

# CHRONIC DISEASES – A WORLDWIDE AND EUROPEAN PUBLIC HEALTH ISSUE

CARMEN DANIELA DOMNARIU<sup>1</sup>

“Lucian Blaga” University of Sibiu

**Keywords:** chronic disease, cardiovascular diseases, cancer, chronic respiratory diseases, diabetes mellitus.

**Cuvinte cheie:** boli cronice, boli cardiovasculare, cancerul, bolile respiratorii cronice, diabetul zaharat

**Abstract:** Chronic diseases are diseases of long duration and generally of slow progression. The main chronic diseases (noncommunicable) are the cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. The epidemiological data are alarming, both at global and European level, which led the World Health Organization to develop a series of strategies for prevention and control of these diseases.

**Rezumat:** Bolile cronice sunt caracterizate printr-o perioadă lungă a bolii și evoluție, de obicei, lentă. Principale boli cronice (netransmisibile) sunt bolile cardiovasculare, cancerule, bolile respiratorii cronice și diabetul zaharat. Datele epidemiologice sunt îngrijorătoare atât la nivel mondial cât și european, fapt ce a condus Organizația Mondială a Sănătății să elaboreze o serie de strategii privind prevenirea și controlul acestor maladii.

## INTRODUCTION

Chronic diseases are diseases of long duration and generally of slow progression. Chronic diseases, such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes, are by far the leading cause of mortality in the world, representing 63% of all deaths. Out of the 36 million people who died from chronic disease in 2008, nine million were under 60 and ninety per cent of these premature deaths occurred in low- and middle-income countries.[1].

## EPIDEMIOLOGY OF MAI CHRONIC DISEASES AT INTERNATIONAL AND EUROPEAN LEVEL

The four main types of non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancer, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.[2].

Cardiovascular diseases are the number one cause of death at global level. It is estimated that in 2008, 30% of the total of global deaths is due to cardiovascular diseases, representing 17.3 million of deaths. Out of these, it has been estimated that 7.3 million were due to coronary heart disease and 6.2 million were due to stroke. The low- and middle-income countries are disproportional affected: over 80% of cardiovascular diseases deaths take place in low- and middle-income countries and occur almost equally in men and women. By 2030, almost 23.6 million of people will die from cardiovascular diseases, mainly from coronary heart diseases and strokes. These are projected to remain the single leading cause of death.[3]

In the figures bellow are illustrated the standardized rates of mortality through cardiovascular diseases, at a global level, in men (figure 1) but also in women (figure 2).[4] At a global level it is observed a greater susceptibility in the women in some of the African countries and in the men in South

America .

Figure no. 1 The world's map illustrating the global distribution of the standardized mortality rate, after age, in men, 2008[4]

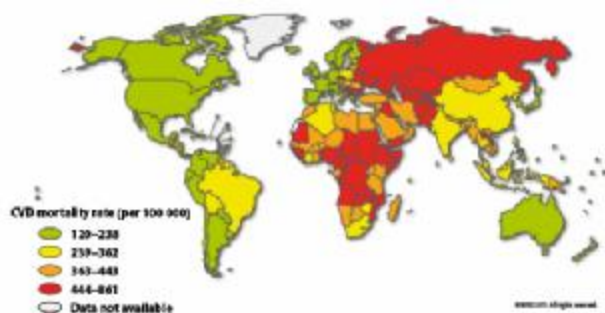
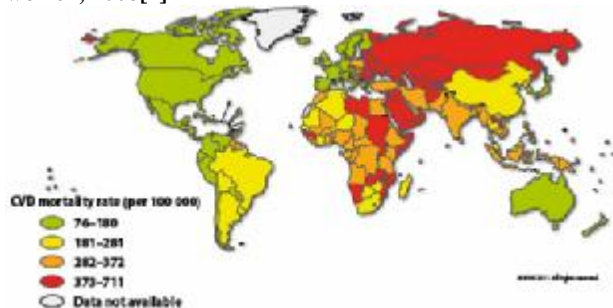


Figure no 2 The world's map illustrating the global distribution of the standardized mortality rate, after age, in women, 2008[4]



Cancer is a leading cause of death worldwide, accounting for 7.6 million deaths (around 13% of all deaths) in 2008. The main types of cancer are: lung cancer (accounting for

<sup>1</sup>Corresponding Author: Carmen Domnariu, Regional Center of Public Health Sibiu, 21, Luptei street, Sibiu, 550330, Romania, e-mail: cdomnariu@yahoo.com, tel +40-(269) 21.28.12

Article received on 09.05.2011 and accepted for publication on 11.07. 2011

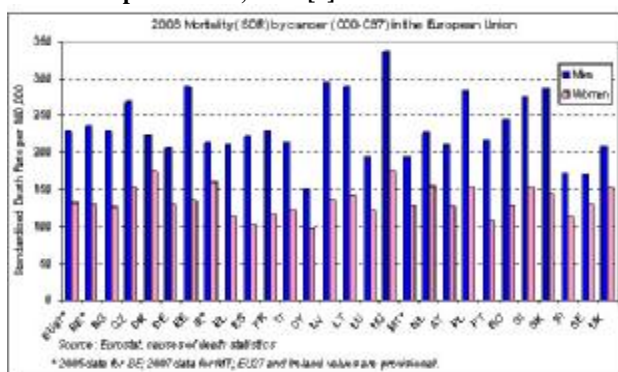
ACTA MEDICA TRANSILVANICA September 2011; 2(3)255-256

1,4 million of deaths), stomach cancer (740 000 deaths), hepatic (700 000 deaths), colorectal (610 000 deaths), breast cancer (460 000 deaths). Almost 70% of the total of deaths from cancer were registered in low and middle-income countries. Forecasts for 2030 show that the number of deaths due to cancer, worldwide and at European level is increasing, reaching over 11 million.

In Europe, the situation is alarming as well. Cancer affects around 3,2 million Europeans each year, the most common forms of the disease being lung, colorectal and breast cancer [5]. Due to the ageing of the population in Europe, cancer incidence cases are expected to increase [5] thus constituting a major public health issue for Europe to tackle. Amongst many important efforts in the public health fields are the European Cancer Programme and the European Code Against Cancer[6,7], carriers of developments in the reduction of cancer risk and recommendations on cancer screening[8].

Almost 30% of deaths due to cancer are caused by five major risks components: increased body mass index (BMI), reduced consumption of fruits and vegetables, lack of physical activity, alcohol consumption and smoking.

**Figure no. 3. The standardized rates of mortality through cancer, in men and women, registered in the member states of the European Union, 2008 [9]**



Out of the chronic respiratory diseases, chronic obstructive bronchopneumonia (COPD) is the pulmonary disease that endangers life, is more than the “smoker’s cough”. It is estimated that 64 million people had COPD at international level in 2004.[10] Over 3 million died from COPD in 2005, representing 5% of the total of deaths at global level in the same year. Almost 90% of the deaths from COPD were registered in the low- and middle-income countries. The main cause of COPD is the active and passive smoking. The disease affects almost equally men and women. COPD is not curable, but treatment may slow down the evolution of the disease. The number of deaths from COPD is expected to increase with more than 30% in the next 10 years, without interventions of reducing the risks, especially smoking exposure.[11]

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Hyperglycaemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time, it leads to serious damage to many of the body’s systems, especially the nerves and blood vessels.

Over the world, 366 million of people have diabetes. In 2004, a percentage estimated of 3,4 million people died as a result of the consequences of the raised level of blood sugar. More than 80% of the deaths caused by diabetes were registered in the low- and middle-income developing countries. World Health Organization foresees that the number of deaths from diabetes will double between 2005 and 2030. Healthy food,

regular physical activity, maintaining a normal body mass index and avoiding smoking, may prevent or delay the onset of the diabetes type 2.[12].

Taking into account the aspects of morbidity and mortality, the World Health Organization issued an Action Plan for a global strategy for preventing and controlling the noncommunicable diseases [13], with the following six objectives:

1. To raise the priority accorded to noncommunicable disease in development work at global and national levels, and to integrate prevention and control of such diseases into policies across all government departments;
2. To establish and strengthen national policies and plans for the prevention and control of noncommunicable diseases;
3. To promote interventions to reduce the main shared modifiable risk factors for noncommunicable diseases: tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol;
4. To promote research for the prevention and control of noncommunicable diseases;
5. To promote partnerships for the prevention and control of noncommunicable diseases;
6. To monitor noncommunicable diseases and their determinants and evaluate progress at the national, regional and global levels.

REFERENCES

1. [http://www.who.int/topics/chronic\\_diseases/en/](http://www.who.int/topics/chronic_diseases/en/)
2. [http://www.who.int/features/factfiles/noncommunicable\\_diseases/en/index.html](http://www.who.int/features/factfiles/noncommunicable_diseases/en/index.html)
3. <http://www.who.int/mediacentre/factsheets/fs317/en/index.html>
4. World Health Organization, Mendis S, Puska P, Norrving B, editors, Global Atlas on Cardiovascular Disease Prevention and Control, Geneva, 2011
5. Ferlay J, Autier P, Boniol M, et al. Estimates of the cancer incidence and mortality in Europe in 2006. *Ann Oncol* 18: 581–92. 2007
6. Boyle P, Veronesi U, Tubiana M, et al. European School of Oncology Advisory report to the European Commission for the "Europe Against Cancer Programme" European Code Against Cancer. *Eur J Cancer* 31A(9):1395-405. 1995
7. Boyle P, Autier P, Bartelink H, et al. European Code Against Cancer and scientific justification: third version (2003). *Ann Oncol* 14(7):973-1005. 2003
8. European Council (2003): Council recommendation of 2December 2003 on cancer screening. [http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l\\_327/l\\_32720031216en00340038.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l_327/l_32720031216en00340038.pdf)
9. Ferlay J, Shin HR, Bray F, Forman D, Mathers C and Parkin DM. GLOBOCAN 2008, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 10 [Internet].
10. WHO, The Global Burden of Disease: 2004 update, published in 2008.
11. <http://www.who.int/mediacentre/factsheets/fs315/en/index.html>
12. <http://www.who.int/mediacentre/factsheets/fs312/en/index.html>
13. World Health Organization, 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases