ESTIMATING BURDEN OF DISEASE THROUGH INDICATORS RELATED TO LIFE EXPECTANCY IN THE EUROPEAN UNION

INTRODUCTION

Population aging is a challenge for society in general, because it must respond in terms of cultural, organizational and economic matters, to meet changes and needs raised in the population subgroups. The system should provide health care, including long-term, to a number of people who have varying degrees of disability inherent in old age, must face a greater burden of disease in a population that is aging.

Efforts to develop indicators to measure the burden of disease in a population have a long history, a growing interest can be noticed especially in the last two decades. Measurements of population health that combines, in a single indicator, information related mortality with those related to non-fatal conditions are called summative measurements and were classified into two broad categories: related to life expectancy (eg. life expectancy without disability) and health-related losses (eg. disability adjusted life years - DALYs). Both classes use time (lived with a specific health condition or for the second category, time lost through premature death) as a common parameter for measuring the impact of mortality and non-fatal conditions.

EU decided to include a set of indicators within the European Community Health Indicators (ECHI) to provide synthetic measure of disability, chronic morbidity and perceived health, comparable between Member States and also, over time. Therefore, were introduced 3 questions relating to these conditions in the questionnaire used in the survey on income and living conditions (EU-SILC), which takes place annually in all EU countries. In this way, it aims to improve comparability of indicators across countries. In addition, life expectancy without long term activity limitation was selected in 2004 to be one of the structural indicators to be examined each year as "healthy life years" (HLY).

Compared to DALY (disability adjusted by years of life - Disability Adjusted Life Years), HLY offers a positive assessment of time spent in different stages of health through the options life expectancy in good perceived health, life expectancy without chronic morbidity or life expectancy without activity limitation (depending on the answers to one of the three mentioned questions). In contrast, using years of life lost, DALY provides a negative assessment.

AIM OF THE STUDY

The purpose of this study is to evaluate, by comparison between Romania and EU countries, the burden of disease expressed by indicators related to life expectancy.

THE METHODOLOGY OF THE STUDY

The study is descriptive and for burden of disease estimating disease were used data provided by the database of the European Health & Life expectancy Information System - EHLEIS (3).

In order to estimate healthy expectancies we used data from Eurostat reports of EU countries: population by age and sex, the number of deaths by age and sex, the results for Romania and EU countries obtained in surveys on revenue and living conditions (EU-SILC) conducted during 2005-2009 (for Romania, which made survey questionnaire alignment since its integration, period is 2007-2009) as answers to questions MEHM components - Minimum European Health Module (for the perception of their health status, activity limitation and the presence / absence of morbidity).

To estimate HLY, the indicator included by EU as structural indicator, we used the indicators of mortality table, calculated using the Eurostat method, thus obtaining the number of years lived by generation at age x, the number of years lived by generation after age x and life expectancy at each age (2).

Number of years lived by generation without activity limitation at a certain age is obtained by applying, for each age, the proportion of people without disabilities out of all people (the proportion of people who do not accuse any activity limitation), obtained from the mentioned above surveys, to the number of years lived by generation at that age. Then, will be calculated the number of years
lived by generation without disability after the age x, then life expectancy at age x without disability and healthy life years (1).

Also, the other similar prevalence results obtained during the survey can be applied: the proportion of people with a perception of their own health as good, the proportion of people without morbidity, etc..

In this study, were analyzed by comparison, life expectancies at age 65 in EU countries for 2008, life expectancies at age 65 without activity limitation (HLY at age 65), life expectancies at age 65 with moderate limitation of activity and the same indicator with severe limitation of activity for the same year.

**RESULTS**

In Romania, life expectancy at age 65 have been increasing over time, according to EHLEIS (3), with 1.7 years for women and 1 year in men in 1998-2008 and is approximately 3.5 years less than the same indicator in the European Union.

Life expectancy at age 65 is significantly higher on average in women than in men in the European Union. Except Belgium, Italy, Netherlands, Portugal and Spain, life expectancy at age 65 without activity limitation is higher in women than in men, but the differences are not significant. Women hope to live over 65 years, significantly more than men hope, but with moderate and severe limitation of activity (Figure1).

Life expectancy at 65 years without activity limitation remains, in Romania, under the European average in all years for which data were available, both for women and men.

In Table 1 we can observe that the share of life expectancy at 65 years without activity limitation in total life expectancy at 65 is higher in Romania than the average of EU member states, share life expectancy at 65 years with moderate limitation or severe being smaller, this difference may have been due, both for women and men, the difference in perception of limiting activity recorded during the surveys mentioned above.

Highest life expectancy at age 65 is found in France, both in women (23 years) and males (18.5 years) and lowest in Latvia in men (13 years) and in Bulgaria in women (16.7 years). In terms of this indicator, for men, Romania ranks 21 in the ranking of EU member states and for women, are the second from the bottom of list. Former socialist countries occupy last places, both for men and women (Figure 2 and 3).

Comparison between countries became possible when the measurement was done using harmonized instruments to collect prevalence data. The question as how the data is collected remains because estimate disease prevalence may be different if the interview is done face to face, by telephone or questionnaire is mailed). Systematic errors may occur, also, depending on the inclusion or non-inclusion in studies of institutionalized persons.

**CONCLUSIONS**

Data analysis shows that life expectancy at age 65 without long term activity limitation (HLY) for Romania is lower than the average of EU countries, both for women and men. Share HLY in life expectancy at 65 years is higher in Romania than the average EU countries, but the share is less than EU for the other two components.

Comparing life expectancy at age 65 between EU countries is noted that Romania is the placed within...
Adoption of HLY as structural indicator, harmonization of instruments for disability prevalence among EU countries, creating a unit for life expectancies analysis, show increasing interest for analyzing the quality of life lived, not just the number of years that a person hopes to live after a certain age. Increasing the number of healthy life years became one of the main objectives of European health policy, increasing faster than the increase in life expectancy will assess over time the success of the measures in the health sector but also economic and social measures, with impact on health individuals and on reducing healthcare spending.

References