olds compared to those younger than 65 years, this - together with the decreasing infant mortality - may help explain the increase in estimated life expectancy in Turkmenistan.

In 2004, WHO estimated that that two thirds (66%) of deaths in Turkmenistan were due to NCDs (8). More recently, WHO estimated that around four fifths (81%) of the death rate (all causes) in 2011 appeared to be due to NCDs (9) (Fig. 1).

Fig. 1. Mortality by cause (estimates) in Turkmenistan, 2008

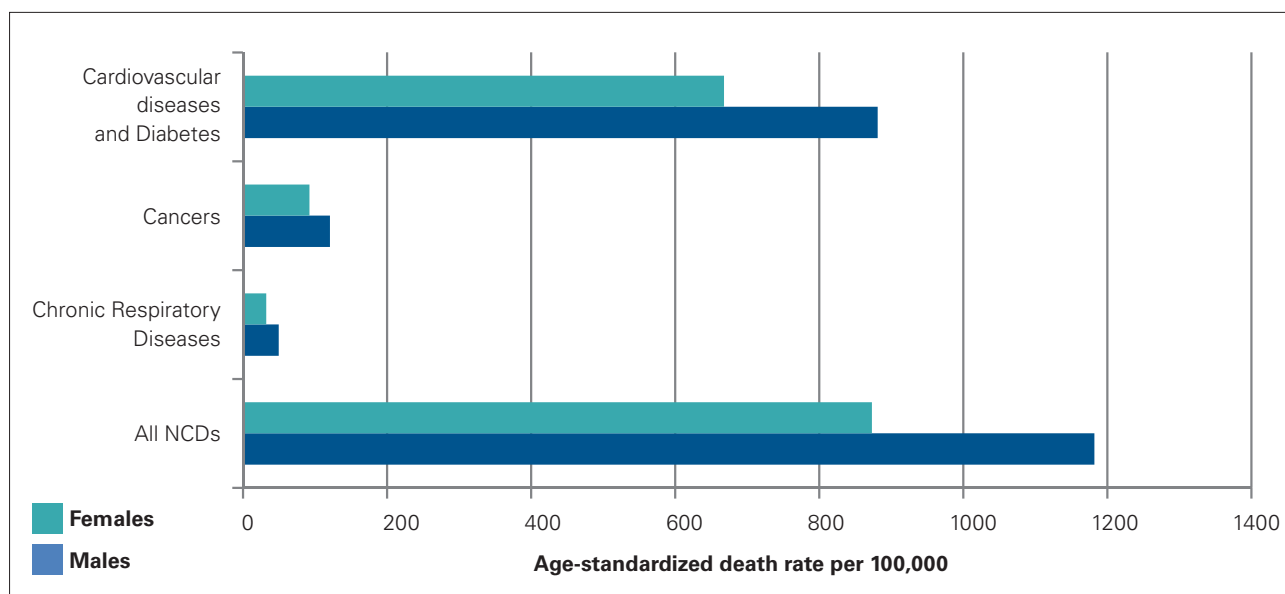


Source: World Health Statistics (9).

The largest fraction of mortality (over 40% of deaths) occurs after the age of 65 in Turkmenistan. Moreover, premature mortality rates (death before age 65) in Turkmenistan were more than 60% higher than the average for the European Region. This may be an indication of the opportunities for the health sector to act in response to mortality that may be avoided or delayed, paying special attention to gender differences.

The leading causes of death appear to be cardiovascular disease (CVD) and diabetes and there appears to be a significant gender gap (Fig. 2). The 2008 estimates for age-standardized death for all NCDs, cancers, CVD, and chronic respiratory diseases show an excess risk of around 30% among men compared to women. However, the estimates also indicate that before 60 years of age, deaths were more frequent among men than among women.

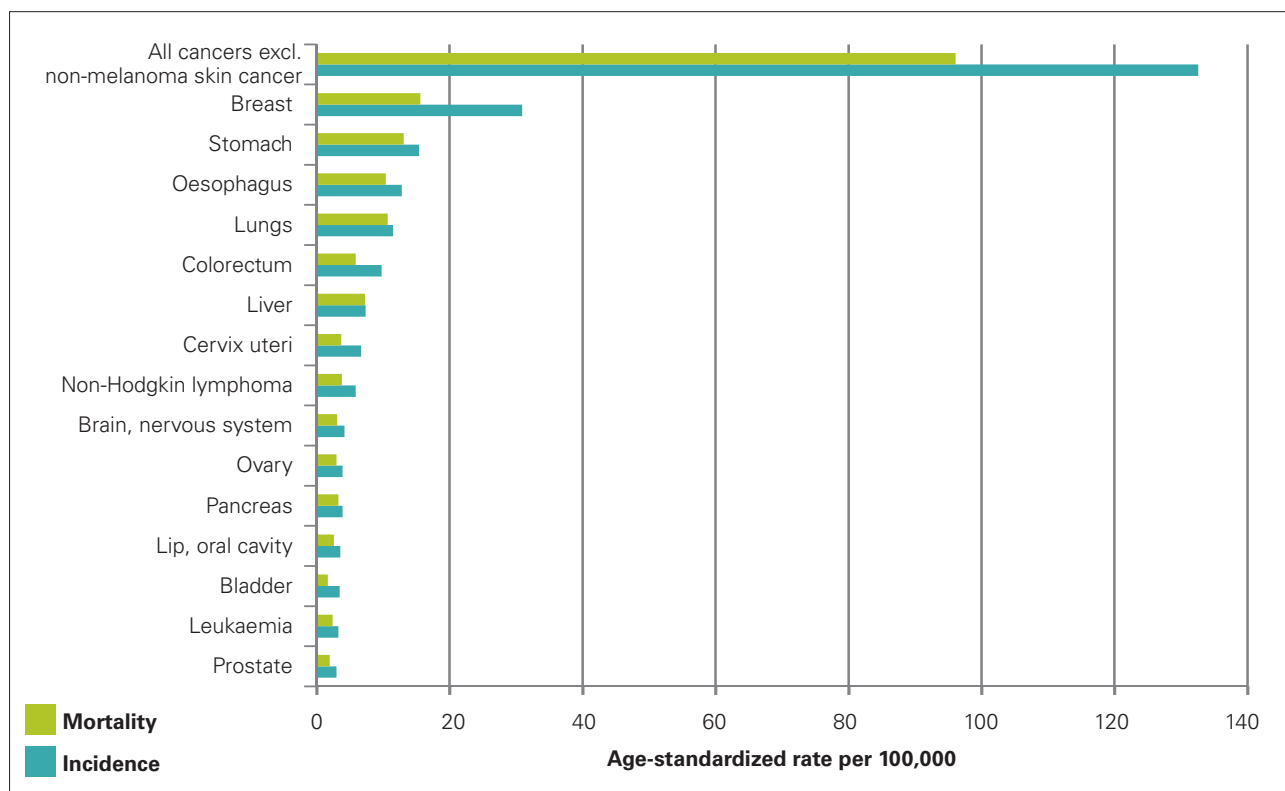
Fig. 2. Gender gap in NCD mortality in Turkmenistan, 2008



Source: WHO NCD Country Profiles 2011 (10).

Cancer mortality tends to be lower in Turkmenistan than in other eastern European countries. Leading cancer sites among men are stomach, lung, oesophagus, liver and colorectum; among women they are breast, oesophagus, stomach, colorectum and cervix uteri (commonly referred to as cervical cancer) (Fig. 3) (11). The ratio of mortality to incidence overall is 72%, higher for some cancers, such as liver and lung, than for others.

Fig. 3. Estimated age-standardized incidence and mortality rates (both sexes) for Turkmenistan, 2008

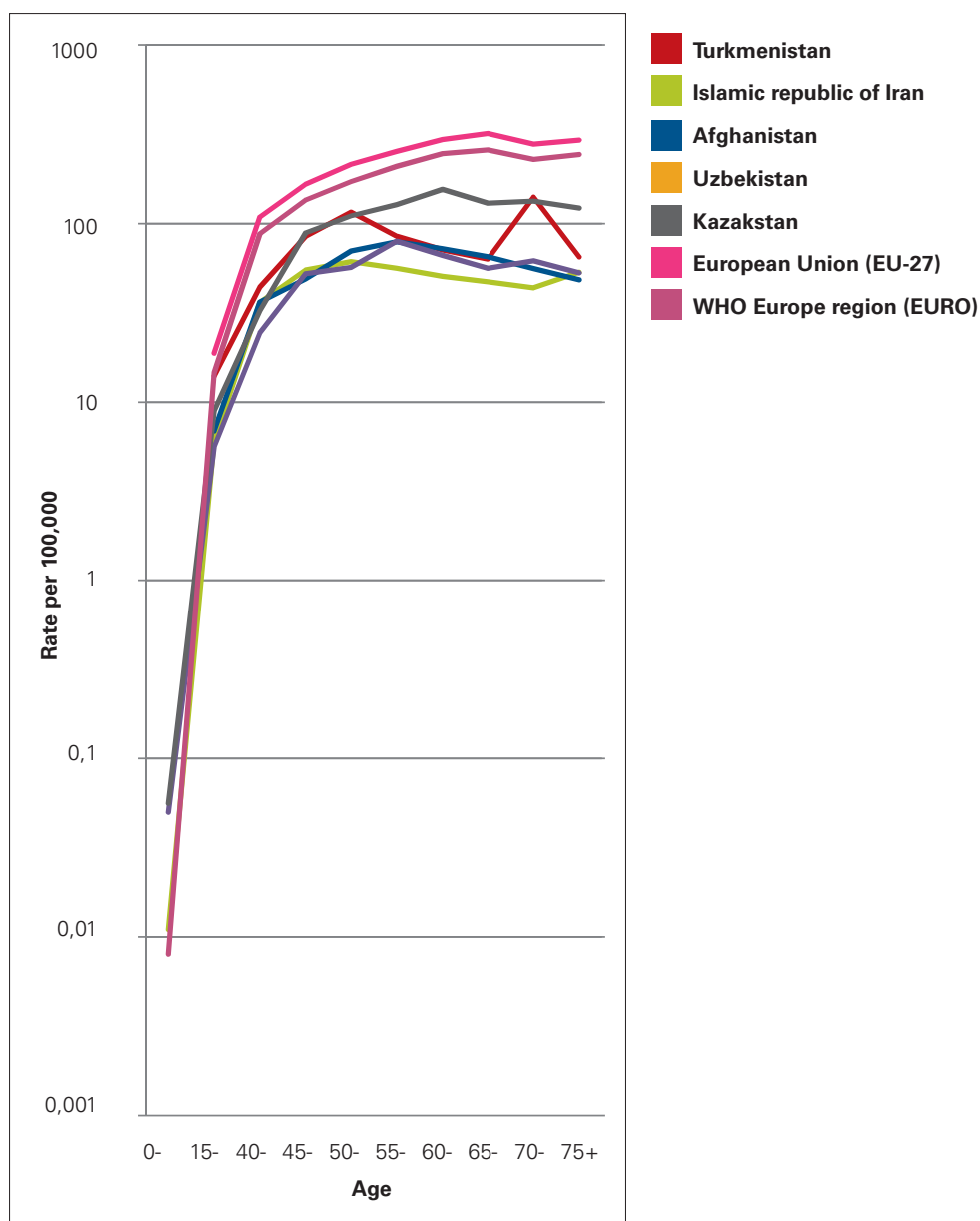


Source: GLOBOCAN (11).

The burden of breast cancer in the population has increased markedly in Turkmenistan over the past two decades. Based on incidence rates provided by the national authorities, from 1991 to 2010 the annual number

of new cases of breast cancer increased more than two fold (108%) from 195 to 406 cases, while the female population increased by approximately one third (35%). According to estimates of the International Agency for Research on Cancer (IARC), the current burden of breast cancer in Turkmenistan may be substantially higher, with age-specific rates at an intermediate level between those of neighbouring countries, such as Afghanistan, Kazakhstan or Uzbekistan, on the one hand, and EU27 and the entire WHO European Region on the other (Fig. 4) (11). Due to demographic changes alone, the current burden of disease is projected to increase further over the coming decades. A more pronounced increase could be expected if women were to adopt a life style with lower parity, higher caloric intake and less exercise.

Fig. 4. Age-specific breast-cancer mortality rates in Turkmenistan compared to neighbouring countries, the WHO European Region and EU27, 2008



Source: GLOBOCAN (11).

2. Governance for NCDs and public engagement

The WHO European policy framework for health and well-being, Health 2020, advocates for integrated policies to address priority health challenges and emphasizes the need for governments to work across sectors and society to achieve real improvements in health (2,3,). It calls for improved leadership and participatory

governance for health and recognizes the contribution that different stakeholders, particularly civil society, can make in promoting and protecting health. Key studies commissioned in the preparation of Health 2020, such as those on governance and the social determinants of health (12-14), as well as subsequent studies, such as those on the implementation of health-in-all policies (3,15), highlight the extent to which responses to health inequalities lie outside the direct control of a health ministry and requires commitment to protecting social values and introducing mechanisms for implementing policies across sectors.

This section reviews the governance structures in place in Turkmenistan, including those across sectors, intersectoral mechanisms for health-related action, engagement with civil society, national and international partnerships and commitment to social values.

2.1 Governance structures

The Government of Turkmenistan is divided into three branches, namely: the executive branch, represented by the Cabinet of Ministers and headed by the President; the legislative branch, headed by the Parliament (the Medjlis); and the judicial branch, headed by the Supreme Court.

The Ministry of Health and Medical Industry of Turkmenistan is responsible for health policy and the provision of health care for the whole population other than the health services provided by a few ministries and national services for their own personnel. Its remit includes: preparation of health legislation; elaboration and implementation of health-care reforms; health research; education and workforce planning issues; development and realization of prevention and care programmes and activities related to the medical device and pharmaceutical industries. It also deals with environmental health issues, plans the health-care budget and monitors the health status of the population (16).

The Ministry of Economy and Development and the Ministry of Finance determine the overall health-sector budget, set accounting norms and health-sector staffing levels, and are responsible for the allocation of resources among regions (velayats) and for the funding of central institutions. The Ministry of Education oversees education policy in general and plays a significant role in health education (Box 1).

Box 1. Ministry of Education

The Ministry of Education cooperates with the Ministry of Health and Medical Industry on the implementation of a number of health programmes (immunization, tuberculosis control, HIV prevention, safe motherhood, etc.) and is a member of a number of intersectoral coordination committees for those programmes. Health education has been part of the curriculum of primary schools since 1996. The two ministries have jointly conducted “health lessons” for schoolchildren and a joint working group of their technical experts has developed textbooks.

The local system of government comprises three levels, namely, the region/province (velayat), the district/town (etrap) and the city/village (gengeshlik). The last mentioned, as the main unit of local self-governance for cities, settlements and villages, is probably the most effective, accountable for and responsive to the problems and needs of the people. Several key laws have empowered local governments to undertake socioeconomic planning, budgeting and taxation activities and to make rational use of natural resources and engage civil society more in decision-making processes. These laws and their amendments are being promoted as ensuring a more proactive governance of the country, in compliance with democratic principles.

The health-care system of Turkmenistan is organized on a national basis. While policy-making for the health sector falls within the scope of the Cabinet of Ministers, the Ministry of Health and Medical Industry is responsible for the actual operation of health services. The provincial governor (velayat hakim), who is appointed by the President, finances the regional health services. While the region/province (velayat) is accountable to the local administration (hakimlik) for the organization of the health services, it is accountable to the Ministry of Health and Medical Industry on technical matters. Each region/province (velayat) is subdivided into districts/towns (etraps) and has a large number of health facilities. The director of the etrap hospital is responsible for

the health services (including primary health care (PHC)), acts as budget holder and is accountable to the health administration of the region/province (velayat) in question.

2.2 Intersectoral governance

The Cabinet of Ministers is responsible for the technical aspects related to health policy development and implementation. It also plays an essential role in intersectoral coordination among the Ministry of Health and Medical Industry, the Ministry of Economy and Development, the Ministry of Finance, the Ministry of Education, and other relevant ministries and organizations. The Cabinet of Ministers has a special department for health that monitors the implementation of national health-sector programmes and reports its findings to the Government.

The intersectoral mechanisms for health action are established at the national level in the form of coordination committees for different health programmes, such as the Intersectoral Coordination Committee for Immunization Programme, the Country Coordination Mechanism for the National HIV/AIDS Prevention Programme, the National Tuberculosis Control Programme, etc. (Box 2). Other ministries, committees and entities, including nongovernmental organizations (NGOs), such as the National Red Crescent Society, are represented on the country coordination committees. Basically, no such structures are functional at the subnational and local levels.

Box 2. Coordination and implementation of tobacco control

In Turkmenistan, the Ministry of Health and Medical Industry is responsible for the overall coordination of national tobacco control. Its role is to coordinate NCD prevention and treatment activities and to disseminate information and raise awareness about measures for tobacco control. The Ministry is also responsible for the surveillance of tobacco use and the monitoring of respective policies.

Several other government structures also have roles to play in tobacco control at the national level. The Ministry of Foreign Affairs is responsible for the WHO Framework Convention on Tobacco Control (FCTC) as for all other international treaties ratified by Turkmenistan. The Ministry of Trade and Foreign Economic Relations regulates the import of tobacco products, the licensing and control of retail sales, and the advertising, promotion and sponsorship of tobacco products. The Ministry of Internal Affairs and the Turkmen State Service for Security Protection of Healthy Society are responsible for enforcing smoke-free legislation and for issues related to the illicit trade of tobacco products. The National Tax Services regulate the taxation of tobacco products and oversee the sales of these products. The Ministry of Finance defines price policy on tobacco products. The Customs authorities coordinate issues related to tobacco products and border control.

As a result of the ratification of WHO FCTC in 2011, the National Council on Tobacco Control was established as a formal mechanism for coordinating the tobacco-control activities of the different players under the leadership of the Ministry of Health and Medical Industry. The Council comprises several national and regional key authorities involved in tobacco control in the country and is led by the Minister of Health and Medical Industry. Its main mandate is to monitor and evaluate the implementation of the National Tobacco Control Action Plan 2012-2016 (adopted in January 2012). The Council meets four times a year to review progress and propose new initiatives. It is obligated to submit yearly reports on its activities to the Ministry of Health and Medical Industry.

In September 2013, the Ministry of Health and Medical Industry initiated the development of a multisectoral NCD strategy. In this connection, it established a national working group comprising representatives of sixteen ministries and committees. The working group carried out a country capacity survey, using the tool developed by WHO, and initiated three projects under the Memorandum of Understanding between the Ministry of Health and Medical Industry and the Regional Office pertaining to the Conference, namely, an assessment of the current status of early detection of breast cancer, an analysis of health-system barriers and a survey using the WHO STEPwise approach to surveillance (STEPS). The last-mentioned will be completed towards the end of 2013 (see 3.2) (17).

2.3 Mass media

The Constitution provides for freedom of the media and freedom of expression. All mass media are stateowned and widely accessible. In 2000, 93% of households had a television, 94% of women watched TV weekly, 33%

listened to the radio, and 31% read a newspaper at least once a week (18). During his inauguration ceremony, the President pledged that the Internet would be available to everyone and government Internet centres have been launched (19).

A national Health Information Centre was established in April 2000. Its main task is to monitor and coordinate the work being carried out by health-care facilities in the areas of disease prevention and health education to promote healthy lifestyles among the population. It is also responsible for the implementation of educational activities for health workers and the population. The capacity of the Centre was strengthened by the opening of a video studio, the provision of necessary equipment and staff training on communication and health promotion, including the development of modern TV shows and programmes. It was assisted in this by the United Nations (United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), WHO), NGOs and other international organizations, as well as the British Embassy in Turkmenistan through, for example, study tours to health-promotion centres in the United States and the British Broadcasting Corporation in the United Kingdom. Specialists from the health-care system regularly organize TV and radio presentations covering issues associated with the prevention of NCDs. All newspapers have health columns and often publish articles on health promotion. There is also a public journal entitled "Saglyk" and a scientific journal entitled "Turkmenistanynlukmanchylygy". The Centre regularly prints and distributes leaflets and pamphlets on health promotion and disease prevention. It also produces the television programme, "Health of the Nation – the country's wealth" that is regularly shown on national television. Several television channels produce spots on health promotion and broadcast them regularly.

2.4 Civil society

There is a limited number of NGOs in the country, such as Youth Union, Women's Union, the Organization of Disabled People, and some others. They participate in the country coordination mechanisms of national programmes (TB, HIV and malaria control, immunization, etc.) and implement some health-promotion activities, mainly on tobacco control.

Public involvement in the health service is rudimentary and service users are not actively involved in decision-making processes relating to the health-care system.

Health professionals are represented either through the trade union for medical personnel or through a specialist society. The trade union, which is based on the model of the former Soviet Union, retains much of its power and status. The specialist societies represent the main specialties, such as cardiology and oncology.

2.5 Intergovernmental and international organizations

In response to the request of the Government and considering the diversity of its mandates, the United Nations is providing support to Turkmenistan in 2010-2014 in four broad areas: (i) strengthening democratization and rule of law; (ii) improving inclusive and sustainable growth; (iii) strengthening human development to achieve the Millennium Development Goals; and (iv) promoting peace and security (19). Particularly active in the country are UNICEF, the United Nations Development Programme (UNDP), the United Nations High Commissioner for Refugees (UNHCR), the United Nations Office on Drugs and Crime (UNODC), UNFPA and WHO, as well as affiliated agencies, such as the International Organization for Migration (IOM) and the World Bank. Relevant projects include those related to safe motherhood and reproductive health, child health and nutrition, and improvement in statistics. The number of international organizations operating in Turkmenistan is very low and some have left (20). The United States Agency for International Development (USAID) is supporting health reform with a focus on the quality of maternal and child health services.

3. Strengthening monitoring and surveillance of NCDs

3.1 Governance for NCD surveillance

Following the adoption of United Nations resolution A/RES/66/2, Political Declaration of the high-level meeting of the General Assembly on the prevention and control of NCD (21), WHO prepared a global monitoring

framework for tracking progress in the prevention and control of major NCDs and their risk factors. The framework, which comprises 9 voluntary targets and 25 indicators, was adopted by WHO Member States at the sixty-fifth session of the World Health Assembly in May 2013 (1). The Health-2020 NCD indicators and targets have been aligned with those of the global framework with adjustments to accommodate the difference in the cut-off dates of the European policy (2020) and the global targets (2025). It is important for Turkmenistan to align its health-information system with the new global monitoring framework and the Health-2020 targets and indicators (2).

The WHO country capacity survey conducted during the first part of 2013 showed that in Turkmenistan responsibility for the surveillance of NCDs and their risk factors is shared across several offices within the Ministry of Health and Medical Industry and that funding is available for surveillance, monitoring and evaluation. Turkmenistan has a system for the routine generation of mortality data by cause of death. A vital registration system exists in which cause of death, determined and certified by a medical practitioner, is recorded. The data include deaths occurring both outside of and in medical facilities and are aggregated by age, gender and other socioeconomic factors. The country capacity survey also gave an insight into risk-factor surveys conducted in Turkmenistan: in 2011, a multi-risk-factor survey was conducted, including the harmful use of alcohol, low consumption of fruit and vegetables, physical inactivity and tobacco use; a survey on blood glucose, raised total cholesterol, raised blood pressure, overweight and obesity, and salt intake was conducted in 2013.

Turkmenistan is determined to strengthen its surveillance system, which is crucial to planning targeted action, monitoring progress and outcomes related to counteracting NCDs, and informing and evaluating strategies and policies. Risk-factor monitoring has been integrated into the general health-information system in order to support linkages and sustainability and allow the longer-term measurement of the impact of NCD interventions and the distribution of this impact.

3.2 WHO STEPS survey in Turkmenistan

Turkmenistan has demonstrated great commitment to strengthening NCD surveillance by pioneering, as one of the first countries of the WHO European Region, the WHO STEPS approach to obtaining internationally comparable core data on the established NCD risk factors (17). The STEPS survey is a key element in establishing an improved NCD surveillance system that will allow the collection of standardized data on the main behavioural and metabolic risk factors for this group of diseases. It will furnish the necessary data for monitoring the implementation status of national strategies and programmes, determining further planning needs, and improving the availability of data for international reporting on progress in the management of chronic NCDs.

In April 2013, an introductory mission was organized in Ashgabat, Turkmenistan, followed by fast-paced country preparations. A national STEPS steering committee was established under the leadership of the Deputy Minister of Health, comprising representatives from the Health Care Department, the Health Statistics Department and the Turkmenistan National Statistics Committee. All three levels of STEPS were selected to include behavioural, physical and biochemical measurements; optional modules for tobacco policy and dietary salt were incorporated. The scope of the STEPS⁵ survey in Turkmenistan was determined to be a nationally representative sample of 3800 adults aged 18-64 years from a mix of urban and rural locations. The questionnaire was adapted and translated into Turkmen and Russian and it was programmed for and tested on handheld devices. A team of highly qualified professionals with experience in national household surveys, such as the Multiple Indicator Cluster Survey and the Demographic Health Survey, was recruited to conduct the survey. The training of supervisors and fieldworkers took place in early September 2013, followed by a pilot survey. The fieldwork for the STEPS survey began later in September; the results are expected to be available by the end of 2013.

⁵ Information available: <http://www.who.int/chp/steps/instrument/en/>, accessed 11 November 2013.

4. Disease prevention and health promotion

This section explores the coverage of core population interventions (tobacco, alcohol, nutrition and physical activity) and individual services (CVD, diabetes and cancer) closely linked with the improvement of NCD outcomes (Table 1), with a particular focus on tobacco and breast-cancer control. Core services are, as promoted in the frameworks of the Global and European Action Plans for the Prevention and Control of Noncommunicable Diseases, evidence-based, high impact, cost-effective and affordable, and could feasibly be implemented in a variety of health systems (1,22).

Table 1. Core population interventions and individual services to improve NCD outcomes

Core population interventions	Core individual services
Range of anti-smoking interventions (FCTC) <ul style="list-style-type: none"> • Raising tobacco taxes • Introducing smoke-free environments • Warning about dangers of tobacco and smoke • Banning advertising, promotion, sponsorship • Ensuring access to quitlines and nicotine replacement therapy (NRT)^a 	CVD and diabetes <ul style="list-style-type: none"> • Risk stratification in PHC • Effective detection and management of hypertension • Effective primary prevention in high-risk groups • Effective secondary prevention after acute myocardial infarction (AMI), including aspirin • Rapid response and hospitalization for AMI and stroke^a
Interventions to prevent harmful alcohol use <ul style="list-style-type: none"> • Raising alcohol taxes • Restricting/banning advertising and promotion • Restricting availability of retailed alcohol • Enforcing regulation on minimum purchase age^a • Introducing permitted level of alcohol in blood when driving^a 	Diabetes <ul style="list-style-type: none"> • Effective detection and general follow-up^a • Patient education on nutrition and physical activity and glucose management • Hypertension management among diabetes patients • Screening for and management of complications
Interventions to improve diet and physical activity <ul style="list-style-type: none"> • Reducing salt intake and salt content in foods • Virtually eliminating trans-fatty acids from the diet • Reducing intake of free sugars^a • Increasing intake of fruit and vegetables^a • Reducing marketing of food and non-alcoholic beverages to children^a • Promoting awareness about diet and activity 	Cancer <ul style="list-style-type: none"> • Hepatitis B immunization • Cervical cancer screening and treatment of lesions • Early detection of breast cancer and treatment of all stages

Note. ^aInterventions not included in the Global action plan on the prevention and control of noncommunicable diseases (1) but added to allow a more comprehensive assessment.

4.1 Coverage of population interventions

4.1.1 Tobacco control

Compared to other newly independent states (NIS), and the WHO European Region at large, Turkmenistan has strong legislation for tobacco control and an apparently very low level of smoking prevalence. Cigarettes and nas are the most consumed tobacco products in the country and they are imported from other countries. Ratified by Turkmenistan in May 2011, WHO FCTC entered into force in the country in August 2011.

A pilot survey using WHO-methodology of the study the Health Behaviour of School-aged Children (HBSC) (23) carried out in 2012 (financed by UNFPA in Turkmenistan) showed that only 3% of the 15-year age group smoked (2.5% boys and 0.5% girls). A national survey on international methodology conducted in 2012 showed that 22.6% of men aged 15-49 years and 3.3% of those aged 15-19 years smoked. Internationally comparable data on the prevalence of tobacco use in adults are not available although some informal national sources indicate that it is not higher than 5%. If this rate is confirmed by the ongoing STEPS survey, Turkmenistan would have the lowest prevalence of smoking in adults both in the European Region and globally.

Turkmenistan developed the National Tobacco Control Action Plan 2012-2016 (adopted in January 2012) together with the Regional Office and in line with WHO FCTC requirements. It includes action to change existing laws and regulations in this area, strengthen their enforcement, raise overall awareness about tobacco control, and strengthen tobacco-cessation services.

The prices of tobacco products in Turkmenistan are high in comparison to those of other NIS. A pack of the cheapest cigarettes can be bought for around TMT 14 (around US\$4) and a pack of the most expensive for around TMT 32-36 (around US\$ 10). As a result of substantial increases in the prices of tobacco products in recent years, many smokers have quit smoking or reduced their cigarette consumption. In 2010, the price of one of the most sold brands in the country was TMT 3.4 while in 2012 it was TMT 9. Turkmenistan applies an ad valorem tax (30% of the producer price) with a minimum specific amount (TMT 1425 per pack of 20). As of 2012, the excise tax share is 15.8% and the total tax share is 30%. The regulations pertaining to importers of tobacco products were restricted in 2011 and, accordingly, all imported tobacco products are sold by the importers to the Government (represented by the Ministry of Trade and Foreign Economic Relations), which sells them further to licensed shops for retail sale. Since the tobacco products' market is strictly regulated by the Government, competition is limited and possibly leads to a certain shortage in the supply of tobacco products in Turkmenistan, pushing prices upwards.

Legislation banning smoking in public places is reasonably well enforced. The key documents pertaining to smoke-free public places are the President's Decrees of January 2000 and August 2004 banning smoking (including the use of nas) in ministries, enterprises and organizations (regardless of ownership), military units, education settings, theatres, all kinds of public transport, parks and other public places. No smoking is allowed in public places, including the streets, although enforcement of the law is seemingly weaker in some hotels, restaurants and casinos. According to the Administrative Code of Turkmenistan (2013), breaking this law can result in a fine of TMT 50-150 (US\$ 20-60). The Police, under the Ministry of the Interior, are mainly responsible for the enforcement of this law but directors of governmental authorities can also fine their employees for smoking. The Traffic Code of 2003 bans smoking by car drivers but not passengers. According to present legislation, only the person actually smoking in a smoke-free area is committing an offence. The legislation could be strengthened by rendering owners or managers of premises, especially privately owned public premises, such as hotels or restaurants, liable for fines if their clients do not comply with the regulations.

A ban on all direct advertising entered into force in 2011 but actual enforcement remains problematic and should be strengthened. By 2016, all indirect advertising will also be prohibited. The advertising, promotion and sponsorship of tobacco products are regulated by the Ministry of Trade and Foreign Economic Relations, according to the Regulation of Trade of Tobacco Products.

It is prohibited to sell or give tobacco products to persons under 18 years of age according to national legislation. Enforcement is relatively good and is connected to the licensing system in place for retail sales. If the law is not observed, a fine amounting to US\$ 600 would be applicable and the licence could be repealed.

New standards for packaging and labelling tobacco products were adopted by the State Standards Service in August 2010 and entered into force in July 2011. According to the new standards, health warnings on tobacco products should include the text, "Smoking kills" (black letters and white background), and they should take up 30% of the front side of the pack. Another health warning (for which there are twelve text options) should take up 50% of the reverse side of the pack. Some cigarettes for retail sale also have health warnings in Iranian, Russian or Uzbek.

Turkmenistan is currently considering adopting strong pictorial health warnings by the end of 2013, based on Thai warnings (which are among the most effective globally); this would make it one of the first countries in the WHO European Region to do so. Through the new Technical Regulations on Packaging and Labelling of Tobacco Products (currently under discussion) and the new tobacco-control law to be adopted by the end of 2013, it is planned to bring legislation in this area in line with WHO FCTC Article 11 on the packaging and labelling of tobacco products, and its guidelines on implementing it.

Treatment of tobacco dependence is included as key action in the National tobacco control action plan 2012-2016. Tobacco cessation treatment is currently not a mandatory service in any part of the health system though it is claimed to be available in some health clinics and hospitals. These services are provided by nine

“trust” centres located in the city of Ashgabat and in all provincial centres. A special “hot” telephone line operates in affiliation with these centres for anonymous counselling on tobacco-control issues. The number of persons provided with cessation counselling annually is not known. It was reported that all of the cost related to cessation advice is covered by the health-care system. Services provided by the centres are promoted through a weekly health programme on national television and other media channels, and health education is provided to different population groups through the dissemination of information materials.

4.1.2 Prevention of harmful alcohol use

There is little information available on alcohol use; new data are awaited as a result of the STEPS survey. WHO estimated the adult (15 years +) per capita consumption in Turkmenistan for 2003-2005 (three-year average) to be 4.6 litres of pure alcohol of which half was recorded and half unrecorded (24). By 2008, the total consumption of pure alcohol per person per year was estimated to be 5 litres (lower than the global average) (9). Just over half (52%) of the alcohol consumption in 2005 was thought to be spirits (24). There was no information available on patterns of drinking. A detailed assessment of the interventions in place to prevent harmful alcohol use and their enforcement has not yet been carried out. A national survey conducted in 2012 using international methodology showed that 35.3% of men aged 15-49 years and 6.4% of men aged 15-19 years consume alcohol.

4.1.3 Interventions to improve diet and physical activity

According to WHO estimates, 13.9% of males and 14.5% of females in Turkmenistan were obese in 2008 (9). No information on overweight/obesity was available for children although the prevalence of stunting among children under five years of age was found to be around 1 in 5 (boys 21%; girls 17%) (25, 26).

In May 2013, Turkmenistan adopted the National Programme on Healthy Nutrition of the Population 2013-2017. The programme aims to expand and revitalize activities related to protecting public health, preventing disease, implementing the principles of healthy lifestyle, and raising healthy nutrition to a higher level in public culture. The main objectives of the programme are to: conduct a large-scale awareness-raising campaign on healthy nutrition; develop and implement rules and regulations on healthy nutrition; and revise the nutritional conditions in kindergartens, schools, catering establishments and all other relevant establishments in the light of current trends in healthy nutrition. One part of the programme is devoted to ensuring strict monitoring of the quality and safety of food products, and to providing support in the organization of food production in accordance with healthy-nutrition requirements. This area of work will cover not only domestic food production but also imported food products.

The National Programme for the Support and Development of Sports and Physical Education in Turkmenistan 2011-2020 was approved by the President in May 2012. Its main objectives include the promotion of physical education, sports and healthy lifestyle and the active engagement of citizens in physical education and mass sports. The Ministry of Health and Medical Industry is collaborating with the State Committee of Sports, other ministries, the municipalities of the regions and Ashgabat, and social organizations to ensure the active participation of the country’s youth in the activities held. In order to develop sports and physical education in various organizations, enterprises and societies, new sports facilities will be built, existing facilities will be reconstructed and their material bases will be strengthened. A large range of continuous educational and informational activities are being conducted that relate to taking care of one’s own health and the health of other people, making sports a source of physical and spiritual development, eliminating bad habits, such as drug addiction, smoking, etc., and preparing young talents for participation in mass sports events. Special informational programmes are broadcast on TV to promote physical education, sports and healthy lifestyle. These programmes underline the importance of being involved in one or more types of sport and recreational activities from childhood throughout life, as well as of developing family sports and creating the habit in family members of daily participation in such activities. The number of mass sports and recreational activities available has increased and large events have been held to raise awareness about them and encourage public engagement (Box 3).

Box 3. Mass events for promoting physical activity for health and well-being

The Cabinet of Ministers issues special decrees on the organization of mass sports and recreational activities. One example of such an activity is the nationwide "Week of health and happiness", a national campaign devoted to World Health Day. In 2012, the first "Week of health and happiness", initiated by the President of Turkmenistan, featured a long list of activities supported by ministries, organizations and businesses to promote healthy lifestyles. Events were organized in every province of Turkmenistan, including a large-scale "healthy family" competition, a conference entitled, "The country of health and happiness – my homeland Turkmenistan!", and sports performances and competitions at various levels. The Week culminated on 7 April 2012 with a mass walk along the "Path of health" and the finals of mass sports tournaments. In 2013, the mass walk was repeated and many other sporting events took place, such as an 8-kilometer marathon on the "Path of health" in which the President participated. Festive sports events dedicated to World Health Day were also held in all regions and districts of the country. In September 2013, the President took part in a nationwide bicycle marathon with over 30000 cyclists (around 15 000 participants in Ashgabat alone and 15000 in the regions).

4.2 Coverage of individual services

4.2.1 CVD and diabetes

WHO estimated the prevalence of raised blood pressure among adults aged 25 years or over to be 38.3% for males and 32.8% for females in 2008. In the same year, the prevalence of raised fasting blood glucose among adults aged 25 years or over was estimated by WHO to be 12.0% for males and 10.1% for females (9). It is anticipated that the results of the STEPS survey, which are awaited towards the end of 2013, will provide further information. An assessment of the systems in place to effectively diagnose and manage key CVD-related conditions, such as hypertension and diabetes, was carried out but it was not sufficient enough. Turkmenistan's response to the WHO country capacity survey conducted in 2013 indicates that the detection and management of risk factors are available at the primary, secondary and tertiary levels of the care system, that government-approved guidelines exist for the main NCDs, and that the relevant essential drugs, tests and procedures are generally available with substantial reimbursement. An order of the Minister of Health and Medical Industry regulates CVD-related services and approves a number of related protocols.

4.2.2 Hepatitis B vaccination

In 2002, Turkmenistan introduced the universal immunization of infants against viral hepatitis B (HBV) (27). The Global Alliance for Vaccines and Immunization (GAVI) provided support for Hepatitis B from 2001 to 2006. Immunization coverage of 1 year-olds with the third dose of hepatitis B vaccine was 97% in 2011 (9).

4.2.3 Cervical cancer

Within the framework of the partnership between the Ministry of Health and Medical Industry and UNFPA, the National Strategy of Turkmenistan for the Prevention of Cervical and Breast Cancer 2011-2015 was developed in late 2010 and the National Reproductive Health Strategy 2011-2015 was approved in January 2011 (28).

The possible introduction of the human papilloma virus (HPV) vaccine was discussed at an expanded meeting of the Interagency Coordination Committee of the National Immunization Programme and members of the technical working group of the Ministry of Health and Medical Industry of Turkmenistan in April 2011. Information on the vaccine's affordability and relative cost-effectiveness was presented to determine value for money. It was decided at that stage that the working group would continue its work on developing recommendations with technical assistance from WHO and UNICEF, and that the final decision regarding the introduction of new vaccines would be made by the Interagency Coordination Committee (29).

4.2.4 Breast cancer

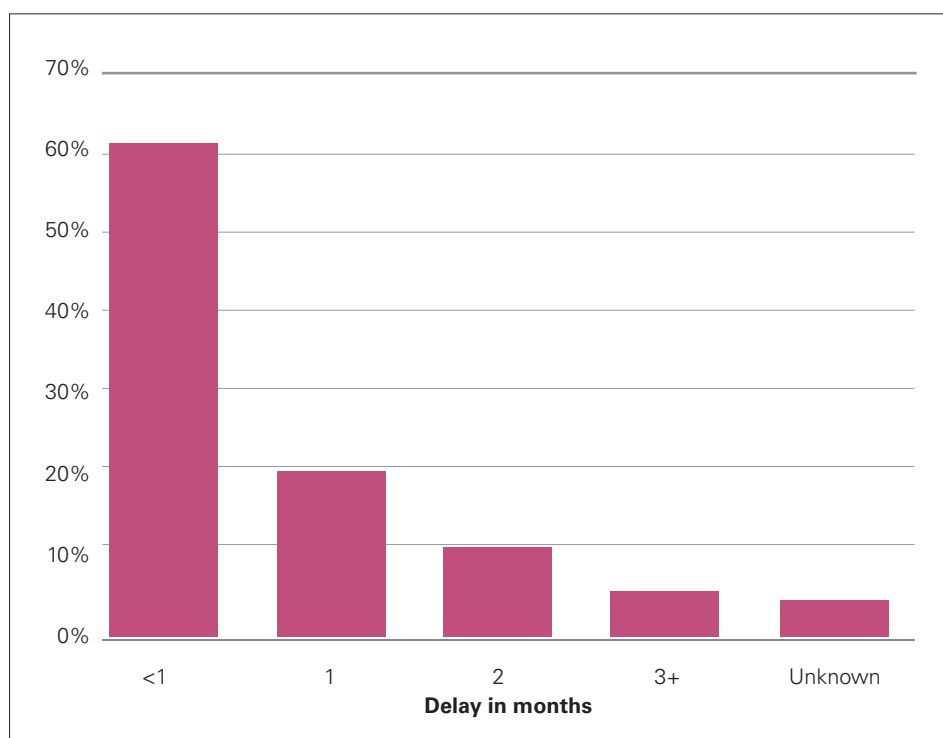
A team of national experts from the National Clinical Centre of Oncology, Ashgabat, and international experts in multidisciplinary breast-cancer screening, diagnosis and management collaborated during 2013 to assess the current status in Turkmenistan with respect to the early detection of breast cancer and to consider the perspectives for further improvement.

Substantial capacity for the detection, diagnosis and treatment of breast cancer is currently available at the National Clinical Centre of Oncology in Ashgabat and four regional oncology centres in the Balkan, Dashoguz, Lebap and Mary regions. The National Clinical Centre of Oncology leads the clinical services for the diagnosis and treatment of cancer, developing practice standards and coordinating their implementation nationwide in collaboration with the regional hospitals. It also facilitates the exchange of information and experience between professionals in the oncology hospitals and the PHC centres. The Director of the National Clinical Centre of Oncology also serves as official advisor on oncology to the Minister of Health and Medical Industry.

The well-organized PHC service also attaches much importance to the prevention and early detection of breast cancer and other common cancers, such as cervical and colorectal cancer, and patients are followed up closely. The PHC service provides universal access to community-based PHC teams operating from outpatient units or centres, each of which serves approximately 1000 people.

Assessment of the current situation revealed that in seeking to improve breast-cancer control, Turkmenistan has some important advantages. There is strong governmental support for health in general and for the health of women and children in particular. A highly developed PHC system exists, which includes a well-established system for the early detection of breast cancer. The health-care infrastructure, as a whole, is highly developed and includes advanced oncological care and short waiting times for breast-cancer patients (Fig. 5). The National Clinical Centre of Oncology is well equipped and developing into a reference centre for specialized training and quality assurance in multidisciplinary breast-cancer screening, diagnosis and treatment. There is good collaboration between the National Clinical Centre of Oncology and the regional oncology hospitals, as evidenced in the collection of data for the present report. The National Clinical Centre of Oncology also appears to have a strategic influence on national health policy-making.

Fig. 5. Delay between diagnosis of breast cancer and admission of patient to hospital, January-March 2013



Source: National Clinical Centre of Oncology, Ashgabat, Turkmenistan.

One of the major challenges faced is the relatively late stage at which diagnosis of breast cancer is made. Only two new cases (2%) of in situ cancer were admitted to oncological centres in the first quarter of 2013. A further problem is the lack of a population-based cancer registry and other sources of detailed data on the performance of breast-cancer services. The lack of information makes it more difficult to identify opportunities for improvement. There is also underutilization of imaging methodology in the management of breast-cancer patients (mammography 33%, ultrasound 46%, magnetic resonance imaging (MRI) 4%, specimen radiography 0%).

Developing and piloting a more effective programme for the early detection of breast cancer to supplement current activities could substantially reduce the burden of breast cancer in the population and would also stimulate improvement in the quality and effectiveness of symptomatic care. Given the relatively high incidence in Ashgabat, population-based mammography screening could be piloted in a study nested in the National Clinical Centre of Oncology. Early detection of breast cancer can be improved in the other regions by applying the advanced protocols for the diagnosis and multidisciplinary management developed in a pilot screening study, and using the infrastructure for quality assurance and training established at the National Clinical Centre of Oncology. After successful implementation of the pilot programme for population-based breast-cancer screening, the benefit of establishing similar programmes in the rest of the country could be evaluated. The development and testing of a regional screening programme for breast cancer would also facilitate the development of similar programmes for other cancers.

Without the strong involvement of civil society, particularly representatives of the target population, there is a danger that participation in screening and other programmes for the early detection of breast cancer would be low due to a lack of effective communication on and understanding about the benefits and risks. It is important not to have unrealistic expectations of rapid improvements and equally important to have sufficient government support during the lengthy translational phase of programme planning, piloting and rollout; insufficient government support could undermine the screening programme. A lack of autonomous programme management, with sufficient authority and resources for programme coordination to assure the quality and control of all essential activities in the screening process, could seriously hamper the development and implementation of an effective programme.

5. Reorienting health services towards prevention and care

The framework developed by Roberts and Stevensen (4) involving 15 important health-system challenges to and opportunities for NCD prevention is used to guide this section. Although a detailed assessment of the health system has not yet taken place, drawing on the findings of the WHO assessment mission carried out in August 2013, as well as on published material, makes it possible to form an initial impression of the relative strengths and challenges in some of the 15 areas (Fig. 6).

Fig.6. Fifteen important health-system challenges to and opportunities for NCD prevention

Political commitment to NCD	Explicit priority-setting approaches	Interagency cooperation	Citizen empowerment
Effective model of service delivery	Coordination across providers	Regionalization	Incentive systems
Integration of evidence into practice	Distribution and mix of human resources	Access to quality medicines	Effective management
Adequate information solutions	Managing change	Ensuring access and financial protection	

5.1 Strengths

One of the major strengths of the Turkmen health system is the political will to improve health services for the population. In May 2012, the Government of Turkmenistan approved the State Programme on the Development of the Health Sector in Turkmenistan 2012-2016 and the related action plan. This programme and its action plan contribute to the National Programme of Socioeconomic Development of Turkmenistan 2011-2030 and the Programme of the President of Turkmenistan on Social and Economic Development 2012-2016. They also accelerate the development of the health-care system, thus increasing the availability of high-quality public health services and modern medical facilities.

Another strength is the current availability of resources. The financing of health programmes apparently has the support of the President, the Minister of Health and Medical Industry and decision-making officials at the highest level of central government, and the strong economic growth derived from exploitation of natural resources suggests that the country can afford to make substantial investments in modernizing its health system. These investments, if made wisely, could help to promote long-term human and economic development in Turkmenistan. However, they should be formally documented and allocated on the basis of a national health plan to minimize inefficiencies, close gaps and lay the foundation for a sustainable and interlinked health system.

Primary care facilities in Turkmenistan seem to be well distributed around the country and access is said to be good for most of the population. The presence of modern hospitals and medical facilities, particularly in Ashgabat, and a strong network providing rural healthcare, should also be highlighted as strengths of the system. While certain supporting elements need to be strengthened, especially training for current and future medical/public health professionals, the presence of some adequate infrastructures for their practice is certainly an advantage.

The Constitution of Turkmenistan and various legislative documents provide various aspects of the right to health protection, including free use of the network of official public health bodies by citizens, foreign nationals, persons without citizenship and refugees. Access to primary and emergency health care is provided based on the individual's place of residence. For those who are unemployed or without a specific residence, the provision of free health services is administered in accordance with general practice in the place where the application was made. Legally, migrants and refugees have access to treatment on a par with the citizens of Turkmenistan.

5.2 Challenges

The most important barriers to quality services for the prevention and control of NCDs pertinent to Turkmenistan are described below in order of relevance.

As mentioned previously, insufficient standardization of the information system is among the most important shortcomings hindering Turkmenistan's capacity to effectively and efficiently address the NCD burden. This system is an essential instrument in: monitoring and evaluating the effectiveness of present and future programmes; characterizing the features of the disease burden, including specific subpopulations at high risk; identifying emerging health threats; ensuring quality health care and patient safety; and adjusting health policies to the precise and evolving needs of the Turkmen people.

The absence of priority-setting processes can be traced directly to the barrier described above. Without detailed epidemiological data that elucidate the precise characteristics of the disease burden, it is impossible to understand the population's needs in terms of health services. Viewing all health threats as high priority may lead to dedicated efforts in different disease areas or health-system activities that are disproportionate to their effects on the population. There is a pressing need to understand what the leading causes of premature mortality and morbidity are, and to formulate a national health strategy based on that information.

There is room to improve access to universal health coverage and to curb the potential financial burden. A partially subsidized voluntary medical-insurance scheme is available. Although the regulations allow 50–100% exemption from payment of certain fees and charges for some groups (such as mothers, children and patients suffering from chronic conditions), including payment for medicines essential to their conditions, co-payment for health services is 50% on average for the general population. This fact suggests that there is an undue financial burden on those in poor health, likely limiting access to health services for vulnerable populations.

In consonance with the worldwide shortage of human resources for health, Turkmenistan also suffers from an insufficient number of comprehensively trained health professionals. Substantial investment is needed, therefore, in training and retaining health professionals based on strategic needs. Training in public health and health services research would certainly benefit from the creation of a well-designed school of public health and/or agreements and twinning programmes with well-recognized schools of public health.

There is a need to better integrate evidence into practice. In line with the absence of robust information systems, the relative lack of health-technology assessments in the country means that context-specific evidence needed by health planners in decision-making on health policy may not always be available. This may be particularly important with respect to NCD interventions.

Finally, better coordination across providers is also needed. Although modern hospitals and primary-care facilities do exist, protocols guaranteeing a smooth patient pathway from one health service to another need to be strengthened.

6. Conclusions and reflections

This report presents a preliminary overview of the challenges posed by NCDs in Turkmenistan and of the response already being made in the country. Further information to enrich these findings should become available as a result of the ongoing WHO STEPS survey and when there has been an opportunity for a more in-depth assessment of the health system. Nevertheless, within the limitations of the study, it has been possible to gather an overall impression.

Turkmenistan is undergoing a period of economic growth and social development. The infant-mortality rate has been decreasing and life expectancy appears to have been increasing since 1990. Although over half the population is under the age of 25 years, the population overall is ageing with an increase in the proportion over 65 years. The currently available data and WHO estimates suggest that NCDs are already the main cause of death and mortality in the country, the main contributor being CVD. The leading site for cancer in women is the breast with diagnosis at a relatively late stage; in men, the leading site is the stomach. Internationally comparable data on NCD risk factors are limited but it would appear that the prevalence of tobacco use is low, and that alcohol consumption per capita is below the global average. Obesity levels are not known; and around a fifth of children under 5 years of age are stunted.

From a Health-2020 perspective, some critical issues can be highlighted. There is evidence of gender equity: for example, education coverage and the national literacy rate are high for both sexes. Legislation has sought to empower local government to be more responsive to local needs, engaging all levels of government and widening civic engagement in decision-making processes. There is strong leadership and commitment, the core components of the President's programme for social and economic development being health and health-service adaptation. The intersectoral approach to developing the NCD strategy and the substantial body of support for doing so are encouraging. Furthermore, the HBSC survey conducted in 2012 provided evidence of efforts to strengthen national monitoring systems and the ongoing STEPS survey is expected to do the same. A number of other strengths can also be highlighted in the areas assessed. In addition to the high-level commitment to health and the development of the health-care system, potential resources are available for investment. There is strong tobacco-control legislation with evidence of reasonably good enforcement. A national programme on healthy nutrition was agreed in 2013 and a national programme to promote sport is

being implemented. The vaccination of infants against hepatitis B is universal and coverage is high. Substantial capacity for the detection, diagnosis and treatment of breast cancer already exists within the National Clinical Centre of Oncology and the regional oncology centres. There is a well-developed health system with an extensive infrastructure of health facilities and a well-organized PHC system, also in rural areas.

With regard to challenges, the lack of a standardized information system has been seen as a significant hindrance, not only within NCD prevention and control but also in connection with: assessment of disease burden; disease registration; prioritization; health-system performance; and monitoring and evaluation of programmes. Shortcomings within the health system include the need for better access to universal health coverage, a shortage of human resources and the need for more evidence-based practice and better coordinated pathways of care across providers. The stronger involvement of civil society, for example, in cancer-screening and early-detection programmes, could benefit a number of health programmes and further strengthen the Health-2020 approach.

The report leads to a number of areas of opportunity for consideration. Firstly, there is a great need to continue, with the support of the Regional Office, the work already started to formulate a national strategy on NCD control, taking into account international and regional experiences in tackling the same problem. A solid strategic plan, as well as an operational plan of action to address the burden of NCDs, would help to mitigate barriers and consolidate the isolated advances already made, integrating the actions of different actors under one programme. The plan should be as specific as possible with a defined time limit and a description of all activities to be undertaken and by whom, defining the responsibilities and competencies of the different actors in the health sector, and promoting accountability. It should explicitly tackle the barriers identified above, not least the establishment of a national health-information system, including: indicators on mortality, prevalence and incidence for all diseases, in accordance with the standards of the International Classification of Diseases; a national health survey to monitor health determinants; and patient outcomes and hospital-based indicators to evaluate the quality of the care received.

Secondly, the continued commitment of the Government of Turkmenistan to tobacco control, in connection with which the introduction of a new law is expected by the end of 2013, should be encouraged. The proposed law includes a number of strengthened policies in line with WHO FCTC obligations. High-level enforcement and compliance with already existing and proposed tobacco-control policies would lead to better health, as has been seen recently in a number of other countries in the Region. The STEPS survey currently being implemented in Turkmenistan will provide, for the first time, internationally comparable data on the prevalence of tobacco use in the adult population. If the data obtained confirm the low prevalence rate among adults, Turkmenistan may be the country with the lowest smoking rate regionally and globally, and thus may lead the end-game of tobacco.

Thirdly, to take advantage of the opportunities to improve breast-cancer control, the authorities might consider establishing an autonomous model programme to improve the early detection of breast cancer, building on the strengths of the health-care system. The development of such a programme would need the establishment and funding of a multidisciplinary working group of national experts and international experts highly skilled in the planning and management of population-based cancer-screening programmes, to draft a proposal for a regional pilot programme for breast-cancer screening nested in the National Clinical Centre of Oncology. To assure the quality of the early-detection programme, a population-based cancer registry would need to be established that fulfils international standards and would provide complete and reliable data for monitoring performance and evaluating the impact of the programme on the burden of disease. A state-of-the-art population-based mammography screening programme, which would need to be piloted and evaluated in the Ashgabat region first, could be the motor that drives change and improvement in the early detection of breast cancer in Turkmenistan in the coming years.

References

1. World Health Assembly resolution WHA66.10. Follow up to the Political Declaration of the High-level meeting of the General Assembly on the Prevention and Control of Noncommunicable Diseases. Geneva: World Health Organization; 2013 (http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf, accessed 28 October 2013).
2. Health 2020. A European policy framework and strategy for the 21st century. 2013: Copenhagen: WHO Regional Office for Europe; 2013 (<http://www.euro.who.int/en/publications/abstracts/health-2020.-a-european-policy-framework-and-strategy-for-the-21st-century>, accessed 28 October 2013).
3. Kickbusch I, Behrendt T. Implementing a Health 2020 vision: governance for health in the 21st century. Making it happen. Copenhagen: WHO Regional Office for Europe; 2013 ([http://www.euro.who.int/__data/assets/pdf_file/0018/215820/Implementing -aHealth-2020-Vision-Governance-for-Health-in-the-21st-Century-Eng.pdf](http://www.euro.who.int/__data/assets/pdf_file/0018/215820/Implementing-aHealth-2020-Vision-Governance-for-Health-in-the-21st-Century-Eng.pdf)
4. Roberts M, Stevenson MA. Improving outcomes for noncommunicable diseases through health system strengthening. A background note. Copenhagen: WHO Regional Office for Europe; in press.
5. International Human Development Indicators [website]. Turkmenistan. Country Profile human development indicators. Geneva: United Nations Development Programme; 2013 (<http://hdrstats.undp.org/en/countries/profiles/TKM.html>, accessed 28 October 2013).
6. European Health for all database [online database]. Copenhagen: WHO Regional Office for Europe; 2013 (<http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db>, accessed 28 October 2013).
7. Global burden of disease: generating evidence guiding policy. Seattle, WA: Institute for Health Metrics and Evaluation; 2013 (<http://www.healthmetricsandevaluation.org/gbd/publications/policy-report/global-burden-disease-generating-evidence-guiding-policy>, accessed 4 November 2013).
8. The global burden of disease: 2004 update. Geneva: World Health Organization; 2008 (http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/, accessed 28 October 2013).
9. World Health Statistics 2013. Geneva: World Health Organization, 2013 (http://www.who.int/gho/publications/world_health_statistics/2013/en/, accessed 4 November 2013).
10. Global status report on noncommunicable diseases 2010. Geneva: World Health Organization; 2010 (http://www.who.int/nmh/publications/ncd_report2010/en/, accessed 28 October 2013).
11. Ferlay J et al., editors. GLOBOCAN 2008: cancer incidence and mortality worldwide. Lyon: International Agency for Research on Cancer; 2010 (<http://www.iarc.fr/en/publications/eresources/cancerbases/index.php>, accessed 28 October 2013).
12. Kickbusch I, Gleicher D, Governance for health in the 21st century. Copenhagen: WHO Regional Office for Europe; 2012(http://www.euro.who.int/__data/assets/pdf_file/0019/171334/RC62BD01-Governance-for-Health-Web.pdf, accessed 28 October 2013).
13. Review of social determinants and the health divide in the WHO European Region. Final report. Copenhagen: WHO Regional Office for Europe; 2013 (<http://www.euro.who.int/en/publications/abstracts/review-of-social-determinants-and-the-health-divide-in-the-who-european-region.-final-report>, accessed 28 October 2013).
14. McQueen DV et al., editors. Intersectoral governance for health in all policies. Structures, actions and experiences. Copenhagen: World Health Organization, on behalf of European Observatory on Health Systems and Policies; 2012 (Observatory Studies Series No. 26; <http://www.euro.who.int/en/about-us/partners/observatory/studies/intersectoral-governance-for-health-in-all-policies.-structures,-actions-and-experiences>, accessed 28 October 2013).
15. Leppo K et al., editors. Health in All Policies. Seizing opportunities, implementing policies. Helsinki: Ministry of Social Affairs and Health; Finland, 2013 (http://www.euro.who.int/__data/assets/pdf_file/0007/188809/Health-in-All-Policies-final.pdf, accessed 28 October, 2013).
16. Health care systems in transition: Turkmenistan. Brussels: European Observatory on Health Care Systems; 2000 (http://www.euro.who.int/__data/assets/pdf_file/0009/96417/E70316.pdf, accessed 28 October 2013).

17. WHO STEPS instrument (core and expanded). The WHO STEPwise approach to chronic disease risk factor surveillance (STEPS). Instrument v2.1. Geneva: World Health Organization; 2009 (http://www.who.int/chp/steps/STEPS_Instrument_v2.1.pdf, accessed 28 October 2013).
18. Gurbansoltan Eje Clinical Research Center for Maternal and Child Health (GECRCMCH), Ministry of Health and Medical Industry, Turkmenistan, and ORC Macro. Turkmenistan. Demographic and Health Survey 2000. Calverton, MD: GECRCMCH and ORC Macro; 2001 (<http://www.measuredhs.com/pubs/pdf/FR130/FR130.pdf>, accessed 28 October 2013).
19. Turkmenistan country analysis 2008. Ashgabat: United Nations; 2008.
20. Turkmenistan's opaque health system. April 2010. Ashgabat: Médecins sans Frontières; 2010 (<http://www.doctorswithoutborders.org/publications/reports/2010/MSF-Turkmenistan-Opaque-Health-System.pdf>, accessed 28 October 2013).
21. United Nations resolution A/RES/66/2, Political Declaration of the high-level meeting of the General Assembly on the prevention and control of NCD. New York: United Nations; 2012 (http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf, accessed 11 November 2013).
22. Action plan for implementation of the European strategy for prevention and control of noncommunicable diseases 2012-2016. Copenhagen, WHO Regional Office for Europe, 2012 (http://www.euro.who.int/__data/assets/pdf_file/0019/170155/e96638.pdf, accessed 4 November 2013).
23. United Nations Population Fund (UNFPA) [website]. Health behaviour among school-aged children (HBSC) survey results presented, 28 August 2012. Ashgabat, UNFPA, 2013 (<http://www.unfpa.org.tm/en/pressroom/news/local-news/local-news-8/>, accessed 4 November 2013).
24. Country profile: Turkmenistan. In: Global status report on alcohol and health 2011. Geneva; World Health Organization; 2011 (http://www.who.int/substance_abuse/publications/global_alcohol_report/en/, accessed 28 October 2013).
25. Multiple Indicator Cluster Survey (MICS3). Ashgabat: United Nations Children's Fund, Turkmenistan; 2006.
26. Improving child nutrition: the achievable imperative for global progress. New York: United Nations Children's Fund; 2013 (http://www.unicef.org/media/files/nutrition_report_2013.pdf, accessed 25 November 2013).
27. National plan of action on safe immunization practices 2004-2010. Ashgabat: Ministry of Health and Medical Industry of Turkmenistan; 2003.
28. United Nations Population Fund (UNFPA) [website]. Turkmenistan: Maternal and newborn health. New York: UNFPA; 2013 (<http://www.unfpa.org.tm/en/activities/maternal-and-newborn-health/>, accessed 28 October 2013).
29. WHO Regional Office for Europe [website]. Introduction of new vaccines in Turkmenistan. Copenhagen: WHO Regional Office for Europe; 2011 (<http://www.euro.who.int/en/health-topics/disease-prevention/vaccines-and-immunization/news/news/2011/04/introduction-of-new-vaccines-in-turkmenistan>, accessed 28 October 2013).

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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