



**REPUBLIC of TURKEY
MINISTRY of HEALTH
DIRECTORATE GENERAL PRIMARY HEALTH CARE**

Policies for Tackling Non-Communicable Diseases and Risk Factors in Turkey

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ABBREVIATIONS

EU	European Union
RSHCP	Refik Saydam Hygiene Center Presidency
DG	Directorate General
PHC	Primary Health Care
NCD	Non-Communicable Diseases
WHO	World Health Organization
MoE	Ministry of Education
MoH	Ministry of Health
SSI	Social Security Institution
IGOs	International Governmental Organisations
NGO	Non-Governmental Organization
ST	Strategic Target
TAPDK	Regulatory Committee for Tobacco and Alcoholic Beverages Market
TNSA	Turkey Demographic and Health Survey
TURKSTAT	Turkish Statistical Institution
STRC	The Scientific and Technological Research Council of Turkey
ODA	Official Development Aid
OECD	Organization Economic Cooperation and Development
UNICEF	United Nations Children's Fund
BTK	Information of Technology Coordinator
HTP	Health Transformation Program

FOREWORD

In parallel to the changes in our demographic structure and changing socioeconomic structure, the health agenda in Turkey is shifting from communicable and vaccine preventable diseases to non-communicable diseases and complications. Besides the successful efforts put into achieving Millennium Development Goals in terms of always prioritized maternal and infant mortality, Ministry of Health also gave speed to the studies aiming at controlling the burden of diseases caused by non-communicable diseases and complications.

A new organizational structure has been formed within Primary Healthcare Services General Directorate to carry out studies for the control of non-communicable diseases, which resulted in the establishment of Departments of Control of Tobacco and Other Addictive Substances; Nutrition and Physical Activities; Mental and Environmental Health, as well as Non-communicable Diseases and Chronic Conditions and Health Promotion Departments. Cancer Control Department provides freestanding service in terms of tackling with cancer, the leading non-communicable disease.

It is expected that the population with non-communicable diseases will increase due to the increasing frequency of the risk factors in parallel to the alternating life styles. It is also considered that costs related to the diagnosis, care and rehabilitation of these diseases and complications will increase. It is very important to provide protection from diseases by enabling behavioural change towards healthy life styles in the community, to provide cost-effective, efficient, and evidence-based service approach, as well as providing early diagnosis, effective treatment, and follow up for the management of these diseases.

The activities developed in parallel to National Program for Prevention and Control of Cardiovascular Diseases in Turkey-Risk Factors; Strategic Plan for Secondary

and Tertiary Prevention and the Action Plan, Program for Prevention and Control of Chronic Respiratory Tract Diseases in Turkey (Asthma, COPD) (2009-2013) Action Plan and Program for Diabetes Prevention and Control in Turkey shall play an important role in the control of diseases and risk factors.

The Ministry of Health put special emphasis on the compatibility of its strategic plan and action plans, as well as compatibility of tackling approaches with contemporary tackling techniques and the strategic and action plans of World Health Organization. In this context, the approach adopted for the development of related strategy and action plans includes contributions from all stakeholders such as public organizations and institutions, local administrations, universities, NGOs, and private sector; and studies are carried out to implement the plans and to ensure monitoring and evaluation.

This book, sharing the non-communicable disease tackling studies in Turkey, is intended to contribute to the policy development efforts. For the preparation of this book, the publication of WHO European Region covering Albania, Finland, France, Greece, Hungary, Ireland, Kyrgyzstan and Lithuania has been followed as an example.

I would like to extend my thanks to the Project Management Support Unit for their contributions for the translation of this book. The efforts of the contributors to this book, which I believe will provide valuable contributions to our health policy developed in parallel to the principle of equitable, quality, and sustainable healthcare for all, is thankfully acknowledged.

Prof. Dr. Recep AKDAĞ
Minister of Health

1. INTRODUCTION

Increase in the level of education and income, changes in nutrition habits, and other factors like communicable diseases control in the 20th century have led into an increase in life expectancy. Though longer life expectancy is a desired effect, there is also seen an increase in the incidence of non-communicable chronic diseases. The fact that the elder population is increasing compared to the younger population caused that the community health problems have shifted from childhood diseases to non-communicable chronic diseases of elder population.

Alarming findings of the studies state that chronic diseases are gradually increasing regardless of the development level of the countries and the social class structure. Non-communicable diseases (particularly cardiovascular diseases, diabetes, cancers, chronic respiratory tract diseases) accounts for 60% of the global deaths. It accounts for 35 million deaths among the 58.7 million deaths and the majority of the diseases (28.1 million) occur in the middle and low income countries. Every year, there occurs eight million early deaths caused by non-communicable diseases among people below 60 years in developing countries and these are “preventable” deaths. World Health Organization (WHO) reports that deaths associated with non-communicable diseases will increase by 17% between 2006 and 2015; this increase will be the highest in African Region and Middle East with 24% and 23% respectively. Non-communicable diseases account for heavier disease burden in low and mid-income countries and the costs for healthcare and treatment may fall below poverty line. Non-

communicable diseases constitute important financial and economic risk in both developed and developing countries’ economies, threatening the sustainability of healthcare provision systems, and create productivity loss which is four times higher than the direct health costs they generate.

There are proven solutions related to prevention of tobacco use and smoking, unhealthy nutrition, physical inactivity, and alcohol consumption for the purpose of preventing undue deaths from preventable non-communicable diseases. Moreover, the approach related to strengthening health systems for responding more effectively to the needs of the public plays an important role in this respect. To this end, WHO has prepared the 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of NCDs and defined 6 main objectives which are:

- I. Giving priority to tackling non-communicable diseases at the global and national level,
- II. Developing and enhancing policy and plans at the national level,
- III. Developing interventions for common basic risk factors (tobacco use, unhealthy nutrition, physical inactivity, and alcohol consumption),
- IV. Promoting research on prevention and control of non-communicable diseases,
- V. Promote partnerships for the prevention and control of non-communicable diseases,
- VI. Monitoring and evaluation at all levels (national, regional, and global).

Global Non-communicable Diseases Net which was established in July 2010 for the purpose of strengthening multi-sector adoption and multi-sector activities needed in the implementation process of WHO “2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases” commenced its activities and the first Global Forum Meeting was held on February 24, 2010 in Geneva. Turkish Ministry of Health attended the first “NCDnet” Global Forum held on February 24, 2010.

There is not any objective related to the non-communicable chronic diseases within the Millennium Development Goals. However, it is notified that objectives related to protection from non-communicable diseases should be added into the Millennium Development Goals and the EU and WHO should cooperate on the issue due to the demographical transition and the burden of disease that this disease group creates in the world. The Member States are called to

take action on the issue. It is stated that not only healthcare services but also decisive political steps are important in tackling socio economic burden created particularly by risk factors such as tobacco use, unhealthy nutrition, physical inactivity, excessive consumption of alcohol, which cause chronic diseases and by diseases such as cardiovascular diseases, cancers, chronic respiratory tract diseases, and diabetes. For this purpose; in the framework of agenda item on “Monitoring the Results of the Millennium Summit” of the United Nations 64th General Assembly, Draft Resolution on “Prevention and Control of Non-communicable Chronic Diseases” was published in order to attract attention to the threats on human health and country economies, created by the heart diseases, cancers, and chronic respiratory tract diseases; the Draft Resolution was adopted by the EU delegation. A high-level event is planned to be held in United Nation’s 66th General Assembly in September 2011.

2. POLICIES FOR TACKLING NON-COMMUNICABLE DISEASES IN THE WORLD

The report titled as Preventing Chronic Diseases: A Vital Investment, which was prepared by the World Health Organization in 2005, states that factors such as increased levels of education and income in the world, change in nutritional habits, control of communicable diseases in the 20th century have increased the life expectancy at birth; and while an increased life expectancy at birth is desirable, it also results in an increase in non-communicable diseases (chronic diseases). The following statements are made based on the fact that the society's health problems move away from childhood diseases to non-communicable diseases in the elderly population because of the increase in elderly population compared to child population:

The impact of chronic diseases in many low and middle income countries is steadily growing. It is vital that the increasing importance of chronic disease is anticipated, understood and acted upon urgently. This requires a new approach by national leaders who are in a position to strengthen chronic disease prevention and control efforts, and by the international public health community.

The problem:

- 80% of chronic disease deaths occur in low and middle income countries and these deaths occur in equal numbers among men and women
- The threat is growing – the number of people, families and communities afflicted is increasing
- This growing threat is an under-appreciated cause of poverty and hinders the economic development of many countries.

The solution:

- The chronic disease threat can be overcome using existing knowledge
- The solutions are effective – and highly cost-effective
- Comprehensive and integrated action at country level, led by governments, is the means to achieve success.

The goal:

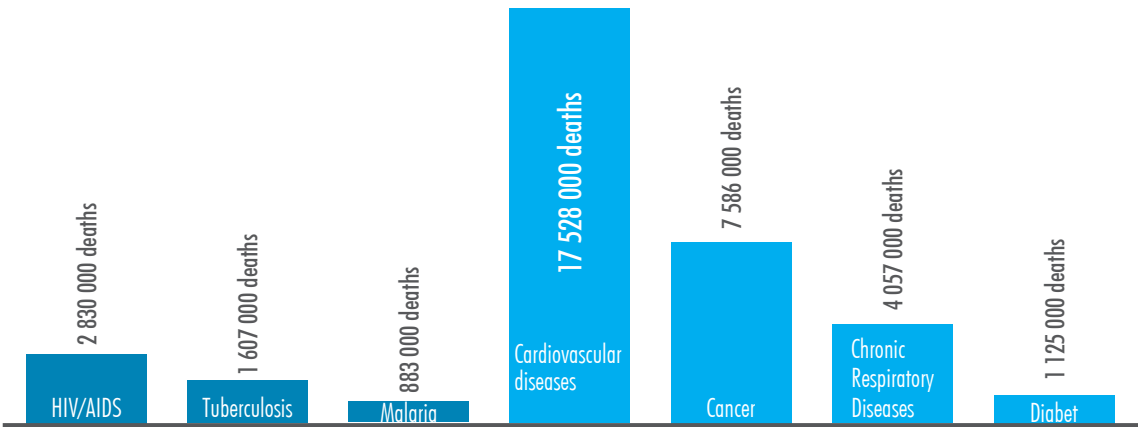
- An additional 2% reduction in chronic disease death rates worldwide, per year, over the next 10 years
- This will prevent 36 million premature deaths by 2015
- The scientific knowledge to achieve this goal already exists.

Chronic Diseases: Major Cause of Death

Chronic diseases include heart disease, stroke, cancer, chronic respiratory diseases and diabetes. Visual impairment and blindness, hearing impairment and deafness, oral diseases and genetic disorders are other chronic conditions that account for a substantial portion of the global burden of disease.

From a projected total of 58 million deaths from all causes in 2005, it is estimated that chronic diseases will account for 35 million, which is double the number of deaths from all infectious diseases (including HIV/AIDS, tuberculosis and malaria), maternal and perinatal conditions, and nutritional deficiencies combined. (Note: The data presented in this overview were estimated by WHO using standard methods to maximize cross-country comparability. They are not necessarily the official statistics of Member States.)

Figure 1. Projected global deaths by cause, all ages, 2005

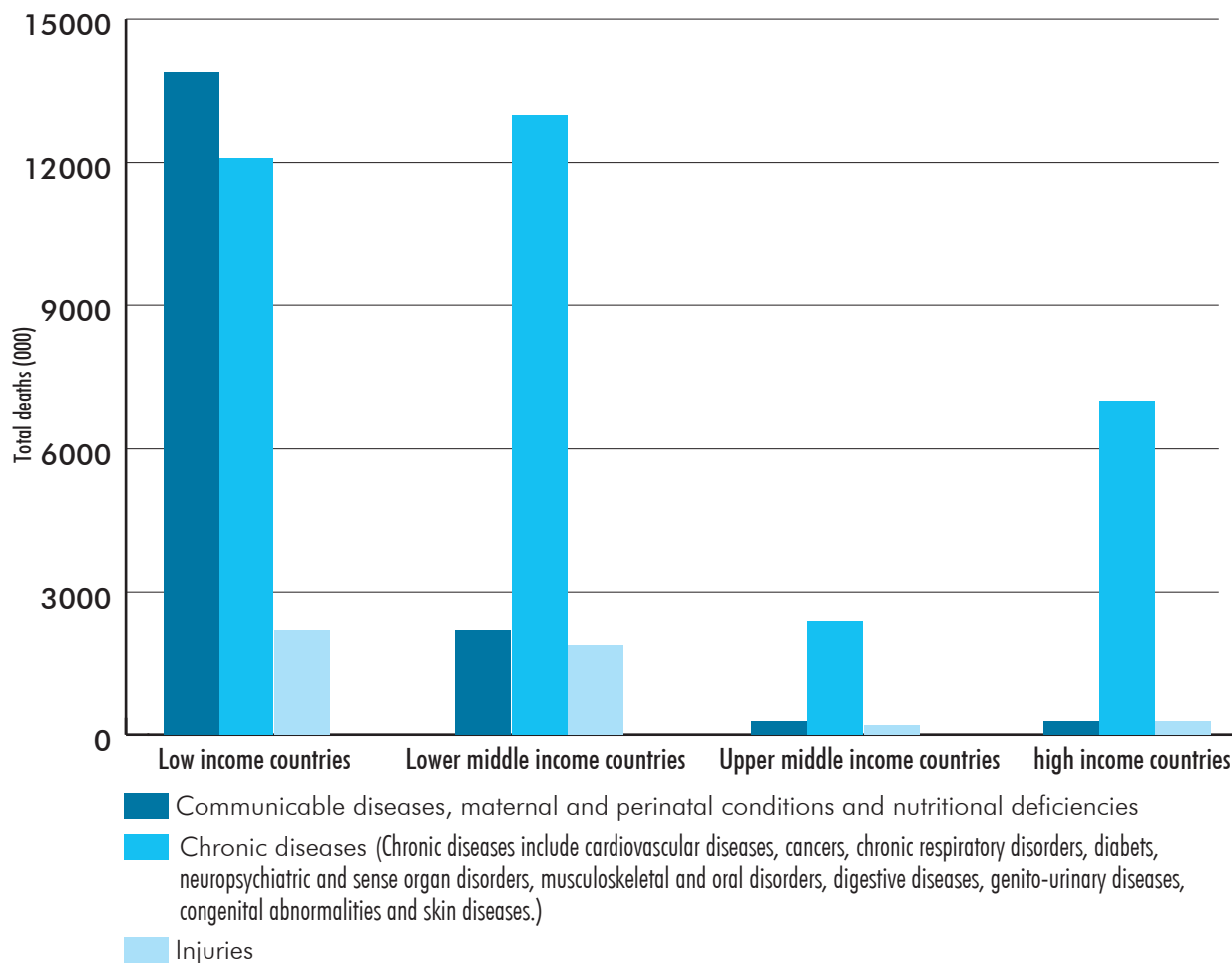


60% of all deaths are due to chronic diseases.

Poorest Countries are the Worst Affected

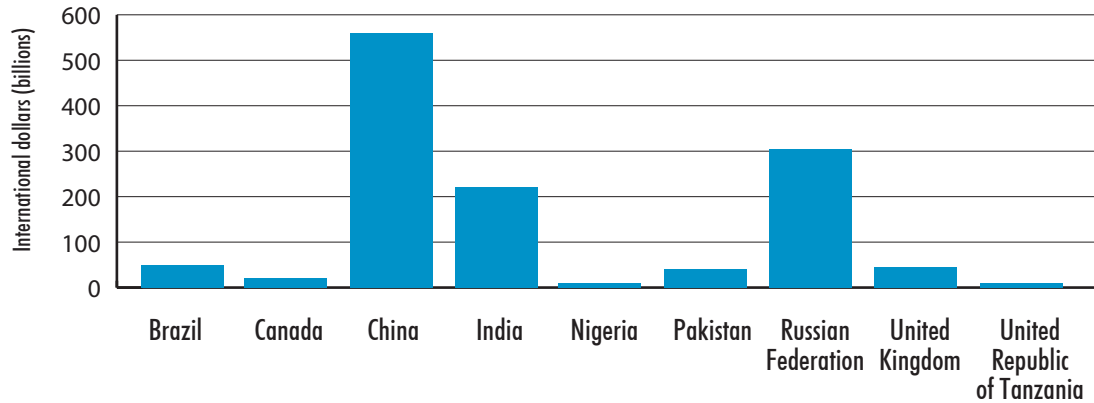
Only 20% of chronic disease deaths occur in high income countries – while 80% occur in low and middle income countries, where most of the world’s population lives. As this report will show, even least developed countries such as the United Republic of Tanzania are not immune to the growing problem.

Figure 2. Projected deaths by major cause and World Bank income group, all ages, 2005




80% of chronic disease deaths occur in low and middle income countries.

**Figure 3. Projected Foregone National Income
due to heart disease, stroke and diabetes
in selected countries, 2005-2015**



20

 \$558 billion - the estimated amount China will forego in national income over the next 10 years as a result of premature deaths caused by heart disease, stroke and diabetes.

The problem has serious impact:

The burden of chronic disease:

- Has major adverse effects on the quality of life of affected individuals
- Causes premature death
- Creates large adverse – and underappreciated – economic effects on families, communities and societies in general.

The Risk Factors are Widespread

Common, modifiable risk factors underlie the major chronic diseases. These risk factors explain the vast majority of chronic disease deaths at all ages, in men and women, and in all parts of the world. They include:

- unhealthy diet;
- physical inactivity;
- tobacco use.

Each year at least:

- 4.9 million people die as a result of tobacco use;
- 2.6 million people die as a result of being overweight or obese;
- 4.4 million people die as a result of raised total cholesterol levels;
- 7.1 million people die as a result of raised blood pressure.



1000 000 000 people are overweight

The Threat is Growing

Deaths from infectious diseases, maternal and perinatal conditions, and nutritional deficiencies combined are projected to decline by 3% over the next 10 years. In the same period, deaths due to chronic diseases are projected

to increase by 17%. This means that of the projected 64 million people who will die in 2015, 41 million will die of a chronic disease – unless urgent action is taken.


The Global Response is Inadequate

Despite global successes, such as the WHO Framework Convention on Tobacco Control, the first legal instrument designed to reduce tobacco-related deaths and disease around the world, chronic diseases have generally been neglected in international health and development work.

Furthermore, chronic diseases – the major cause of adult illness and death in all regions of the world – have not been included within the global Millennium Development Goal (MDG) targets; although as a recent WHO publication on health and the MDGs has recognized, there is scope for doing so within Goal 6 (Combat HIV/AIDS, malaria and other diseases). Health more broadly, including chronic disease prevention, contributes to poverty reduction and hence Goal (Eradicate extreme poverty and hunger, Health and the Millennium Development Goals, Geneva, WHO, 2005). In response to their needs, several countries have already adapted their MDG targets and indicators to include chronic diseases and/or their risk factors; a selection of these countries is featured in Part Two.

This report will demonstrate that chronic diseases hinder economic growth and reduce the development potential of countries, and this is especially true for countries experiencing rapid economic growth, such as China and India. However, it is important that prevention is

addressed within the context of international health and development work even in least developed countries such as the United Republic of Tanzania, which are already undergoing an upsurge in chronic disease risks and deaths.

 388 000 000 people will die in the next 10 years of a chronic disease

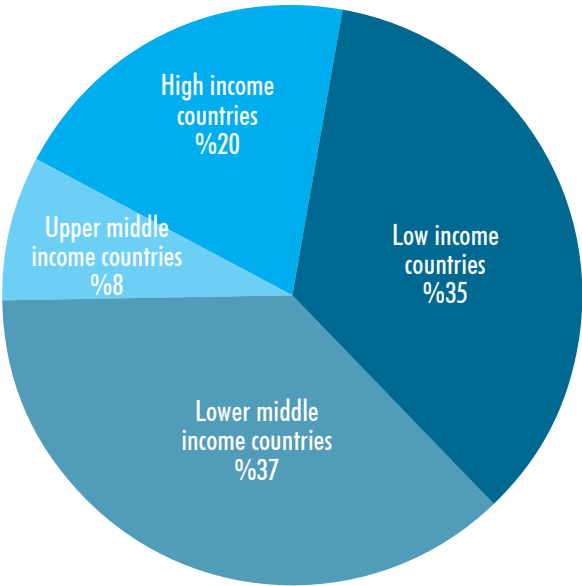
10 WIDESPREAD MISUNDERSTANDINGS ABOUT CHRONIC DISEASE - AND THE REALITY

Several misunderstandings have contributed to the neglect of chronic disease. Notions that chronic diseases are a distant threat and are less important and serious than some infectious diseases can be dispelled by the strongest evidence. Ten of the most common misunderstandings are presented in this report.

**MISUNDERSTANDING 10:
Chronic diseases mainly affect high income countries**

Whereas the common notion is that chronic diseases mainly affect high income countries, the reality is that four out of five chronic disease deaths are in low and middle income countries.

Figure 4. Projected global distribution of chronic disease deaths by World Bank income group, all ages



MISUNDERSTANDING 9:

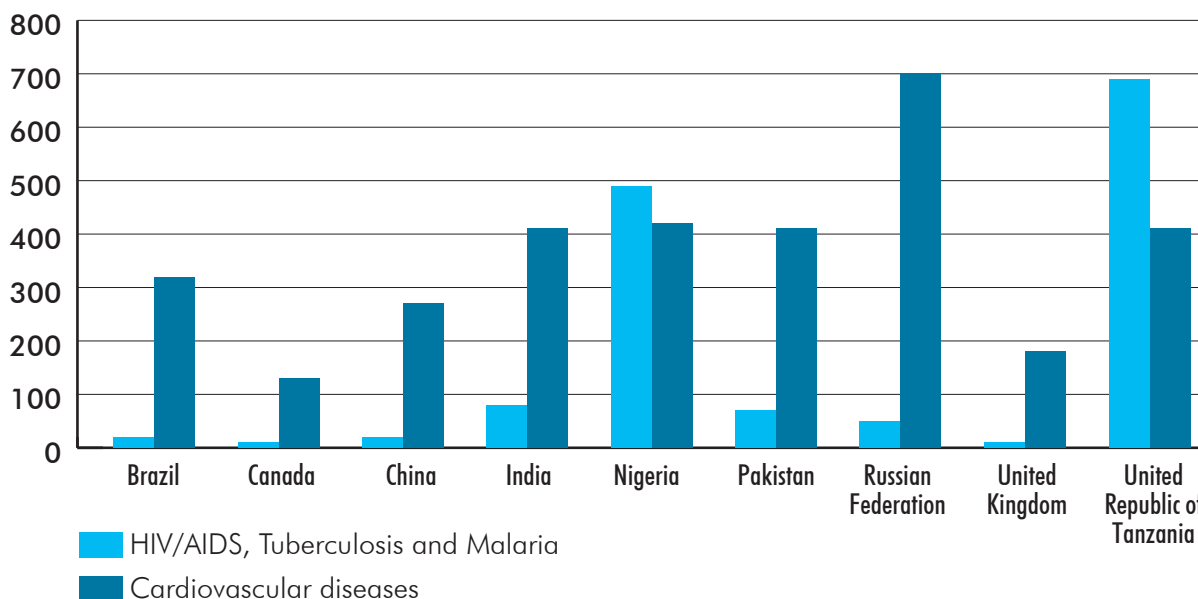
Low and middle income countries should control infectious diseases before chronic diseases

Many people believe that low and middle income countries should control infectious diseases before they tackle chronic diseases.

In reality, low and middle income countries are at the center of both old and new public health challenges. While they continue to deal with the problems of infectious diseases, they are in many cases experiencing a rapid upsurge in chronic disease risk factors and deaths, especially in urban settings. These risk levels foretell a devastating future burden of chronic diseases in these countries.

Figure 5. Projected death rates by specific cause for selected countries, all ages, 2005

Age-Standardized death rates (per 100 000)



MISUNDERSTANDING 8:

Chronic diseases mainly affect rich people

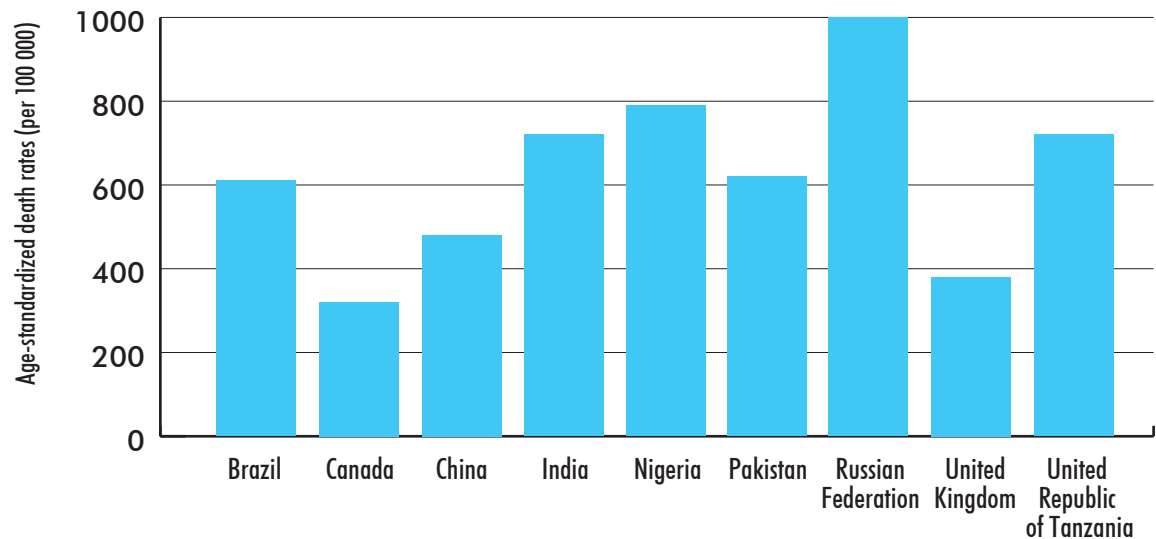
Many people think that chronic diseases mainly affect rich people. The truth is that in all but the least developed countries of the world, poor people are much more likely than the wealthy to develop chronic diseases, and everywhere are more likely to die as a result. Moreover, chronic diseases cause substantial financial burden, and can push individuals and households into poverty.

MISUNDERSTANDING 7:

Chronic diseases mainly affect old people

Chronic diseases are often viewed as primarily affecting old people. We now know that almost half of chronic disease deaths occur prematurely, in people under 70 years of age. One quarter of all chronic disease deaths occur in people under 60 years of age. In low and middle income countries, middle-aged adults are especially vulnerable to

Figure 6. Projected chronic disease death rates for selected countries, aged 30-69 years, 2005



chronic disease. People in these countries tend to develop disease at younger ages, suffer longer – often with preventable complications – and die sooner than those in high income countries.

Childhood overweight and obesity in children is a rising global problem. About 22 million children under the age of 5 are overweight. In the United Kingdom, the prevalence of overweight in children aged two to 10 years rose from 23% to 28% between 1995 and 2003. In urban areas of China, overweight and obesity among children aged two

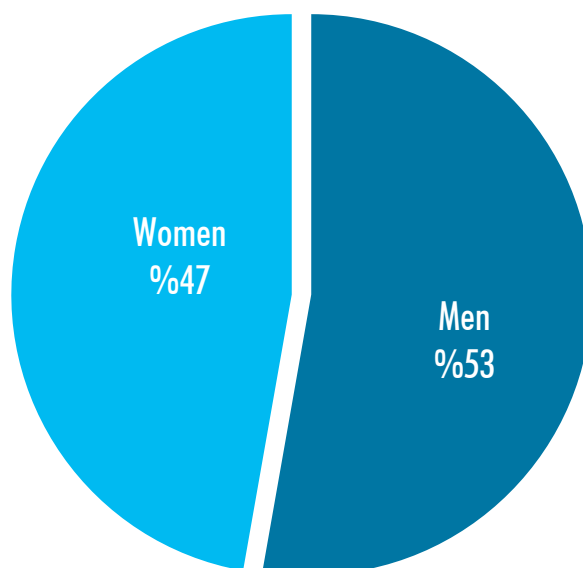
to six years increased substantially from 1989 to 1997. Reports of type 2 diabetes in children and adolescents – previously unheard of – have begun to mount worldwide.

MISUNDERSTANDING 6:

Chronic diseases affect primarily men

Certain chronic diseases, especially heart disease, are often viewed as primarily affecting men. The truth is that chronic diseases, including heart disease, affect women and men almost equally.

Figure 7. Projected global coronary heart disease deaths by sex, all ages, 2005



MISUNDERSTANDING 5:**Chronic diseases are the result of unhealthy “lifestyles”**

Many people believe that if individuals develop chronic disease as a result of unhealthy “lifestyles”, they have no one to blame but themselves. The truth is that individual responsibility can have its full effect only where individuals have equitable access to a healthy life, and are supported to make healthy choices. Governments have a crucial role to play in improving the health and well-being of populations, and in providing special protection for vulnerable groups.

This is especially true for children, who cannot choose the environment in which they live, their diet and their passive exposure to tobacco smoke. They also have a limited ability to understand the long-term consequences of their behaviour. Poor people also have limited choices about the food they eat, their living conditions, and access to education and health care. Supporting healthy choices, especially for those who could not otherwise afford them, reduces risks and social inequalities.

MISUNDERSTANDING 4:**Chronic diseases can’t be prevented**

Adopting a pessimistic attitude, some people believe that there is nothing that can be done, anyway. In reality, the major causes of chronic diseases are known, and if these risk factors were eliminated, at least 80% of all heart disease, stroke and type-2 diabetes would be prevented; over 40% of cancer would be prevented.

MISUNDERSTANDING 3:**Chronic disease prevention and control is too expensive**

Some people believe that the solutions for chronic disease prevention and control are too expensive to be feasible for low and middle income countries. In reality, a full range of chronic disease interventions are very cost-effective for all regions of the world, including sub-Saharan Africa. Many of these solutions are also inexpensive to implement. The ideal components of a medication to prevent complications in people with heart disease, for example, are no longer covered by patent restrictions and could be produced for little more than one dollar a month.

HALF-TRUTH

Another set of misunderstandings arises from kernels of truth. In these cases, the kernels of truth are distorted to become sweeping statements that are not true. Because they are based on the truth, such half-truths are among the most ubiquitous and persistent misunderstandings. Two principal half-truths are refuted in this section.

HALF-TRUTH 2:

“My grandfather smoked and was overweight – and he lived to 96”

In any population, there will be a certain number of people who do not demonstrate the typical patterns seen in the vast majority. For chronic diseases, there are two major types:

- people with many chronic disease risk factors, who nonetheless live a healthy and long life;
- people with no or few chronic disease risk factors, who nonetheless develop chronic disease and/or die from complications at a young age.

These people undeniably exist, but they are rare. The vast majority of chronic disease can be traced back to the common risk factors, and can be prevented by eliminating these risks.

HALF-TRUTH 1:

“Everyone has to die of something”

Certainly everyone has to die of something, but death does not need to be slow, painful, or premature. Most chronic diseases do not result in sudden death. Rather, they are likely to cause people to become progressively ill and debilitated, especially if their illness is not managed correctly. Death is inevitable, but a life of protracted ill-health is not. Chronic disease prevention and control helps people to live longer and healthier lives.

A VISION FOR THE FUTURE: REDUCING DEATHS, IMPROVING LIVES

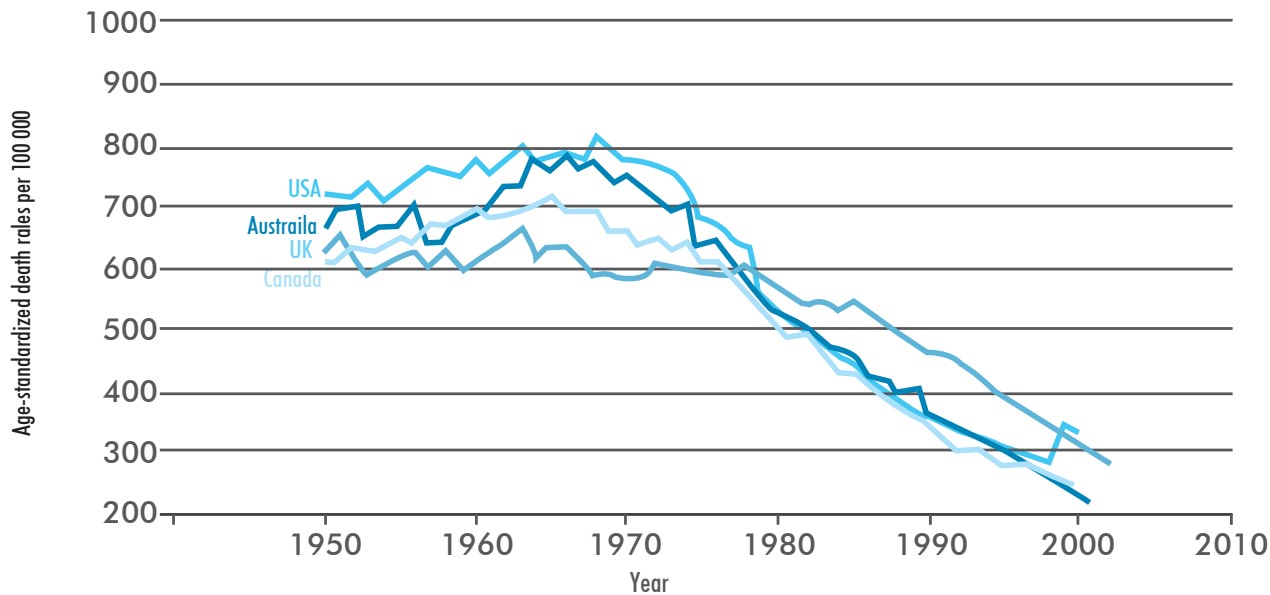
Chronic diseases can be prevented and controlled

The rapid changes that threaten global health require a rapid response that must above all be forward-looking. The great epidemics of tomorrow are unlikely to resemble those that have previously swept the world, thanks to progress in infectious disease control. While the risk of outbreaks, such as a new influenza pandemic, will require constant vigilance, it is the “invisible” epidemics of heart disease, stroke, diabetes, cancer and other chronic diseases that for the foreseeable future will take the greatest toll in deaths and disability. However, it is by no means a future without hope. For another of today’s realities, equally well supported by the evidence, is that the means to prevent and treat chronic diseases, and to avoid millions of premature deaths and an immense burden of disability, already exist.

In several countries, the application of existing knowledge has led to major improvements in the life expectancy and quality of life of middle-aged and older people. For example, heart disease death rates have fallen by up to 70% in the last three decades in Australia, Canada, the United Kingdom and the United States. Middle income countries, such as Poland, have also been able to make substantial improvements in recent years. Such gains have been realized largely as a result of the implementation of comprehensive and integrated

approaches that encompass interventions directed at both the whole population and individuals, and that focus on the common underlying risk factors, cutting across specific diseases. The cumulative total of lives saved through these reductions is impressive. From 1970 to 2000, the WHO estimated that 14 million cardiovascular disease deaths were averted in the United States alone. The United Kingdom saved 3 million people during the same period.

Figure 8. Heart disease death rates among men aged 30 years or more, 1950-2002



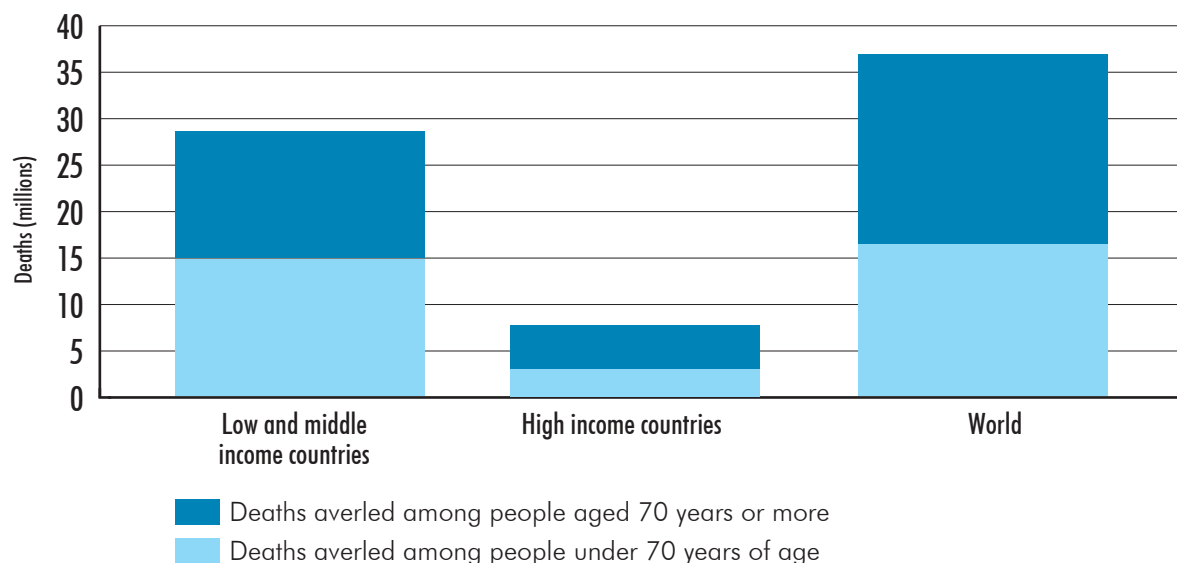
The Global Goal For 2015 Preventing Chronic Diseases: The Global Goal For 2015

Encouraged by achievements in countries such as Australia, Canada, Poland, the United Kingdom and the United States, this report anticipates more such gains in the years ahead. But realistically, how much is possible by the year 2015? After carefully weighing all the available evidence, the report offers the health community a new global goal: to reduce death rates from all chronic diseases by 2% per year over and above existing trends during the next 10 years. This bold goal is thus in addition to the declines in age-specific death rates

already projected for many chronic diseases, and would result in the prevention of 36 million chronic disease deaths by 2015, most of these being in low and middle income countries. Achievement of the global goal would also result in appreciable economic dividends for countries.

Every death averted is a bonus, but the goal contains an additional positive feature: almost half of these averted deaths would be in men and women under 70 years of age and almost nine out of 10 of these would be in low and middle income countries. Extending these lives for the benefit of the individuals concerned, their families and communities is in itself the worthiest of goals.

Figure 9. Estimated global deaths averted under the global goal scenario



This global goal is ambitious and adventurous, but it is neither extravagant nor unrealistic. The means to achieve it, based on evidence and best practices from countries that have made improvements, are outlined in Parts Three and Four of this report.

Taking the First Steps

Every country, regardless of the level of its resources, has the potential to make significant improvements in chronic disease prevention and control, and to take steps towards achieving the global goal. Resources are necessary, but a large amount can be achieved for little cost, and the benefits far outweigh the costs. Leadership is essential, and will have far more impact than simply adding capital to already overloaded health systems. There is important work to be done in countries at all stages of development. In the poorest countries, many of which are experiencing upsurges in chronic disease risks, it is vital that supportive policies are in place to reduce risks and curb the epidemics before they take hold. In countries with established chronic disease problems, additional measures will be required, not only to prevent disease, but also to manage illness and disability.

Part Four of this report details the stepwise framework for implementing recommended measures. The framework offers a flexible and practical public health approach to assist ministries of health to balance diverse needs and priorities while implementing evidence-based interventions. While there cannot be a “one size fits all” prescription for implementation – each country must consider a range of factors in establishing priorities – using the stepwise framework will make a major contribution

to the prevention and control of chronic disease, and will assist countries in their efforts to achieve the global goal by 2015.



A FINAL WORD

The causes are known. The way forward is clear. It's your turn to take action

In many ways, we are the heirs of the choices that were made by previous generations: politicians, business leaders, financiers and ordinary people. Future generations will in turn be affected by the decisions that we make today. Each of us has a choice: whether to continue with the status quo, or to take up the challenge and invest now in chronic disease prevention.

STATUS QUO

Without action, an estimated 388 million people will die from chronic diseases in the next 10 years. Many of these deaths will occur prematurely, affecting families, communities and countries. The macroeconomic impact will be substantial. Countries such as China, India and the Russian Federation could forego between \$200 billion and \$550 billion in national income over the next 10 years as a result of heart disease, stroke and diabetes.

INVEST NOW

With increased investment in chronic disease prevention, as outlined in this report, it will be possible to prevent 36 million premature deaths in the next 10 years. Some 17 million of these prevented deaths would be among people under 70 years of age. These averted deaths would also translate into substantial gains in countries' economic growth.

For example, achievement of the global goal would result in an accumulated economic growth of \$36 billion in China, \$15 billion in India and \$20 billion in the Russian Federation over the next 10 years. The failure to use available knowledge about chronic disease prevention and control needlessly endangers future generations. There is simply no justification for chronic diseases to continue taking millions of lives prematurely each year while being overlooked on the health development agenda, when the understanding of how to prevent these deaths is available now. Taking up the challenge of chronic disease prevention and control requires a certain amount of courage and ambition. The agenda is broad and bold, but the way forward is clear (1).

Figure 10. Schema of causal pathways influencing chronic disease and health outcomes

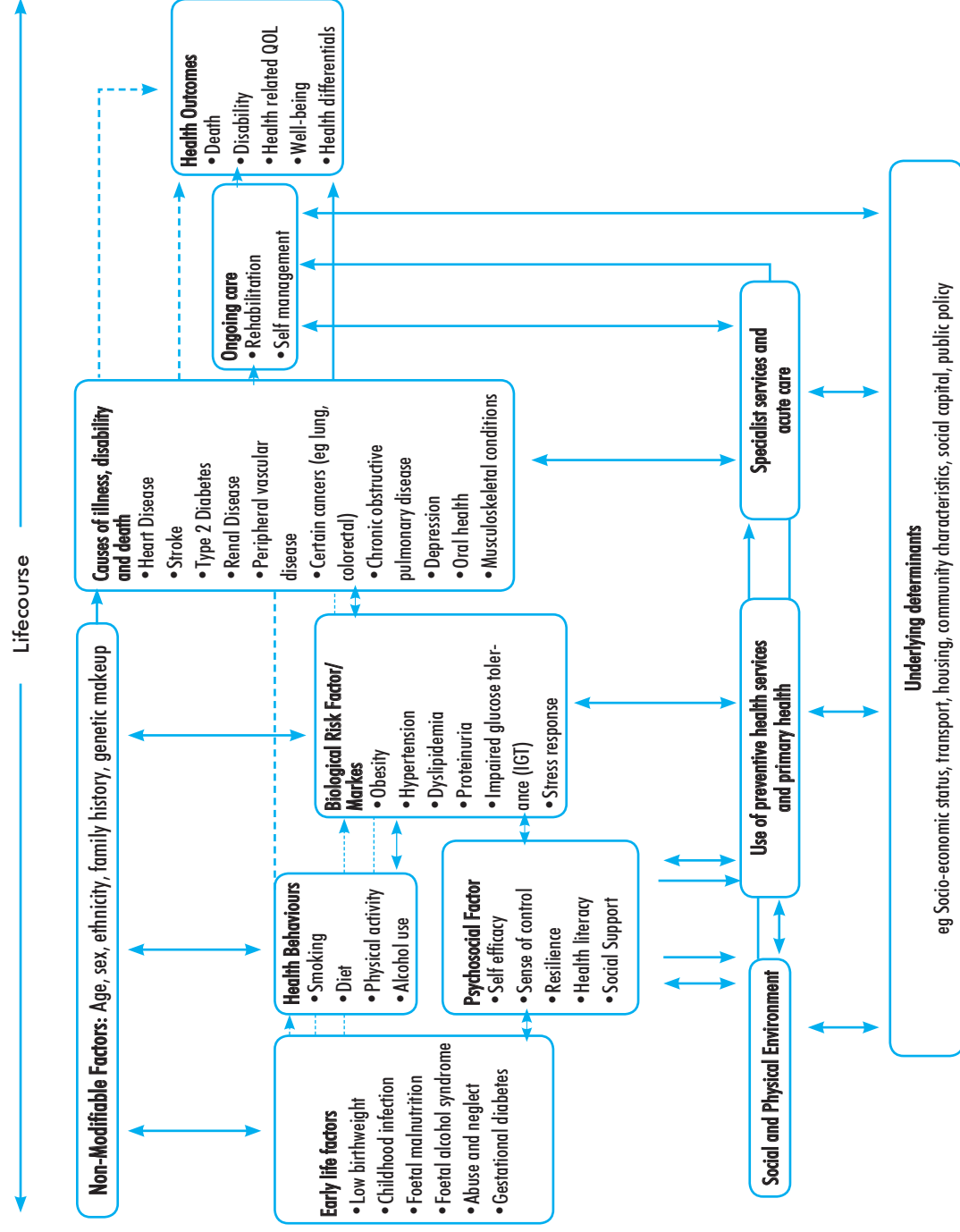
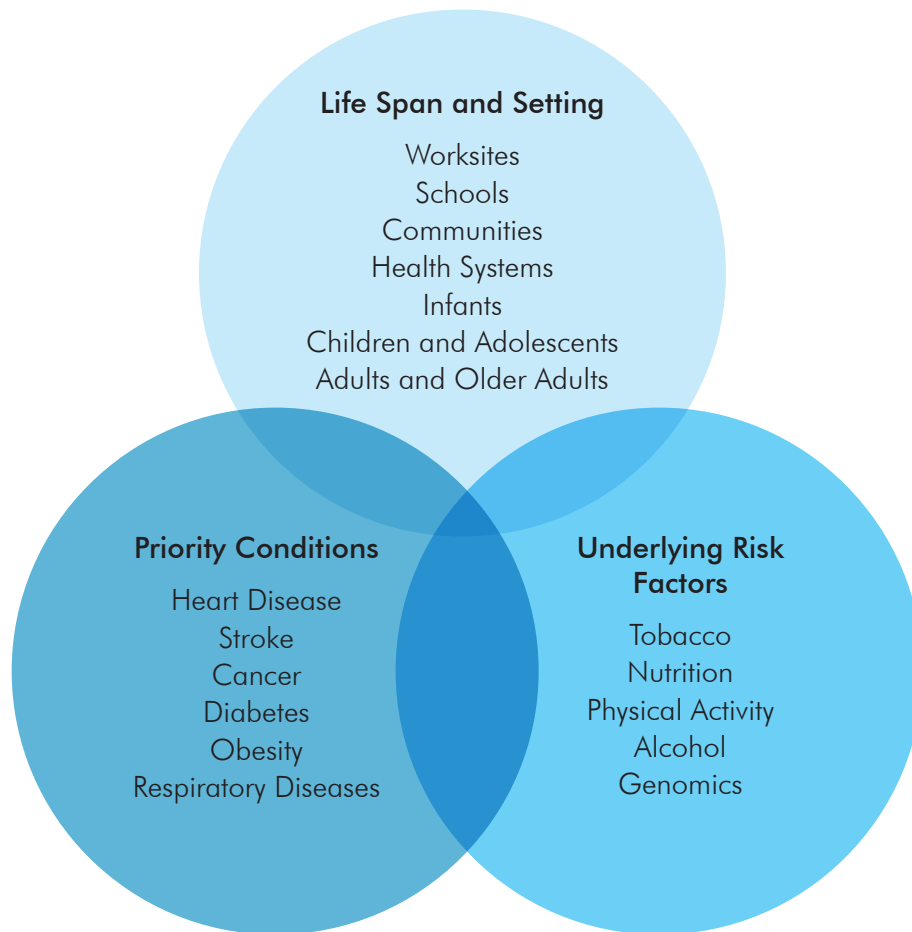


Figure 11: Framework for Preventing Chronic Disease and Promotion Health



CDC, *The Power To Prevent The Call To Control at a Glance 2009*

Scaling Up Public Policy Responses in the WHO EUROPE

In the last 40 years, European countries have made striking progress in the forestalling death and extending life, as evidenced by rising life expectancy and falling infant mortality rates. Yet health is by no means assured for all citizens in European countries. Four types of non-communicable diseases (NCDs) cardiovascular diseases, cancers, chronic respiratory diseases and diabetes -- are now the most common causes of premature death and disability in all countries of the WHO European Region. In the region, NCDs account for 8.1 million deaths in 2004 (i.e. 86% of the total number of deaths in the region), including 1.5 million deaths before the age of 60 years. Three out of four premature deaths from NCDs in the WHO European region occur in low- and middle-income countries (i.e. 1.1 million). Tobacco smoking and the harmful use of alcohol are the highest behavioural risk factors in the WHO European Region and the region's experience in policy approaches to both risk factors provides important lessons for incorporation in global approaches to NCDs and development^{1 2}. The rapidly increasing burden of NCDs is affecting poor and disadvantaged populations (e.g. migrants) disproportionately, contributing to widening health gaps between and within countries. If action is not scaled up, deaths from NCDs will increase from 8.1 million (2004) to 8.6 million (2015). These premature deaths before the age of 60

years are largely preventable by means of effective interventions that tackle four common modifiable risk factors, namely: tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol. In addition, improved disease management can reduce morbidity, disability, and death and contribute to better health outcomes. Despite the ample resources available in the European region, compelling ideas and approaches which have been adopted in some countries, have not taken hold in all European countries.

A number of key developments in the European Region were highlighted in the opening session and echoed in the proceedings. The WHO European Regional .

Office is developing a European Health Policy entitled 'Health2020' and an NCD Action Plan 2011 - 2015.

The epidemic of NCDs will not be addressed effectively unless there is a whole-of-Government approach to address policies in other sectors and to influence the social determinants of the epidemic. The European policy framework will thus advocate horizontal health governance approaches backed by political commitment at the highest level;

The European Study on Social Determinants is also under way. This will inform the development of Health2020 both in low and middle income as well as high income countries; the Health 2020 process will particularly focus on essential public health functions and operations for health protection, disease prevention and health promotion. Finally the ongoing commitment to non-communicable

1. WHO Report on the Global Tobacco Epidemic. The MPOWER package. World Health Organization, 2008

2. Global Health Risk. Mortality and burden of disease attributable to selected major risks. World Health Organization 2009.

diseases in Europe is further signalled by the ongoing efforts to develop a five year European Action Plan for the Prevention and Control of NCDs. This will reflect the Global and European Strategies adopted by the World Health Assembly and the Regional Committee respectively. It will focus on an integrated approach to the prevention and control of NCDs, on specific actions to address the specific priority diseases, and on empowering people living with these conditions to manage their own health.

Public policy makers in countries in Europe have placed the prevention and control of NCDs at the forefront of efforts to improve health outcomes. The World Health Organization's Regional Committee for Europe adopted the European Strategy for the Prevention and Control of Non-communicable Diseases in 2006, as a strategic framework for action. To this end, at least 15 Member States in the WHO European region have a unit or department in the Ministry of Health dedicated to NCDs, while at least 14 European countries are implementing a nationally-approved policy document for the prevention and control of NCDs. The European Strategy for the Prevention and Control of Non-communicable Diseases is fully aligned with the Global Strategy for the Prevention and Control of Non-communicable Diseases and its Action Plan.

Lower income countries in Europe face particular challenges in addressing the burden of NCDs. They often have a primary care infrastructure that is well-established but lacks the capacity for prevention or that is not focused on NCDs. The prevention of NCDs needs a population-based approach to risk factor reduction rather than just

focusing on high-risk individuals. They need an infrastructure to support surveillance, that combines public health and science, facilitates monitoring and provides a means of demonstrating impact of programmes. These countries often lack capacity in strategic planning, translating measures into action plans, as well as tools for collecting data in a comparable way, and the participants saw institutes of public health as having a role to play in developing professional capacity. A proper strategic framework would have a timed action plan, build consensus, and ensure sustainability from the financial and political point of view. The UN High Level Meeting outcome document could provide examples of best practice internationally and help to influence other sectors.

The development of comprehensive policies faces a resource allocation dilemma between funding traditional public health programmes and accommodating NCDs. There is a need to recognize that there are mutual linkages between the communicable diseases and health systems strengthening assists both. Examples would be task-shifting between the workforce, access to essential medicines, financing, good information and monitoring systems, good stewardship and governance. Service delivery requires a chain of care stretching from promotion through prevention, treatment and through to palliative care. Functioning primary health care systems would benefit the whole chain.

Policy decisions of sectors like agriculture, trade, finance, taxation, food production, pharmaceutical production, industry, education, transportation and urban development can have a major influence on

the population levels of risk factors like tobacco use, unhealthy diet, physical inactivity, overweight and obesity and the harmful use of alcohol. Therefore, gains can be achieved much more readily by influencing public policies in these sectors than by making changes in health policy alone.

In specific areas of the prevention of NCDs, intersectoral action has already been shown to be effective: structural measures such as taxes and price policies for alcohol and tobacco have been used in a deliberate way and, combined with other measures such as a total advertising ban, had been highly cost-effective and produced a sizeable impact in a relatively short time. New efforts are being made. An increasing number of countries are raising tobacco and alcohol taxes and prices, are warning people about the dangers of tobacco and harmful use of alcohol, and are enforcing bans on tobacco and alcohol advertising. Some countries had started to raise taxes and prices on soft drinks high in free sugars. Adopting approaches to policy development that involve all government departments is difficult but also essential in order to ensure the NCD issues receive a cross-sectoral response. The use of financial instruments to support implementation of intervention projects, such as development investment to resolve structural economic and social problems, was highlighted by a number of low- and middle-income countries as a way to scale up pilots to national levels. Active participation in existing regional and sub-regional networks for the prevention and control of NCDs is the key for identifying and disseminating the lessons learned in high-income countries. However, additional research is needed on the assessment of the cost-

effectiveness of public health interventions for improving health behaviours and health outcomes in low- and middle-income countries.

Civil society plays a crucial part in a whole-of-society approach. NGOs 'play on the same team' as participants in this battle against NCDs and were a crucial resource for governments.

Communication is an essential component in the response to NCDs. Communication capacities are needed to promote health to other sectors. Health professionals need to demonstrate powerful skills in communicating with other ministries, shifting discussion from price to value. There is a need for communication strategies to raise awareness and improve health literacy. There is a need to strengthen the individual capacities of people to make choices, balanced with responsibilities at the policy level. There is a need to invest in newer communication and social media in order to reach the young people and to improve the health literacy in Europe.

- a. In all developing countries, and by any metric, NCDs now account for a large share of premature deaths and poverty. There is a need, therefore, to increase the priority and allocations for health, NCD prevention, control and surveillance in national health budgets. In addition, there is a need for development partners to consider including NCDs and risk factors, with particular focus on effective, appropriate and cost-effective interventions as part of Official Development Aid (ODA) priorities, in accordance with national priorities.

- b. National policies in sectors other than health have a major bearing on the risk factors for NCDs. Health gains can be achieved much more readily by influencing public policies in sectors like trade, taxation, education, agriculture, urban development, food and pharmaceutical production than by making changes in health policy alone. There is a need, therefore, to promote the adoption of approaches to the prevention and control of NCDs that involve all government departments at national levels.
- c. Global targets and indicators need to be established in order to halt and begin to reverse premature deaths from NCDs. All countries require data and information on the magnitude of and trends in NCDs as the foundation for advocacy, policy development and national action. This data and information needs to be adequate, reliable, timely and disaggregated in order to show the burden, monitor the progress and demonstrate the effects of social determinants, including gender and income. The WHO is invited to work on developing a limited number of global targets and indicators on NCDs and risk factors. Building on the WHO Framework Convention on Tobacco (WHO FCTC) -- which has become one of the most widely embraced treaties in the history of the United Nations and, as of today, has 172 Parties -- one possible global target is the reduction of prevalence of tobacco use among adults, for which data is available in more than 140 countries, including two-thirds of countries in Africa.
- d. NCDs are a development issue and are intimately linked with poverty and the health-related Millennium Development Goals (MDGs). On one hand, addressing NCDs will accelerate the attainment of the MDGs; for example poorer households need protection from catastrophic costs of care; tuberculosis control requires action on tobacco, diabetes and alcohol; HIV/AIDS on treatment becomes a chronic disease with close linkages to diabetes, cardiovascular disease and cancer; cervical cancer and gestational diabetes hold back the health of women in low income countries. On the other hand, MDG attainment is essential to the prevention and control of NCDs, as MDGs aim at reducing poverty (MDG1), gender inequality (MDG3), child and maternal health (MDG4-5), infectious diseases (MDG6), essential medicines (MDG8), as well as limiting climate change consequences and giving access to safe water (MDG7). Therefore, MDG accomplishment is part of improving social, economical and environmental determinants of health, which also supports the prevention and control of NCDs.
- e. NCDs are a threat to development that neither the developed world nor the developing world can afford. The burden of NCD is increasing rapidly and threatens development, including health and wider socio-economic development, in all countries, and by any metric. The cost of inaction is unacceptable: the growth of NCDs threatens national economies, the viability of health services, and the wellbeing of poorer households. Strong political will is needed at

global and at national level to scale up and sustain the response to address this epidemic. The distribution of premature deaths from NCDs shows signs of increased burden in low- and middle-income countries, hence contributing to the unfair distribution of health and wealth globally. Issues like financial and economic crisis, volatility of food and energy prices, climate change and biodiversity add uncertainty and deepen inequalities between and within countries and negatively affect development.

- f. Member States need to reduce the level of exposure of individuals and populations to risk factors for NCDs, and respond effectively and equitably to the health-care needs of people with NCDs as part of the fundamental human rights of every human being, in accordance with the WHO Constitution³. Although there is a reciprocal relationship between the responsibilities of the State and the individual in the protection of health, primary responsibility lies with the State. The inequitable distribution of the burden of NCDs among individuals and populations across social groups and income quintiles, as well as the inequitable distribution of the barriers to access preventive and curative services are a threat to human health and rights.
- g. Measures to tackle NCDs must not only address the diseases themselves, but also health behaviours and their social determinants.

³ “The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social condition” is one of 9 principles that are part of the Constitution of the World Health Organization.

Actions taken to prevent and control NCDs must improve health literacy and help people with NCDs to manage their own conditions better. This includes providing education and incentives and tools for self-management and care. In order to achieve this, more attention should be paid to upstream social policies that address the root causes of NCDs and health inequality. Universal health promotion strategies must be combined with more targeted disease prevention measures.

- h. Communication and education strategies play an essential role in fostering a positive climate for social change and for raising awareness of NCDs and their risk factors among policy makers and the population. A life-course perspective is appropriate for NCDs in view of the fact that exposure to risk starts in uterus and accumulates throughout life. Particular focus should be given to children and adolescents, as the level of exposure to risk factors for NCDs is high among the youth. Young people are also a force for advocacy and social change. Strategies for reducing tobacco use, unhealthy diets, physical inactivity and the harmful use of alcohol among youth should therefore be considered a priority.
- i. Maternal health is a determinant of lifelong health. The protection of the health of women, the provision of proper antenatal services and attention to proper infant and young child nutrition, are all essential in their own right, as well as being an investment in the prevention of preventable NCDs.

- j. Environmental factors are major determinants for NCDs. NCDs and their risk factors are linked to global climate change and challenges to sustainability (e.g. clearing of land for tobacco farming and greenhouse emissions from cattle farming in response to demand for meat). In the WHO European Region, the approach taken through the Parma Ministerial Declaration on Environment and Health provides a strong and coherent policy infrastructure to fully exploit the opportunities to prevent NCDs by addressing their environmental determinants. The experience of two decades of intersectoral action in the field of environment and health in Member States and with IGOs (International Governmental Organisations) and NGOs can be emulated and lessons learned can be applied to the problem of NCDs.
- k. In order to halt and reduce premature mortality and morbidity from NCDs, more research is needed, particularly in LMIC. Work with countries should be undertaken in building and disseminating information about the necessary evidence base and surveillance data to inform policy-makers in low- and middle-income countries on proven packages of low-cost policy interventions ("best buys") which reduce the level of exposure of individuals and populations to the main risk factors for NCDs and promote the effective management of NCDs. Research on the financial implications of inaction can be used as a tool for convincing policy makers to set priorities and mobilize investments. Existing cost-effectiveness studies on packages of policy interventions to reduce tobacco use and the harmful use of alcohol need to be disseminated in order to inform policy makers. These packages include fiscal measures, regulations on advertising and availability of tobacco and alcohol among youth. Similar packages of cost-effective policy interventions aimed at reducing unhealthy diets and physical inactivity need to be developed, and include interventions such as structural measures and appropriate regulations that make it easier for individuals to make healthy choices. Similar packages should be developed to enable health systems to respond more effectively and equitably to the health-care needs of people with NCDs.
- l. In order for low-cost packages of policy interventions to be implemented successfully in low- and middle-income countries, concerted involvement of governments in high-income countries is needed to help build public health and managerial capacity among line ministries, district authorities and civil society in low- and middle-income countries. Mechanisms of networking and exchange of experiences need to be strengthened and facilitated in order to support the development of national capacity for integrated prevention and control of NCDs
- m. The ageing population and the surge in NCDs imply that countries must address prevention and care simultaneously. A population-based preventive strategy is needed alongside a health systems strengthening approach. The infrastructure of the health system, in both the public and private sectors, should have the elements necessary for the effective

prevention, management of and care for chronic conditions. Such elements include access to essential medicines and basic technologies, a re-orientation towards a person-centered approach and integrated comprehensive delivery of primary care. The Tallinn Charter; Health Systems for Health and Wealth in the European Region provides a framework for strengthening of health systems based on primary care responses. The Charter calls for equity in health, solidarity, social justice, universal access to services, multi-sectoral action, transparency, accountability, community participation and empowerment, and health literacy development. Within this framework, responses of NCDs need to be reinforced through the strengthening of international cooperation via the exchange of best practices aimed at building public health capacity, improving access to medicines, encouraging the development and transfer of technology, and the training and retaining of health professionals. The health service has a key role in advising both the whole population and at-risk patients and implementing measures to reduce risk. Local “healthy living centers” that provide help, motivation and support for behaviour change can be an important supplement to primary health care.

- n. Government at all levels must work in partnership with local communities in the fight against NCDs, leading, mobilizing and coordinating a whole of society response to NCDs. Central government plays an essential role in the prevention and control of NCDs. This is especially crucial for certain measures,

such as the adoption of appropriate laws and regulations. The fight against NCDs also takes place in local communities in the settings where people “live, work and play”. Local government has a particular role in developing health-supporting environments, for example through good urban planning. A central issue is therefore how to strengthen local government responses to address NCDs, how to empower civil society and how to mobilize each person’s health resources.

- o. Civil society is a crucial resource and partner to the public sector in responding to NCDs. In most countries, civil society remains at the forefront of treatment, care and support, as well as prevention and in reaching out to key populations, including the poor and most vulnerable. The most active members of civil society are often those with personal experience of the NCD epidemic. While governments and civil society need to work together in NCD responses, challenges persist in ensuring meaningful participation of civil society in many countries. Existing international networks and partnerships provide opportunities for strengthening national approaches.
- p. The Global Strategy for the Prevention and Control of NCDs, and its Action Plan, when implemented, will halt and begin to reverse the prevalence of premature deaths from NCDs. The Action Plan was developed by the WHO Member States through an intergovernmental process. It is based on current scientific knowledge, available evidence and a review of international experience. It comprises a set

of actions which, when performed collectively by Member States and other stakeholders, will tackle the growing burden of NCDs. In order for the Action Plan to be implemented successfully, high-level political commitment is required.

- q. The main discussions at the Regional Consultation centered mainly on the four types of NCDs - cardiovascular diseases, cancers, chronic respiratory diseases and diabetes - which make the largest contribution to mortality in the majority of countries and which require concerted, coordinated action. As emphasized in the Action Plan, these diseases are largely preventable by means of effective interventions that tackle shared risk factors, namely: tobacco use, unhealthy diet,

physical inactivity and harmful use of alcohol. While recognizing the four types of NCDs and the four shared risk factors for NCDs, the participants also emphasized the need to have a comprehensive and integrated approach as outlined in the European Strategy for the Prevention and Control of NCDs and to address mental health conditions (e.g. depression) and injuries (e.g. road traffic accidents) in line with the WHO Mental Health Gap Action Programme⁴ and the recommendations included in the WHO World Reports on Road Traffic Injury Prevention⁵, Violence and Health⁶, and Child Injury Prevention⁷, respectively. Comprehensive national strategies will set their own priorities and will take advantage of the numerous common risk factors, underlying determinants, and synergies in action.

4. www.who.int/mental_health/evidence/mhGAP/en/index.html

5. www.who.int/violence_injury_prevention/publications/road_traffic/world_report/en/index.html

6. www.who.int/violence_injury_prevention/violence/world_report/en/index.html

7. www.who.int/violence_injury_prevention/child/injury/world_report/en/index.html

3. POLICIES FOR TACKLING NON-COMMUNICABLE DISEASES IN TURKEY

Berrak Bora Başara MD

3.1. Country Profile

Turkey is located on south-western part of Asian continent, on Anatolian peninsula. Some parts of its land are in Thrace constituting some of the Balkan Peninsula in the South-eastern Europe. For this reason, Turkey is a historical country where the east and the west join together; the European and Asian continents and their cultures meet and harmonized with each other. Turkey is both an Asian and European country. It has borders with Greece, Bulgaria in Thrace; Syria, Iraq, Iran, Georgia, Armenia, and Azerbaijan in the south and eastern Anatolia. Turkey is surrounded with Black Sea in the North, the Marmara Sea in the northwest, and Aegean Sea in the west and Mediterranean in the South. The Marmara Sea is linked to Aegean Sea through the Dardanelle and to the Black Sea through the Bosphorus. The Aegean Sea joins the Mediterranean in the South. The Mediterranean is linked to the Atlantic Ocean through the Gibraltar. The seas surrounding Turkey in three directions open to world oceans. Climate conditions in Turkey vary in terms of heat and precipitation according as the surface patterns and altitude. Annual amount of precipitation is 500 mm; however, this amount rises up to 2,000 mm in the Black Sea coastal province Rize while it decreases below 300 mm in some parts of central Anatolia. Typical climate in Turkey is hot and dry in summers and cold, rainy, snowy, and windy

winters particularly in Central Anatolia and Eastern Anatolia. Temperature does not vary a lot between regions during summer, however, temperature difference is observed largely between regions. During the winter, average temperature decreases to -10°C in the East and to $+10^{\circ}\text{C}$ in the South.

Turkey is among the most crowded 20 countries in the world; has the second largest population in Europe after Germany; and the second in the Middle East after Iran. As of 2009, total population in Turkey is 72.561.312. 36.462.470 of the population is male (50.3%), 36.098.842 is female (49.7%). Annual rate of population increase is 14.5‰. 75.5% of the population lives in provincial and district centers. Looking at the age distribution of the population, it is seen that half of the population is 28.8 years old and below. The population in working age between ages 15-65 constitutes 67% of the total population. 26% of the population is within age group 0-14; and 7% of the population is within age group 65 and above. Geographical, climatic, cultural, social, and economic discrepancies between different regions of Turkey underlie the reason of classifying Turkey into regions. Turkey is separated into five regions having different socio-economic development levels and demographic characteristics (Western, Southern, Central, Northern, and Eastern regions). This regional classification is used in social research for sampling and analysis purposes. In addition, a new classification system has been adopted since 2002 in the framework of EU harmonization process, which are NUTS 1 (12 regions), NUTS 2 (26 regions) and NUTS 3 (81 provinces). 29 regions have been created in the scope of studies in Health Transformation Program. Administrative

structure of Turkey has been formed by three constitutions since the foundation of Turkish Republic (Constitutions of 1924, 1961, and 1982). The three constitutions declared that Turkey is a Republic based on parliamentary system and the will of public is represented in the Grand National Assembly of Turkey (GNAT). All three constitutions adopted the basic individual, social, and political rights, as well as the separation of powers principle (legislative, executive, and judicial powers).

The legislative body of the Republic is the GNAT. The GNAT is consisted of 550 parliamentarians who are elected in every four years. The President is elected by the public among the member of the Parliament or among the Turkish citizens having the necessary qualifications. The President is the head of the Republic and represents the Republic and the national unity. The President puts the constitution in practice and ensures different state units work in harmony. The president has authority and power in legislative, executive, and judiciary area (Savaş S, 2002). The executive body is the Council of Ministers and constitutes the Prime Minister and the Ministers. Judiciary bodies are the Supreme Court, Supreme Court of Appeal, Court of Military Appeals, Council of State, as well as administrative, juridical, and military courts (HÜNEE, 2009). The independent courts and the higher judicial bodies exercise the power of judiciary. Judicial part of the constitution guarantees the independence of the courts and the judges, including the rights and authorities of the judges as the arbiter of constitutional state principle.

Turkey is separated into 81 provinces administratively. The provinces are also separated

into districts, townships, and villages. The province is administrated by the governor who is appointed by the Council of Ministers and approved by the President. The governor reports to the central government. The governor is the highest head of the province and obliged to execute the policies of the government, to supervise general administration in the province, to ensure coordination of several ministerial representatives appointed by the central government in capital Ankara, and to protect law and order in the province in his authorization.

The Mayor and city council members are elected by local elections every five years. In accordance with law, a municipal administration is formed in every settlement area with a population over 2,000. The Municipalities are responsible for the provision of services including utilities, road construction and maintenance, drainage, and other infrastructure services such as garbage collection. The educational and healthcare services are provided by the central government, yet some municipalities in metropolitans provide limited health care for those who live in poor economic and social conditions within their jurisdiction.

3.2. Socio-economic Development

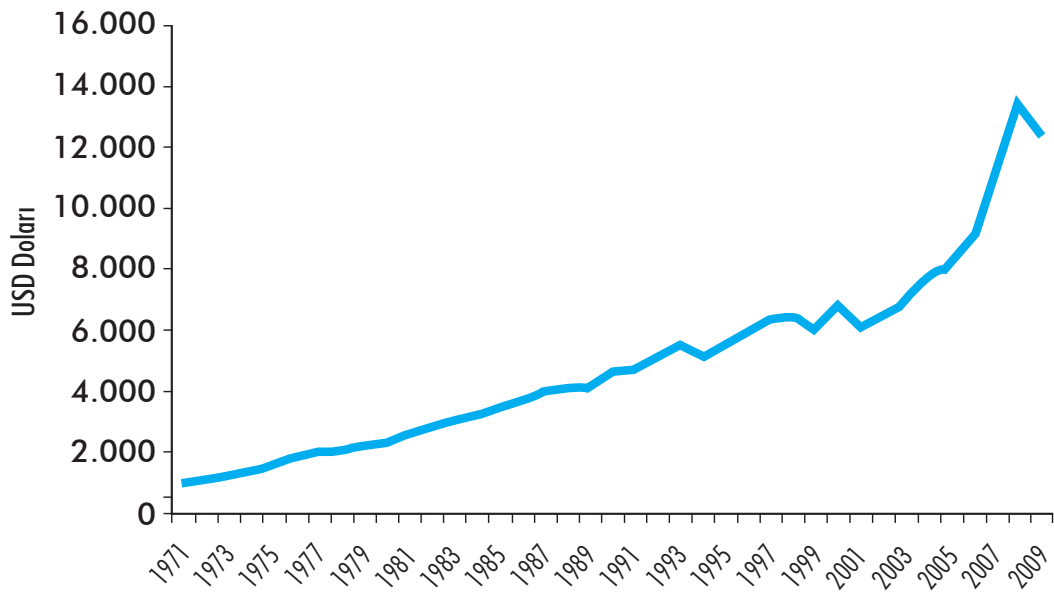
Economy of Turkey has reached to the highest growth rate in the post 1950 period between the years of 2002-2007. In this period, the economy has grown annually by 6.74% in average; and by 50% cumulatively. It has reached the highest growth rate in the examined period in 2004 by 9.4% growth rate. Looking at the quarterly terms, uninterrupted growth was observed in economy for 24 terms. This performance accounts for the

longest uninterrupted growth period since 1987 when the growth rate was announced by quarterly terms.

Income per capita in Turkey depicts a continuous increase except for the stable periods during economic crisis and partly decreases. Purchasing power adjusted national income per capita in the late 1960s was below 1000\$, while it rose to 6800\$ in the early 2000s and to 13500\$ in 2008. In 2009, a slight decrease was experienced in the income per capita which was found at the level of 12340\$ (Figure 12). The economic growth model based on exportation which was started to be implemented after 1980 has contributed a lot to the rapid increase in the income per capita.

It is seen that the food poverty – hunger level – which was 1.4% in the early 2000 decreased below 1% starting from the mid-2000 and became 0.5% recently. Food and non-food poverty was 28% in the early 2000; it decreased to 21% in the mid-2000; and became 17% in the late 2000. For the year 2008, there is no individual whose daily spending per capita is below 1\$ according to the purchasing power parity. Nevertheless, the ratio of individuals who is below the poverty line defined as daily 2.15\$ per capita according to purchasing power parity is 0.47%. The distribution of income in Turkey has been progressing towards a more balanced distribution in time. The Gini coefficient which was 0.55 in the 1960s, decreased to 0.41 recently as a result of partial improvements in the distribution of income.

Figure 12. Changes in the National Income per Capita, 1968-2009



Looking at the employment and unemployment status, according to the results of TURKSTAT Household Labour Study June 2010, the non-institutional working age population has increased by 859,000 when compares with the same period of the previous year and reached to 52 million 503 thousand people. The number of employed people by June 2010 increased to 23 million 488 thousand people with an increase of 1 million 541 thousand people when compared to the same period of the previous year. The number of people working in agricultural sector increased by 446,000 people and the number of people working in the non-agricultural sector increased by 1 million 95 thousand people. Among the people employed in June 2010, 26.6% is in the agricultural sector, 19.3% is in the industrial sector, 6.7% is in the construction sector, and 47.4% is in the service sector. When compared with the same period of the previous year, the share of agricultural sector among the employed people increased by 0.2 points; the share of industrial sector increased by 1.2 points; share of the construction sector increased by 0.1 point, whereas the share of the service sector decreased by 1.6 points. The number of unemployed people nationwide decreased by 518,000 people and became 2 million 751 thousand people. The unemployment rate was found 10.5% with a decrease of 2.5 points. The urban unemployment rate is 13.1% with a decrease of 2.9 points; while the rural unemployment is 5.5% with a decrease of 1.5 points.

The ratio of public health expenditures to GDP was 2% in 1996, while it was found 3.8% in 2002, and 4.1% in 2007. The ratio is 6.7% in EU-27 countries, and 6.4% in OECD countries. On

the other hand, the ratio of people spending for pharmaceuticals and treatment out-of-pocket was 32.1% in 2003 and 14.7% in 2009.

3.3. Health Status

The health status of Turkish population has improved significantly over the past 8 years, accompanying improvements in the scale and functioning of the healthcare system. Impressive progress has been made in expanding financial protection to the population through expansions in the breadth and depth of health insurance coverage combined with service delivery reforms to improve equity in access to health services.

The health status in Turkey has been improving rapidly in recent years, and in some aspects has been converging with OECD averages. Nevertheless, average life expectancy in Turkey remains lower than other OECD countries and infant mortality remains higher. When comparisons are made between Turkey and other upper-middle income countries using the data belonging to the years 2006 and 2007, it seen that significant improvements have been made. For instance, due to the importance given to the preventive services, significant progress has been made in terms of several indicators including the vaccination level, maternal and infant mortality rates, and life expectancy at birth.

Life expectancy at birth in Turkey was 67.4 in 1990 whereas it rose to 73.6 in 2008. For the women, it stood up from 69.5 to 75.8 and for the men, from 65.4 to 71.4. A significant decrease has happened

in the infant mortality rate between 2003 and 2008. The infant rate was at 52.6 per thousand births in 1993 while the ratio decreased to 17 per thousand births in 2008 and was estimated to be 10 per thousand births in 2010. The same decrease was experienced in terms of under 5 mortality rate. Under 5 mortality rate was 61 per thousand live births in 1993 while it decreased to 24 per thousand live births in 2008.

In a report prepared by UNICEF, Turkey is stated to be among a few countries meeting and passing the Millennium Development Goals early. In the same report, Turkey is found to be the second country which realized the biggest decrease in terms of mortality rate in the age group below five years (UNICEF, 2009). Nevertheless, Turkey puts great efforts to improve the infant mortality rate which is still higher than the EU Member States and is very decisive about maintaining the decrease seen within the years.

The crude birth rate in Turkey is 17.8 per thousand for the year 2008 (TURKSTAT, 2009) and the demographical projections for post 2025 period shows that the crude birth rate and the crude death rate will be equalized by the mid-century in Turkey; as a result the natural birth increase rate will be zero (Koç İ, 2010). The data obtained in National Demography and Health Survey depicts that there is a decrease in total fertility rate in Turkey. Fertility rate was 4.04 in 1983, whereas it was found to be 2.16 in the TDHS 2008. The reasons behind the rapid decrease in fertility rate particularly by the mid-1950s are the use of contraceptive methods affected by the macro level socio-economic developments such as the increase in the level of

education, increase in the rate of urbanization, and increase in the income, and the increase in the number of women working for cash income; and the changes in demographic determinants such as the age of marriage and intentional abortion.

In the framework of studies carried out in the preventive and primary healthcare and the importance given to these, there has been significant decrease in terms of the incidence and prevalence of communicable diseases. The chronic diseases come forth in the burden of disease ranking as a result of the prolongation of the life expectancy at birth, the success of combating with communicable diseases and the success in terms of maternal and child health. It is expected that the chronic diseases will come further in the burden of disease ranking and the cost of treatment will increase as a result. For this reason, it is necessary to give priority to the issues such as combating against the risk factors of chronic diseases, improving the ability of our citizens for controlling their own health, and putting the preventive medicine approach in the center of health. Since the life expectancy increases besides the unhealthy life styles in the whole world and Turkey, chronic diseases also increase. In 2005, 35.000.000 people died from chronic diseases in the world and this accounts for 60% of all the causes of deaths. According to the data in Turkish National Burden of Diseases Study, 71% of the deaths in Turkey is due to the chronic diseases (ischemic heart diseases, Cerebrovascular diseases, COPD, trachea, bronchus, and lung cancers, hypertensive heart diseases, and diabetes mellitus) and the chronic diseases occupy the highest ranks among the first 20 cause of death in the national level, causing a significant burden

of disease. Preventing ill-health and premature deaths due to non-communicable diseases constitute important health programs of the recent period. In this scope, national programs were designed particularly for cardio-vascular diseases, cancer, diabetes, chronic respiratory tract diseases, paralysis, and kidney failure, including some other diseases. In the 2008 Cancer Report published by the World Health Organization, Turkey was depicted as an “example country” in terms of its cancer control strategy. Behind all this success lies the increased awareness in terms of cancer control as well as its being a part of government policy in terms of screening and treatment through the Health Transformation Program.

3.4. General Characteristics of the Health System

Turkish Health System is within a transformation. As a part of the HTP (Health Transformation Program), the government realized institutional and structural reforms to prevent the disintegration and duplication in health financing and service delivery systems and to ensure access of the public to the health insurance and health services. The Ministry of Health is the primary body of the government responsible for the direct provision of health services; determining policies in the health sector; and implementing national health strategies through programs. The Ministry of Health is the main provider of the primary, secondary, and tertiary level healthcare as well as maternal-child health and family planning. The Ministry of Health is also the main provider of preventive health services through the outspread health centers nationwide, which provide primary level, secondary

level, specialized inpatient and outpatient treatment services. The organization structure of the Ministry of Health consists of a minister, an undersecretary, five deputy undersecretaries, and related administrative units. The organization within the Ministry has a vertical bottom-up structure and there are provincial directorates as well as units separated by their functions at the level of health centers and health posts. The health directorates are responsible for the provincial level administration of the healthcare provided by the Ministry of Health (in 81 provinces). The provincial health directorates reports to the governor for administrative issues and to the Ministry of Health for technical issues.

The Ministry of Health, within the Health Transformation Program vision, develops policies, establishes standards and supervises the services and is expected to ensure the national resources allocated for health, public or private, are used in effective, efficient, and equal manner. Resulting from this, the organization affiliated with the Ministry will be structured in the direction of local administration principles –separation of units which develop rules and implement them –and the Ministry shall hold a planning and strategic organization structure.

Primary duty and responsibility of the Ministry of Health comes forward as preparing policies and supervising the order. Other focus areas for the Ministry of Health in Turkey include quality control and consumer training. The Ministry of Health, hereinafter, should focus on determining priorities for the health sector, monitoring and regulating quality, accreditation of the organizations and

licensing the specialists, regulation and supervision of insurance, management of public health functions, and surveillance of epidemic diseases.

Health care in Turkey is provided by the public and private providers. The Ministry of Health is the largest public provider of healthcare and its impact increased through the devolution of SSK (Social Insurance Organization) hospitals. Some other health services provided by other ministries (the Ministry of Defence, the Ministry of Transportation, and the Ministry of National Education), some public organizations and municipalities previously have also been devolved to the Ministry of Health. University hospitals are the other important service provider. The Ministry of Health is the main provider of primary, secondary, and tertiary level health care and the sole provider of the preventive services. The Ministry of Health provides service within a very expanded net with the primary, secondary, and specialized inpatient and outpatient treatment agencies. This expanded net in the public sector is complemented with the few private institutions providing inpatient and outpatient curative services.

The Ministry of Health is gradually implementing the family medicine practice in the scope of Health Transformation Program. A family practitioner is defined as the physician of all members of the family from the unborn child to the eldest member. Family Medicine practice was put into implementation in 2005 in the scope of Health Transformation Program and it planned that it will be implemented nationwide by the end of 2010.

Health system financing in Turkey has a complex structure. This complex structure is one of the important factors complicating the effective functioning of the system. In this complex structure, health expenditure is covered basically by public and private sector resources. Expenditures by the central government, local administrations, and social security funds are among the public sector health spending. Private sector spending consists of out-of-pocket expenditure of the households, payments by the companies for their employees, private health insurance, and the expenditures of the non-profit organizations providing service for the households.

Prior to the Health Transformation Program, premium based social security was being implemented by three different social security organizations: Social Insurance Agency (SSK), pension fund, and social insurance agency for tradesmen and artisans and other independent workers (Bag-Kur). SSK provided social security service for private sector employees and public sector workers; Bag-Kur provided service for independent workers; and the pension fund provided service for retired government employees. The health expenditures of the active employees are covered by the budget of the public agency they are affiliated with. Moreover, free of charge healthcare service has been provided by the public for those who are unable to afford it or those who have limited ability to afford healthcare with their low income since 1992 within the scope of "Green Card" Program. Social Insurance Agency (SSK), Bağ-Kur (BK) and Pension Fund are financed by premiums whereas the green card and health expenditures of the active workers are financed from the budget. Basically the SIA, Bag-

Kur and the pension fund is financed by premiums, yet due to their deficits in recent years, they are also subsidized by the budget also. In order to ensure unity in norm and standards in the social security fund's implementation and actuarial calculations, Social Security Institution (SGK) was established in 2006. Thus, SSK Presidency, Bag-Kur General Directorate and the Pension Fund General Directorate were unified through Social Security Institution.

Turkish health system is mainly financed by the public. Looking at the National Health Accounts for the years 1999-2007, the main financing resources for the health expenditures are the General State and the Social Security Agencies. The most important financing resource in the private sector is the out-of-pocket health expenditures of the public. The ratio of health spending in GDP was 4.8 in 1999 while it increased to 6.0 in 2007. If we look at the private and public sector distinction of the health spending, it is seen that 38.9% of the total health spending in 1999 was private health spending whereas 61.1% was public health spending. The ratio of public health spending has increased over the years and accounts for 67.8% of the total health spending 2007. Private health spending decreased over years and accounts for 32.2% of the total health spending in 2007. The health expenditures per capita was 187\$USD in 1999 and was approximately 553\$USD in 2007 (PPP 813 USD \$).

The implementation of Universal Health Insurance is one of the most important developments in terms of health financing in the scope of Health Transformation Program. UHI aims at eliminating

the complexity in health insurance and establishing a system with unity in terms of standards and norms in the implementation.

Figure 13 depicts the general functioning of the system as a result of the changes occurred in health system financing, the actors in the system and the relations between these actors.

With the approval of legislation which started the Universal Health Insurance in 2008, the efforts for improving the effective health insurance coverage in Turkey have improved both financial protection against the high health expenditures for the poor population and also equity in the access to health care. Insufficiency of the health insurance coverage in the previous years and inadequate coverage for some disadvantaged groups in the population played an important role in the emergence of a relatively low health status for some indicators in Turkey. Yet, the percentage of population impoverished because of the catastrophic health spending is low and getting lower. The ratio is lower than the other countries about which we have data.

The Health Transformation Program dealt with the unbalanced distribution of the labour force in health nationwide, particularly following a policy of incentives towards the regions having priority in development, and it was aimed to increase the number of health professionals. As of July 2010, 168.000 new personnel were employed in the health institutions within the Ministry of Health. Thanks to a new legislation in 2004 (Law No. 4924), a new employment model was developed specifically for the Ministry of Health. The model

4. TURKEY'S APPROACH TO DEVELOPING POLICIES TO TACKLE NCD

4.1. Health Policies

The Ministry of Health was established on May 3, 1920 and the primary health services have been established since that day. These services were provided in various methods as seen below.

Between 1923-46; within the principles of health care planning, programming, and management by one hand; central government occupied with preventive medicine whereas the local governments occupied with curative medicine; increasing attraction of the schools of medicine to meet the labour force need in the health sector; compulsory service for the graduates of school of medicine; starting programs for combating communicable diseases including malaria, syphilis, trachoma, tuberculosis, and leprosy;

- The health services have been conducted with “single purpose service in a wide area/vertical organization” model,
- “Preventive medicine” concept has been developed through legal regulations, the local administrations have been promoted to open hospitals, offices of government doctor have been established,
- Diagnosis and treatment centers have been established in district centers beginning from the places with high population (150 district centers in 1924 and in 20 district centers in 1936), physicians' salaries were increased yet they were banned to work independently.

Health Policies between 1946-1960 “The First Ten-Years National Health Plan” 10.8.1947/10.6.1948 that can be names as the first written health plan of the republican period, was prepared and the inpatient treatment institutions, which had been under the supervision of local governments as the basic structure started to be managed from the center.

In this framework, the Biologic Control Laboratory was established in 1947 within Refik Saydam Hygiene Center Presidency and starting from 1952, health institutions and hospitals were opened for the insured workers.

1961-2002 The Law no.224 on the Socialization of the Health Services, which was a milestone for restructuring the public health services, was adopted in 1961. The socialization actually began in 1963 and became widespread in the country in 1983. A structure was established as health posts, health centers, and province and district hospitals through a widespread, continuous, integrated, and graduated approach.

“Multi dimensional service in narrow area” approach was adopted alternative to the “single dimensional service in wide area”.

“Basic Law on Health Services” was adopted in 1987. However because the necessary regulation for the execution of this Law was not made and some of its articles were repealed by the Constitutional Court, the Law was not put into effect in complete manner.

In 1990 the State Planning Organization (SPO) prepared a basic plan on the health sector. This “Master Plan Study on Health Sector” which was

conducted by the ministry of Health and the State Planning Organization is, in a way, the beginning of the health reforms.

The first and the second National Conference on Health were held in 1992 and 1993 and the theoretical studies on health reform gained acceleration. Green card practice was started in 1992 with the Law no. 3816 for the low income citizens who are not covered by social security. Even if in a limited manner, the effort was aiming at including the needy part of the society in the health insurance.

“The National Health Policy” which was prepared by the Ministry of Health in 1993 included 5 main chapters such as support, environmental health, lifestyle, provision of health services, and goals for a healthy Turkey.

The main components of the Health Reform which was conducted in 1990’s were:

- 1- Establishment of a general health insurance by gathering the social security institutions under one umbrella,
- 2- Development of the primary health services in the framework of family medicine,
- 3- Transformation of the hospitals into autonomous health facilities,
- 4- Providing a structure to the Ministry of Health which plans and supervises the health services prioritizing preventive health services.

Consequently, this was a period in which theoretical studies were conducted but not practiced sufficiently.

4.2. Health Transformation Program 2003 and the Ministry of Health 2010-2014 Action Plan –Broad Policy for Health

World Health Organization states that the health system of a country should be designed in a way to ensure the provision of health services necessary for everyone in high quality. The service should be effective, affordable, and adoptable by the society. Each country is recommended to develop its own health system considering these factors. Since health is a natural right, it is a must that the health services are organized in a manner to be provided equally for everybody. In pursuance of justice and equity principles, everybody should be provided health insurance, there should be no discrimination of sex, social status, and social class for the utilization of health services, the health services should be easily accessible, and the health service provided should be modern and effective.

At the end of 2002, the status the Turkish health system engaged in necessitated radical changes in various fields including service delivery, financing, human force, and information system. Right after the elections on 3 November 2002, the basic objectives to be conducted under “Health for Everyone” title were determined in the Emergency Action Plan of the 58th government, which was declared on 16 November 2002. The key objectives are:

- 1- Administrative and functional restructuring of the Ministry of Health,
- 2- Covering all the citizens by the general health insurance,

- 3- Gathering the health institutions under one umbrella,
- 4- Providing the hospitals with an autonomous structure on the Administrative and financial aspect,
- 5- Starting the implementation of family medicine,
- 6- Giving special importance to mother and child healthcare,
- 7- Generalizing the preventive medicine,
- 8- Promoting the private sector to make investment in the field of health,
- 9- Transforming the authority to the lower echelons in all the public Institutions,
- 10- Eradicating the lack of health personnel in the areas which have priority in development,
- 11- Realizing the e-transformation in the field of health.

Right after the determination of the Urgent Action Plan, the Health Transformation Program was prepared and declared to the public by the Ministry of Health. The Health Transformation Program aimed at transforming in the framework of 8 themes:

- 1- Ministry of Health as the planner and auditor,
- 2- General health insurance gathering everyone under single umbrella,
- 3- Widespread, easily and friendly accessible health service
 - a) Strengthened primary health services and family medicine,

- b) Efficient and graduated referral chain,
 - c) Health facilities having administrative and financial autonomy,
- 4- Manpower in the field of health which has adequate information, skills and high motivation,
- 5- Education and science institutions to support the system,
- 6- Quality and accreditation for qualified and efficient health services,
- 7- Institutional structuring in rational management of medicine and supplies,
- 8- Access to effective information in decision process.

The Health Transformation Program was put into implementation in 2003. The program which was prepared and publicized at the beginning of 2003 was inspired by recent experiences, health reform studies and the successful examples in the world. Each step taken in the field of health from the foundation of our Republic until today has been evaluated. The project studies conducted under the Ministry of Health have been examined and the positive heritage of the past has been kept.

Three new items were added into the Health Transformation Program in 2007 in the light of the five years of experience. These are:

- 1- Health promotion and healthy life programs for a better future,
- 2- Multilateral health accountability for the mobilization of the parties and inter-sectoral cooperation,

- 3- Trans-border health services that will increase the power of the country in the international level.

It is obvious that the program will affect not only the present but also the future seriously and shall be an important cornerstone for the realization of the targets aimed in the field of health.

The Ministry has shown its decisiveness for the implementation of this program and reaching the desired point in the field of health, and has put many implementations into practice. In this period, the steps easing the lives of our citizens are taken with courage and determination. In this understanding, the hospitals of other public institutions, including the SSK ones, were transferred to the Ministry of Health. The coverage of green card have been widened for low-income groups; the health services and the pharmaceutical expenses of the green card holders within the scope of “outpatient services” are also now covered by the state.

The VAT of the pharmaceuticals has been reduced and the medicine pricing system has been changed. In this way, a big discount has been achieved in pharmaceuticals’ prices, and the burden of pharmaceutical expenses on both the public and the citizens has been mitigated a lot. Those arrangements have played an important role in expanding the access to pharmaceuticals.

Primary healthcare services were strengthened and expanded. Family medicine implementation, which is a fundamental element of modern health understanding, has been launched.

The imbalance in health was eradicated through giving priority to places with inadequate equipment and health personnel country-wide. In the last seven years, 1.771 new health facilities were opened, 476 of which are hospitals and annexes and 1295 of these were primary level health organizations.

Despite the implementation of a transformation program in a wide scale in the last 8 years, which was admired by the world, non-interest general public spending has been parallel with the trends of increase in public health spending. Thanks to the Health Transformation Program, the public resources started to be utilized more effectively.

The countries in different levels of social and economic development try to strengthen four basic functions of their health systems: Stewardship, financing, resources, and service delivery. With these functions, the health systems aim at meeting the ultimate goals below: improved level of health, responsiveness to the health needs of the people, and financial protection against health costs.

As of the end of 2002, through the “Health Transformation Program” which has been implemented by the governments of 58th, 59th, and 60th terms in Turkey, a series of changes and innovations were implemented to ensure that the health service delivery would be provided in more effective, modern, and qualified manner. Besides the positive impacts of the Health Transformation Program on the basic health indicators, it also contributed to the increase in the satisfaction ratio of the citizens from the health services. The satisfaction ratio was 39.5% in 2003 and increased to 65.1% at the end of 2009.

The Health Transformation Program was described in OECD Health Systems Review Turkey 2008 Report as: "Health system reform is a continuous process. In these first phases of the implementation, Turkey is considered to be among the few mid-income countries which could realize a "giant" reform effectively. The program reflects that Turkey has achieved an important improvement in terms of social aid system and also is a "best practice" model for the other countries tackling similar issues."

In the scope of strategic management understanding, **The Ministry of Health prepared the strategic plan for the years 2010-2014.**

Goals included in the plan and the objectives that complement them constitute the focal point of investments that the Ministry of Health will make and activities it shall carry out for 5 years in order to accomplish its task (mission). These actions were analyzed in the framework of the four basic functions of health systems and have been elaborated on methods to be followed for reaching strategic goals.

There is one ultimate goal in the plan: **"To increase and improve the health status of our people"**. There are also three strategic goals to achieve the ultimate goal.

The ultimate goal, three strategic goals and the objectives about the control of non-communicable diseases and risk factors are seen below:

ULTIMATE GOAL: To increase and improve the health level of our people

Strategic Goal 1: To protect the community from health risks

SO 1.1. To ensure all people get access to health promotion and healthy living programs.

SO 1.5. To reduce the prevalence of non-communicable diseases and reduce the deaths due to these diseases by 25%.

SO 1.6. To increase the rate of non-smokers over fifteen years of age above 80% by the end of 2014; to put into practice alcohol control program; to reduce substance abuse.

SO 1.7. To support for increasing the ratio of population living in a healthy and safe physical environment.

SO 1.8. To ensure access of all employees to overall labour health services, to reduce the rates of mortality and disability due to occupational diseases.

Strategic Goal 2: To ensure provision of necessary healthcare services in a quality and safe manner

SO 2.1. To continue improving hospital services in administrative, structural and functional ways; to increase the service standards and improve efficiency.

SO 2.2. To increase the quality of diagnosis, treatment and rehabilitation services, to ensure provision thereof within principles of accessibility, efficacy, efficiency, measurability and equity.

- SO 2.3.** To clarify the stewardship, regulatory, planning and supervisory role of The Ministry by the end of 2011 in the scope of restructuring of The Ministry of Health.
- SO 2.4.** To complete the Organization of Community and Region-based Health Services by the end of 2014 and to make the regions self-sufficient health units.
- SO 2.5.** To support the research and development efforts and scientific publications in the scope improving health services.
- SO 2.6.** To improve pharmaceuticals and medical device services and to sustain safe, accessible, and quality provision.
- SO 2.7.** To complete, operate, and improve Turkey Health Information System/e-health which will ensure access to effective information in the process of decision making and service provision.
- SO 2.8.** To ensure that sectors are accountable for the impact of their policies and actions on health; to develop multi-sector health accountability policy.
- SO 2.9.** To maintain cooperation with other nations and international organizations in the field of health; to make Turkey a regional center of attraction; and to increase the capacity of trans-border health services provision

Strategic Goal 3: To advocate equity focusing on a human-oriented approach in health services; to ensure responsiveness to the needs and expectations.

- SO 3.1.** Based on a human-oriented approach in the provision of health services, to give priority to the people with special needs due to their physical, mental, social or economic conditions.
- SO 3.2.** To disseminate family medicine practice nationwide by the end of 2010 for the purpose of increasing service quality of primary healthcare services and satisfaction of service providers and receivers and generating human oriented service.
- SO 3.3.** To respond to the expectations of the patients and relatives as well as medical necessities during health service provision processes and to increase the level of satisfaction.
- SO 3.4.** To ensure protection against financial risks for the people in access to health services.

Strategic Planning Process

In accordance with the related article of the Public Financial Management and Control Law, the Ministry of Health commenced efforts to prepare first strategic plan covering the period between 2010 - 2014 and in this scope, Strategic Management Coordination Team was formed and the Strategic Management and Planning Department was established within the Ministry for the purpose of guiding the studies of the units, exchange of the studies with senior management, and communicating the suggestions to the units in this strategic planning process.

About strategic planning and performance based budgeting; Strategic Planning Road Map was prepared for the realization of main components of the strategic management in the Ministry of Health. In order to better manage the strategic planning process, training and study programs that will ensure a common conceptual language between the coordination team and the strategic planning team members and that will support the development about the applicable methods were organized. Following the trainings, information has been provided to sub-work groups, which were created under the information of unit heads, and to other middle and lower-level managers. Practical trainings and workshops were held with the Ministry of Health central organization managers and strategic planning team members. Comments and suggestions from central and provincial health personnel were obtained and analyzed during the internal stakeholder meetings. Through the external stakeholder survey, comments and suggestion were obtained from the external stakeholders and these were analyzed.

The results from these studies were arranged according to some criteria including service delivery, resources, stewardship, and financing, taking into consideration “A Strategic Map for The Turkish Health System” model which was formed within the scope of “Health Systems Performance Assessment” project jointly conducted by the Strategic Management Coordination Team (SMCT) and the World Health Organization. The responsible and support units which will realize the strategic goals and objectives of the Ministry of Health were identified through “Objective / Unit Matrix”. In that way, the responsibility level for the strategic objectives, the strategies towards the objectives and the performance indicators were produced. The relationship between performance indicators and performance objectives included in the administrative performance program of the units was determined.

The Teams Participating In The Strategic Planning Process And Their Duties:

Senior Committee for Strategy Development (SCSD): The Committee is composed of the Minister, Undersecretary, Deputy Undersecretaries, and unit managers who will work to ensure the identification of the goals and policies of the Ministry and guide the studies to be conducted. The committee is responsible for the review of the studies conducted and for the approval of the reports.

Strategic Management Coordination Team (SMCT): Strategic Management Coordination Team was formed for the purpose of providing leadership and guidance during the strategic planning, guiding the studies of the units, and communicating the studies with the senior management. SMCT is responsible for the coordination of strategic planning studies and activities, communicating the importance of the strategic planning efforts, and communicating the instructions of the senior management to the units. SMCT has coordinated various activities including the identification of mission, vision, strategic issues, strategic goals and objectives, definition of institutional principles and values, determination of key success factors, identification of internal and external stakeholders, formation and operation of internal environment screening teams, formation of external survey forms, and analysis and review of the study results.

Strategy Development Department (SDD): The Department was established within the Strategy Development Presidency in order to determine

planning activities necessary for the development of strategic management system, to coordinate the activities between the units, and to carry out bureaucratic procedures and works. The unit provided support services during the strategic planning activities including organization of the meetings and providing communication internally and externally. The department was responsible for correspondence, document management, training and informing necessary units, data collection, and sending the results to the related units.

Strategic Planning Team (SPT): A Strategic Planning Team (SPT) was composed of 77 persons from various management levels and who are open to change in order to coordinate and consolidate the work within and between the units for efficiently executing the activities to be performed in the strategic planning process.

Strategic Planning Sub-Study Groups (SPSSG): These groups were formed within each unit to work jointly with the Strategic Planning Team during the strategic planning process. The teams were composed of unit personnel who could represent their unit and who had the knowledge and experience to contribute to the group activities.

Elements of Strategic Planning. "Strategic Planning Guideline for the Public Institutions-2" by the State Planning Organization was utilized primarily during the strategic planning studies. In addition, plans of other countries and ministries were reviewed during the trainings through benchmarking method. The sources in the literature were also used. The organizational values are the perceptions on the Ministry, working style,

regulatory rules taken into consideration during relations with internal and external stakeholders, type of management and organizational behaviour patterns. The organizational values of the Ministry of Health were determined by the Strategic Planning Team. In this study, the members are requested to seek the answers to the following questions as “Employees of the Ministry of Health, How shall we behave towards”:

- the target audience to whom the MoH provides service,
- the MoH personnel,
- the service providers,
- the providers about their services,
- the vendors who sell products to the MoH,
- other organizations and institutions with which MoH has relations,

As the last step, organizational values on which all of the members of the team agreed were determined. In this scope, the changes planned to be realized in the organization culture were determined and the strategies and action were developed on how to realize the change.

Fields of Activity and Strategic Issues: The main purpose of the activities carried out by the Ministry of Health is to ensure that all people in Turkey enjoy their health in a complete condition of well being in mental, physical and social terms, to improve the health conditions in the country, to combat against the factors damaging the health of individuals and society, and to ensure single source of planning for the health organizations. The main activity areas of the Ministry of Health were determined by the

SPT during the workshop, taking into account the legal obligations.

Strategic subject defines the priorities of the organization including its duties and responsibilities, the level of services, its target audience, its financial status, and the main issues affecting the management of the organization. The main output from the identification of the strategic issues is that strategic goals and objectives were determined and input was provided for the prioritization. SWOT analysis was used for the determination of strategic priorities. The issue was considered in terms of duties and legal obligations. It was aimed that the strategic subjects would be result-oriented and no quantitative limitation was imposed for the determination of the strategic priorities. The subjects were identified jointly by the strategic planning team. The areas considered necessary for achieving the desired vision from the mission were listed through brainstorming and then, the strategic subjects were determined after assessments were made on the list.

Through the identification of strategic goals and objectives, it was aimed to determine the point the Ministry of Health would desire to achieve. Special attention was paid that the said goals are realist and achievable and would carry the activities of the Ministry further. The results of the SWOT analysis were also taken into consideration during the study. The strategic goals were designed in a way to be compatible with mission, vision, and organizational values, to contribute in fulfilling the mission, to ensure transformation from the current situation to the desired future status, to clearly express what to achieve, and to guide the further phases of the strategic planning.

The key success factors were determined by the SPT through responding to the following question: What will the Ministry of Health focus in order to be successful in terms of service delivery?

While determining the objectives for realizing strategic goals, SMARTER objectives were determined.

- S** (Specific),
- M** (Measurable),
- A** (Audacious),
- R** (Result Oriented),
- T** (Time Bound),
- E** (Encompassing),
- R** (Reviewed).

Thus, it was provided that the objectives are specific, measurable, audacious, result-oriented, time bound and encompassing. The objectives were tried to be compatible with the mission, vision, and strategic goals. The expectations of the stakeholders, alternatives, and current situation analysis were taken into consideration.

The strategic goals are quite general expressions of what the Ministry of Health shall do in the next five years in order to realize the plan. Detailed objectives were determined for each goal.

2008-2013 Action Plan for Global Strategy for the Prevention and Control of Non-communicable Diseases of the WHO, and the Gaining Health: European Strategy for the Prevention and Control

of Non-communicable Diseases prepared by WHO Regional Office for Europe were translated into Turkish and distributed to the related organizations and local health directorates. The translations are also available on the website of the Ministry.

4.3. Policies for Specific Non-Communicable Diseases

Chronic diseases bear great significance for our country. 305.467 (71%) of total 430.459 deaths estimated for the year 2000 in Turkey are caused by chronic diseases. Among these diseases, 205.457 were caused by cardiovascular diseases. Chronic diseases occupy the first three ranks among the major ten diseases causing death (ischemic heart disease 22%, cerebrovascular diseases 15% and COPD 6%). Ischemic heart diseases occupy the first rank among the first ten causes of death, hypertensive heart diseases occupy the 6th rank, and inflammatory heart diseases occupy 10th rank. The chronic diseases occupy the first two ranks among the causes of death by primary diseases groups and the cardiovascular diseases occupy the first rank with 48%.

The total number of deaths among men caused by cardiovascular diseases was 102.386 in 2000. The number is estimated to be 134.700 in 2010; 175.663 in 2020; and 235.567 in 2030. As it is seen, there would be a 2.3 fold increase in the number of deaths among men, due to the cardiovascular diseases in a 30 years period.

The number of deaths among women caused by cardiovascular diseases was 103.071 in 2000, and it is estimated that the number will increase

to 123.411 in 2010; 144.297 in 2020; and 180.530 in 2030. As it is seen, there would be a 1.8 fold increase in the number of deaths among women due to cardiovascular diseases in a 30 years period.

From the national disease burden perspective, chronic diseases are the second (ischemic heart disease) and third in the ranking of first ten disease burdens, and first and second in the primary disease groups (cardiovascular diseases 19%, neuropsychiatric diseases 13%).

World Health Organization reports that consuming five and more vegetable and fruit meals in a day as sufficient consumption of vegetables and fruits. In Turkey, however, the detected daily consumption is 1.64 portion of fruits and 1.57 portions of vegetables.

According to the results obtained in National Household Survey (2003), 20.32% of the population in Turkey lives inactive (sedentary) and 15.99% of the population has insufficient physical activity. Obesity incidence in various studies was found to be 22-48% among women and 17-21% among men.

Prevention of negative factors such as hypertension, smoking, high cholesterol, and obesity and increasing physical activity would:

- prevent 772.814 of the 860.083 DALY burden, and
- prevent more than 300.000 deaths attributable to ischemic heart diseases.

In light of the briefly described situation in Turkey, which is parallel to the situation in the world, and through the evaluation of programs conducted and recommended in the world primarily by the WHO, the Ministry of Health carries out a series of studies for the prevention of cardiovascular diseases and for the control of risk factors, which are described below.

The Ministry of Health was restructured. In addition to the Department of Control of Tobacco and Addictive Substances and the Department of Nutrition and Physical Activities which were established within the General Directorate of Primary Health Care; Non-communicable Diseases and Chronic Conditions Department and Health Promotion Department were also established on 18.01.2008.

4.3.1. Cardiovascular Diseases

Nazan Yardım MD, Gülay Sarioğlu, Meltem Soylu

The integrated community based “Program for Prevention and Control of Cardiovascular Diseases in Turkey” which was prepared for the three primary risk factors (tobacco, obesity, and physical inactivity) and the Strategic Plan and Action Plan for Risk Factors were declared in the signing ceremony of the European Heart Health Charter on 25 December 2007 and were put into implementation. As a continuation of the Action Plan, “Strategic Plan and Action Plan for Secondary and Tertiary Prevention for Cardiovascular Diseases, 2010-2014” which includes high risk strategies for the secondary and tertiary prevention for cardiovascular diseases and which aimed at the prevention, treatment, and control of

cardiovascular diseases for a healthier Turkey, was completed. When preparing the said action plan, the following studies were taken into consideration; Turkish Cardiology Society National Heart Health Policy; WHO 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases; Republic of Turkey Ministry of Health Strategic Plan and Action Plan 2010-2014, National Tobacco Control Program Action Plan, National Action Plan for Obesity Control 2010-2014; Health Transformation Program in Turkey Progress Report 2008; European Heart Health Charter; Helsinborg Declaration 2006 on European Stroke Strategies, WHO European Region); WHO Health for All 21 Goals; Cardiovascular Risk Platform Joint Declaration, policy documents of WHO on the prevention of chronic diseases; EU Acquis and the White Paper, Together For Health: A Strategic Approach for the EU); and Republic of Turkey Prime Ministry's State Planning Organization Undersecretary's Strategic Planning Guide 2006 for Public Enterprises. Effort was put to ensure that the action plan is compatible with the related documents.

The plan includes,

- risk factors and prevention and control of cardiovascular diseases,
- organization, human force planning, and training,
- emergency treatment services,
- device and drug management,
- childhood cardiovascular diseases
- cardiovascular surgery,

- cerebrovascular diseases and stroke
- rehabilitation, palliative treatment and home care services,
- improving future implementation approaches and elimination of negative sides.
- inter-sectoral cooperation

A broad consensus was achieved in the preparation of the plan and all public agencies, universities, as well as NGOs participated.

A structure similar to GARD Turkey is planned for the administrative structure necessary for the implementation of the program.

In addition to that, the Ministry of Health gives support and importance to the projects and programs carried out jointly by NGOs and universities. These include trainings for physicians and the public, community screenings, and model development studies.

It is estimated that the population of Turkey would increase by 13.2% in 2023. However, the population increase ratio for age group 40 and above, which is accepted as the risk group for coronary heart disease, is estimated to be 39.7% due to the aging population. According to these dynamics, it is assumed that the number of cardiovascular patients would increase approximately by over 7% annually. For this reason, it is aimed to improve cardiology and CVD services and to provide qualified service in the scope of national plan studies.

In the scope of regional health planning, it is planned to establish cardiology and cardiovascular surgery centers in 26 provinces and the studies commenced with the support of 7 coordinator hospitals. The staffs of these hospitals was trained and the trainings are almost completed. The patients could now receive CVD service requiring quite advanced technology and equipment in the nearest hospitals in their settlements.

4.3.2. Diabetes

Nazan Yardım MD, Nevin Çobanoğlu

Diabetes among the population 20 years old and above was found to be 7% in 1997 while this ratio increased to 13% in 2009. The ratio of those who said that they had diagnosed diabetes was 5% in 2003, while the ratio increased to 9% in 2009. The ratio was found to be 11.3% and 14.5% among the population 35 years and above (2009). Diabetes occupies the 8th rank with 2.2% among the first ten diseases causing death. From the gender perspective, the rank is 11 among men and 7 among women. By age groups, diabetes is the 6th cause of death in 15-59 age group, 8th in 60 years and above. It accounts for 2.1% among the total causes of death in urban area; and 2.3% among the total causes of death in rural area. Looking at the causes of deaths from the regional distribution perspective, it has a ratio of 2.3% in the western region and 1.8% in the eastern region. Diabetes does not exist among the ten diseases causing burden of diseases (DALY) in the national level for 15-59 age group, while it is the 4th diseases causing burden of diseases in the age group 60 and above with 4.9%. Moreover, within the first ten diseases causing DALY in the national

level, it has a ratio of 3.9% among men and 5.8% among women for the age group 60. The total number of deaths among men due to Diabetes Mellitus is estimated to be 3,982 in 2010, 4,366 in 2020, and 4,868 in 2030. The number is estimated to be 6,174 in 2010, 6,902 in 2020, and 8,175 in 2030 among women. Prevalence related to Type 1 Diabetes among the children in Turkey is not known precisely. In a screening conducted in Istanbul among a broad population including the school children in 6-18 age group, the prevalence was determined as 0,66/1.000.

Approximately 1/3 of the population 20 years and above in Turkey has metabolic syndrome. The female population is under more risk than the male population. Metabolic syndrome prevalence in Turkey is 28.8% among men and 41.1% among women (2009).

The Ministry of Health carries out studies in the scope of combating against the diabetes which is a disease causing considerable burden of disability (YLD-Years Lost of Disability). The Ministry also gives importance to improve and develop studies about obtaining data on diabetes surveillance which provides guidance in policy development and decision making.

One of the components of Health Transition Project (2004-2009) carried out in the scope of Health Transformation Program is improving the Health Information system for the purpose of accessing to effective information in decision making process. In the scope of Health Transformation and Social Security Reform Project (2009-2013), which is the second phase of the Health Transition Project,

the Ministry's Administrative and Financial Affairs Department, the Coordinating Unit of Information Systems and Technologies, Coordinating Unit of Information Technologies continue to develop Health Net database within the National Health Information System Project. The variables within the content of the related Minimum Health Data Set (MHDS) can be detected using the active Hospital Information System (HIS) and Family Medicine Information System (FMIS). With the development of Decision Support Systems (DSS), indicators can be counted using the data and updated surveillance data is provided in electronic environment.

Minimum Health Data Set on Diabetes is about the findings and follow-up procedures practiced for all patients with diabetes and includes; the organization, the date of first diagnosis, height, weight, waist circle, exercise (none, mild, medium, severe), compliance with medical nutrition treatment (yes, no), systolic or diastolic blood pressure, thyroid examination (thyroid impalpable, nodules palpable, diffuse palpable) and additional diseases frequently seen together (hypertension, obesity, hyperlipidemia, coronary artery diseases, peripheral artery disease). There are ongoing studies for the improvement of provision of indicators about quality of the treatment, care, and follow up of diabetes (particularly HbA1c value).

The Ministry also cooperates for the highly reliable surveillance studies. Turkey Diabetes, Hypertension, Obesity, and Endocrinology Diseases Prevalence Study 2010 (TURDEP II) was conducted with

Istanbul University School of Medicine and the related field study was performed by the staff of the Ministry of Health. Similarly, Turkish part of the Prospective Urban and Rural Epidemiological Study (PURE) is carried out with the approval of the Ministry.

Diabetes Prevention and Control Program in Turkey

Studies were developed and carried out within the Ministry in the previous years in parallel to the approach of programmed combat against diabetes. St. Vincent Declaration in 1989 which was developed by the initiative of World Health Organization Regional Office for Europe and International Federation for Diabetes determined a strategy for diabetes for our region and the declaration was signed in 1992 on behalf of Turkey. "National Diabetes Program" was put into practice in 1994 under the leadership of the Ministry and diabetes policlinics/centers were developed and became widespread in this scope. In the 10th anniversary of St. Vincent Declaration, its fifth meeting was held in Istanbul in 1999, hosted by the Ministry of Health and "Istanbul Declaration" was published consequently. The process was revised in 2003 and was rearranged as "Diabetes-Obesity-Hypertension Control Program".

As of the beginning of 2009, the Ministry of Health started to rearrange the policies towards combat against diabetes and policies for the management of diabetes in parallel way to the strategies and action plans of the WHO and in compliance with combat techniques of the day. The official diabetes strategy of Turkey under the name of "Turkish

Diabetes Control Program” is being developed and related action plans are prepared, the studies for publication is ongoing.

The action plans includes the following issues:

- I. Improving management for diabetes management
- II. Strategy for prevention of risk factors related to diabetes
- III. Health Promotion Activities for Diabetes and its Complications
 - i. Ensuring necessary life style changes for the prevention of diabetes and its management
 - ii. developing supportive environments for the prevention of diabetes and its management
 - iii. Promotion of civilian society support for the prevention and management of diabetes
- IV. Strengthening early diagnosis and the standards for diagnosis related to diabetes
- V. Strengthening the treatment of diabetes and improving its management
 - i. Improving treatment and follow up of diabetes
 - ii. Strengthening diabetes treatment
 - iii. Improving the access of diabetes patients to the health care
 - iv. Improving management of pregnancy diabetes
- v. Strengthening the diagnosis and treatment of diabetes emergency cases
- vi. Immunization for diabetes patients
- vii. Developing treatment criteria for special situations in diabetes
- viii. Increasing awareness on special situations specific to elderly people in the care for diabetes
- ix. Strengthening physiotherapy and rehabilitation in the care for diabetes
- x. Strengthening home care services for diabetics
- xi. Improving self-care for diabetics
- xii. Increasing awareness on other concomitant health conditions
- VI. Reducing complications of diabetes
- VII. Childhood-specific approaches for improving diabetes care
- VIII. Strengthening trainings on diabetes
 - i. Strengthening training of the public on diabetes, training for diabetics, and the subject of diabetes in formal education
 - ii. Strengthening on-the-job trainings about diabetes
- IX. Improving cost-effectiveness and social security aspects in the management of diabetes
- X. Health Labour Force planning for the care of diabetes

In the light of these elements and also using the experiences of the countries which prepare strategic plans for effective combat against diabetes and

which present best practice models, the Strategic plan and the Action Plan were shaped around five basic objectives after the studies with the project group:

Goal 1: Prevention of diabetes

Goal 2: Effective treatment of diabetes and its complications

Goal 3: Improving the life quality of the diabetics

Goal 4: Control of childhood diabetes

Goal 5: Strengthening the support areas for diabetes management

GARD Turkey model was adapted for the implementation of the prepared program.

For the implementation of the program the local administration have an important role in terms of the provision of physical activity opportunities and also contributing to the social awareness activities in cooperation with the universities and NGOs.

In addition to that, the Ministry of Health gives support and importance to the projects and programs carried out jointly by NGOs and universities. These include trainings for physicians and the public, community screenings, and model development studies. In this scope, Turkish phase of the Prospective Urban and Rural Epidemiological Study (PURE), which is a 12 years prospective cohort study monitoring the life style changes in urban and rural areas, risk factors, and chronic diseases in 17 countries through data collection in regular intervals, is being carried out by Metabolic Syndrome Society of the Population Health and Research Institute at the McMaster University in Hamilton, Ontario, Canada, in cooperation with

MoH Istanbul Goztepe Research and Training Hospital and Marmara University School of Medicine and Faculty of Health Sciences.

4.3.3. Chronic Respiratory Diseases (COPD-Asthma)

Nazan Yardım MD, Ertuğrul Göktaş

World Health Organization (WHO) has performed an urgent action call for the prevention and control of chronic diseases, and for this purpose it has established the Global Alliance against Chronic Respiratory Diseases (GARD). GARD is an alliance where national and international organizations merge voluntarily and work together within the framework of the vision of a world where everybody breathe freely, and it aims at reducing the global burden of chronic respiratory diseases and initiating a comprehensive approach in fighting these diseases. WHO ensures the collaboration between the international organizations and GARD, and through this, it aims at establishing collaboration between the programmes of each country and the ones continuing within GARD. The provision requiring these programmes must be managed by the governments is the most important difference and privilege of this alliance from other similar organizations.

Within the scope of the works of the Ministry of Health to form the “Turkey Chronic Respiratory Diseases Prevention and Control Programme-Action Plan” covering 2009-2013, 1st GARD Turkey General Assembly was held on 26 October 2007, in Ankara, and duties and responsibilities were determined for the stakeholders that take part in the programme. GARD Regional Countries

Meeting, GARD Turkey Promotion Meeting and 3rd GARD General Meeting were held on 29-31 May 2008, in Istanbul. Action plans were put into practice in May. By improving and implementing these National Action Plans, it is aimed at reducing the diseases and deaths depending on these diseases and also to reduce the economic burden these diseases brought along with them.

The six objectives of the Chronic Respiratory Diseases Prevention and Control Programme and its Action Plan are listed below:

1. Forming the Chronic Respiratory Diseases Prevention and Control Programme,
2. Ensuring that the program is introduced to and adopted by the public,
3. Prevention of the development of diseases,
4. Early diagnosis of diseases and prevention of their progress,
5. Effective treatment of diseases, prevention of the development of complications and provision of rehabilitation services for these diseases,
6. Monitoring and evaluation of the Chronic Respiratory Diseases Prevention and Control Programme.

In the implementation of this program, the Ministry of Health jointly works with a non-governmental organization for the first time. The structure of the jointly executed programme is as follows:

General Assembly: Including the representatives of all stakeholders, the General assembly congregates at least once a year. It evaluates the

action plans of working groups, discusses the reports and activities submitted by the executive council and forms an opinion. The meeting date, agenda and place of the general assembly are determined by the executive council and organized by the secretariat.

Executive Council: It is responsible for the execution of the programme and the determination of the general strategy. It reviews the suggestions prepared by the working groups before they are discussed in the general assembly and submit them for the view of the general assembly. It congregates at least three times a year. The meeting date, agenda and place are determined by the executive council and organized by the secretariat. The executive council elects its chairman and vice chairman among its members. The chairman and the vice chairman stay in duty for two years, and they can perform those duties for two periods at most. The Executive Council is composed of GARD Country Coordinators (1 original, 1 substitute member will represent the original member in case of his/her absence), the representatives of Turkish National Society of Allergy and Clinical Immunology and Turkish Thoracic Society that are members of GARD, chairmen of working groups, a Deputy General Director from the Ministry of Health's General Directorate of Primary Health Care, Department Head of the Department of Non-communicable Diseases and Chronic Conditions, Branch Director of Respiratory System Diseases, Department Head of Health Promotion, Department Head of the Tobacco and Addictive Substances Control, Department Head of the Nutrition and Physical Activities, Department Head of the Environmental Health, Department Head of the Family Medicine,

one representative from the General Directorate of Maternal and Child Health and Family Planning, the General Directorate of Curative Services, and the School of Public Health.

Working Groups: These are groups that are formed according to the programme objectives where the members of the general assembly take part in accordance with their job descriptions. Each working group prepares suggestions for the planning, execution, evaluation, and development of works that are related to their own fields specified in their action plans; submits these to the Executive Council and executes the approved activities. It congregates at least twice a year. The meeting dates, agenda and place are determined by the executive council and organized by the secretariat. In order to present in the general assembly, it prepares the annual report including the results of the studies. The chairmen and secretaries of working groups are elected by the group for a period of two years.

Provincial Council: It is responsible for the supporting and coordination of action plan activities of each province in itself. Under the presidency of Provincial Health Director or one of the Deputy Directors, it is composed of, if any, the provincial representatives of stakeholders. Working procedures and principles of the Provincial Council is determined by the Executive Council and the councils perform their works according to these procedures and principles. The chairman or representatives of the Provincial Council are natural members of the General Assembly.

Secretariat: Secretarial duties are executed by the Branch Directorate of Respiratory System Diseases of the Department of Non-communicable Diseases and Chronic Conditions within the Ministry of Health's General Directorate of Primary Health Care.

Within the scope of the works **for the adoption and promotion of the formed programme**, a web site was prepared related to the action plan which can be accessed at www.saglik.gov.tr/GARD, which can also be accessed through the official web site of the Ministry of Health.

At present, within the scope of the works for 2010: the Year of the Lung, a spot film is shown on TV regarding the chronic respiratory diseases. Moreover, within antismoking campaigns, messages will be delivered for the awareness on Asthma and COPD.

Within the scope of the works for the introduction of the programme in the provincial health directorates, action plan was sent out to provinces in printed form, GARD Provincial Council Working Procedures and Principles were determined and GARD Provincial Council was formed. Besides, the provincial health directors were informed about the action plan during the meeting held in Ankara in August 2009.

Under the title of **prevention of disease development**, "The Report on the Inner and Outer Environment Air Pollution in Turkey and the Assessment of Climate Changes in terms of the Chronic Respiratory Diseases Control" was published.

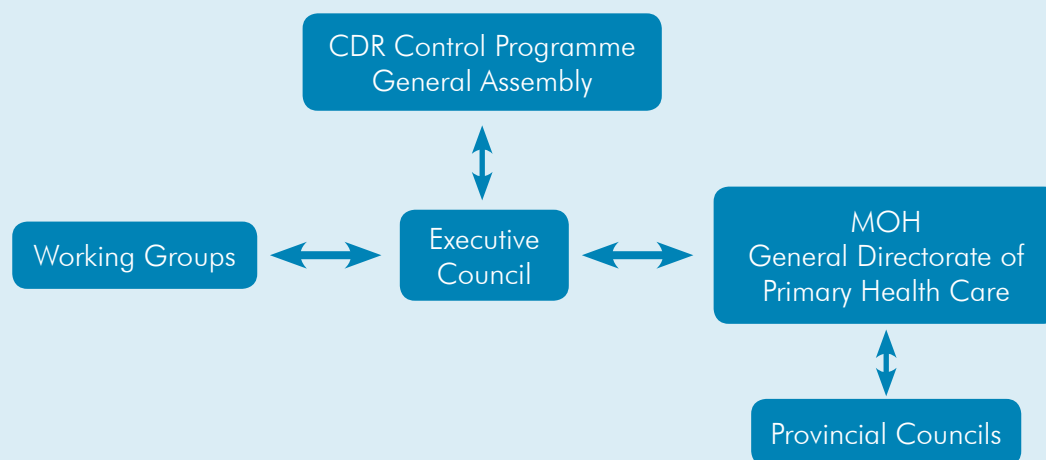
Within the scope of the works for **the early detection of diseases and prevention of their development**, In-Service Training Module for the Primary Care Physicians in the diagnosis and treatment of Asthma and Chronic Obstructive Pulmonary Disease- Trainer's Guidelines was prepared and printed. In-Service trainings are planned to be performed within 2011. GARD working members were included in the Health Implementation Communiqué (HIC) works.

Within the scope of the works for **the effective treatment of diseases, the prevention of the development of complications and the provision of rehabilitation services for these diseases**, the organization and roll-out of home care services, Home Care Workshop was held in 24-26 November 2010.

Within the scope of activities, a research on national chronic diseases will be conducted; awareness and smoking among physicians concerning the chronic respiratory diseases was conducted and is being analyzed by CDC. A Survey on awareness among the public concerning the chronic air way diseases is being analyzed.

Within the control programme implementation procedure, two Executive Council meetings in 2009 (16 June-30 September), two Executive Council meetings in 2010 (18 January-25 May) and two Executive Council meetings in 2011 (13 Jan-15 March) and Working Groups meetings on 13 November 2009 -16 December 2010 were held.

Figure 14. The Organization of the Chronic Respiratory Diseases Control Programme



In addition, on 29 March 2010, under Working Group-1, an evaluation meeting was held for data preparation; under Working Group-3, a meeting was held for the purpose of preparation of “The Report on the Inner and Outer Environment Air Pollution in Turkey and the Assessment of Climate Changes in terms of the Chronic Respiratory Diseases Control” by the members of “The Report Commission for Inner and Outer Environment Air Pollution and Climate Changes”. The report has been printed and distributed. It includes basic information at national and local levels, problems and solution offers as well;

GARD Turkey 2nd Ordinary General Assembly meeting was held in 17 December 2010 and Strategic Plan has been revised for 2011-2014.

4.3.4.Mental Health

Akfer Kahiloğulları MD,

18% of the population in Turkey lives with a mental disease for lifetime and in our country, neuropsychiatric diseases group is in the second rank just after cardiovascular diseases among the causes of disease burden (DALY) with a proportion of 19%. Considering the sub components of YLD (Years Lost with Disability), it is seen that neuropsychiatric diseases are in the first rank among the basic disease groups causing YLD at most. By gender, among the first 20 causes leading to YLD, there are six psychiatric diseases (including Alzheimer) among men and there are five psychiatric diseases (including Alzheimer) particularly unipolar depression in the first rank among the women.

In the “Health 21 Health for All: Objectives and Strategies of Turkey”, published by the Ministry of Health’s General Directorate of Primary Health Care in 2001, Objective 8 was specified as “To improve the psycho-social wellness of the public by 2020 and ensure the provision of special care for the people with mental health problems”.

National Mental Health Policy text was announced in 2006. While forming the text, it was based on the seven modules suggested by the WHO in relation to mental health policies. For this reason, both the text in general and the modules in themselves were structured properly. As it stands, the text includes the modern emphases of the WHO in the mental health field. The basic suggestions in the policy text are as follows:

- Community-based mental health system, its integration with universal health system and primary care.
- Performing community-based rehabilitation works.
- Increasing the money allocated for the mental health field.
- Increasing the quality of mental health services.
- Enacting laws in respect to the mental health field.
- Advocating patient rights against labelling.
- Increasing the training, research and manpower in mental health field.

Established upon the order of the Minister of Health, the Mental Health Executive Council is composed of the officials of the Ministry of Health, representatives of societies in the mental health field, and mental health professionals from university and training hospitals. This council has formed the urgent action plan with 28 articles. This text is such as to present a framework for the things to be done urgently. This suggestion package also underlines the problems. Problems and the presented suggestion package are as follows:

- A. Increasing the number of beds
- B. Increasing the number of mental health professionals
- C. Legislation
- D. Service
- E. Preventive mental health

Institutions Providing Mental Health Services

Mental health works in our country are mainly executed by the public sector. The Ministry of health has eight public Mental Health and Mental Diseases Hospitals (MHMDH) in Istanbul, Samsun, Manisa, Adana, Elazığ, Trabzon and Bolu provinces. Apart from the public sector, in Ankara and Istanbul, there are private Mental Health and Diseases Hospitals. In addition, psychiatry services and polyclinic services are provided both in general hospitals and university hospitals. Also within private hospitals, there are departments providing inpatient psychiatry services. Including the beds allocated for the mental health in general

hospitals; the total number of beds allocated for mental health is 7,648. Inpatient mental health service is mainly given by the Ministry of Health and universities, and the participation of private sector is observed to be low.

The number of psychiatric beds per thousand people in our country is 0.1.

The Number of Child-Adolescent Beds

In our country, there are 189 child-adolescent psychiatric beds in total though 50 of whose are reserved for substance-related disorders.

The number of psychiatrists per hundred thousand people in our country is 1.67; the number of paediatric psychiatrists is 0.25, the number of psychologist is 1.68; the number of psychiatric social worker is 0.77. There are 179 nurses in Turkey who have masters degree in the field of mental health, and 47 of whom are still attending their graduate studies. At present, 12 universities provide psychiatric nursing education. The number of nurses working in the field of mental health is 1677. However, various problems are encountered in ensuring the certification and continuity of personnel working in the field of mental health. Considering the fact that there are total 102,607 nurses in Turkey, 1.8% of the nurses work in the field of mental health.

Various projects are being executed within the scope of the works for the protection of mental health and prevention efforts. One of these is the Combating Domestic Violence against Women Project started within the scope of the Combating

Domestic Violence against Women National Action Plan. Prime Ministry's Circular No. 2006/17 was issued on the subject following the comprehensive report of the Parliamentary Investigation Commission which was established for the purpose of "The Investigation of the Causes of Custom and Honour Killings and the Violence against Women and Children and Determination of the Measures to be taken" on 11.10.2005 in the Turkish Grand National Assembly. In accordance with the circular, under the coordination of the Directorate General on the Status of Women, "2007-2010 Combating Domestic Violence against Women National Action Plan" was prepared. Under the said national plan, improvements are targeted in six basic fields regarding the social gender equality and combat against domestic violence against women. The fields in question are as follows:

1. Legal arrangements,
2. Social awareness and intellectual transformation,
3. Strengthening the socio-economic status of women,
4. Preventive services,
5. Treatment and rehabilitation services, and
6. Cross-sectoral cooperation.

Within the Ministry of Health, under the scope of the "Combating Domestic Violence against Women National Action Plan", at first step, works were initiated in June 2008 for increasing the awareness of health personnel and increasing their knowledge and skills. Within the scope of the project, through the works jointly executed with

the Directorate General on the Status of Women, total 424 health personnel were given trainer's training.

During the trainer's trainings, lasting for five days, subjects such as "Training Skills, Gender Mainstreaming, Domestic Violence against Women Basic Training; Health Services, Communication, Interview Techniques, Prevention of Child Abuse in Combating Domestic Violence against Women" were studied. Great attention was paid to ensuring the cross-sectoral cooperation to which we attach importance in combating violence against women and various panels were included in the training programme with the participation of specialists from various professional associations.

As the second phase of the trainings, the field trainings were initiated in February 2009; as of August 2010, **11,764** physicians, **31,519** midwife-nurses, **152** psychologists, **129** psychiatric social workers, **11,628** other health personnel, and totally **59,094** health personnel were trained.

Registration, feedback and monitoring works are still going on in the Combating Domestic Violence against Women Programme. As of August 2010; 2126 violence cases were notified to the Ministry of Health. Analysis and assessment of the cases are going on. The database to be formed for the violence cases that were not notified before this program will be of great importance in terms of the evaluation of the effectiveness of the said project.

In order to be implemented in the emergency services of the MoH's state hospitals, "Psychosocial Support to Suicide Attempts in Emergency Services

and Crisis Intervention Programme” was prepared and prior to that Psychosocial Support and Crisis Intervention Units were established and started operation in 32 pilot provinces.

Within the scope of the roll-out works of the programme, the implementation of the programme is continued in 103 hospitals of 50 provinces. Consequently, as of the end of 2008, 43.186 health personnel (physician, nurse, midwife, health officer, psychologist, social worker, etc.) were provided trainings in the implementation provinces in line with the programme. In addition, within the framework of multidisciplinary structure, 4.926 professionals were trained among advisor teachers, members of police department, gendarme, firemen, and members of local media, religious officials, and prison workers.

Moreover, supervision services were provided through on-site visits to 38 implementation provinces. For all that, 68,879 follow-ups were carried out in the same period in “Psychosocial Support and Crisis Intervention Units”. By the end of 2012, it is targeted to strengthen the said program via suicide intervention trainings in primary care health facilities and to roll-out the suicide prevention programme nationwide.

Again, in line with the strategic plan of the Ministry of Health, it is targeted to diminish the suicides resulting in death. According to TURKSTAT data, no change is observed in the suicides resulting in death. However, one of the important objectives of the programme is to create a database in respect to uncompleted suicides; following the formation of this database, the efficiency of the performed interventions will be able to be evaluated.

“Supporting the Child’s Psychosocial Development Project” was started by the General Directorate of Primary Health Care’s Department of Mental Health in 1994, in nine provinces including Adana, Ankara, Bursa, Eskişehir, Erzurum, Malatya, Manisa, Tekirdağ, and Trabzon. In 2005, it was decided by the General Directorate to roll out the programme nationwide and, in this sense, the trainings of central training teams for 81 provinces were completed in April 2010. In 81 provinces, the total number of trainers is 460.

The central training teams of provinces are composed of the people chosen from various professional groups such as the Branch Director of Mental Health and Social Diseases, general practitioner, midwife/nurse, as well as psychologist, social service specialist, child development specialist, medical technologist, etc. that can provide trainings.

As of July 2010, according to the data obtained from provinces, monthly data is obtained from 68 provinces under the programme. Since 2005, when the program was started, up to the present, the number of pregnant women followed-up under the programme is 458.322; the number of infants is 671.645; the number of children has reached to 927.349. The number of the fathers having been interviewed is 227.646.

Followed Risk Factors

- Poverty at the level of nutritional deficiency
- Environmental development backwardness
- Parental mental disorders

- Violence
- Negligence-Exploitation

As the implementers of the programme; the midwives, nurses, and physicians working in primary care health facilities are informed through trainings and their awareness are increased on the negligence-exploitation, as well as the risk factors effecting the domestic violence; they are informed about the negative impacts of these factors on family integrity and the development of the child; they are also informed on the processes effecting the development, follow-up of the development and growth, the positive impacts of some behaviours such as mother-father's spending time together with the child apart from the time for his/her care, sharing joint activities with the child, playing games, talking, kissing, telling tales, etc. on the learning and the development of the child.

In case of any negligence and exploitation (domestic violence, etc.) against woman-infant and child, programme implementers are informed on the following issues:

- How to intervene,
- Points to be considered during the physical examination in negligence-exploitation cases,
- Responsibilities of health personnel in exploitation cases, notification and starting the necessary legal procedures.

In 2009, it was decided to conduct a research to evaluate the effectiveness of the work and it was planned to be executed by UNICEF.

The draft of "National Mental Health Action Plan" for 2010-2014 was prepared; it was finalized by taking the views of the stakeholders and related agencies. In the action plan to be published within 2010, objectives and strategies were determined under the following main titles:

1. Introduction to the Community-Based Mental Health System
2. Increasing the Number of Psychiatric Beds
3. Increasing the Number and Qualifications of Professionals Working in Mental Health Field
4. Performing Legal Arrangements in Mental Health Field
5. Rising Awareness Against Discrimination
6. Integration of Mental Health Services into Primary Care
7. Works for Childhood and Adolescence Periods
8. Preventing Violence Against Women
9. Preventing Suicides
10. Disasters and Trauma
11. Supporting the Trainings and Researches on Mental Health
12. Forming a Treatment Model for Substance Addiction

In terms of NCD policy, mental health will continue to constitute one of the main challenging fields that will be encountered in the future.

4.3.5.Cancers

Murat Tuncer MD, Nejat Özgül MD, Emire Olcayto MD

In our country, the struggle against cancer began with the foundation of Turkish Association for Cancer Control in 1947 as a civil initiative. The first official approach for cancer control began with the foundation of Branch Chieftaincy within Primary Health Care in 1962 by the Ministry of Health, with the purpose of tackling cancer. In 1970, the Branch Chieftaincy within the General Directorate of Primary Health Care was transformed into the Directorate of Cancer Control. In 1970, the week covering 1-7 April was adopted as “Cancer Week” and nationwide activities were started within the framework of cancer control, and since then, the week-specific activities have been carried on until today. Between 1972 and 1976, for the first time official in-service training courses and public trainings were carried out, and Cancer Control Council was formed. In 1982, cancer was included in the notifiable diseases. After 1983, cancer control started to be executed by an independent department which was founded in the Ministry of Health at the level of general directorate. In 1988, Cancer Control Advisory Board was formed and in 1989, membership to the Union for International Cancer Control was realized.

In the cancer control programme in our country, it is targeted to decrease smoking and the use of other tobacco products; and through education, the roll out of healthy nutrition is targeted. In addition to the prevention of cancer, as the primary protection, decreasing the cancer mortality via early diagnosis is among the important objectives. Particularly, breast and cervical cancer screenings

were initiated within a national programme framework and rolled out in 81 provinces through KETEMs (Cancer Early Diagnosis, Screening and Training Centers). In addition to these screening programmes, other screening programmes were initiated in more limited regions for gastric cancer and colon cancer which are also important for our country.

In the cancer control programme which has become a state policy in our country now, the main objective is to record cancer properly and orderly. Besides, primary protection and secondary protection have gained importance, and foundation of a cancer early diagnosis, screening and training center is targeted in each province. In this respect, EU-supported projects were accelerated.

In cancer registry, the previous method for recording every cancer from everywhere which is known ineffective was abandoned and new registry centers were established according to regional representation properties, and in this way, significant improvements were obtained in cancer incidences in the last several years.

Significant measures are taken for environmental cancers among which arsenic, asbestos and erionite come to forefront and they are of great importance for our country. Resulting from the geological structure of our country, natural asbestos is already present in soil in 60 provinces, in more than 80 settlements, and in some of these settlements it is of vital importance at a level that threatens human life. A widespread programme was initiated particularly for the prevention of erosion and unconscious use of soil.

Being the fourth in the rank in 1970s among all causes of death in Turkey, cancer has risen to the second rank today, just after heart diseases. Considering deaths in all ages together, it is seen that every one of ten deaths is because of cancer. Efforts for the preparation and implementation of effective cancer control programmes in Turkey have been increasing rapidly in recent years.

While shaping the national cancer control programmes in our country, both the global control programmes and our possibilities and our human resources must be taken into consideration and we must come down to earth. In this context, our National Cancer Control Programme has five main titles:

- 1) Cancer Registry
- 2) Prevention
- 3) Screening and Early Diagnosis
- 4) Treatment
- 5) Palliative Care

Cancer Registry

Pursuant to the Ministry of Health's Circular (dated 14.9.1982 and numbered 5621), cancer was included in the scope of the "notifiable diseases" which is specified in the Article 57 of The Public Health Law (no.1593). In accordance with this law, all (public and private) physicians who diagnose cancer are obliged to notify this to the nearest health facility.

With the aforementioned circular, the Ministry of Health began to collect nationwide cancer data with a passive method based on the notifications of the physicians who diagnosed and of health facilities. The total cancer incidence rate in Turkey was estimated to be at least 150 per hundred thousand and accordingly 90 thousand-100 thousand new cancer cases were estimated to be seen per annum; however, the number of nationwide cases collected with passive method couldn't come up 20 thousand per annum. This system was previously tried in developed countries and it failed. The conclusion we reached is that "thousands of collected forms, piles of data which are insufficient in terms of both quality and quantity" and no reliable information was obtained on cancer epidemiology in Turkey.

Scientific communities in the discipline of cancer registry find it sufficient for cancer registry activities in a community to cover the 10% of the population on condition that the covered proportion represents the socio-demographic properties of this community. Specialists of the field suggest that instead of collecting passive data nationwide (notification), population based cancer registry

centers should be founded to collect data in designated provinces with active method.

In this way, instead of collecting incomplete and invalid or unreliable data nationwide, it was found to be appropriate to form a cancer registry system with the data to be collected with active method in certain areas whose geographical borders and population were defined at a level representing the population of the country as it is in many other countries and the Ministry of Health's Department of Cancer Control initiated the "Cancer Registry Incidence" project in 1992.

In our country, works were initiated in Izmir for the first time in 1991 in order to establish registry centers based on a regional population whose borders were defined properly. Izmir Cancer Registry Center is the population based cancer registry center of Turkey and its data are accepted in international scientific communities; the center was initiated as the "Izmir cancer incidence and data collection project" with a special protocol signed between Turkey's Ministry of Health, Turkish-American Health Research Center, and Ege University. Because of the fact that these works were tried to be executed Ankara-centered initially and the infrastructure needed for a cancer registry center couldn't be established, it can't be said that they were executed successfully. Obtained results also couldn't reach a realistic size and doubts on data reliability and validity continued. However, in the following years, Izmir Cancer Registry Center was accepted as a model and it was emphasized that the other centers should be structured according to this model, the trainings were intensified for the staff working in these centers, and particularly

the locally successful centers were supported. On 14 December 2000, "the Regulation on Cancer Registry Center", which was accelerated all these efforts, was published in the Official Gazette (numbered 24260) and was put into practice. All arrangements made until today can be accessed through www.kanser.gov.tr. In this way, cancer registry came to a very good level in Antalya, Trabzon, Samsun, Eskişehir, Edirne, Ankara, Bursa, İzmir and Erzurum provinces. In addition to these, active cancer registry works were initiated in Malatya and Gaziantep provinces in 2010. The data of Izmir and Antalya Cancer Registry Centers were published in the Part IX of CI5C (2007) to which only data of certain quality is accepted. In the upcoming several years, the other centers are also stipulated to come to a position to publish incidence rates at the level of sufficient scientific accuracy.

Active Cancer Registry Centers in Our Country and Cancer Records



Ministry of Health's Department of Cancer Control will continuously sustain the preventive works specified in the following main titles:

a) Decreasing tobacco use (banning the smoking of tobacco products in closed areas, increasing the prices of tobacco products, implementation of bans on advertising, promotion and sponsorship, media campaigns, putting warnings on packs and product control, providing medical support on giving up smoking)

b) Decreasing infection risk (works are still going on for such issues like performing Hepatitis B vaccination in all newborns in order to decrease Hepatitis B infection; and performing HPV vaccination to entire target population with its cost-effectiveness analyses in order to decrease the Human Papilloma Virus Infection and prevention of cervical cancer and ensuring injection safety)

c) Occupational and Environmental Factors:

- **Asbestos:** It is known that this problem could be solved through determination of the cause of asbestos problem, prevention of the use of the asbestic soil and prevention of citizens' breathing the asbestos fibres; within this scope, in Eskişehir, Konya, Kütahya, Sivas, Tokat Elazığ, Diyarbakır, Malatya, Hatay, Adıyaman, Ş.Urfa, Yozgat, Çankırı, Denizli, Afyonkarahisar, Kahramanmaraş, Adana, Çorum, Isparta, Erzincan, and

Prevention

The programme which was carried out with a broad working group for the Cancer Control Programme envisages the prevention of cancer, giving weight to screening, improving the treatment standards as well as facilitating the access to service. Complying with the health transformation program and family medicine objectives is of great importance for the national cancer programme to realize its objectives. To this end, trainings of family physicians especially on prevention of cancer and cancer screenings are still going on. The most significant deficiencies in respect to the prevention and screening issues are in the human resources. In terms of preventive approaches, it is of great importance to inform the public on tobacco control and nutrition in an integrated manner with the Ministry of Health's General Directorate of Primary Health Care. A new action plan will be implemented to use the mass-media for preparing and informing the public. Within this scope, the

Burdur provinces, works are executed together with Provincial Health Directorates of each province in order to form asbestos-specific epidemiological studies, screening and action plans.

- **Mesothelioma:** It is a cancer of the of mesothelial tissue, especially that of the pleura or peritoneum and it is rarely seen in the world; and works are carried out for struggling against mesothelioma problem caused by the zeolite (erionite) mineral in Tuzköy town of Gülşehir district and Karain and Sarıhıdır villages of Ürgüp district in Nevşehir province. Since Sarıhıdır village moved to a new location because of natural disasters, the problem in that village was substantially solved. In Tuzköy town, the construction of new houses in the region has been completed at present and the old houses were evacuated and people moved to their new houses. As for the old location areas, the improvement works will be initiated. In addition to these, to ensure Karain village to move, TOKİ started works in 2009 to construct the required houses.
- **Kocaeli Dilovası:** According to the result of the epidemiological research carried out in the region, the deaths because of cancer are in the first rank above the deaths because of cardiovascular diseases; Kocaeli Provincial Health Directorate began to measure daily SO₂ and smoke values in six different regions in Kocaeli province; and by getting in touch with the required units, the significance of the cooperation was introduced for the solution of the problem.

In addition,

- In Emet and Gediz districts of Kütahya province; because the arsenic level is too high in potable water, regular measurements are carried out and training activities are carried out in the region to ensure the citizens utilize the arsenic-free water resources as drinking water and service water, and as a result of the geological structure of the region, considering the fact that ground water can make contact with arsenic at any moment with seismic movements, arsenic measurements are carried out regularly for the water resources found in the region.
- **Chernobyl:** As a result of the Research on Cancer and Cancer Risk Factors in the Black Sea Region conducted for the investigation of the impact of Chernobyl Nuclear Accident on the Black Sea Region, it was concluded that cancer in the Black Sea Region does not indicate a different increase or distribution from other regions.
- **Afşin-Elbistan:** Because of the pollutant impact of Power Station-A which was built with the old system and whose chimneys have no filter, the relevant institutions and organizations carry out various works in cooperation with each other in order to update the chimney filter system and to make it operational.
- **Muğla-Yatağan:** Because of the fact that the coal used in the power station was of low quality, and therefore it was needed to be pre-processed; however it was neglected by the business enterprise and

also the chimney height was lower than the standards; therefore, as a result of the works, the chimney height was brought to normal size and the periodical measurements were started, the coal was processed through different procedures before it was burned, in this way, the problem was substantially come up with a solution.

- **Heavy metal in the Water of Turkey:** In aquatic systems, intense domestic and industrial waste coming from outer environment decrease in dissolved oxygen concentration and therefore heavy metals join the system depending on the pH change and they cause negative impacts on many living beings through the food chain; therefore, depending on the environmental factors, continuously changing aquatic ecosystems should be monitored in certain intervals which is of great importance; within this scope, our department in cooperation with Hacettepe University started a study called Heavy Metal in the Water of Turkey.
- d) **Tackling Obesity at Global Level:** Within the scope of tackling obesity, various works are carried out to perform obesity screenings in KETEMs, to direct the risky citizens to specialist dieticians, and in cooperation with the Ministry of National Education, to ensure that nutrition as a subject is included in the curriculum of primary schools.

Screening and Early Diagnosis;

Cancer Early Diagnosis, Screening and Training Center (KETEM)

Majority of the cancer cases are diagnosed at advanced stage, and this reduces the chance for treatment. It is seen that the most common cancers in the world and in Turkey are the strains that can be prevented by means of primary and secondary protection. Therefore, deaths caused by the cancers that can be screened can be prevented by raising awareness through public training within the scope of primary protection and by creating the chance to treat the cancers with early diagnosis within the framework of screening and early diagnosis programs within the scope of secondary protection.

Significant steps of the cancer control are the organizing trainings for informing the health personnel and the public on cancer and raising awareness, diagnosing the defined risk groups at an early stage with the population-based screening programs [Breast, Cervix, colorectal cancers, etc.] to be carried out in line with the established screening standards, referring the patients diagnosed with cancer by making the necessary medical directions to the treatment centers, performing the patient follow-up and evaluations, and providing social, mental, and medical support within the bounds of possibility.

“Prevention, screening - early diagnosis, treatment and palliative care” also form the steps of the Cancer Control Program recommended by the WHO for the countries.

Cancer Early Diagnosis, Screening and Training Centers (KETEM) started to be established in order to raise public awareness on the importance of early diagnosis and screening for cancer through trainings for reaching a modern level in terms of cancer control in our country, to carry out and spread the early diagnosis and population-based screening activities for the cancers that can be diagnosed early, to play an active role in cancer control, and to reduce the morbidity and mortality of the cancers that can be prevented and diagnosed early as a result of all those activities. The legal infrastructure for this was constituted with the Regulation on Cancer Early Diagnosis, Screening and Training Centers. The number of KETEMs has reached to 122 as of 2009.

The training program of the personnel working at those centers has been quite important since the first year of the establishment of the centers. The trained KETEM personnel organized in-service trainings and public trainings in order to inform the public on cancer and to raise awareness, embraced and worked towards the objective of executing the screening programs throughout Turkey and gained success in that. Breast cancer, cervix cancer and colorectal cancer screenings were initiated in the pilot regions even before the National Screening Standards were issued and they became widespread in years. Thus, the awareness was raised on the fact that we can fight cancer at the individual, social, and institutional levels and responsibilities were shared.

Moving from the principle of “Early diagnosis saves lives!”, the KETEMs carry out screening programs regarding the breast, cervix and colorectal cancers.

The main purpose of the KETEM services is to reduce deaths caused by the breast, cervix, colorectal, and skin cancers and to increase the health level of the society, particularly the women. Among the other objectives of KETEM services are:

- To increase public awareness about cancer by communicating the information on cancer to the healthy women and men, who are the target groups of the screenings,
- To increase the percentage of the people screened within the target population,
- To raise awareness in the public,
- Increase in the percentage of screened people,
- Decline in the cancer cases that are diagnosed in advanced stages,
- Decline in cancer incidences (cervix, skin),
- Decline in cancer mortality.

Attaining the defined goals is possible through increasing the quality of the service provided, spreading the ongoing screening programs to the whole country, and ensuring its standardization. “KETEM Service and Quality Standards Guideline” was issued on 21.05.2009 in order to increase service quality and ensure standardization at KETEMs and it is planned to spread it by establishing 280 KETEMs in the country as per the National Cancer Control Program.

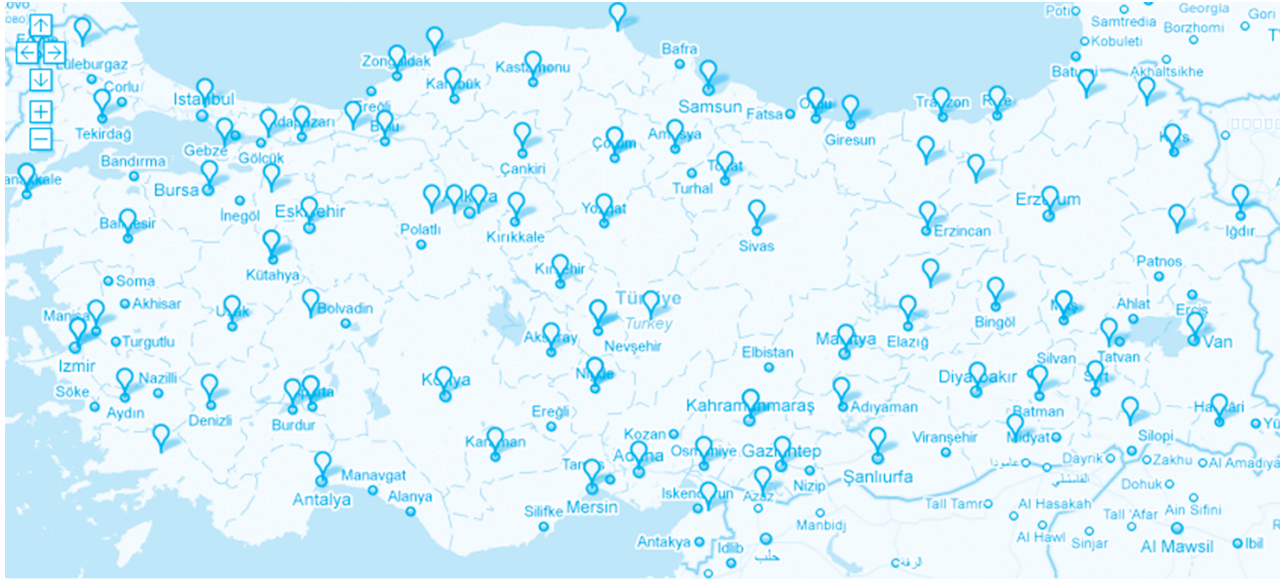
Cancer Early Diagnosis and Screening works, an important component of the 2009-2015 National Cancer Control Program (prepared by our Department and has four components), are

executed by the KETEMs. It is planned to screen 70% of the whole population until 2015 within the scope of the program.

KETEMs carry out various activities including trainings for informing the health personnel and the public and raising awareness on the topics of

cancer, balanced diet and proper nutrition, harms of smoking, **“breast cancer, cervix cancer and colorectal cancer screening programs”** consistent with the national standards, counteracting obesity, smoking cessation consultancy and treatment, in-service trainings and public training services.

KETEM Centers



The following are planned for 2011,

1. Smoking cessation support programs,
2. Works on obesity, screening and their treatments,
3. HPV screenings,
4. Public health primary care studies,
5. Palliative care services in collaboration with the family physicians.

National standards have been established regarding the breast, cervix and colorectal cancer screenings, which are included in the program in the EU countries for decreasing mortality through screening. The screening for the stomach cancer, which is increasing significantly recently in our country, was also included in the program step,

which is an advanced step. Unfortunately the number of radiologist that can do the radiological evaluation in the breast cancer screenings and the number of pathologists that can evaluate the PAP smear in cervix cancer screenings is inadequate. The number of pathologists in our country is not enough to screen 11.000.000 women that will be covered by the screening program in every five years. In the medium term (3-5 years), it is planned to train the practitioners and the family physicians on those topics so that they can join the screenings under the supervision of the specialists. In the long term (7-10 years), it is planned to build the infrastructure for the method of "Tele-Medicine" ("Tele-Tıp" in Turkish language) and to send the screening materials (mammography, smear, etc.) digitally to the Evaluation Centers, which are planned to be established, or to the

relevant specialists that will work for the screenings and to get the reporting with the same method. In addition, steps are taken to train cytotechnologists. The service is free of charge so that the screening programs can be executed regularly. It is planned to open at least one KETEM in each province for infrastructure support. Our short and medium term goal is for KETEMs to screen 35% of their target population and the long term goal is to screen 80% of the target population.

Treatment

At the moment there are functioning cancer centers in 29 universities (one of them is a private university), 12 MoH Training Hospitals and 3 private hospitals. 175 medical oncologists, 97 pediatric oncologists, 306 radiation oncologists, 88 radiation physicists, 525 oncology nurses, 50 psychologists and 23 social service specialists are working in those centers. As the figures indicate, have approximately the one third of the targeted human resources. On this subject a serious approach is required from the universities in terms of capacity building. The most important problem with respect to access to and utilization of radiotherapy is the lack of radiation physicists. On this subject, new job definitions will be made such as dosimetrists in collaboration with the TAEK (Turkish Atomic Energy Authority) and the human resource capacity will be increased in the medium term. Since it is known that 52% of all cancer patients require single dose and 25% require two doses of radiotherapy, increasing capacity for this is inevitable. Regarding the radiotherapy devices, it is planned to have an implementation similar to the project of creating employment without

making a big investment, which was realized by MoH on other radiology devices. Our medium term (5 years) goal for this is to open 17 extensive cancer diagnosis and treatment centers, 54 cancer centers and 14 cancer treatment centers in parallel with the regional planning. In this way, it will become possible for each cancer patient to access treatment easily.

Palliative Care

Since the medical institutions did not have the necessary equipment to implement certain diagnosis and treatment methods in the past, the medical intervention method used was only for providing palliation to the patient. With the emergence of advanced technology and medical institutions, it has become possible to make clearer grouping of the patients. As a result of those developments, protecting and increasing the quality of life in terminal patients have become more important. In our country, as in many other countries, it has not been possible to focus on the palliative care in practice so far; and the parties related to the subject, including the public institutions and the private ones, were not able to grasp the importance of palliative care in full. The Ministry of Health saw and understood this deficiency and established an extensive Palliative Care Program in collaboration with the WHO specialists to be implemented within the scope of the National Cancer Control Program in the next five years. The said program is prepared by taking the characteristics of our country in the Asia-Europe line into consideration.

Turkey has a wide population and an increasing cancer incidence. It is difficult to implement the

programs implemented by other countries in Turkey because of the vastness of the country's geographical area. Because of this reason, a unique Palliative Care System consistent with the subjective country conditions has been established to realize a first in the world and it is ready to be implemented in the next five years. Palliative Care System to be implemented in our country will make a good model with its high qualifications and it will set an example for the other developing countries. Palliative Care Project is a population-based system and the first caregivers are the family physicians and the practitioners working in the cancer screening center throughout the country. The most important members of the team that will provide this service are the nurses and the practitioners that have received a very good training on the topics. A significant part of the service to be provided will be the homecare service. Palliative Care Project also foresees the collaboration of the NGOs. The purposes of the joint works to be carried out with the NGOs are to provide community support, to meet the social needs of the patients, to supply financial resources and also to provide moral and material aids and occupational support.

Cancer Control Department provides training to the public on many topics in order to increase the level of information through trainings on the prevention of cancer and several projects have been carried out on the prevention of cancer in cooperation with international organizations and non-governmental organizations in Turkey. Some of them are as follows:

Stomach Cancer Early Diagnosis Pilot Project

"Stomach Cancer Early Diagnosis Pilot Project" is carried out by Ankara University's School of Medicine. At the beginning of this project, fifteen thousand healthy volunteers were screened for stomach cancer. Works are carried out by Cancer Control Department and the said faculty to ensure the continuation of the project for one more year.

Youth Accumulation Association Projects

Every year, an international program called "Raising Awareness among the Youth about Cancer" is organized in Muş province by the Youth Accumulation Association between the dates of 18-25 April by means of an EU grant. Within the scope of this program, the participating young people are informed about the cancer disease and the methods of protection from this disease.

HPV (Human Papilloma Virus) Project

This project is carried out by our Department for identifying the common HPV strains in our country and preventing cervix cancer.

Blue Bicycle – Road is Open for Early Diagnosis in Cancer Project

Blue Bicycle – Road is Open for Early Diagnosis in Cancer Project is carried out for raising cancer awareness in our country by the Turkish Bicycle Federation.

Cancer Week and the Festival Hand in Hand Against Cancer:

Activities for the cancer week were carried out within the scope of the 5th Asian Pacific Organization for Cancer Prevention and Control (APOCP) Congress was held in 3-7 April 2010.

Cancer Control Department carries out joint works in collaboration with the international cancer institutions such as MECC (Middle East Cancer Consortium), IARC (International Agency for Research on Cancer), UICC (International Union Against Cancer), NCI (National Cancer Institute), APOCP (Asian Pacific Organization for Cancer Prevention), WHO (World Health Organization) NHS (National Health Service). In addition to that, joint works are carried out with the ESGO (European Society of Gynaecological Oncology) and ENYGO (European Network of Young Gynaecological Oncologist), which works under this society.

4.3.6.Tobacco

Hasan Irmak MD, Hüseyin İlter MD

“Framework Convention on Tobacco Control (FCTB)”, which was the first international convention for tobacco control, was adopted in 21 May 2003 at the 56th World Health Assembly of the WHO. This agreement was signed by Prof. Dr. Recep AKDAĞ, the Minister of Health, in 28 April 2004 on behalf of Turkey, and then it entered into effect by being published in the Official Gazette. Turkey is the 43rd country that signed this agreement. With the signature of the **FCTB** the works regarding tobacco control gained momentum in our country. **“National Tobacco Control Program”**, which has been prepared with the collaboration of approximately 130 specialists from the relevant ministries, universities and the NGOs, was issued as the Prime Ministry Circular in 07 October 2006. In 2007 **“Provincial Tobacco Control Councils”** have been established in 81 provinces in order to implement the National Tobacco Control

Program and to execute tobacco control activities at the local level. The Department of Tobacco and Addictive Substances Control was established within the General Directorate of Primary Health Care with the purpose of rendering the works executed within the Ministry more effective and sustainable. **“National Tobacco Control Program Action Plan 2008–2012”** was prepared and was introduced to the public with the participation of our Prime Minister Recep Tayyip ERDOĞAN in 12 December 2007.

“Law Amending the Law on Preventing the Harms of the Tobacco End Products” no. 5727 was adopted at the Parliament on 03 January 2008. With this law, our country has become one of the few countries that have legal regulations in terms of tobacco control and it has even become a sort of leader. The provisions of the said law regarding the indoor public places have entered in to effect in 19 May 2008; the provisions regarding the ban on the consumption of tobacco products in recreational facilities such as restaurants, cafes, cafeterias, pubs belonging to private legal entities have entered into effect in **19 July 2009**. The said law is adopted by twenty countries around the world.

The Prime Ministry Circular was issued in 16 May 2008 with the purpose of implementing the provisions of the law in an effective manner and to ensure standardization in implementation.

Regarding the implementation of the penal provisions of the law, **“Communiqué on the Procedures and Principles for Implementing the Administrative Sanction Decisions that will be**

Applied to the People That Consume Tobacco Products in the Places, Vehicles, Buildings and Facilities Belonging to Public Institutions and Agencies” was issued in 27 May 2008 by the Ministry of Health, Ministry of Interior and, the Ministry of Finance.

In 27 October 2008 the Ministry of Health issued a circular and re-explained the issues to be taken into consideration in the works to be undertaken for monitoring, evaluating and coordinating the implementations for Law no.4207 and the necessity of multidisciplinary approach, and revised the monitoring and evaluation forms.

National Media Campaign was launched with the slogans of “Smoke-Free Air Zone” and “Protect Your Air” in order to inform the public and raise awareness about the law. The non-prohibiting, uniting approach, which was exhibited in the media campaign, was received well. Within the framework of the campaign 50 TV and 25 radio spots, newspaper advertisements, billboards, posters, brochures, open air events were organized. The message of togetherness was empowered with the inclusion of the leaders of all political parties into the campaign. Spokespeople from all sectors of society stated their support for the law and the campaign in the media. At the end of the first phase of the campaign 62 million people were reached. This law turned into a social common sense movement. “Quit-Win Campaign” was organized between the dates of 01–28 May 2008. 69.678 citizens participated in this national campaign and a citizen from the province of Niğde won the award.

World Health Organization Director presented the **General Special Recognition Award for Contribution to Global Tobacco Control 2010** to our Prime Minister Recep Tayyip Erdoğan. Galatasaray University presented the **“Best Social Responsibility Project Award”**, which is one of the “Best of 2008 Awards”, to our Minister of Health Prof. Dr. Recep AKDAĞ.

Supervision teams were formed to assess the implementation within the works that started after the law entered into effect in 19 May 2008, and those teams received the necessary training. Approximately 70.000 places were visited by the supervision teams throughout the country until 19 July 2009. While the law conformity rate was high during the visits, necessary warnings were made in the places where problems were detected and necessary actions were taken to solve them. During the visits 114 people, 113 facilities and 2 public transportation vehicles, which failed to observe the smoking ban and did not to care for the warnings, were subjected to the necessary legal sanctions.

Different studies were undertaken for evaluating the effectiveness of the new regulations that have been implemented as of 19 May 2008. Those studies indicated that public awareness was raised regarding the harms of tobacco and tobacco products with the smoke-free air zone implementation. The implementation received great support (%95) from both smoking and non-smoking citizens. Serious decrease was detected in the particle amounts in the air in the closed areas with the implementation of the smoke-free air zone in the measurements aiming at the evaluation of the air quality in closed settings.

Turkey is the first country that completed the data collection for the Global Adult Tobacco Survey (GATS) and reported on it. When the results of this work, which was completed with the collaboration of the CDC, TURKSTAT and the Ministry of Health, were compared with the results of the study conducted in 2006, it was seen that the smoking rates decreased by 2.1% in the society. And tobacco consumption rate, which was 33.4%, came down to 31.2%. On average 7% of the smokers quit smoking and the tendency to quit tobacco and its products is more common in the youth. When we look at the figures regarding cigarette sales, while the cigarette consumption per capita was 1646 in 2000, this figure dropped to 1287 in 2010.

A training meeting on 'Leadership in Tobacco Control' was held in 16–19 December 2008 in collaboration with WHO with international participation for the administrators that are responsible for tobacco control in provinces. The participants were informed on the topic and they were charged with a leadership mission. National Tobacco Control Committee came together in 24–25 December 2008 and the National Tobacco Control Action Plan and the strategies for implementation were reviewed.

"MPOWER: A Policy Package to Reverse the Global Tobacco Epidemic", which was prepared by WHO and which was meant to guide the countries in their tobacco control works, was translated in to Turkish and it was distributed to the relevant institutions and agencies throughout the country.

"National Capacity Assessment Meeting" was held in 9–20 February 2009 with the participation

of local and foreign academicians that were specialized in the field of tobacco control. With this work main institutions and agencies that play a role in tobacco control throughout the country were visited, and opinions were exchanged on tobacco control policies, processes, outcomes, and country profile was drawn with respect to tobacco control. After that international experiences were taken into consideration and a report covering the identifications and suggestions was prepared. The report that was prepared as a result of this work was shared with the public with a press release with wide participation.

"Training of Supervision Teams on Tobacco Control" was held in 13–14 April 2009 for the officials in 81 provinces, and the procedures to be applied in field visits were standardized. "Guideline for the Smoke-free Air Zone Supervision Teams" was prepared and was presented to the supervision teams throughout the country.

"Interagency Collaboration Meeting within the scope of Tobacco Control" was held in 15 April, 26 and 28 May 2009 with the participation of Governors, Deputy Governors, Deputy Mayors, Municipality Constabulary Director, Provincial Health Director, Provincial Health Deputy Director, local media, and the representatives of NGOs from all around. The importance of tobacco control and tobacco products control and their responsibilities for this subject was explained to the participants that were all provincial level managers.

Smoke-Free Air Zone Liaison Offices were established in order to reply the questions and complaints that will come from the people around

the country, necessary trainings were given to the officials working in ALO SABİM 184 hotline, and also Technical Support Desk was established in the Ministry.

A press meeting was held with the heads of the National Football Federation and the sport clubs in 18 August 2009 under the chairmanship of the Minister of Health, and the precautions to be taken for tobacco control in the stadiums were discussed.

Tobacco control works that are implemented in our country also received interest from the WHO, our country was selected from amongst many countries as a result of an evaluation made, and the Global Tobacco Control Report was held in Istanbul in 9 December 2009.

The number of supervision teams that are formed to assess the implementation of the legal provisions is 2848, the number of personnel working in those teams have reached 9496. The ratio of compliance with the law was found to be 99.2% during the supervisions.

The figures for the monthly cigarette sales has started to decline since 19 July 2009 when the consumption of tobacco and tobacco products was banned in all closed areas including the food service sector.

Turkey had the lowest cigarette consumption in the last fifteen years. In the 2010, people smoked 724 million packages less when compared to the same period of 2008 and 708 million packages less when compared to the same period of 2009.

The sales declined in this period of 2010 by 15% compared to 2008

According to this data, in 2010 the citizens paid 3 billion 727 million TL less for cigarettes when compared to the same period of 2008 and 3 billion 648 million TL less when compared to the same period of 2009.

Further decline is expected in cigarette sales because of the illustrated warnings on the cigarette packages as of 01 May 2010.

After the provisions of “Law on Prevention and Control of the Harms of the Tobacco Products” no. 4207 entered into force, the owners of some businesses declared that they lost customers, lost money and that they would go bankrupt. However the economic data do not support those declarations. After the regulations regarding tobacco control entered into force, an increase is observed particularly in the number and profitability of businesses in the food service sector. According to the data of the Ministry of Finance, the number of businesses in the food service sector, which was 931.531 in July 2008 increased to 958.960 in December 2009. The catering sector grew by 4%, businesses serving alcoholic drinks grew by 3%, businesses serving non-alcoholic drinks grew by 2% and in total the food service sector grew by 3%. In the period of August-December 2009, 7.198 businesses were closed and 19.042 businesses were opened. In 2009, 65.330 businesses were opened in the food service sector and 39.977 businesses were closed in total. According to this, in 2009;

Number of businesses in the catering sector increased by 13.585,

Number of businesses serving alcoholic drinks increased by 830,

Number of businesses serving non-alcoholic drinks increased by 10.938,

In total, the number of businesses in food service sector increased by 25.353.

The number of staff working in those businesses in August 2008 was 584.082 572.944 in August 2009 and 710.633 in December 2009.

VAT assessment of the food service sector increased by 11% from the period of August-December 2008 to the same period of 2009. The increase ratio was 13% in the catering sector, and 10% in the businesses serving non-alcoholic drinks (cafes, cafeterias etc).

According to TURKSTAT's "GDP by Periods" data, while the GDP of Turkey dropped by 3.3% in the same period of 2009, there was an income increase of 5.2% in the food service sector including the hotels, restaurants and cafes.

According to TURKSTAT's "Quarterly Trade-Service Indicators", in the 3rd quarter of 2009 the turnover index of the food service sector businesses increased by 23.8%, employment index increased by 9.9%, and wage-salary index increased by 17.5% compared to the same period of 2007. However the turnover index in the construction sector decreased by 10.3%, employment index decreased by 26.1%, and wage-salary index decreased by 0.6 %.

This data indicates that as in other countries the Law banning smoking in all closed public settings including restaurants and cafes is working out and only the cigarette industry is losing money.

Our country has become the 6th country in the world after Bermuda, New Zealand, Uruguay, England and Ireland and the 3rd country in Europe, in terms of having the most extensive law for tobacco control as of 19 July 2009.

MPOWER strategies, which were published to support the works of the signatory countries of the Framework Convention on Tobacco Control by WHO, was adopted as the principle in the tobacco control works in our country, and all plans were formulated on those strategies.

So far in Turkey;

1. Researches were conducted targeting the adults and adolescents throughout the country in collaboration with the WHO and CDC in 2008 and 2009, the necessary planning was made with the WHO and CDC to repeat them in 2010, and the field works are about to start.
2. An extensive ban on indoor smoking was initiated with the Law, which has been issued at the beginning of 2008 and which entered into force in 19 July 2009 with all its provisions; and the law is being implemented successfully.
3. Illustrated health warnings that cover at least 65% of one surface of the packages of the tobacco products started to be implemented as of 01 May 2010.

4. The tax ratio on tobacco products was increased over 80% as of 01 January 2010.

In this context, 4 of the M-POWER strategies have been completed. Works regarding one of the remaining two strategies “ENFORCE: Enforce bans on tobacco advertising, promotion and sponsorship” will be completed with the publication of the legal arrangement on sale point prepared by RCTABM (Regulatory Committee for Tobacco, Tobacco Products and Alcoholic Beverages Market) in the upcoming period.

Regarding the other remaining strategy, which is “OFFER: Offer help to quit tobacco use”;

1. “National Guideline” was prepared with the collaboration of the specialists and academicians for the physicians working at the primary care level and it was published as a book, and it is distributed to the physicians working in all primary care institutions in our country. With the help of this smoking cessation works will be spread to all primary care institutions and each family physician will serve as a smoking cessation clinic.
2. A two-stage (distant training and on-site training) in-service training was initiated on smoking cessation treatments for the primary care physicians.
3. Smoking cessation polyclinics were developed in hospitals, works were initiated to increase the effectiveness and number of the polyclinics (it is around 260).

4. The citizens now have access to the pharmaceuticals used for smoking cessation treatments through pharmacies. In addition, the pharmaceuticals used for the treatment of tobacco addiction were supplied by the Ministry of Health and they are given without any charges to the cigarette addicts under the control of the physicians in the smoking cessation polyclinics. Works continue to increase the amount of the pharmaceuticals to be distributed.
5. The final stage has been reached in the works aiming at describing the works and procedures of the private and public health institutions for increasing the service quality of the smoking cessation polyclinics.
6. Works are completed for “ALO 171 Smoking Cessation Hotline”, which people can reach for free for 24 hours and get live answer all the time. 45 staff members are assigned for the call center; and they were given 15-day training within the framework of the training curriculum, which was prepared with the participation of the WHO, Hacettepe University, communication specialists and other relevant specialists. A physician has been assigned to provide constant medical support to this team consisting of auxiliary health personnel, such as the nurse and health officer; in addition a consultant team of 20 people was established to provide support by phone when necessary.

4.3.7.Nutrition

Cengiz Kesici, Biriz Çakır

With respect to nutritional status, Turkish people rely heavily on bread and other grains as their main food. 44% of the daily calorie intake is derived from only bread, whereas 58% is derived from bread and other grains. Food consumption trend has changed over the years, with a decrease in the consumption of bread, milk-yoghurt, meat and meat products, fresh fruits and vegetables and an increase in the consumption of legumes, egg and sugar. Although no substantial difference was observed in the consumption of oil in general, the consumption of vegetable oil increased in comparison to fat. Some segments of the society do not have access to sufficient food and consume animal products in low quantities, which lead to macro and micro nutritional deficiencies.

Analyzing the nutritional status on the basis of energy and nutrients, the ratio of families consuming insufficient levels of energy is low. Total protein consumption per capita is at an adequate level. Most of the protein is plant-based. Consumption of grain and grain crops rank the top, followed by consumption of vegetables in the second place. Although meat and meat products are significant for their protein content, the consumption percentage of meat and meat products amongst other food groups is only 3% in Turkey.

With respect to nutritional status, Turkey appears to be a country where the problems of both the developing and developed countries co-exist. The nutritional status of Turkish people differs substantially according to regions, seasons,

socio-economic status, and urban-rural areas of settlement. The main underlying reason is the unequal distribution of income. It affects the nature and prevalence of nutritional problems. Moreover, the lack of knowledge about nutrition causes inadequate choice of food and inadequate methods to be applied for the preparation, cooking and storage of food; thus aggravating the nutritional problems.

The need to draft a national food and nutrition action plan with inter-institutional cooperation came up in Turkey after participation to the International Conference on Nutrition 1992, 1996 and 2002 World Food Summit and the “Workshop on Development of Food and Nutrition Action Plans in South-East Europe” organized by WHO and FAO in 2002. To this end, a working group led by the State Planning Organization (SPO) and consisting of the Ministry of Health, Ministry of Agriculture and Rural Affairs, universities, UNICEF, WHO and representatives from the food sector conducted a detailed analysis of the current situation regarding food safety, food security and nutrition; and the “National Food and Nutrition Strategy Working Group Report – National Food and Nutrition Action Plan” was published by SPO in the year 2003. The aim of this report is to ensure cooperation and coordinated action among different institutions by uniting all food and nutrition related services provided by different Ministries under the roof of national action plan.

Under Decree Law No. 560, the Ministry of Agriculture and Rural Affairs was responsible for food security, food safety controls, production, import and export etc. services, and the Ministry of

Health for ensuring food safety in food marketing and public consumption facilities and developing nutrition policies. Food Law No. 5179 enacted in 2004 transferred the responsibility of ensuring food safety in food marketing and public consumption facilities to the Ministry of Agriculture and Rural Affairs. All services related to food safety and food security except for services related to water, supplementary food, infant formulas, dietary foods for special medical purposes, and infant formulas for special medical purposes were delegated to the Ministry of Agriculture and Rural Affairs. "Department of Food Safety" affiliated to the Ministry of Health's General Directorate of Primary Health Services and responsible for developing national nutrition policies and providing nutrition services took over the responsibility of promoting physical activity and was restructured as the "Department of Nutrition and Physical Activity" in 2006. With the enactment of the Law No. 5996 on Veterinary Services, Plant Health, Food, and Feed published in the Official Gazette in June 2010, regulations related to food and veterinary services were gathered under a single heading and the responsibility was assigned to the Ministry of Agriculture and Rural Affairs. Ministry of Health is responsible for establishing the national nutrition and health policies.

In order to identify the nutrition and health status and problems in our country, it is necessary to conduct the Nutrition, Health, and Food Consumption survey at 5 year intervals as the case in the rest of the world. Existence of reliable data from surveys is essential for preparing effective, useful and consistent food and nutrition plans and policies targeting the national nutritional problems.

In Turkey, no survey providing data based on samples representing the country was conducted since 1974. In this context, Turkey Nutrition and Health Survey field study was carried out in 81 provinces and 19056 households in 2010 and the preliminary report will be published in the first half of 2011.

Ministry of Health carries out several programs and activities aimed at the prevention of chronic diseases such as obesity, cardiovascular diseases, diabetes, hypertension etc. in which nutrition is a risk factor, eliminating vitamin and mineral deficiencies particularly in childhood, promoting breastfeeding etc. as listed below:

- Nutrition Education in Primary Schools was introduced in 81 provinces in 2004 in order to inform the school-age children on adequate and balanced nutrition. The program reached around one million students by 2005 and three million students by 2009. The target of the program is to reach out to all children; and 25% of the total number of 12 million primary school students has been reached so far. Various training materials (books, posters, letters for parents and teachers, book separators, stickers, CDs, questionnaires) have been devised throughout the program. The program still continues.
- With a view to preventing obesity, cooperation is made with the Ministry of National Education to discourage the sale of food constituting high fat, sugar and salt and to encourage the sale of milk, yoghurt drink, yoghurt, fruit-vegetable juice and fruits and vegetables sold by piece.

- Sample healthy menus meeting the age-adjusted energy and nutrient requirements of primary school students were devised for the lunch-box during lunch time in half-day schools and for lunch in full-day schools which serve meals. “Menu Models and Sample Lunch Lists for Full-Day Schools” were developed in order to ensure the quality and standardization of food service in schools serving meals. Menu models were submitted to the Ministry of National Education for enforcement in schools serving meals.
- It was aimed to identify the prevalence of malnutrition, overweight and obesity among children at school-age (aged 6-10). The project reached out to 12,300 students in 26 provinces. Height and weight of these students were measured and information on nutritional status, physical activity levels and school surroundings of the students were collected through questionnaires applied to students and their parents. The implementation phase of the project has been completed and it is planned to put the project results in a report to share them with the public.
- “Nutrition Friendly School” Program was initiated in cooperation with the Ministry of National Education. The program includes the inspection of schools according to the “Friendly Schools Project Evaluation Form” in line with the determined criteria and the award of “Nutrition Friendly School” certificate to schools scoring 90 and above over 100 points.
- Theatre training program has been implemented and the children’s play “Uncle Vitamin Versus the Microbes” has been staged in order to draw the attention of primary school students to food hygiene and encourage healthy nutrition. In this framework, 25,000 students have been reached, 10,000 CDs and 5000 books have been printed and disseminated. It is planned to stage the theatre play across the country in cooperation with the local administrations.
- Painting, poetry, essay and cartoon competitions about nutrition, obesity and physical activity were organized across the country and the winners were awarded. “Competition Album” including the works in the competition was prepared and distributed to all provinces. Moreover, a quiz competition was organized among primary school students and the winning schools were awarded.
- Several activities were organized on the occasion of World Milk Day (May 21st), World School Milk Day (September 27th) with the aim of attracting more attention to healthy nutrition among teachers and students.
- Ministry of Health prepared the “Dietary Guidelines for Turkey” in cooperation with the relevant institutions and organizations and shared it with the health personnel and the cooperating institutions and organizations.
- The Nutrition, Obesity, Physical Activity, and Tobacco Information Series consisting of 85

booklets and serving as a reference book for health personnel was prepared and shared with the health personnel and the cooperating institutions and organizations.

- All the activities, projects and documents may be found on the web page (www.beslenme.saglik.gov.tr) of the Department of Nutrition and Physical Activity under the General Directorate of Primary Health Services affiliated to the Ministry of Health. This web page also contains a part devoted to children named "For Children". This part covers the issues of nutrition and physical activity in a colorful and entertaining way to attract the attention and participation of children. This part also includes information for teachers and parents.

As the case in the rest of the world, the prevalence of obesity is steadily increasing in Turkey. Different studies report a prevalence of 18-35% for obesity in adults. Although no national study has been conducted to demonstrate the prevalence of obesity among children and adolescents, some local and regional studies reveal the necessity to take certain measures to prevent obesity among children.

World Health Organization organized the "European Ministerial Conference on Counteracting Obesity" hosted by our country in Istanbul on November 15-17th, 2006 and the "European Charter on Counteracting Obesity" was signed. The need to prepare a national program and action plan in order to accelerate obesity prevention activities, reach the determined targets, identify new targets

and strategies in line with the requirements and maintain the activities within a certain framework has arisen and thus, "Obesity Prevention and Control Program of Turkey" has been drafted. Circular of the Prime Ministry on "Healthy Nutrition and Active Life Program of Turkey" published in the Official Gazette dated September 29th, 2010 and No. 27714 encompasses the aforementioned program.

"Obesity Prevention and Control Program of Turkey" adopts a wide base and multi-sectoral approach. Therefore during the preparation phase of the program, a workshop attended by all relevant public institutions and organizations, particularly health, sports, education, transportation, finance institutions and municipalities, the representatives of international organizations, academicians from the departments of medicine, nutrition and dietetics, physical therapy and rehabilitation and food engineering of universities, representatives of the food industry from the private sector, consumer's associations and other non-governmental organizations was organized. Moreover, the draft document was opened to public opinion on the web page www.beslenme.saglik.gov.tr and was revised as required.

The aim of the "Obesity Prevention and Control Program of Turkey (2010-2014)" is to effectively counteract this disease, the incidence of which is steadily increasing in our country and which is affecting our children and adolescents; to encourage individuals to gain the habit of adequate and balanced nutrition and regular physical activity by raising the level of knowledge in the society about counteracting obesity; and

thus reduce the prevalence of obesity and diseases associated with obesity (cardiovascular diseases, diabetes, some types of cancer, hypertension, muscular and skeletal system diseases, etc.) in our country. Moreover various public institutions and organizations, universities, private sector, non-governmental organizations etc. implement different programs, projects and training activities to counteract obesity. One of the most significant issues determining the success level is coordination among various activities and to follow a road map. Within the framework of the national program, it is aimed to carry out planned activities according to a certain schedule in a measurable, traceable manner and to ensure coordination

The program consists of four main headings. Headings and sub-headings are listed below:

A. Establishment of Obesity Prevention and Control Program of Turkey and Development of Policy

- A.1. Enabling and Reflecting Into Practice the Political Will and Determination at National and Local Level
- A.2. Financial Arrangements for the Management the Fight against Obesity
- A.3. Determining the Current Situation at the National and Local Level and Supporting the Researches to be conducted

B. Activities for Obesity Prevention

- B.1. Informing and Raising Awareness in the Society about Obesity, Adequate and Balanced Nutrition and Physical Activity

- B.2. Encouraging the Habit of Adequate and Balanced Nutrition and Regular Physical Activity in Schools for Obesity Prevention
- B.3. Activities Targeting Workplaces
- B.4. Ensuring Cooperation with the Food Industry for Obesity Prevention
- B.5. Supporting Adequate and Balanced Nutrition and Regular Physical Activity by News and Commercials in the Media
- B.6. Promoting Physical Activity and Improving Environmental Factors

C. Measures for the Diagnosis and Treatment of Obesity in Health Institutions

D. Monitoring and Evaluation

Some of the activities planned and implemented in the period 2010-2014 in line with the action plan under the aforementioned program are listed below:

- Ensuring coordination and cooperation among public and private institutions and organizations actively working in fields related to obesity prevention (healthy nutrition, promotion of physical activity, etc.),
- Incorporating obesity prevention strategies into the national health strategies and policies,
- Establishing “Advisory and Executive Committee on Obesity Prevention” at central level to increase political determination and

reinforce management; and establishing “Adequate and Balanced Nutrition and Active Life Committee” at provincial level to increase participation and coordination,

- Carrying out the Nutrition and Health Survey of Turkey,
- Updating the “Dietary Guidelines for Turkey” according to risk and age groups and ensuring its extensive use,
- Preparing the “National Physical Activity Guidelines” and ensuring its extensive use,
- Raising awareness across the society (children, pregnant and breastfeeding women, adults, elderly etc.) about obesity and associated health risks,
- Launching “Obesity Prevention Information Hotline” under Ministry of Health Call Center (ALO 184) providing uninterrupted access and correct information for citizens,
- Maintaining the activities aimed at promoting breastfeeding, as an important factor for preventing obesity,
- Ensuring that pregnant and breastfeeding women benefit from weight control and relevant consulting services when they apply to health institutions at regular intervals,
- Devising, regularly implementing and spreading mass campaigns, activities and programs on obesity, healthy nutrition, and physical activity targeting the whole society and special groups (military personnel, teachers, religious officials etc.),
- Increasing the level of knowledge among health correspondents, producers and directors in order for them to convey correct messages to the society about obesity prevention,
- Creating a surveillance system to direct overweight and obese individuals visiting health institutions for any reason to obesity centers and treating and following up them according to clinical guidelines for obesity diagnosis and treatment,
- Informing preschool and school-age children, teachers and parents on obesity by interactive, entertaining and informative teaching techniques,
- Carrying out various campaigns and activities (White Flag Project, Nutrition Friendly School Program, etc.) to encourage healthy nutrition services in school canteens,
- Improving the physical conditions for school-age children to engage in more physical activity and sports,
- Initiating campaigns such as serving school lunch and milk to students within budgetary limits in the schools of regions with low socio-economic level,
- Inspecting nutrition services in school canteens and cafeterias and food sale facilities around schools; and ensuring that healthy menus are served at schools,
- Making healthy menus more common in food serving (dining hall, canteen etc.) at workplaces,

- Increasing the knowledge level of occupational physicians in the public and private sector about obesity, performing obesity screening among employees within the framework of occupational medicine and identifying their nutritional habits and physical activity status,
- Cooperating with the food industry for national health policies and conducting various activities targeting consumers,
- Working towards reducing the excess fat, sugar, and salt content of food (In this framework, the first step is to initiate the “Program on Reduction of Excessive Salt Intake”),
- Ensuring that food labels include an understandable and legible nutrition facts table to inform the consumers,
- Making additional arrangements about nutrition and health declarations,
- Working towards increasing the consumption of fresh fruit and vegetables,
- Revising the current legal arrangements about food commercials and promotion activities targeting children in the media in line with the needs and the new international agreements undersigned by our country,
- Ensuring that correct messages about adequate and balanced nutrition, obesity and physical activity are communicated by the relevant experts via TV, radios and internet,
- Raising awareness about physical activity in the society and encouraging local

administrations to build more sports facilities, recreation areas (walking, running tracks, bicycle paths etc.) and make more urban arrangements for pedestrians in order to increase physical activity in the society.

4.4. Health Promotion Strategies

Kağan Karakaya MD, Levent Göçmen MD

Health promotion activities have been on the agenda across the world since 1970s and they were introduced in our country with the initiation of the Health Transformation Program by the Ministry of Health in 2003.

In this framework, several programs and projects such as the Iron-Like Turkey Program (2004-), Conscious Mother, Healthy Baby Program (2004-), Program on the Prevention of Vitamin D Deficiency and Protection of Skeletal Health in Babies (2005-), Program on Iron Supplementation for Pregnant Women (2005-), establishment of Cancer Early Diagnosis and Screening Centers (KETEM) in all provinces (2008) were initiated and they still continue.

The Ministry of Health established the “Department of Health Promotion” in January 2008 in order to centrally direct the current and future programs, gaining much more importance each day, in a more effective manner. This Department has so far undertaken two major projects. “Smoke-Free Air Zone”, which was initiated in 2008 and is still ongoing, has been implemented in such a way to set a model for the rest of the world. In March 2010, “Touch Water and Soap” campaign was launched in order to raise awareness about hand-

washing in the society. It has become a regional project with the participation of Ministries of Health of Tajikistan, Georgia, Mongolia, Uzbekistan and TRNC. It is planned to further expand the scope of the campaign in the future by enabling the participation of other countries in the region.

National Health Strategic Plan 2010-2014 mainly deals with health promotion and disease prevention.

Moreover, a campaign will be launched in 2011 to promote physical activity and prevent obesity, currently regarded as one of the most important health problems across the world and included in the activity plan for 2011 by the Ministry of Health.

Under the Healthy Cities Project, which aims to increase the physical, psychological and environmental well-being of individuals living and working in cities, the Ministry of Health carries out activities within the scope of health promotion. These activities are aimed at reducing inequalities in all fields related to health and all health-associated urban and environmental fields and fighting against urban poverty.

Friday Khutbah Project, led by the Presidency of Religious Affairs, was initiated and necessary steps were taken and information was provided for the topic of joint health to be addressed in Friday Khutbah.

European Network of Health Promoting Schools Project is undertaken in our country in cooperation with the Ministry of National Education, Ministry

of Health and World Health Organization. Financially and technically supported by WHO, European Council and European Commission, the project was put into practice by the protocol signed between the Ministry of Health and Ministry of National Education on July 17th, 1995 in order to improve the health knowledge of primary school students and teach them how to live in a healthy manner in a healthy environment. The project is implemented in more than 52 countries in Europe; and in Turkey, the secretariat works of the Project are carried out by the Department of Health Promotion under the General Directorate of Primary Health Services of the Ministry of Health.

National Health Strategic Plan 2010-2014 mainly deals with health promotion and disease prevention. At the same time, a separate strategic plan on health promotion, apart from the national plan, is underway.

4.5. Settings

School Health Activities

M. Nezir Kahraman, Halil Polat

“School Health Activities” have been undertaken in order to contribute to raising healthy generations by providing preventive health services to teachers and students, improving the quality of life, giving sanitation and hygiene trainings; and contribute to raising health-conscious individuals taking responsibility for their health by supporting physical and mental examinations. Under the relevant protocols, Ministry of National Education and Ministry of Health are realizing these activities in coordination.

Family Physicians carry out examinations and screenings on school children and submit forms including the examination results and relevant information to both the students and schools. On the other hand, Community Health Centers conduct evaluations on health conditions at schools as well as screenings and mass vaccination campaigns as the case in swine flu epidemic.

The results of the 2nd Global Youth Tobacco Survey of 2009 reveal that 8.4% of the school students (10.2% among boys and 5.3% among girls) are still smoking. Considering that the smoking rate in this age group was 6.9% (9.4% among boys and 3.5% among girls) according to the Global Youth Tobacco Survey of 2003, one can conclude that the smoking rate has increased. 10.2% of the non-smokers (7% in 2003) indicated they were likely to start smoking during the next year. 29.6% of the students aged 13-15 (26.3% in 2003) reported that they smoked at least once.

Obesity was assessed within the scope of several different studies; one study conducted in Istanbul's Şişli Region with high socio-economic level and covering 1821 children aged 12-15 found that 9.9% of the children had BMI 18-25 kg/m² (85-95 percent) and 6.2% of the children had BMI > 30 kg/m² (≥95.percent). Another study evaluated 4260 children aged 6-15 in the Aegean province of Muğla for obesity and found that 7.6% of the girls and 9.1% of the boys were obese. The reasons of obesity in this age group were reported to be watching TV for too long, eating in front of TV, working mothers and eating at least one sweet snack at school. HBSC study evaluated the BMI in our country during 2001-2002 and found that

7% of the girls and 14% of the boys aged 11, 7% of the girls and 13% of the boys aged 13 and 5% of the girls and 14% of the boys aged 15 were overweight or obese. Considering that childhood obesity leads to adulthood obesity and paves the way for many chronic diseases, the importance of counteracting obesity during childhood becomes more pronounced. Moving from this point, several activities are carried out under the scope of school health improvement efforts.

A-Health Screenings

Under the “Cooperation Protocol for School Health Services” (Health Screenings), 3,934,510 primary school students in 32,276 schools were screened by the Ministry of Health teams under the coordination of the Ministry of National Education in the academic year 2007-2008. During the screenings, 173,642 students were found to have health problems and were referred to hospitals for treatment. A total of 4,419,539 students in 39,020 schools were examined in the academic year 2008-2009.

Among the students examined, 1,130,684 were given prescriptions, 52,407 were supplied drugs free of charge, 199,497 were referred to hospitals and 22,445 were referred to counseling and research centers. Health screening results of students for the academic year 2009-2010 will be available by the end of the year. In our country a total of 3679480 students out of 8537137 students in 35420 schools were examined.

Health screening results are evaluated and necessary measures are taken in the case of abnormal results.

B- Studies Related To School Cafeterias, Food Service, Obesity Control, and Physical Activity

- 1- We carry out awareness-raising activities in accordance with the Circular dated 18 April 2007 and No. (2007/33) on the **“Inspection of School Cafeterias and Applicable Rules of Hygiene”** issued by the Ministry of National Education in cooperation with the Ministry of Agriculture and Rural Affairs and the Ministry of Health in order to determine the rules of sanitation and hygiene applicable to the canteens, cafeterias, buffets, tea houses etc. of training institutions; protect the health and strengthen the health consciousness of students; and prevent possible food poisoning, communicable diseases, diseases associated with inadequate and imbalanced nutrition and obesity. Governor’s Offices have been instructed to **discourage** the sale of energy drinks, soda/soft drinks, cola drinks, flavoured drinks and fries and chips constituting high energy but low nutritional value, thus possibly leading to imbalanced nutrition and obesity; and to **encourage** the sale of milk, yoghurt drink, yoghurt, fruit juice, vegetable juice, freshly squeezed fruit and fruits sold by piece granted manufacturing or import permit by the Ministry of Agriculture and Rural Affairs.
- 2- The Ministry of National Education undertakes joint activities with the Ministry of Health, Ministry of Agriculture and Rural Affairs and the National Dairy Council for ensuring **“Access to Nutrition and Safe Food”**.
- 3- Governor’s Offices were instructed under the relevant Circular to prevent the activities of street peddlers around schools and initiative has been taken at the Ministry of Interior level for the municipalities to follow this issue closely.
- 4- Within the framework of the **National Obesity Control Program and National Action Plan 2008-2012, Project on Monitoring the Growth of School-Age Children in Turkey** has been initiated under the coordination of the Ministry of Health and in cooperation with Hacettepe University, Department of Nutrition and Dietetics in order to monitor the growth of school children aged 6-9. Under this project, a scientific study has been conducted by applying anthropometric measurement and questionnaires to a total of 16,500 students continuing 1st, 2nd, 3rd and 4th grades in 140 schools of 26 provinces and applying questionnaires to 16,500 parents and 140 school administrations; and the final report is being prepared.
- 5- 186 provincial trainers have been trained in the following fields: Nutrition of school-age children, food service, obesity, physical activity, minimum and technical hygiene rules for school canteens, food inspection and hygiene in cafeterias and dining halls. These trainers provide trainings to teachers, students and parents across the country to inform them on healthy nutrition, counteracting obesity and physical activity.
- 6- Circular dated February 15th, 2010 and No. 2010/15 issued by the Ministry of National

Education instructed Governor's Offices to meet the nutritional needs of students continuing boarding, day and transportational education in the public and private training institutions of the Ministry, students staying at pensions and dormitories established by local means; make sure that the foods served meet certain requirements (hygiene rules, presentation, duration of storage, adequate warmth etc.) and take measures to avoid undesired events.

- 7- Subjects focusing on healthy life and healthy environment are included in the primary school curricula. Course titled "Health Information" taught at primary schools is being revised according to the circumstances of the day and the subject of **Diabetes and Healthy Nutrition** has been added under a unit in the book.
- 8- A protocol has been signed with the Association for Healthy Society and activities towards establishing healthy nutrition habits and taking measures against obesity are underway.
- 9- As per the protocol signed between the Ministry of National Education and the Ministry of Health, **Nutrition Friendly Schools** Project was launched, under which applying schools are evaluated according to whether they meet the healthy nutrition criteria or not.

C-Diabetes Control Activities

The Ministry of National Education issued the Circular dated 3 January 2000 and No. 2000/1 for diabetic students. Under the Circular in question and in line with the **National Diabetes Prevention and Control Program** of the Ministry of Health,

a protocol was signed with the cooperation of Paediatric Endocrinology and Diabetes Association and the Ministry of National Education on 27 April 2010 and Diabetes Training Programs at Schools have been launched accordingly.

D- White Flag Practice in Training Institutions

White Flag Cooperation Protocol was signed between the Ministry of National Education and the Ministry of Health to reward the primary schools which score 90 or above over 100 according to certain criteria. This practice aims to encourage positive developments in terms of sanitation, hygiene, physical infrastructure and environmental sanitation in primary schools. So far, 5800 schools meeting the criteria were awarded white flags and instructions were given to Governor's Offices under the Circular dated 17 February 2009 and No. 2009/20 to ensure that all schools reach the same level with the white flag awarded schools.

E- Activities to Ensure Personal and General Hygiene

- 1- Activities related to hand hygiene are carried out under the "National Action Plan" coordinated by the Ministry of Health. Once the action plan is put into practice, the Ministry of National Education will fulfil the required tasks. Moreover, subjects related to hand hygiene are incorporated in the curricula of primary education institutions.
- 2- A seminar for provincial trainers has been organized with the participation of vocational course teachers from a hundred

vocational schools of health across the country. Within the framework of school and environmental health activities, the following topics were covered in the seminar: project preparation, logical framework of project preparation, legislation on inspection of school canteens, personal hygiene, electro-magnetic pollution, noise and air pollution, environment-health relationship, waterborne diseases and necessary measures, pesticides, insecticides and chemical threats, cosmetics, make-up, toilet faucets and hygiene in schools, hand washing, carboy and water dispenser use, flu and the importance and ways of flu prevention. Provincial trainers who attended this training continue to transfer their knowledge to the administrators and teachers in their provinces.

- 3- Circular No. 2005/97 instructed the Governor's Offices to provide settings other than the toilet for the students to drink water.
4. Circular on hygiene in shared areas at schools was issued on 17 February 2009 with No. 2009/79 and the implementation is being monitored.

F- Tobacco, Alcohol and Substance Abuse Control Activities

- 1- The Circular No. 2005/90 implementing the **Law No. 4207 on Prevention of the Hazards of Tobacco Products** was notified to the Central and Local organization of the Ministry of National Education; and

the Circular No. 2008/16 pertaining to the implementation of the law in question was notified to the Governor's Offices and the current implementations are being monitored.

- 2- Three (3) posters about the harmful effects of tobacco and tobacco products were selected; 60,000 of each poster, amounting to a total of 180,000 posters were printed and distributed to 81 provincial directorates of national education.
- 3- The Ministry of National Education organized a panel on Tobacco and Youth in the Festival Hall on 31 May 2008 on the occasion of **"World No Tobacco Day"** in cooperation with the World Health Organization.
- 4- Course titled "Health Knowledge" in the primary school curriculum has been revised and the subject **"Hazards of Tobacco"** has been added.
- 5- Active participation is made to the studies related to National Tobacco Control Program and Action Plan.
- 6- Active participation is made to the studies of the National Committee on Smoking and Health.
- 7- In cooperation with the World Health Organization Country Office and with a view to identifying the attitude and behaviours of the youth about tobacco, **"Global Youth Tobacco Survey"** was conducted in 70 schools of 30 provinces through the vocational course teachers of vocational

high schools of health and the results of the survey were published.

- 8- 100 provincial trainers were trained on counteracting substance abuse (Tobacco-Alcohol and Narcotics).

G- Blood Donation And Thalassemia Awareness-Raising Activities

- 1- Within the framework of the “Protocol on Voluntary Blood Donor Recruitment Activities” signed between the Ministry of National Education and Red Crescent Society, two rounds of “Training of Trainers Seminar for Blood Donors” was organized and cost of the activities was incurred by our National Red Crescent Society. A total of 350 voluntary blood donation trainers were educated throughout the trainings. Activities such as training of voluntary blood donors, recruitment of blood donors and other activities are carried out in cooperation with National Red Crescent Society.
- 2- “Thalassemia Training of Trainers Seminar” was organized in cooperation with the Thalassemia Federation in order to improve the knowledge of teachers on the ‘Disease of Thalassemia’, ensure early diagnosis of the disease and raise awareness among teachers, students and parents. 41 teachers selected from 33 provinces with relatively high prevalence of thalassemia participated in this training, the cost of which was incurred by Thalassemia Federation; and subsequently, these teachers informed around 4000 teachers about the disease.

H- First Aid Training Activities

- 1- Under the First Step to First Aid Project in cooperation with TOÇEV Education Foundation, trainings accompanied by theatre education are provided to the students of boarding primary region schools; and at the end of trainings, first aid cabinets are distributed to schools and booklets approved by the Ministry of National Education’s Board of Education are distributed to students.
- 2- Teachers of 100 vocational high schools of health across the country were trained to become provincial trainers and these teachers delivered 18-hour long hands-on first aid training to around 90,000 teachers in a period of two years.
- 3- 92 vocational course teachers from the vocational high schools of health were trained as provincial trainers in Erzurum In-Service Training Institute on 12-16 July 2010.

I- Oral and Dental Health Activities

- 1- In order to contribute to raising a generation conscious about the protection of oral and dental health, the Ministry of National Education signed a cooperation protocol on **"Awareness Raising for Oral and Dental Health"** with Colgate-Palmolive Cleaning Products Industry and Commerce Inc. Within the scope of this Cooperation Protocol, training activities were initiated in 22 provinces in the first year, whereas 14 provinces were added during the second year to reach a sum of 36 provinces. Cartoons approved by the Ministry of National Education are shown and toothbrushes and tooth paste as well as training kits are distributed to students.
- 2- Cooperation protocol on active preventive implementation program was signed between the Ministry and Kırıkkale University to prevent tooth decays in 1st and 2nd grade primary school students. This program aims to contribute to raising a generation suffering less from tooth decays after permanent dentition.
- 3- Vocational course teachers from a total of 93 vocational high schools of health in 81 provinces were provided in-service training to become provincial trainers and participate in training activities across the country.

J- In-Service Trainings

- 1- Under the **Adolescent Health Training of Trainers Seminars**, two-phase training on the subject has been given to 136 formative teachers. These teachers raise awareness among their colleagues in their provinces by subjecting them to a training of 12 hours.
- 2- Under the **First Aid-First Intervention Training of Trainers Seminars**, 100 provincial trainers were trained.
- 3- **School Food Service Training of Trainers Seminar:** 186 provincial trainers were trained on the importance of optimal nutrition and health, food service stages, obesity, physical activity and health, importance of nutrition in school-age children, and ensuring minimum and technical hygiene in canteens.
- 4- **Crime and Violence Prevention Seminar:** Under the violence prevention activities in training institutions, one trainer from all 81 provinces was trained to become provincial trainers and they informed other colleagues in their provinces on the subject.
- 5- **Preventive Health Services Seminar (Tobacco, Alcohol and Substance Abuse)** Through this seminar, it is aimed to raise awareness about the influence of active/passive smoking, economical dimension and environmental impact, risk perception in tobacco control, the importance of risk groups, combat against tobacco and youth, the importance of legal arrangements,

activities of different institutions, the definition of addiction, addictive substances and recognizing addiction in children, the importance of alcohol abuse in children and youngsters and the importance of the family's attitude towards the child using alcohol or addictive substances.

K- Change During Adolescence Project

In line with the main objectives and principles of the Fundamental Law of National Education, **Change During Adolescence Project (ERDEP)** aims to teach students, parents and teachers about the physical, psychological and social changes that youngsters experience during adolescence; ensure that problems encountered during transition from adolescence to young adulthood are overcome in a healthy and happy manner and thus, move towards a more conscious society. Under the **"ERDEP Project"**, trainings have been provided to **7,140,289** students.

L-Other Activities

- 1- Lectures on "Atherosclerosis" were delivered to teachers in 11 provinces in the academic year 2008-2009; and Board of Education approved DVDs for students about the same topic were distributed to 33,768 primary schools.
- 2- HIV/AIDS prevention and training activities are carried out.
- 3- Circular dated 20 October 2009 and No. 2009/79 on Swine Flu came into effect and training activities continued to be organized.

In this context;

- a. Two crisis management centers were established under the Ministry of National Education.
- b. With the purpose of providing information on flu and flu prevention to teachers from all training institutions of the Ministry of National Education, 105 vocational course teachers from vocational high schools of health in 81 provinces were trained on 12-16 October 2009 to become provincial trainers.
- c. Having undergone the afore-mentioned training, provincial trainers, together with the provincial health directorates in their provinces, started providing trainings to groups consisting of 1 teacher from each school. Having attended the training, administrators and teachers informed the teachers in their schools, who subsequently informed the students on the subject matter according to a program.
- d. Brochures, CDs and DVDs to be used as training materials and targeting pre-school, primary school students and adults are produced and distributed by the Ministry of National Education and the Ministry of Health. Moreover, the documents in question are published on the web page of the Ministry of National Education's Department of Health Affairs.
- e. In order not to interrupt education during the school breaks, courses were broadcasted by distant education system on national TV channels (TRT).

4. Protocols about school health were signed with public institutions, universities and non-governmental organizations and put into effect.

Workplace and Personnel Health

Nefise Burcu Ünal

Activities are undertaken by the General Directorate of Primary Healthcare in order to identify the health and safety priorities for personnel; establish health units particularly in those provinces with high density of personnel but lacking a health unit; provide primary health care services, particularly preventive services for personnel health; conduct studies on occupational diseases and work related health risks as well as providing preventive and curative services at the health unit level; amend the legislation on medical examination rooms and ensure that medical examinations in the provinces meet certain standards, rely on a scientific basis and are carried out regularly, soundly and in compliance with the laws.

In this context, relevant legislation was amended accordingly and necessary legal arrangements were made for public health centers to offer basic occupational health services. The Circular on “banning the use of sand for spraying jeans” No. 2009/24 was issued in order to prevent silicosis, which is an occupational disease.

At the national level, the Directorate of Occupational Health and Safety under the Ministry of Labour and Social Security determines policies and monitors their implementation. There are seven Occupational Health and Safety Centers at the periphery and these centers mainly make

measurements (dust, gas, fume, vapour, noise, lightening etc) at workplaces upon request and also give consultancy and training services. By law, all employers with 50 or more employees should have a health unit with a physician and sufficient amount of auxiliary workers. These units should ensure a healthy and safe working atmosphere, determine measures for prevention of risks and implement and monitor these measures. This unit also provides first aid and emergency care and also refers employees to relevant institutions for further care. However, these organizations with 50 or more workers do not comprise the majority of enterprises in Turkey. In 2008, 99.7 % of the enterprises which are named as SMEs had less than 250 employees. Parallel to this, 83.8 % all employees were employed in SMEs and 80.7 of occupational accidents occurred in these enterprises.

Pneumoconiosis is one of the most frequently seen occupational lung diseases in Turkey and is of the leading among the preventable occupational diseases. It is possible to prevent pneumoconiosis by the way of effective protection and prevention methods employed in all steps of occupational health services. Since there is no system for regular and effective monitoring of occupational health and safety in our country, new pneumoconiosis cases are identified even in coal mining enterprises, in which one would expect pneumoconiosis to be under control. In addition, silicosis cases, the number of whom has increased recently, have been identified even in those sectors not known until today (sandblasting of jeans by sand spraying, glass shaping works etc). Due to serious problems related to occupational disease notification system

in Turkey, the number of diagnosed pneumoconiosis cases is underestimated in the records, as is the case with other occupational diseases. When the non-notified pneumoconiosis cases are taken into account, pneumoconiosis becomes a far more important problem for our country.

Therefore, there was a need for an immediate action plan and “National Pneumoconiosis Prevention Action Plan” in compliance with the resolutions of Joint ILO/WHO Committee on Occupational Health was enforced under the leadership of the Ministry of Labour and Social Security on 7 December 2006.

The first round of trainings for A and B reader physicians evaluating chest radiography for pneumoconiosis was organized in 1995, whereas the second round of trainings was organized in English in 2005. A total of 64 physicians, 28 of them being A readers and 36 B readers were granted certificates in these trainings.

Under the goal “Monitoring the performance of readers for the evaluation of chest radiography, organizing and maintaining of certificate and re-certificate training programs” in the last paragraph of Article 10 of National Action Plan for the Prevention of Pneumoconiosis, ILO entitled us to conduct “Certificate Program on ILO International Classification of Radiographs of Pneumoconiosis” in Turkish without changing the program and content. Based on this entitlement, 2 rounds of trainings, participated by 20 participants each, were organized. Third round of training was organized on 10 May 2010 and the number of A and B reader physicians reached 121.

A cooperation protocol was signed between the Ministry of Labour and Social Security and Ministry of Health in order to organize the following activities on occupational health and safety:

- a) Preparing a national policy and action plan for preventive occupational health services, the prevention and early diagnosis of occupational diseases,
- b) Prioritizing preventive medicine in the provision of occupational health services,
- c) Cooperating for İSGÜM (Occupational Health and Safety Center) to be designated as WHO-CC (World Health Organization Collaborating Center),
- d) Undertaking joint project activities,
- e) Assessing the current status and resolving the problems of medical practice at the workplace under the Law on Full-Time Practice and family medicine legislation,
- f) Supporting and facilitating the establishment of joint health and safety unit in the community health centers,
- g) Resolving current problems in the implementations of Social Security Institution regarding medical practice in the workplace and occupational diseases,
- h) Ensuring that statistics on work accidents and occupational diseases are updated and accessible,
- i) Preparing diagnosis guidelines and treatment protocols for occupational diseases,

- i) Increasing the awareness and sensitivity of health workers about occupational health and diseases,
- k) Enabling cooperation and coordination between İSGÜM and Public Health Laboratories,
- l) Eliminating the problems encountered in the process of diagnosing occupational diseases,
- m) Pilot implementation and monitoring of Basic Occupational Health Service Model in selected provinces,
- n) Roll-out of Basic Occupational Health Service Model and integration of occupational health services into primary care.

Project / Cooperation / Protocol Activities of the General Directorate of Occupational Health and Safety (İSGÜM) (August 2007)

Listed below are some of the projects and activities of Ministry of Labour and Social Security's General Directorate of Occupational Health and Safety:

- EU Upgrading Occupational Health and Safety in Turkey Project - ISAG-PHASE-2
- EU Project for the Development of Regional Laboratories of İSGÜM
- EU Project for Improving OHS at the Workplace
- Project for the Establishment of Laboratories for Market Surveillance and Supervision Support on PPEs

- European Network Education and Training in Occupational Health and Safety -ENETOSH Project
- PHARE IV Project for Supporting Turkey's Membership to European Occupational Health and Safety Administration (OSHA)
- Cooperation Agreement on Occupational Health and Safety between BGAG Dresden Academy and İSGGM
- Protocol on Occupational Health and Safety in the Construction Sector
- Cooperation Protocol with National Productivity Center for "Research and Training on Occupational Safety and Health and Ergonomics for Productivity"
- Campaign for Occupational Health and Safety in the Mining Sector
- Training and Promotion Activities for Occupational Health and Safety
- TAIEX Study Visit "Risks and Risk Assessment Methods in Chemical Industry"
- Research Project on the Working Conditions of Workers and Incidence of Silicosis in Sandblasting Workplaces
- Preventive System Method to Reduce Work Accidents in Turkey

Healthy Cities

On 23 June 1998, mayors and senior politicians from cities in Europe, meeting in Athens to attend the International Healthy Cities Conference, which celebrated the first ten years of the European Healthy Cities movement and launching of phase III (1998-2002) of the WHO Healthy Cities project, adopted the Athens Declaration for Healthy Cities. This political Declaration expresses the clear and strong commitment of cities throughout Europe to health and sustainable development. This Declaration highlights the priorities and new challenges for cities to address and work on and identifies ways in which national governments and WHO can support action based on health for all at the local and city levels.

This Declaration calls on national governments within the European Region:

- To recognize the importance of the local dimension of national health policies and acknowledge that cities can make a significant contribution to national strategies for “Health for All” and “Agenda 21”,
- To use, in their national health strategies, the experience and insights of cities in analyzing and responding to local health conditions using inter-sectoral approaches,
- To examine ways in which additional resources could be made available in support of health for all and sustainable development policies,
- To support national networks of healthy cities in their coordinating and capacity-building role,

- To encourage the participation of local government representatives in Member States’ delegations to meetings of WHO’s governing bodies and other relevant international forums,

Welcoming the development of the WHO European Center for Urban Health, we look to the WHO Regional Office for Europe:

- To provide leadership and strategic support in work towards the goals of phase III (1998-2002) of the WHO Healthy Cities Project,
- To promote capacity-building and networking for healthy cities in all Member States of the European Region, especially those that have not been involved so far in the movement, including the newly independent states and Member States in the Balkan region,
- To provide technical support and guidance for better integrated city health planning, evaluation, and monitoring,
- To promote and encourage the development of local action components in all of WHO’s technical areas,
- To promote synergy between sectors and settings, harmonizing skills and experiences of local and national governments,

We are convinced that the combined efforts of local, regional and national government and of WHO will bring about changes that will substantially improve the health and well being of our citizens.

Turkish Healthy Cities Association

Turkish Healthy Cities Association was founded in 2005 under the leadership of Bursa Metropolitan City Municipality to create healthy and livable cities. The Association is the Turkey extension of Healthy Cities Movement active in 6 World Health Organization Regional Offices and 66 countries.

Healthy Cities Association stands as the first and only association focusing on urban health in Turkey, which is a member of the WHO Europe National Networks of Healthy Cities and is guided by WHO Health Cities Project. Within the framework of “Health for All” principle, Healthy Cities Association aims to optimize the urban living space and ensure a high-quality life for every individual in line with the principles of sustainable development. Healthy Cities Association produces services for millions of citizens through 41 member municipalities including Bursa, Istanbul, Izmir, Kocaeli, and Antalya Metropolitan Municipalities. To this end, member municipalities benefit from the transfer of experiences, knowledge, documentation and project experiences under WHO Healthy Cities Phase IV and Phase V on the specific themes of municipality management, health, planning, environment, housing, transportation, education, safety, and healthy cities. The Association continues to broaden its vision through the annual summits hosted by different municipalities and the conferences with international participation.

Within the framework of the overarching themes of WHO Healthy Cities Network Phase V covering the period 2009 – 2013, Health Cities Association organized the “Healthy Cities Panel”

with the participation of distinguished experts from universities on 5 June 2009 in Bursa and informed the member municipalities on the activities required under the new phase. The panel was followed by the 5th Annual Conference titled “Equity and Health in All Policies” co-organized with the 11th General Assembly of Healthy Cities Association. The 5th Annual Conference was participated by around 160 individuals including mayors, academicians, members of the parliament, and project coordinators. It was organized in four main sessions on “Sensitive and Supporting Environments for Children, Elderly and Disadvantaged Groups”, “Roundtable Meeting on Equity and Health in All Policies for Policy Makers”, “Healthy Life” and “Healthy City Planning and Environment”. Experiences were shared by the presentations of academicians and member municipalities. It was decided to organize trainings on the overview of Healthy Cities Project, preparation of profile and urban health development plan, overview of Phase IV main themes, project management and project cycle management. In this context, “Healthy Cities Project Training”, hosted by Aydin Municipality, was organized on 26-27 February 2010 and detailed information on healthy cities project, preparation of profile and urban health development plan and Phase V themes was provided throughout the training.

Each year, Health Cities Association organizes “Best Healthy City Project” competition in order to encourage and motivate member cities to devise and implement Healthy City policies, plans and strategies. This competition was organized for the third time this year under the categories Social Responsibility Projects (Supportive Environments:

disabled, elderly, children, disadvantaged groups), Healthy City Planning and Healthy Life. The projects were evaluated by a jury of academicians, representatives of the TMMOB's (Union of Chambers of Engineers and Architects) Chamber of City Planners and the members of the Advisory Board of the Association; they were exhibited and shared with the other member municipalities in Ürgüp Meeting held on 14-16 May 2010.

The Ürgüp Meeting organized on 14-16 May 2010 under the theme of equality, hosted sessions on "Equality in Health", "Equality in Planning, Urban Services and Management", thus presenting a much broader perspective to the member municipalities on the topic of equality.

Assembly of the Association took a decision during the Mardin Meeting in October 2009 to revise its membership criteria in line with the World Health Organization Phase V (2009-2013) European National Networks of Healthy Cities Membership Charter and the accreditation criteria. A revision was deemed necessary due to the imbalance in the member profile of Healthy Cities Association and higher density of members in the western provinces and districts of Turkey. Furthermore, within the framework of the goal **"Empowering the Healthy Cities Association on both the national and the international platform and increasing the number of member municipalities of Healthy Cities Association to 60 until the end of 2020"** stipulated in **Turkish Healthy Cities Association's 2005-2020 Strategic Plan**, provincial population criteria have been put into force to reach a member profile not only high in number but also adequately qualified. The new criteria limits the total number

of member Provincial and District Municipalities by 1 for provinces with a population of 50,000 and above; 2 members for provinces with a population of 100,000 and above; 3 members for provinces with a population of 500,000 and above; 4 members for provinces with a population of 1 million and above and 5 members for provinces with a population of 2 million and above.

The association started working at the national level in order to encourage the cities to become healthy cities and to be heard. Healthy Cities Association aims to guide all cities in the healthy cities movement. However, municipalities make a commitment to sustain the project and provide all necessary support. Therefore, it is essential to work with cities which will make the necessary commitment to sustain the healthy cities movement and contribute to the movement. Healthy Cities Association is willing to further expand and sustain the healthy cities movement together with the cities dedicated to the movement and showing the maximum effort to create liveable cities. Cities dedicated to the Healthy Cities Project across Turkey will boost the dynamism of the Association and put the idea of liveable cities into practice.

Healthy Cities Project aims to improve the physical, psychological, and environmental well-being of citizens living and working in cities. Under this Project, Healthy Cities Association carries out collaborative activities to alleviate the inequalities in health and in all urban and environmental matters associated with health; and to counteract urban poverty. Needs of individuals, as the inseparable dynamics of the city, vary according to their socioeconomic status, educational

attainment, cultural structure, age, gender and residence area. It is necessary to consider these variable structures whilst producing services and to come up with solutions tailored to their specific needs. A healthy city assigns duties to all sectors of the city and unifies these sectors. It is essential to unite the sectors for all different matters, ensure coordination and maintain this unity with the participation of the public. Local administrations are responsible to ensure such coordination. Local administrations unite under the roof of Healthy Cities Association; enable coordination by gathering all institutions and organizations of the city under the health platforms and carry out joint activities. Healthy Cities Association gives the municipalities the prescription for a healthy city that will improve both the physical and mental health of citizens. Cities co-exist and live with the citizens they shelter. A healthy city is the city where the physical and psychological needs of all citizens from 7 to 70 years old, regardless of their cultural structure and gender and whether they are disabled or not, are met and where all citizens are pleased to be spending their lives. Healthy Cities Association aims to improve the urban structure and urban services for healthy citizens, as the basis of healthy cities, and spread the same level of improvement across the country; and tries to achieve this aim by transferring knowledge and experiences on urban health to local administrations.

4.6. Policies for Specific Groups- Elderly People

Nazan Yardım MD, Ertuğrul Göktaş

Turkey does not have an official “National Council”. However there are many NGOs. One of these NGOs, namely the Turkish Geriatrics Society, applied for membership to AGE Platform Europe and the application is currently under evaluation. Since the year 2004, Turkey is officially represented in the International Association of Gerontology and Geriatrics (IAGG) by the “Turkish Geriatrics Society” (www.turkgeriatri.org, www.iagg.info). Turkish Geriatrics Society is invited to the workshops organized under the European Research Area in Aging (UK Sheffield University EU 7th Framework Program) Projects.

Data from the year 2000 show that the ratio of the population above 65 years to the general population is 5.37%, whereas the ratio is 7% according to the Address Based Population Registration System data of 2009 (TurkStat). Life expectancy at birth is steadily increasing in Turkey. Life expectancy at birth was 70.4 years in 2000 and it prolonged to a total of 73.7 years (71.5 years for men and 76.1 years for women). Evaluating the life expectancy at age 65 for WHO European Region Member Countries for 2004, Switzerland ranks the first by 20.19 years and Turkey ranks the 31st in the same list by 14.26 years. At the national level, health adjusted life expectancy at age 60 (HALE) is 14.4 years, 13.4 years for men and 15.9 years for women. Percentage distribution of Top Ten Diseases Leading to Death for the group aged 60 is as follows: Ischemic heart disease, cerebrovascular diseases, COPD, hypertensive heart disease,

cancer of the trachea, bronchus and the lung, inflammatory heart disease, lower respiratory tract infections, diabetes mellitus, gastric cancer and strokes. Percentage distribution of Top Ten Diseases Leading to Disease Burden (DALY) for the group aged 60 and above according to gender is as follows: Ischemic heart disease, cerebrovascular diseases, COPD, diabetes, hypertensive heart disease, Alzheimer's disease and other dementia, cancer of the trachea, bronchus and the lung, osteoarthritis, adult hearing loss, inflammatory heart disease.

In parallel to the changes across the world, prevention and control oriented elderly health care activities of the Ministry of Health are carried out by the Elderly Health Unit under the Department of Non-Communicable Diseases and Chronic Conditions of the General Directorate of Primary Health Care.

Elderly health is included in the strategic plan (2010-2014) of the Ministry of Health under the following headings.

Under the **Strategic Goal 1**: To protect the society from Health-Related Risks

SO 1.1. Training and promotion activities and efforts to improve elderly health will be carried out in order to raise awareness in the society about elderly health under the heading: To ensure all people get access to health promotion and healthy living programs

Strategic Goal 3 To pursue equity and ensure responsiveness to the needs and expectations based on a human-oriented approach for health care services.

SO 3.1. Based on a human-oriented approach in the provision of health services, to give priority to the people with special needs due to their physical, mental, social or economic conditions.

- To realize activities in the National Action Plan for Healthy Ageing,
- To carry out necessary training, information and promotion activities to give the adequate information, attitude and behaviours on healthy ageing and ensure a comfortable period of ageing,
- To prepare "Elderly Health Diagnosis and Treatment Guide" in order to support the health improvement activities at primary care level.

In addition, specific activities are carried out under the action plans prepared and implemented against chronic diseases which increase in incidence with ageing. Activities are also carried out to alleviate the undesired effects of disability aggravated by ageing and to grant special rights to the elderly citizens. Positive discrimination of citizens with disability is ensured at hospital admission.

The policy document "Situation of Elderly People in Turkey and the National Plan of Action on Ageing" was prepared to identify the relevant aspects, implement and monitor the United

Nations Action Plan, which includes measures important for Turkey as well and which is in the form of a recommendation. Within the scope of preparatory works for the document in question, State Planning Organization organized several workshops and drafted a comprehensive report with the contributions of the public institutions and relevant NGOs.

The commission report on “Increasing of Health and Wellbeing at Old Age” of the afore-mentioned action plan touches upon the current situation and problems and puts forth the objectives and necessary actions under the following topics;

- Lifelong improvement of health and wellbeing,
- Provision of full access to health care and nursing service,
- Elderly people and HIV/AIDS,
- Training of health care providers and health care personnel,
- Mental health care needs of elderly people,
- Elderly people and disability,

Under the heading “training of health care providers and health care personnel”, Elderly Health Diagnosis and Treatment Guide was produced in 22,000 copies and distributed to primary care physicians. Guide for Elderly Health was prepared to be used in public health trainings by the trainers.

Age-friendly Primary Health Care (PHC) Centers Toolkit devised by WHO was translated into Turkish and published.

Within the framework of Ministry of Health’s efforts to improve elderly health, it is planned to carry out the following activities to put the actions under “Increasing of Health and Wellbeing at Old Age” in the afore-mentioned action plan into practice;

- “Preparation of training guides to be used in public trainings in order to develop community-based information programs to provide training on disability, causes of disabilities, life-long prevention, treatment methods and living with disabilities” in the year 2011,
- Organizing “Elderly Friendly PHC” trainings in the year 2011 under “Ensuring universal and equitable access for elderly people to primary care, nursing and rehabilitation services and developing policies for the preparation of public health programs” of the National Plan of Action on Ageing.

The activities undertaken by the provincial health directorates about elderly health are monitored through forms devised for the purpose. The programs pursued by the provincial health directorates are summarized below:

- Home care services,
- Preparation of provincial action plans and delivery of nutrition trainings to improve elderly health in the provinces,
- Diabetes, osteoporosis trainings,
- Provision of mobile health care services,
- Regular examinations by mobile teams,

- Patient transport service,
- Statistical follow-up,
- Pneumococcal vaccination – adult vaccination calendar,
- Diabetic patient follow-up,
- Course on home care,
- Supply of drugs.
- There are geriatric polyclinics in Adıyaman, Ankara, Bursa, Çanakkale, Eskişehir, Gaziantep and İstanbul State hospitals,
- There are geriatric centers in Isparta, Kayseri and Kırıkkale,
- There are geriatric units in the community health centers in Denizli, Isparta, Sivas.

Health and Care Services at Home

Orhan Koç MD, Gültekin Bayraktar, Emine Kurtluk

Urbanization and industrialization has caused significant changes in the family structure; and the traditional large family structure has been replaced by immediate families. Due to the fact that spouses are both working in metropolitan cities and that particularly women, traditionally responsible for the care of the elderly, stepped into professional life, and that they live in apartments designed for immediate families at a long distance or in different cities, it is no longer possible to sustain the traditional system of elderly care.

Therefore the Ministry of Health devised home care services implemented by both the public and the private sector. In this context, the first initiative was to release the regulation on “Provision of Home Care” published in the Official Gazette dated 10 March 2005 and No. 25751. The Regulation enables home care to be provided by private health care institutions and disciplines the services provided by the private sector in this particular field.

Following the Regulation, the Ministry issued on 1 February 2010 the “Directive on Implementing Principles and Procedures of Home Care Services Provided by the Ministry” about the home care services provided by the health care institutions and organizations of MoH.

Within the framework of health transformation program, the said directive aims to provide effective, efficient, friendly and human-centered health care services to needy individuals based on the principles of equality and equity in the comfort of their homes and family environment; and to increase the service quality of our treatment units.

Target Group of Home Care Services

The profile of individuals and diseases for which we aim to provide services under the Directive on Home Care Services is listed below. It is clear from the table our home care units are particularly focused on reaching the elderly citizens above 65 years of age.

Groups of Individuals and Diseases Targeted Under Home Care Services

- Elderly people (65+)
- People with severe disabilities
- Cardiovascular diseases
- Neurological diseases (ALS, CVA, etc)
- Chronic diseases (Diabetes, Hypertension, etc)
- Lung and respiratory disease patients
- Cancer patients
- Orthopaedics and traumatology patients
- Post-op patients
- Patients who need home care after discharge
- Post partum mothers and newborns
- People who want to receive vaccination and
- laboratory test services at their home or workplace
- Other patients who need oxygen treatment
- Terminal patients who need palliative care
- Patients who had accident
- People who need short-term nursing care

The main principle of home care services implemented within the scope of the Directive is to provide the health care services needed by the individuals in an effective, accessible manner and through home visits in line with the concept of social state.

Our home care units provide the examination, investigation, testing, treatment, medical care and rehabilitation services according to the medical condition of the individual in the home setting and family environment.

Home Care Services

- Prescribing drugs confirmed by health report,
- Preparing reports on the use of medical devices and supplies,
- Informing the patient and the patient's family about the possible roles they may assume in home care and about the disease and care process,
- Training on the accurate and proper use of medical devices and equipment related to the disease and requiring individual use at home,
- Providing social and psychological support and counselling services to these individuals and family members at the same time.

Home Care Services Team

Home care services are planned and implemented with a team mentality. The leader of the team is the responsible physician of the home care unit. The team consists of a medical secretary responsible for communication and correspondence, minimum one nurse, one health officer and one driver. Depending on the particular needs of the patient, one physiotherapist, one dietician, and one psychologist/social worker might be incorporated in the team.

The team members wear their own specific uniforms and carry identity cards for recognition.

Organization of Home Care Services

Home care services are provided based on an appointment system. Depending on the condition of the patient, home visits are organized on daily, weekly, or monthly basis. The visit plan including the visit date and time, titles and identity information of the team members is notified to the patients subject to home care and the family members and an appointment is made. One copy of the visit plan is provided to the patient and the family members.

The responsible physician of the team is entitled to change the appointment date and time. Changes are notified to the patient and personnel beforehand.

If necessary, the relevant specialist provides consultation to the patient for his/her disease at home. The individuals receiving home care are referred to the most appropriate health institution or organization when deemed necessary by the responsible physician for compulsory medical reasons.

The patient is transferred by the patient transport vehicle and sufficient number of support personnel is assigned for the transfer. For patients in remote areas, the health directorate sets up mobile health teams when necessary. Within the bounds of possibility, the hospital or health directorate providing home care supplies the patient with functional patient bed, air bed and similar other

fixed medical devices which may assist treatment. These fixtures are debited on the patient or the patient's relative and reserved for their use during home care.

Monitoring Home Care Services

In order to provide Home Care Services in line with the Directive, Homecare Units provides the service at 500 hospitals in 81 provinces. The objective is to take this service to 100.000 citizens in 2011.

Moving from the understanding that we cannot manage the services if we cannot measure them, the Ministry of Health introduced the web-based home care data form on 1 August 2010 with the purpose of monitoring and assessing the provided services and collecting statistical data. Activities are carried out to expand the implementation gradually across the country. 444 38 33 is the hotline used throughout the country for applications.

Rest Homes under Public Institutions and Organizations, Private Rest Homes and Elderly Care Centers

Abdurrahman Çohaz

General Directorate of Social Services and Child Protection Agency: Inpatient care services are provided in rest homes, elderly care and rehabilitation centers and outpatient services are provided in Clinics for the Elderly.

The institutions providing inpatient services for elderly people are the rest homes, elderly care and rehabilitation centers, private rest homes and elderly care centers and rest homes established under public institutions and organizations.

The rest homes and elderly care and rehabilitation centers of the General Directorate provide inpatient care service **against payment** to those elderly people with adequate economic power but in social deprivation; and inpatient care service is provided **without payment** to those elderly people in economic deprivation and presented with the Medal of Independence as per Law No. 1005.

The institution pays an allowance of 69 TL to the elderly people aged 60 – 65 and lodged without payment as per Law No. 2022. SSI pays 288 TL quarterly to elderly people above 65 years of age and lodged at rest homes without payment.

As of the end of December 2010, 7979 elderly people benefit from inpatient care services in 97 rest homes and elderly care and rehabilitation centers with a total capacity of 9260 people. Among these people; 39% are elderly women, 61% are elderly men, 54% are lodged against payment, 46% are lodged without payment, 67% are lodged at rest homes and 33% are lodged at private care centers.

Differences in the individual characteristics of elderly people necessitate the diversification of nursing services to be offered. In this framework, our institution broke new ground and started the pilot implementation of an **“elderly home”** affiliated to the Seyranbağları Rest Home Elderly Care and Rehabilitation Center. The “elderly home” shelters 4 elderly people and provides care in the home environment.

In the nursing houses, the health services for the elderly people are provided by physicians, dentists,

physiotherapists and nurses. The daily health checks of the elderly, their overall examinations, diagnosis and treatments are provided in those houses. They are referred to the health institutions when necessary, and their treatments are made in the nearby health institutions in the lack of physicians.

All health expenses of the elderly people with any salary are covered by them (that is, their social security institution) or the families of the elderly people. All care costs of the elderly people are covered by our institution free of charge and their health costs are covered by the Social Security Institution through our institution.

In order to raise the service standard, the physical conditions of public and private institutions providing elderly care services were improved and they were modernized to become liveable settings for the elderly. Elderly care services are provided by certified officials trained on elderly care and graduate of secondary and higher education institutions specializing in the relevant field. For every fifteen elderly people, four elderly care staff members are assigned and they work in three shifts.

Elderly people aged fifty-five and above, suffering from social and/or economic deprivation and in need of institutional care are cared for and protected in the private rest homes/elderly care centers. Under the scope of the “Regulation on Private Rest Homes and Elderly Care Centers” governing the rest homes and care centers operated by real entities and private legal entities, 154 rest homes owned by associations, foundations,

minorities and real-legal entities provide services with a capacity of 8996 people; whereas 27 rest homes of other ministries and municipalities governed by the “Regulation on Foundation and Operation of Rest Homes Established under the Public Institutions and Organizations” provide services with a capacity of 4485 people.

Day Care Services and Clinics for the Elderly;

So far, Day Care Services for the elderly have been provided by Elderly Solidarity Centers with the purpose of meeting the social and psychological needs of the elderly people who do not require the services of a boarding institution and who live in the home environment; and preventing them from being excluded from the society, regardless of their economic and social status. However, considering the evolving and changing needs of the society in our country, the “**Regulation on Day Care in the Clinics for the Elderly and Home Care (supporting life at home) Services**” was drafted and came into effect upon being published in the Official Gazette dated 07 August 2008 and No. 26960 with the purpose of diversifying the services provided to the elderly, providing social and psychological support services as well as elderly solidarity services and providing day care to the elderly people with Alzheimer’s disease, dementia etc.

Clinics for the Elderly aim to;

- Help the elderly, who are living in the home environment and are mentally and psychologically sound, lead a healthy life by spending their leisure time with social activities, developing social relations and activities,

- Improve the living environment of the elderly, who live in their homes with their families, relatives or alone and have Alzheimer’s disease, dementia etc.; spending leisure time; help them meet social, psychological and health related needs; offer support for matters they have difficulty dealing with and for daily activities; develop social relations by creating activity groups and organizing social activities according to their fields of interest; increase activities and improve the quality of life through solidarity and sharing with their families when necessary,
- Improve the living environment of the elderly people in their homes and support them in daily life activities in cases the household -alone or with support from outside (neighbours, relatives) - cannot afford to care for the elderly, who are mentally and psychologically sound, do not require medical care and do not suffer from disability.

Day care services are currently provided to approximately 1000 elderly people in 5 different elderly care centers.

Activities targeting elderly citizens are supported by local administrations as well. In this framework, other aid in kind (including health and day care, social activities) as well as home care is offered.

The main problem of the institutions providing health and care service is the shortage of health workforce. Taking the increase in the ageing population into consideration, it is important to strengthen local administrations.

4.7. Broad Sectoral Policies with a Health Component

The ninth development plan covering the period of 2007-2013 is the main policy document identifying the transformations that Turkey will be going through with an integrated approach in the economic, social and cultural fields. In this scope, the ninth development plan has been prepared with the vision of **“a Turkey, which grows in stability, shares its income in a more equitable manner, has the power to compete globally, turning into an information society, has completed its harmonization process for EU membership”** and within the framework of long-term strategy (2001-2023). An effective monitoring and evaluation mechanism is included in the plan in order to ensure effectiveness and transparency in the implementation and to set the basis for accountability in the process of implementing the foreseen strategic aims and priorities. The ninth development plan is the basis of national and regional plans and programs, particularly the medium term program and the sectoral and institutional strategy documents, along with the documents such as the pre-accession economic program and strategic framework for harmonization, which are compulsory in the EU membership process. The ninth development plan has been prepared with the contributions of all public institutions and agencies under the coordination of the State Planning Organization by taking the strategy adopted by the Cabinet as the basis. Emphasis was put on participation while preparing the plan. For this purpose, 57 Specific Specialty Commissions (SSC) covering a wide range of areas were established within the scope of the Prime Ministry circular dated 5 July

2005. 2,252 people from the public, private and university sectors participated in the said commissions. While forming the plan strategy and the document, the institutional knowledge was utilized as well as the SSC reports and the results of the consultation meetings held with the specialists, who are forerunners in their fields and the senior managers in the public sector.

One of the several activities under the title of **Activating Health System** is defined as “increasing the quantity, quality and services of the health personnel working in the field of preventive health, meeting necessary infrastructure needs, and raising awareness in public about the protective health lifestyles”. Moreover many measures are included under the titles of **Improving Income Distribution and Social Inclusion and Tackling Poverty**.

The 60th Government Program, which was announced in 7 September 2007, accepts the health services as a “basic human right”, and states that the duty of the social state of law is to take all necessary measures in order to fully implement this right for all the citizens. In this context it is stated that; the health transformation program will continue, family medicine will be rolled out in the country, all people will benefit from health services with the same standard without a discrimination between the rich and poor, the premiums of the poor will be covered by the state, all children below the age of 18 will have health insurance and the “Universal Health Insurance” system will be implemented.

The government action plan prepared on January 10, 2008 covers a total of 145 activities and tasks to be executed by the relevant Ministries. Those

145 activities and tasks included in the Action Plan will be realized within 23 ministries, under the responsibility of 42 public institutions and agencies and in collaboration with all other institutions and sectors. Among the other objectives are to establish a health insurance system that covers all, to increase employment, and to ensure that the disadvantaged groups feel safe. The task of monitoring, evaluation, and coordination of the action plan and submitting regular reports on its outcomes to the Government will be carried out by the Ministry it is linked to and the Deputy Prime Ministry under the coordination of the SPO Undersecretariat. The annual programs cover the measures regarding the activities of the 60th Government Program Action Plan along with the measures required by the policies included in the ninth development plan, EU Acquis Harmonization Program and other national strategy and policy documents. The implementation status of all the policies, measures, and projects included in the annual programs will be subjected to monitoring and evaluation in quarterly periods, in the ends of March, June, September and December in line with the provisions of the Cabinet Decision. In this scope, the actions included in the 60th Government Program Action Plan will be monitored as well.

4.8. European Union Negotiation Process

Elif Bor Ekmekçi MD

In line with the decision taken by the Presidents of the EU Member States at the summit dated 17 December 2004, Turkey has officially started the EU accession negotiations with the Luxembourg Intergovernmental Conference of 3 October 2005. EU Accession Negotiations are evaluated under 35 negotiation chapters. Chapter 28 is the “Customer and Health Protection” and is the only chapter that is directly related to the Ministry of Health. For the said chapter, our country submitted the Negotiation Position Paper to the EU on 31 July 2007. Its reply, the EU Joint Position Paper, was published in 17 December 2007.

The chapter of Customer and Health Protection is subject to a basic distinction between the protection of the customers and protection of health. The health part of the chapter regulates the communicable diseases, tissue and cell, blood and blood components and tobacco as a binding joint legislation and it regulates the topics such as mental health, alcohol, nutrition and physical activity, cancer screening with a recommendation. The health section of the chapter also focuses on topics such as the socioeconomic determinants of health and inequality in health. The progress made by our country in the said area is followed by the subcommittee no.2 on internal market and competition, which is one of the eight subcommittees established with the decision No. 3/2000 of the EU-Turkey Partnership Council and by means of the technical negotiation meetings. In this scope, the 8th meeting of the subcommittee No.2 on internal market and competition, including the “Customer

and Health Protection” chapter was held in 19 January 2010 at the EU General Secretariat.

Within the framework of the said chapter, the first official negotiation meeting with the EU Commission was held in Brussels on 24 September 2008. The second official negotiation meeting was held in Brussels on 6 May 2010. With this respect, the progress made by our country in the field of health and in the technical closing criteria of the chapter was communicated to the EU. In the said meetings, discussions were held on “cancer”, which is one of the non-communicable, chronic diseases. During those discussions, the level of harmonization with the EU Recommendation⁸ in the field of cancer was shared with the EU Commission.

8. National Standards for Cervix and Colorectal Cancer Screening were published on the basis of the relevant EU Recommendation. The training of the personnel working in this field is carried out in 122 KETEMS in 81 provinces in line with the EU standards within the framework of the published standards. National Standards Regarding Colorectal Cancer Screening were published in January 2009 and community-based screening has started.

5. INFRASTRUCTURE AND RESOURCES FOR POLICIES TO TACKLE CHRONIC DISEASES AND RISK FACTORS

5.1. Infrastructure and Human Resources

The Ministry of Health’s National Tobacco Control Committee provides significant contribution to the works to be done. National Cancer Advisory Board is another valuable source that can provide expert opinion on those topics. GARD’s Executive Board for Turkey provides recommendations on the COPD and asthma action plan and the strategic plan applications. At the same time, the EU, World Bank and TUBITAK projects play a significant role in affecting the national actors and works.

The physicians working in the primary care are the family physicians that receive training in the family medicine departments and the practitioners that graduate from the schools of medicine. At the moment, family medicine training is given in twenty-six universities and twenty-five training and research hospitals affiliated to the Ministry of Health. There are 1981 specialist family physicians and 434 assistants. In addition, it is planned that the existing general practitioners will become family physicians through a 2-years training program. It is planned that in the future family medicine specialists will work as physicians in the primary care.

Public health specialists (including the topics of epidemiology, chronic diseases and risk factors, environmental health, school health, occupational health, health promotion and health education) are trained in schools of medicine by the departments of public health. The ones that receive their specialty,

master's degree of PhD from those departments are recruited by the universities, the private sector or the Ministry of Health.

The training curricula of the schools of medicine have hands-on public health lectures in the 1st and 3rd years and there is a public health internship for 1-2 months in the 6th year.

As of December 2009, the total number of physicians in our country is 112.000. Number of physicians per 1.000 people is 1.53 (EU average is 3.22, WHO European Region average is 3.40). It is very important for Turkey to increase staff numbers, particularly physicians and nurses, without compensating from training quality in human resources in health. Turkey ranks at the bottom in the WHO European Region in terms of the number of physicians per hundred thousand.

In terms of the number of practitioners per 100.000 people; EU Average, WHO European Region Average and Turkey are 97, 68, and 44 respectively. The specialist physicians figures are 272 (WHO), 226 (EU) and 80 (Turkey).

School of Public Health, which works as affiliated to the Ministry of Health, carries out several public health works. In addition, public health departments of the universities and the NGOs carry out similar works.

Nevertheless, human power is not sufficient to tackle the public health problems in Turkey. There is lack of human resources particularly in health promotion and prevention of non-communicable diseases. Family medicine and community health

centers have been established under the Health Transformation Program. The family physicians are expected to carry out the diagnosis, treatment, and screening works with respect to chronic diseases and risk factors. Community health centers will carry out the works related to health promotion, public trainings, school health, environmental health and also the work related to the analysis and reporting of the records. On the other hand, considering that the departments for chronic diseases and health promotion have been established in 2008 within the General Directorate of Primary Health Care in the Ministry of Health, the need for intensive workforce becomes even more explicit.

The experienced personnel worked with a professional consultancy firm for the design and implementation of mass communication programs for health that uses modern communication tools.

5.2. Financial Resources

The Ministry of Health and the reimbursement agencies (Social Security Institution and Ministry of Finance) sign a global budget by agreeing on a certain annual amount for the treatment services delivered by all health institutions and agencies affiliated to the Ministry of Health to the people whose treatment costs are covered by the reimbursement agencies. The aim of this implementation is to keep the health expenditures within the limit defined for every year.

This system, which has been continuing for many years in developed countries, has been implemented by the Ministry of Health since 2006. This implementation contributes to the provision of financial discipline and ensures effectiveness and savings in health expenditures. On the other hand, global budgeting enables planning for the future and increases service quality and standard.

NCDs and health promotion programs are financed directly by the Ministry of Health and on a project-basis (WHO, EU, TUBITAK).

5.3. Information and Technological Resources

Ünal Hülür MD

The Ministry of Health launched the BHRSM (Basic Health Statistics Module) in dispersed architectural structure in 1997 in order to collect the health data of the delivered services independently from the service receiver with the purpose of monitoring and managing the health services. This structure was centralized in 2003 and became web-based.

The Ministry of Health initiated the CHRMS (Core Health Resources Management System) project as a pilot in 5 provinces in 21 July 2003 in order to monitor and manage the material and human resources in all institutions and agencies. This project was rolled-out to the whole country in 2004. The CHRMS was used as two modules in 2004, which were HRMS (Human Resources Management System) and ITS (Investment Tracking System). MRMS (Material Resources Management System) was added to the CHRMS in 2006 and 2007; and PHSMS (Private Health Institutions Management System) has been added in 2010.

As a result, it is possible to follow all health staff in the public sector, movable and immovable asset records, and the inventories of the private health institutions via CHRMS as of October 2010.

After the implementation of some components of health service reforms, several actions were taken to improve the health services information systems since 2004. In parallel with the overall changes in the system, both the Ministry of Health and the Social Security Institution designed new information

systems in order to monitor the functioning of the different steps of the health services system and also to improve the financial management of the system.

The Ministry of Health started works for developing the national health information system. At the moment, those works focus on the standardization of health data and main procedures. The Ministry issued a “National Health Data Dictionary”, which will be taken as the basis by all information system procedures. There are works to build an electronic health records database and a decision support system that uses those records. Moreover, there are works aiming at spreading the tele-medicine implementation in the health services system. As of October 2010, a total of 72 hospitals and 3 Family Medicine Units are covered in this system.

In addition, the Ministry launched the family medicine information system in 2006 in order to monitor the Primary Care Health Services via family physicians. The system covers patient-based information such as age, gender, residence address, social insurance status, risk assessment, death information, diagnosis (ICD-10), treatment procedures, follow-up of women between the ages of 15-45, follow-up of pregnant women and follow-up of infants. It is planned to implement positive performance within the scope of ensuring the screening and follow-up of the chronic diseases by the family physicians.

We can group those projects in two main groups as indicated in the following table: meeting the institutional informatics needs of the Ministry of Health, and health informatics (e-Health).

Table 1. Projects executed by the Department of Administrative and Financial Affairs and the Standards Established

Institutional Projects	Health Informatics Standards
Core Health Resources Management System (CHRMS)	National Health Data Dictionary (NHDD)
Uniform Accounting System (UAS)	Minimum Health Data Sets (MHDS)
Ministry of Health Procurement Information System (SBIBS)	Healthcare Coding Reference Server (HCRS)
Medical Device and Supplies Recording System (TCMKS)	Disease Coding and Classification Systems
Green Card Information System (GCIS),	Electronic Health Records (EHR) Database
Green Card Accruals Information System (GCAIS)	HL7 Messaging System
Performance Follow-up System (PFS)	Information Security Policy
Hospital Information Forms (HIFs)	Hospital Information System Procurement Framework Principles
Performance Assessment Forms (PAFs)	Primary Care Information System and Environment Units Procurement Framework Principles
Patient Follow-up System (PFS)	PACS Procurement Framework Principles
Telemedicine	ICD 10
Document Management System	ICPC
Basic Health Statistics Module (BHSM)	
Disaster Recovery Center Installation	
Family Medicine Information System (FMIS)	
Physician Data Bank (PDB)	
Document Management System (DMS)	
Electronic and Mobile Signature	
Health Net	
Pharmaceuticals Tracking System	

As discussed before, the Social Security Institution has started to play a significant role in the health services system as the main reimbursement institution. SSI launched a new information system called MEDULA to be used in the reimbursement procedures. At the moment, all secondary and tertiary care providers that provide service to the Institution are paid only by means of an internet-based information system. While the main purpose of the system is to monitor the reimbursement applications, it also collects data on the health services utilization independently from the reimbursements. MEDULA provides information on topics such as the age, gender, and insurance status, the type of service (inpatient, outpatient), diagnosis (ICD-10), referrals, expenditures, discharge status, and co-payments. When the patient applies to the health service provider, the provider has to use this system to get an identity number in order to verify the insurance status of the patient and to monitor all the procedures related to the patient's visit. The provider is paid after all procedures end and all expenditures are approved by SSI. Right now the system covers only population under the institution and the working civil servants. The Green Card holders are not covered in the system yet. After the implementation of all reforms, the whole population will be covered in the information system within the scope of the Universal Health Insurance.

5.4. Research and Development

Nejla Can Güler MD, Harun Arslan MD, Erol Koç MD

Research and development (R&D) activities are among the important indicators used for measuring the development level of the countries. R&D activities are measured by R&D expenditure and its share within the GNP, manpower working in R&D activities and its ratio to the economically active population, and the results of the R&D activities in terms of patents, scientific publications, Nobel Prize, product and process. Being innovative is one of the most important elements of the competitive economic structure and majority of the innovations derive from the R&D activities producing information and technology.

R&D activities are defined as “the regular, creative efforts that are executed on a systematic basis with the purpose of increasing the scientific and technical knowledge, including the community, culture and human knowledge, and that are made to use this knowledge in new implementations”. The distinctive feature of the R&D activities is that they provide the opportunity to produce new information and items or to produce the existing items with higher efficiency and lower cost.

In the developed countries, the R&D's share within GNP is above 2%, and the R&D personnel per economically active ten thousand people are above 40. In the developing countries those figures are below 1% and 15 respectively. On average 7-10% of overall R&D expenditure is used for health R&D activities.

In Turkey, according to 2009 data, the share of Gross Domestic Research-Development expenditure within GDP is 08.5%. Regarding the GDP Research-Development expenditure; 40.0% is covered by the commercial sector, 12.6% is covered by the public sector and 47.4% is covered by the university sector. In the EU average, the private sector is in the first place, the university sector is in the second place and the public sector is in the third place.

When we look at the breakdown of R&D expenditure by financing source; 41.0 % of the expenditure is covered by the commercial sector, 34.0% by the public sector and 20.3 % by the university resources. The commercial sector has the top share and the public sector has the second share in the EU.

When we look at the full-time equivalent (FTE) R&D personnel per economically active thousand people; university sector has a share of 42.2%, commercial sector 42.8% and the public sector 15.0 %. While the share of the R&D personnel within the total employment is 29% in the EU it is 12.5% in Turkey.

Health issues have risen to the first ranks amongst the rapidly-increasing R&D expenditure in the world. Approximately 11% of the R&D expenditure made in the USA is related to health, and 2/3 of this expenditure is financed by the public sector. The private sector spends primarily on the pharmaceuticals in its R&D activities. The R&D activities in the health sector focus on the health materials, pharmaceuticals and the medical treatment methods for health protection and treatment.

In Turkey, the R&D expenditure constitutes the 10% of total health expenditures. The R&D activities in the health sector are executed by the public sector, the universities and the commercial sector.

In Turkey, the share of the R&D expenditure within the health expenditures in 2009 was 1.98 % in the public sector, 39.1 % in the university sector and 0.58 % in the private sector.

TUBITAK (Scientific and Technological Research Council of Turkey) was established in Turkey in 1963. TUBITAK supports the R&D institutes that carry out “Research-Technology-Development” works, academic and industrial research and development works and the innovations in line with the national priorities defined for executing scientific studies. In addition to its management functions, TUBITAK determines the Science and Technology policies of our country and published books and journals in order to raise public awareness. It supports and encourages the local and foreign academic activities of the scientist by scholarships and awards. It provides funding for the projects of the universities, public institutions and industrial sector and thus tries to increase the competitiveness of the country.

The share of health within the R&D supports provided by TUBITAK is 12.9 % for academic R&D supports and 6.2 % for public R&D supports.

TUBITAK supports the R&D projects by means of different sources. These sources can be grouped under the titles of Industrial R&D Project Supports, Academic R&D Supports, Science and Community Project Supports, EU Framework Programs

Supports, Binary and Multiple Collaborations, and Scholarships.

TUBITAK's Department of Research Support Programs (DRSP) supports the scientists executing R&D activities for generating knowledge and technology, turning their outcomes into service and/or products thus benefitting the community with the "Scientific and Technological Research Projects Supporting Program" in line with the universal developments and the country priorities. In addition, the DRSP supports the R&D projects in the fields of science and technology in order to meet the needs of the public institutions with R&D and to provide solutions to their problems within the scope of "Public Institutions Research and Development Projects Supporting Program".

In this context, various research groups have been established within the DRSP for executing the project supports. One of those research groups is "Health Sciences Research Group (HSRG)".

The Department of Research Support Programs (DRSP) has also established various supporting programs to execute the supports. One of them is "Public Institutions Research and Development Projects Supporting Program (1007)". The aim of this program is to support the projects for meeting the needs of the public institutions with R&D and solving their problems.

Furthermore in Turkey the State Planning Organization (SPO) carries out research activities and monitoring and evaluation works. The aim of the R&D Infrastructures program supported by the SPO is to direct the big-scale research

infrastructures of the universities, the public institutions and agencies, the training of research manpower, and the researches in their working areas.

The firms located within the technology development zones are provided with exemption from the corporate tax and the VAT until the end of 2013; and the researches are exempt from all kinds of taxes. 40% of the R&D expenditures of the firms that are located outside those zones are deducted from their income and corporate tax bases.

As in other countries, the pharmaceuticals industry of the private sector is the main actor of the health services research. Nevertheless, this capacity cannot be fully utilized in Turkey because of the inflexible rules and bureaucracy.

Since there is not a strong relationship established amongst the institutions that perform R&D activities, support such activities and use the knowledge and technologies deriving from those activities, the results of the R&D activities cannot be implemented or the researches made are generally far away from the needs and requests of the industry. R&D and innovation works are particularly important for leaving behind the global economic crisis on 2009 and taking advantage of the new opportunities.

In Turkey, the share of R&D expenditure within GDP was 0.71% in 2007 and it was 0.73% according to 2008 data. The EU-27 average is 1.85 percent. 43.8% of GDP R&D expenditure is made by the universities, 44.2% by the commercial sector and 12.0% by the public sector. The ratio of the R&D expenditure made by the private sector to the total

R&D expenditure was 33.1% in 2005. This ratio increased to 41.3% in 2007. However this is still behind the EU-27 average of 55.4% for 2006. The private sector has the first rank in the EU average, the universities have the second rank and the public sector has the third rank. In our country, the private sector, especially the SMEs, need to increase their R&D capacity and their request for R&D.

During the Plan VIII (2002-2007), various universities established centers of excellence in strategic areas. In addition to that, support has been given to the projects for training scientists since 2002, and support has been given to the multi-partner and multi-disciplinary projects since 2004.

Support will continue to be given to the activities of the technology development zones, technology centers, wall-free technology incubation centers, and university-industry joint research centers.

As of August 2009, we have 36 Technology Development Zones (20 of them are active) and 20 Technology Centers (18 of them are active). As of August 2009, the number of firms working in Technology Development Zones has reached 1189. It is very important to support the programs for developing products and technologies depending on local technology particularly in sectors such as defense, health and energy, where outsider dependency is high, with the purpose of facilitating the effective use of the R&D expenditure and the implementation of the R&D results. In this context, R&D support programs of the public institutions have started to be implemented related to their activity areas since 2005, and those programs are planned to be improved in the upcoming years.

The firms located within the technology development zones are provided with exemption from the corporate tax and the VAT until the end of 2013 and the researches are exempt from all kinds of taxes. 40% of the R&D expenditures of the firms that are located outside those zones are deducted from their income and corporate tax bases.

In 2005, within the scope of the Turkey Research Area Program, which is put into practice by TUBITAK, "Academic and Hands-on R&D Support", "Public R&D Support", "Industry R&D Support", "Defence and Space R&D Support", "Raising Science and Technology Awareness " and "Scientist Training and Improvement" Programs have been initiated.

In our country, the number of full-time equivalent (FTE) researcher staff per economically active 10.000 people was 13.6 in 2002, and this is below the OECD average of 66.6. In addition, 73.1% of the researchers in our country work at universities while 70% of the researchers work in private sector in developed countries. In 2007, R&D personnel constituted the 0.52% of the total manpower and recruitment in Turkey; this ratio is 1.44% for the EU-27 countries. In our country, in 2005, the private sector employed 30.4% of the total R&D personnel in terms of Full-Time Equivalent (FTE); in 2007 this ratio increased to 38.2%. Nevertheless this ratio was 48.8% in EU-27 countries in 2007. The ratio of women, who constitute an important criterion for equality in working life, to total number of researchers in terms of FTE was 34% in Turkey in 2007; and this was above the EU-27 average of 28%. It is important to have local and foreign qualified researchers working in our country in order to be able to develop the researcher manpower in

terms of quality and quantity. In 2006 the ratio of international researchers between the ages of 25-65 working in the EU-27 countries to the total number of researches was around 6%; it is estimated that this ratio is below 0.1% in Turkey.

The private sector has an important role in turning the R&D works into products and in increasing their contribution to the competitiveness. Recently it is seen that the R&D activities of the private sector is in the rise thanks to the incentives provided to the private sector and the increased awareness about the necessity of the R&D and innovation activities for competitiveness.

Although our country has provided full participation to the “Sixth Framework Program” of the EU in the field of science and technology, the feedback received from the projects was quite low when compared to the participation share paid to the program. The most important reasons of this situation are the insufficiency of connection with the EU research network, the lack of R&D infrastructure and the shortage of researchers.

“Turkey Public Health Research Program”, which was prepared by the Ministry of Health and TUBITAK in 2005 and which will be implemented until 2015, is still continuing. The purpose of this program is to identify the needs that can be met by means of R&D works in the field of health and to develop solutions for those needs.

In this scope, the coordination of the R&D works that were initiated by the Ministry of Health in 2005 is carried out by the Department of R&D, which was established under the General Directorate of Health Education in 2009.

The total number of public R&D projects of the Ministry of Health, which were accepted and supported by TUBITAK within the scope of the 1007 Program between the years of 2006-2010, is 11 (2 of them are completed, 9 of them are in progress); their total budget is 50 million 550 thousand 597 TL.

“National Hereditary Bleeding Disorders Information Management and Surveillance System” project, which was carried out with Hemosoft Bilişim ve Egt. Hiz. Limited, and “Research on the Potential Drug Candidate Compounds in the Hereditary Diseases Caused by RNA ‘Splicing’ Errors” project, which was carried out with Hacettepe and METU, were completed successfully. The outputs of those projects have been put into practice by the Ministry of Health.

Furthermore, the Ministry of Health is the implementing and spreading agency in the ongoing projects listed below. The project outputs are transferred into implementation by the Ministry of Health within the framework of the relevant legislation as the projects are finalized.

1. Development of Diagnosis Kits by Using Serological and Molecular Methods in the Diagnosis of Hepatitis B Infection (TUBITAK (MAM) - GATA - Istanbul University - RTA Firm)
2. Building Facilities Generating Electricity, Oxygen and Hydrogen out of PEM Fuel Cells with Solar Energy for the Hospitals and High-Pressure Electrolisor (Niğde University – METU – Hydro-energy Ltd.)

3. Development and Use of Femto-second Fiber Lasers for Nano-surgery (Bilkent University Science Faculty (UNAM) - Ankara University)
4. Development and Application of Infrared Laser Fibers for Medical Applications (Bilkent University UNAM)
5. Development of Quantitative PCR Kit to be Used for the Diagnosis of Francisella (Tularemia), Obtaining Antigen, and Molecular and Epidemiological Sorting of the Strains that are isolated during the project monitoring in our country (Kocaeli University - Refik Saydam Hygiene Center Presidency)
6. Turkey Population and Health Study 2008 (Hacettepe University Population Studies Institute)
7. Development of Electronic Identity Verification System with a Smart Card Basis and Design of Citizenship Card (TUBITAK National Electronic and Cryptology Research Institute)
8. Treatment of the Chronic Ulcers with the *Lucilia Sericata* Larva (Istanbul University Cerrahpaşa School of Medicine)
9. Epidemiology and Molecular Characterization of Crimean-Congo Hemorrhagic Fever Virus, Antigen ELISA Development and Protective Vaccine Works (Firat University Veterinary Faculty - Kafkas University Veterinary Faculty)

As the above-listed studies indicate, there is a lack of studies in the fields of tackling chronic diseases and risk factors and health promotion.

2% of the revolving fund sources of the Ministry of Health are transferred to the center, and minimum 50% of this amount is used for improving health services, promoting qualified and efficient service delivery, meeting the needs of the health institutions and agencies, trainings, R&D activities and supporting primary care institutions. The Ministry of Health performs researches by procuring consultancy service from the universities and the international institutions (CDC; WB, WHO).

The Strategic Plan (2010-2014) of the Ministry of Health includes the strategic aim of “supporting R&D works within the scope of improving health services” and the objective of “strengthening the institutional structure of the R&D Unit of the Ministry of Health and developing personnel capacity”. In this context, works are continuing in the Ministry to develop the R&D works.

The Ministry of Health has a vision that identifies rules and standards for the future, regulates, supervises, and guides; and it is crucial for the Ministry to make the maximum use of the science, technology and especially R&D works in order to be successful while implementing those policies.

The Ministry of Health has raised the bar for services in its working area within the framework of the Health Transformation Program, and it supports its qualified service understanding with the R&D approach and renews it constantly.

5.5. Spreading Information and Communication Technologies

Activities towards the liberalization of the electronic intercommunication sector gained speed with the establishment of the Telecommunication Agency in 2000, and the sector was opened to competition at the beginning of 2004. Telecommunication Agency has almost completed the secondary legislation needed by the market that is becoming free in consistency with the relevant EU regulations. The law on the provision of universal service in the electronic intercommunication sector became effective in 2005.

After the liberalization of the electronic intercommunication sector, new operators were authorized to deliver the long distance telephone services and infrastructure management services, which were executed by the monopoly of Turk Telekom Inc. previously. In addition, authorizations were made for the delivery of cable platform services, and works are carried out regarding the licensing of the new services.

Formerly, in the GSM mobile intercommunication market, the operators carried out their activities on the basis of income sharing with the Turk Telekom Inc. and under a license after 1998. They signed a concession agreement with the Telecommunication Agency in 2002. As a result a rapid increase was obtained in the mobile phone penetration ratios.

The authorization process of the third generation (3G) mobile intercommunication services was completed at the end of April 2009, and the said services started to be delivered by August 2009. The number of land line subscribers, which was

19 millions in 2005, dropped to 17.5 million by the end of 2008. Mobile phone operators started to implement plans that made the calls to other networks including the land lines attractive; as a result of this, mobile phone services has become stronger alternatives to land line services. At the end of this process, the decrease in the number of land line subscribers accelerated. The number of mobile phone subscribers reached 65.8 million at the end of 2008; this figure went down to 63.6 million by June 2009 since some of the second lines were cancelled in the following months because it became possible to transfer the phone numbers and plans that made calls to other networks attractive were put into practice. Right now there are 9 operators active in the mobile phone market.

The works that were executed under the coordination of Radio and Television Supreme Council for transfer to digital broadcasting have been completed. In this scope, the necessary legal and technical infrastructure studies are executed under the coordination of the Ministry of Transport.

With the initiation of the e-transformation Turkey Project, the utilization of information and technology in the delivery of public services has gradually increased. Significant improvements took place in the awareness and service demands of the citizens and businesses regarding those technologies. Those improvements have increased the demand for internet access and consequently the broadband infrastructure investments in a great deal. The number of broadband subscribers has increased to 6.5 million by the end of 2009.

Table 2. Basic Indicators for the Information and Communication Technologies

Basic Indicators	2007	2008	2009
Land line switchboard capacity (thousand lines)	21772	22921	23000
Number of land line subscribers (thousand people)	18201	17502	16700
Land line subscriber intensity (%)	24,9	24,5	23,4
Number of mobile telephone subscribers (thousand people)	61975	65824	62000
Mobil telephone subscriber intensity (%)	84,9	92,1	87
Number of broadband subscribers (thousand people)	4404	5986	6500
Broadband subscriber intensity (%)	6	8,4	9
Internet user intensity (%) (on the basis of population between the ages of 16-74)	26,7	35,8	38,1
Number of cable TV subscribers (thousand people)	1141	1145	1150
ITT Market size (billion USA dollars)	21,7	23,8	21,8
- Telecommunication	17	16,7	15
- Information technologies	4,7	7,1	6,8

BTK, TURKSTAT, IDC (International Data Corporation)

6. FORCES FACILITATING OR OBSTRUCTING DISEASE PREVENTION AND HEALTH PROMOTION

The aim is to ensure that the institutional position of the basic healthcare services gains a structure that will have authority and control over other service levels.

The driving force of the novelties to be undertaken for this is the improvement of status of the individuals forming the society in general and the improvement of status of the patients and the health professionals in particular. The ongoing program takes the basic health services as the basis in the delivery of health services. Moving from this perspective, a multidimensional program is carried out by realizing numerous actions and projects in the field of basic health services.

While new arrangements were made, the existing process was not neglected and improvement works were undertaken extensively for those as well.

The budget of the preventive and basic healthcare services was 928 million TL in 2002; it reached 3 billion 779 million TL in 2009. **(The budget allocated for the preventive and basic healthcare services in 2010 is 4 billion 136 million TL.)** It increased by 4 times in 7 years with nominal values. With 2009 prices (in real terms) the source allocated for preventive and basic healthcare services increased by two times when compared to 2002. The budget allocated for 2011 is 6 billion 242 million TL.

In addition to the Action Plan, the Ministry of Health has prepared specific action plans for the CVD,

Diabetes and Chronic airway diseases, mental health and cancers. While the control programs for mental health and cancer, which are chronic diseases, are older in Turkey, the preparation of the said programs and the strategic plan that is consistent with the Ministerial action plan is new. However Turkey has made progress compared to many European countries. Turkey follows the implementations recommended by the WHO closely. Evidence-based programs have been prepared based on the results of the burden of disease study conducted in 2004 and by evaluating the health outputs obtained in communicable diseases and mother and child health. However it is necessary to perform the impact assessments of the actions plans and the ongoing program implementation. The vertical structure can cause conflicts in some studies. Monitoring of the hospital follow-up and treatment of chronic diseases or assessment of the studies by the Ministry of Health are not at the desired level.

NGOs have been working actively for many years in Turkey regarding the main NCDs and their risk factors. The best NCD specialists are among their members. The Ministry of Health values and uses the knowledge of the NGOs in the preparation and implementation of the health policies that are included in the strategic plan and the actions plans. Significant achievements have been made especially in the field of smoking. The positive impact of the legal ban on indoor smoking and the successful implementation of the law on morbidity and mortality will probably be seen in the data of the upcoming years.

Since the family medicine system is new, it is estimated that its contribution to the implementation of the national NCD plans will take time to reach the desired level.

Turkey has many national programs for the NCDs but they are all parallel to each other and they are far away from having an extensive coordination strategy.

The government provides guidance for local implementation by means of national strategies however the provinces are expected to develop their own local health activities according to those general strategies. The concept of local health authority authorization transfer is implemented and it makes it possible to find solutions suitable for the local needs. The provincial level organization for chronic diseases and risk factors is just taking place.

Lack of manpower is one of the main problems both at the Ministerial and provincial levels. In 2008, the number of actively working physicians per ten thousand people was 14,3 and the number of nurses was 13. They were 31,8 and 73,1 for the EU countries. They were 27 and 86 for the high income countries of the WHO. Health personnel country average falls behind the EU and WHO countries' averages, and the lack of nurses is more evident. In 2008, the number of graduated nurses per hundred thousand people was 6.1 in our country; it was 28,6 for the EU countries. Since the nurses can work in the public health and clinical services, increasing the number of nurse will increase quality and decrease costs in health services in the long run. In addition, the physician/

nurse ratio is 1.3 and it is crucial to increase nurse quota to reduce this ratio.

On the other hand, the NGOs carry out many researches simultaneously and this causes overlaps and confusions.

In fact, the number of beds per 100 thousand people is 285 in Turkey. This figure seems adequate within the framework of the new trends in the world. However, it is necessary to carry on with the investments, which will turn the existing beds into qualified beds and establish the modern structure accompanying those.

The SWOTs of the health system are as follows:

Strengths:

1. It has a long-standing institutional structure, wide knowledge and experience coming from the past,
2. Positive image in the public; and there is confidence and trust in the administration,
3. Health Transformation Program continues as a successful health policy,
4. Social security reform has been made,
5. Some central authorities were transferred to the periphery,
6. Existence of the revolving fund resources that are used for the direct health services along with the general budget resources,
7. Performance-based supplementary payment for the staff,

8. Ability to collaborate with all public/private institutions and agencies and the national and international institutions,
 9. Willingness towards restructuring, strategic planning, performance and quality management,
 10. Increasing the level of technological facilities in health services,
 11. Strengthening the information and communication infrastructure and being able to reach technological innovations,
 12. Works and procedures regarding health are carried out in the electronic environment.
 13. Bureaucracy and paperwork is decreasing,
 14. Widespread service network and the ability to deploy rapid reaction against disasters,
 15. The share of health expenditure within GDP is increasing
5. Workload of the ministerial center is heavy,
 6. There are insufficiencies in terms of the effective collaborations with the non-Ministerial institutions and agencies,
 7. Professional organizations, local administrations and NGOs do not provide sufficient contribution to basic health policies,
 8. Rapid changes in population movements and urbanization,
 9. There is resistance against novelties and change at times,
 10. failure to benefit from the staff members that completed their training, master's degree or PHD,
 11. Failure to recruit Career Health Specialists (health management, health economics, labour economics, public administration, management, economics, accounting etc.),
 12. Slow bureaucracy in the works and procedures of the personnel and problems in adaptation to the use new technologies,

Weaknesses:

1. The number of health staff cannot meet the health service demand and the institutional need; the physicians work part-time,
2. The organizational law is old and it does not fully meet the existing needs,
3. Existence of out-of-date, inconsistent, complex and insufficient legislation
4. Scattered settlement of the central organization units and insufficiencies of the service buildings in terms of quality and capacity,

Opportunities:

1. Economic and political stability.
2. Steps taken in the EU process,
3. Increased interest in the concept of strategic management,
4. Improvements in public administration,
5. International collaboration and supportive policies of the stakeholders in the health sector,

6. Increase in the sources that can be allocated for health services with the increased national income,
7. “Universal Health Insurance System” implementation,
8. Improvement of basic health indicators as a result of the works made in line with Turkey’s Target 21 Policy (WHO 21 Targets for the 21st century),
9. Increase in the accurate use of health services as a result of increased health awareness in society,
10. Our country has a young population,
11. Increase quality of employment in the field of health,
12. Globalization and technological developments,
13. Developing information technology and rapid access to information sources,
14. Developments in the medical technology have positive impact on the health service delivery,
15. Development potential of the health tourism,
16. Increased use of renewable energy resources,

Threats:

1. Increased burden of health service as a result of increased life expectancy at birth and increase in the elderly population,
2. Health sector is open to exploitation and populist policies,
3. Unexpected changes in the existing diseases and the risks of the newly identified or unforeseen diseases have negative impact on health service delivery,
4. Epidemics can spread fast with the increased population mobility,
5. Global and/or regional economic crises,
6. Regional wars and political instabilities,
7. Health threats that can derive from neighbouring and near countries,
8. Increase in health problems caused by globalization and global warming,
9. Nuclear, chemical and biological activities threatening the environmental health and human health.

7. LESSONS FROM THE TURKISH EXPERIENCE

The Turkish approach to NCD policy development is consistent with WHO decisions and recommendations. There are various practices such as the program for preventing chronic respiratory diseases and smoking (GARD Turkey), and those are well-known in the international arena.

The most widespread legal arrangement including the ban of indoor smoking has been realized in Turkey as the 3rd country in Europe. When the process between 12 December 2007 when the tackling action plan was launched and 19 July 2009 when the ban was put into practice is considered, it is seen that accurate and proper steps have been taken in a very short period of time. The Prime Minister Recep Tayyip Erdoğan's personal contributions and determined attitude has played a significant role in this. The community support is around 90% in the works conducted. This situation is an indication of the fact that the Turkish public prefers change in tobacco use regulation law and being healthy.

According to the results of the Life Satisfaction Survey by conducted TURKSTAT, the satisfaction from the quality of health services increased from 39% in 2003 to 65% in 2009. It is seen that the citizens have a positive view of the effects of the improvements that have been made.

7.1. The Policy Environment

In Turkey, various health policies are prepared to tackle the non-communicable diseases and to promote health, and those policies are completed by strategic plans and action plans. The actions in several plans reflect the policies for settings such as schools and workplaces, which is proper for separate policies for specific groups.

Turkey has experienced a rapid growth between the years of 2002-2007 and the same political idea has the power since 2002. This situation has been an important factor in the uninterrupted implementation of the programs that were initiated and in having implementation. However, important discussions took place in the parliament and with the professional associations such as the Turkish Medical Association. The most evident examples of such are the opposition's attempt to cancel the ban on smoking in public places in the parliament and the objections to the health system regulations that have been made.

Some strategic plans have been initiated by the Ministry of Health in the works for developing NCD policies. Some studies have been legalized in the Parliament and also prepared as Prime Ministry circulars. The aim of the Ministry of Health 2010-2014 Strategic Plan and the other specific NCD strategic plans is to help the formation of a countrywide policy.

7.2. From Awareness Building to Policy Action

That fact that significant progress have been made in tackling non-communicable disease in Turkey and the results of the 2004 burden of disease study have played an important role in raising awareness in terms of chronic diseases (milestone in tackling chronic diseases). After the Tobacco Control Framework Agreement was signed the works for tobacco control have gained momentum in our country. The signing of the Istanbul charter for the prevention of obesity has accelerated the works towards the establishment of the Department of Chronic Diseases. Significant changes might be expected in the near future because the rooted change in the health system is not complete yet and the interventions included in the actions plans are not being implemented yet.

7.3. Sustaining Policy Implementation, Monitoring, and Revision

Comprehensive and reliable health information is provided by some national studies. The Ministry of Health collects data, carries out various researches and published its findings regularly.

Turkey has taken action for membership in the CINDI program.

The integration to health-net, for which change efforts are still continuing, is complete by 98% for the Ministry of Health hospitals as of this year, around 40-60% for the private and university hospitals. The integration will be completed in 2011. Information will be received on NCD and risk factors. In addition, health system performance assessment covers indicators for chronic diseases as well. With the help of a field survey to be conducted by the family physicians within the family medicine system, it will be possible to follow the same people regularly and to measure the health effects of the intervention programs.

7.4. Key Conclusions

- If a country aims at improving its health systems, the first thing to do is to sustain the support of the political authority in that country. The financial and social aspects should also be taken into account. It should also be known that many groups will stand in the way of reform. It is essential to have a Prime Minister, a President, a cabinet, and an assembly majority that stands by you, supports you and encourages you. Another aspect of the issue, which is as important as this, is that the health professionals believe and work with humanitarianism.
- Turkey implements the works foreseen by the WHO. In this scope, Turkey has prepared its strategic plans and has put some of them into practice. Tobacco control, prevention of chronic respiratory diseases, cancer control programs, obesity, diabetes and cardiovascular diseases control programme are at the stage of implementation.
- It is important to assess the impacts of the intervention undertaken and to do the monitoring and evaluation of the control program.
- Organization at the ministerial level and provincial level is not enough yet. The works for restructuring the organization of the Ministry of Health have not been completed yet.
- Analysis of the database for the chronic diseases has not been completed yet.
- Transition to family medicine system and the restructuring of the Community Health Centers within the scope of the Health Transformation Program cause delays in launching some programs.
- Communication campaigns are implemented successfully for the health promotion works. When progress is made in terms of health practices in all policies and increasing education, employment and income levels, which are the social determinants of health, important contributions will be sustained for the process of creating positive behavioural changes for the risk factors, which will reduce the development of chronic diseases.
- As in some other countries, in Turkey the integration of the chronic diseases is controversial and it is difficult to make the top-down or bottom-up definition.
- There is an umbrella strategy, which can be considered rather as an eclectic framework of the existing activities than as a centrally management of the strategic process at the Ministerial level.
- The decision making system is centralized only in theory; process and financing mechanisms are provided through interactions between different actors. This situation creates a fragmented structure and inequalities in the development of various “subject”-based policies.

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