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Trends in Avoidable Mortality in Lithuania During 2001–2008 and Their Impact on Life Expectancy

Vilius Grabauskas[1], Aldona Gaižauskienė[2], Skirmantė Sauliūnė[2], Rasa Mišeikytė[3]
[1]*Department of Preventive Medicine, Medical Academy, Lithuanian University of Health Sciences,*
[2]*Department of Health Management, Medical Academy, Lithuanian University of Health Sciences,*
[3]*Institute of Hygiene, Lithuania*

Key words: *avoidable mortality; life expectancy; trends; Lithuania.*

Summary. *The process of the restructuring of health care system in Lithuania demonstrates the need to continue the monitoring of changes in avoidable mortality.*

Objective. To assess the level of avoidable mortality as well as its changes over time in Lithuania during 2001–2008 and to define the impact of avoidable mortality on life expectancy.

Material and Methods. The mortality data were taken from the Lithuanian Department of Statistics. Twelve avoidable causes of deaths (treatable and preventable) were analyzed. Mortality trends were assessed by computing the average annual percent change (AAPC). The shortening of average life expectancy was computed from survival tables.

Results. During the period 2001–2008, the avoidable mortality was increasing more significantly (AAPC 3.0%, P<0.05) than the overall mortality (AAPC 1.7%, P<0.05) in the population aged 5–64 years. The increasing trend was mainly determined by mortality from preventable diseases (AAPC 4.6%, P<0.05). The avoidable causes of death reduced the life expectancy by 1.77 years (preventable by 1.12 and treatable by 0.63 years). Diversity in trends in mortality of different avoidable causes was disclosed. A declining trend in mortality caused by chronic rheumatic heart disease and lung cancer was observed for males (AAPC –22.6% and –2.1%, respectively; P<0.05). However, the mortality caused by liver cirrhosis was increasing for both genders (AAPC 16.1% for males and 17.6% for females, P<0.01) and that caused by tuberculosis – only for females (AAPC 7.8%, P<0.05).

Conclusions. An increasing trend in avoidable mortality was observed. Deaths caused by the diseases that could have been prevented had the greatest impact on the increasing mortality and decreasing life expectancy.

Introduction

Significant changes of national mortality indicators over time in different populations dictate the necessity to search for scientifically proved causes of the observed processes. In the case of Lithuania, all-cause mortality with ups and downs within a certain range before the 1990s had sharply increased after the collapse of the Soviet system reaching the peak in 1994. From the international literature, this phenomenon is known as the "transitional mortality crisis" (1). Although there is no hard scientific evidence that explains the observed mortality trends, nevertheless, there is a generally accepted view that gross political, social, and economic changes that occurred during that time were the major contributors to the sharp worsening of health situation in post-Soviet populations. Stabilization of political, social, and economic situation, at least in Lithuania, in addition to the investments into the health sector might be an indirect reflection of a significant improvement of national health indicators (2). Unfortunately, this improvement was halted in the year 2000, and again an increasing trend in mortality was observed until 2008 (3).

The search for arguments for possible explanation of such diverse processes requires careful consideration and adequate investment into research. One of the approaches that in broad terms might be useful to start critical thinking regarding health policy implementation could be the assessment of trends in avoidable mortality. The concept of avoidable mortality has been proposed by Rutstein with colleagues (4), which further was elaborated by Holland to measure the quality of health care (5). Avoidable deaths are those that occur due to absence or lack of preventive measures and those that occur due

Correspondence to A. Gaižauskienė, Department of Health Management, Medical Academy, Lithuanian University of Health Sciences, Mickevičiaus 9, 44307 Kaunas, Lithuania
E-mail: aldona.gaizauskiene@gmail.com

Adresas susirašinėti: A. Gaižauskienė, LSMU MA Sveikatos vadybos katedra, Mickevičiaus 9, 44307 Kaunas
El. paštas: aldona.gaizauskiene@gmail.com

to improper diagnosis or inadequate treatment. Application of contemporary knowledge in health sciences and its use in daily practice demonstrate that many deaths could be prevented, avoided, or at least their number could be reduced. In other words, the level of avoidable mortality could be considered as a measure of health care quality (5). At present, it is generally accepted to assign the indicators of avoidable mortality into two groups: those that reflect the efficiency of health care (deaths caused by diseases that are treatable) and those that reflect the effectiveness of health policy (preventable deaths, i.e., deaths caused by diseases that could be controlled by preventive measures) (6).

In previous studies, the issue of avoidable mortality in Lithuania has been analyzed and assessed for the periods 1970–1990 and 1991–2001 (7–9). This analysis based on the list of diseases recommended by the European Commission experts headed by Holland (6) showed a sensitivity of avoidable mortality indicators to the changes of health care system infrastructure and provision of health care services meaning that this type of indicators must be an integral part of public health monitoring. The process of restructuring the health care system in Lithuania within the last decade demonstrates the need to continue the monitoring and evaluation of changes in avoidable mortality at the population level.

The aim of this study was to analyze the level of avoidable mortality, to assess its changes within the period 2001–2008, and to demonstrate its impact on the life expectancy of Lithuanian population.

Materials and Methods

A computerized database of causes of death from the Lithuanian Department of Statistics for 2001–2008 was used for this study. Twelve causes of death as recommended by the European Commission Working Group experts headed by Holland (6) were used for analysis: the first group comprised deaths caused by diseases that could have been treated and the second – deaths that could have been avoided by preventive measures (Table 1). Maternal deaths and deaths during perinatal period were excluded. The causes of death were coded using the 10th revision of the International Classification of Diseases and Health Problems.

The analysis performed on avoidable mortality covered the Lithuanian population aged 5–64 years for the period 2001–2008. Keeping in mind the impact of population aging on mortality changes, the mortality indicators were computed using a direct standardization by age (European population standard). The row of age-standardized mortality changes for 2001–2008 for each cause of death was expressed by the linear regression (y=a+bx). The Student's criterion was used to assess the significance of changes. To compare the speed of mortality changes for different causes of death, the average annual percent change (AAPC) was computed, which presented an average mortality change in percent. In order to control bias that occurs due to annual variations resulted by relatively small numbers of death in some nosologic groups, the AAPC was computed not from real standardized mortality indicators for 2001 and 2008, but from linear regression values using the following equation:

$$AAPC = (({}^{m}2008 / {}^{m}2001)^{1/7} - 1) \times 100,$$

where $^{m}2001$ and $^{m}2008$ indicate standardized mortality values based on linear regression. Average life expectancy (ALE) at birth and ALE shortening due to avoidable causes of death were computed for each year from annual survival tables. The same methodology was used for computing the average ALE and

Table 1. Avoidable Mortality, Selected Causes for Selected Age Group (EC Working Group Recommendations)

Avoidable Cause of Death	Age Group	International Classification of Diseases (ICD–10) Codes
Treatable causes		
Tuberculosis, including late effects of tuberculosis	5–64	A15–A19, B90
Malignant neoplasms of cervix uteri	15–64	C53
Chronic rheumatic heart disease	5–44	I05– I09
All respiratory diseases	1–14	J00– J99
Asthma	5–44	J45– J46
Appendicitis	5–64	K35–K38
Abdominal hernia	5–64	K40–K46
Cholelithiasis and cholecystitis	5–64	K80– K81
Hypertensive and cerebrovascular diseases	35–64	I10– I15, I60–I66
Preventable causes		
Malignant neoplasms of trachea, bronchus and lung	5–64	C33– C34
Cirrhosis of liver	15–64	K70, K74.3–K74.6
Motor vehicle accidents	5–64	V02–V04, V09, V12–V14, V19–V79, V80.3–V80.5, V80.9, V81.0–V81.1, V82–V89

shortening of ALE due to avoidable diseases from the combined survival table for 2001–2008.

Results

The data taken from the WHO European "Health for All" database (10) present the trends of all-cause mortality in the Lithuanian population between 1980 and 2008 in comparison with the EU, 2 other Baltic States, and the Commonwealth of Independent States (CIS) (Fig.). The presented analysis of trends in all-cause mortality demonstrates several important issues. Firstly, contrary to steady declining mortality rates in the EU populations, the Baltic and CIS populations experienced a dramatic increase in age-standardized mortality rates (SMRs) after 1990s, peaking in 1994, and then a significant decline until 2000, at least in the Baltic States. However, while the SMRs in Latvia and especially in Lithuania leveled off since 2000, in Estonia mortality rates continued to decline. Secondly, mortality rates in Lithuania for a long time being the lowest in the Baltic context (even in a health crisis situation) have lost this position after 2004. There must be some important reasons for this transformation. Finally, although with obvious differences in the level of mortality rates, the trend changes in the Baltic and CIS populations followed similar patterns still remaining considerably higher in the CIS populations after 2004. Moreover, significant differences in mortality rates remain comparing the Baltic and EU populations.

Assessing the changes in mortality trends by analyzing the patterns of avoidable mortality might provide some explanation for the effects of national health policy implementation. In Lithuania, 112 117 deaths were registered in the population aged 5–64 years during the study period. The proportion of deaths of 12 avoidable causes under study accounted for 22.9% in this age group, i.e., almost one-fourth of all deaths. Among them, deaths the causes of which could have been avoided by treatment made up 40% and deaths that could have been avoided by effective prevention measures made up 60%.

During the analyzed period, the all-cause SMR in the population aged 5–64 years (Table 2) was significantly increasing (AAPC 1.7%, $P<0.05$), as was the case for female population (AAPC 1.6%, $P<0.01$). The avoidable mortality was increasing more substantially than the overall mortality (AAPC 3.0%, $P<0.05$). The most significant increase was observed for avoidable mortality in the female population (AAPC 4.0%, $P<0.05$). An increase in avoidable mortality caused by preventable diseases was observed for both genders and a considerable increase was recorded for females (AAPC 4.6% for both genders, $P<0.05$, and 9.4% for females, $P<0.01$). A trend in the increasing avoidable mortality that could have been treated was not statistically significant.

The observed negative changes in avoidable mortality were reflected in the values of ALE. Due to premature deaths before the age of 65, the overall ALE within 2001–2008 was shortened by 8.8 years. The impact of deaths due to avoidable causes was less significant – the ALE was shortened by 1.77 years. The shortening of ALE by avoidable deaths for males was 2.18 years. Although this shortening for females was only 1.12 years, its annual change reached 3.8% ($P<0.05$). The impact of avoidable deaths caused by treatable and preventable diseases on ALE was considerably different. The ALE within 2001–2008 was shortened by 0.63 year by deaths caused by treatable diseases, and this impact practi-

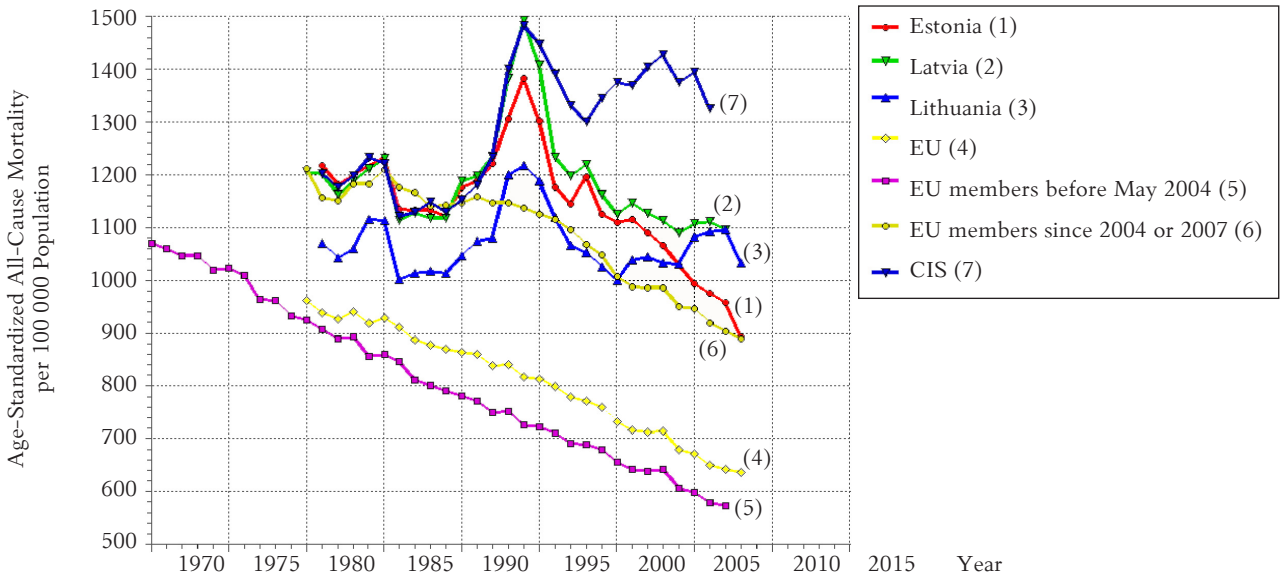

Fig. Trends in age-standardized all-cause mortality in the Baltic, European Union, and CIS populations
Source: WHO/Europe, European HFA Database, January 2010.

Table 2. Changes in Avoidable Mortality in Lithuanian Population Aged 5–64 From 2001 to 2008 and Their Impact on Average Life Expectancy

Cause of Death	Gender	Total No. of Deaths in 2001–2008	Standardized Mortality Rate per 100 000 Population in 2001–2008	Average Annual Percent Change (%)	Shortening of Life Expectancy in 2001–2008	
					Years	Average Annual Percent Change (%)
All causes	Males	81975	834.4	1.7	11.85	0.8
	Females	30202	258.8	1.6**	4.88	1.2*
	Total	112117	522.2	1.7*	8.80	1.0
Avoidable causes of death	Males	18213	185.3	2.6	2.18	1.6
	Females	7572	64.9	4.0*	1.12	3.8*
	Total	25785	119.8	3.0*	1.77	2.4
All treatable causes of death	Males	6223	65.0	1.3	0.64	0.5
	Females	4084	34.6	–0.2	0.56	–0.4
	Total	10307	48.2	0.7	0.63	0.2
All preventable causes of death	Males	11990	120.4	3.3	1.49	2.0
	Females	3488	30.1	9.4**	0.55	8.4*
	Total	15478	71.6	4.6*	1.12	3.6*

*$P<0.05$; **$P<0.01$.

cally remained unchanged during the entire period of observation. At the same time, the deaths caused by preventable diseases shortened ALE as much as twice (1.12 years), and their impact on the shortening of ALE remained significant over the entire period under study (AAPC 3.6%, $P<0.05$). Gender-related analysis demonstrated that although male ALE was shortened for 1.5 years due to preventable diseases, the annual change of that shortening was not significant. In contrast, although ALE shortening for females was only 0.5 year, the annual change of that shortening was statistically significant (AAPC 8.4%, $P<0.01$).

The avoidable mortality by individual disease categories during the period under study was different (Tables 3 and 4). In the group of deaths caused

Table 3. Mortality by Diseases That Could Have Been Treated in Lithuanian Population From 2001 to 2008 and Their Impact on Life Expectancy

Treatable Cause of Death	Gender	Total No. of Deaths in 2001–2008	Standardized Mortality Rate per 100 000 Population in 2001–2008	Average Annual Percent Change (%)	Shortening of Life Expectancy in 2001–2008	
					Years	Average Annual Percent Change, %
Tuberculosis	Males	1784	17.8	0.5	0.20	0.4
	Females	346	3.0	7.8*	0.05	8.4*
	Total	2130	9.8	1.8	0.14	1.8
Malignant neoplasms of the cervix uterus	Females	1103	11.5	–2.7	0.16	–3.1*
Chronic rheumatic heart diseases	Males	30	0.4	–22.6*	0.004	–25.2*
	Females	18	0.2	–10.9	0.003	–9.1
	Total	48	0.3	–17.7	0.004	–17.6
Respiratory diseases	Males	28	1.3	–5.1	0.01	–5.4
	Females	17	0,9	7.9	0.009	6.6
	Total	45	1.1	0.0	0.01	–0.4
Asthma	Males	13	0.2	3.4	0.002	–1.8
	Females	5	0.1	23.0	0.001	33.9
	Total	18	0.1	2.5	0.002	4.9
Appendicitis	Males	10	0.1	–25.0	0.001	
	Females	10	0.1	2.1	0.002	–6.6
	Total	20	0.1	–9.6	0.001	–17.8*
Abdominal hernia	Males	22	0.2	–4.3	0.002	–5.4
	Females	29	0.2	1.4	0.004	–0.3
	Total	51	0.2	–0.8	0.003	–2.8
Cholelithiasis and cholecystitis	Males	28	0.3	1.0	0.00	2.1
	Females	17	0.1	–15.3	0.00	15.2
	Total	45	0.2	–4.7	0.00	–4.0
Hypertensive and cerebrovascular diseases	Males	4319	95.5	1.8	0.41	1.0
	Females	2549	44.8	–0.1	0.32	–0.4
	Total	6868	67.2	1.1	0.39	0.6

*$P<0.05$.

Table 4. Mortality Caused by Diseases that Could Have Been Prevented in the Lithuania Population From 2001 to 2008 and Their Impact on Life Expectancy

Preventable Cause of Death	Gender	Total No. of Deaths in 2001–2008	Standardized Mortality Rate per 100 000 Population in 2001–2008	Average Annual Percent Change (%)	Shortening of Life Expectancy in 2001–2008	
					Years	Annual Average Percent Change (%)
Malignant neoplasms of the trachea, bronchus, and lung	Males	3729	40.5	–2.1*	0.35	–3.6*
	Females	485	4.2	2.3	0.06	1.8
	Total	4214	20.1	–1.7*	0.23	–2.6*
Cirrhosis of liver	Males	4141	50.3	16.1**	0.47	15.3*
	Females	1954	20.3	17.6**	0.27	17.8*
	Total	6095	34.2	16.6**	0.40	16.2*
Motor vehicle accidents	Males	4120	38.2	–2.5	0.65	–3.0
	Females	1049	9.1	0.8	0.22	0.9
	Total	5169	23.2	–1.8	0.47	–2.0

*$P<0.05$; **$P<0.01$.

by treatable diseases, only 2 of them showed significant changes in mortality. These were deaths caused by tuberculosis in females and chronic rheumatic heart disease in males. Tuberculosis-caused mortality in females was increasing by 7.8%, on the average, per year ($P<0.05$). Since the absolute number of females who died due to tuberculosis was relatively small (346 females died due to tuberculosis in 2001–2008), the shortening of ALE due to this cause of death was small, i.e., only 0.05 year. Again, in absolute numbers, only 30 males died due to chronic rheumatic heart disease, but an annual decrease in avoidable mortality was significant (AAPC –22.6%, $P<0.05$).

The highest avoidable mortality that could have been controlled by implementing effective preventive measures was related to deaths caused by liver cirrhosis. Due to this cause, the SMR per 100 000 for males increased from 32.4 in 2001 to 78.9 in 2007 and for females from 14.1 to 33.8. In the year 2008, this indicator for both genders leveled off. This meant that during the entire period under study, the AAPC due to liver cirrhosis was systematically increasing: 16.1% for males and even 17.6% for females. Consequently, during 2001–2008, this cause of death shortened ALE by 0.47 for males and by 0.27 years for females. A sharp increase in mortality led to a considerable annual shortening of ALE: 15.3% for males and 17.8% for females, on the average.

Malignant neoplasms of the trachea, bronchus, and lung were the next pathology where statistically significant changes were observed during 2001–2008. Male mortality from this pathology showed a downward trend (AAPC –2.1%, $P<0.05$). The large proportion of males in this age group (88.4%) resulted in the decreasing overall mortality caused by this pathology (AAPC –1.7%).

Mortality caused by motor vehicle accidents showed also a trend of decline within the period under study, however, not reaching statistical significance.

Discussion

Advantages and Shortcomings of the Study Method. The concept of avoidable mortality is in principle based on scientific evidence and expert consensus that allows judging how much the number of deaths in a population might be significantly reduced in a given period taking into account the conditions in which the health system is functioning. However, the scope and quality of health care provision are changing over time. The list of diseases that could be effectively treated in various age groups is also changing. All these conditions have a serious impact on the proportion of deaths that could be avoided within the structure of overall mortality. On the other hand, the interpretation and practical use of avoidable mortality concept are also changing. The group of researchers headed by Rutstein, having the objective to raise community's interest in searching the answers to the questions why their members died or became disabled, proposed the list containing 90 ill-health conditions (4). The improvement of health care quality was the major task of the analysis performed. This concept was further developed by other investigators backing it up by quantified indicators. Studying territorial avoidable mortality changes in England and Wales, Charlton et al. selected 14 disease entities from the Rutstein's list, which had a direct link with functioning of primary and inpatient care (11). Poikolainen and Escola studied 22 conditions; 5 of them were related to perinatal deaths in Finland. Analyzing the differences in avoidable mortality in 25 countries, the authors in their later research selected 70 avoidable and 20 "partially avoidable" disease entities, meaning that the concept of avoidable mortality again was enlarged. The European Commission Working Group headed by Holland proposed the list of 14 diseases being selected on the basis of intervention effectiveness and existing health care structures (5, 6). In principle, the largest proportion of studies in the subsequent period was based on the recom-

mendations of this Working Group. Westerling was among the first ones who adopted the concept of preventable and treatable avoidable mortality at the national level in Sweden and proposed to define the acceptable marginal levels of avoidable mortality for each country (12). The debate is ongoing at present regarding the proposal to expand the list of avoidable deaths. The increasing number of interventions such as coronary angiography, thrombolytic therapy, and coronary bypass surgery in medical practice has a considerable impact on the survival of patients with ischemic heart disease, and the combination of surgical, chemotherapy, and radiotherapy for the treatment of malignant neoplasms considerably changes disease outcomes. Researchers suggest adding diabetes, alcohol intoxication, and suicides to the list of avoidable mortality, thus increasing the number of avoidable external causes of death (13, 14). After having performed the literature review on amenable mortality as an indicator of health care quality in 2008, Kamarudeen states that there is no consensus what exactly constitutes avoidable mortality, thereby making the concept in itself imprecise (15). However, the researchers continue the studies on avoidable mortality (16–20). Keeping in mind the abovementioned comments and even increasing trends of some cause-specific mortality in Lithuania, the application of avoidable mortality method should be considered more detailed in future research in our country.

Computing the impact of avoidable deaths on ALE is another important methodological aspect to mention. The shortening of ALE in this study was assessed by eliminating avoidable deaths in the target age group under assumption that those subjects would not die from other causes in the study period. For methodological precision, it would be desirable to carry out more detailed analysis that includes the clustering of diseases. However, the chances that other causes might lead to death within the study period for subjects younger than 65 years in practice are not too big since multiple pathology at this age is unlikely to be frequent. Therefore, it is justified enough to assume that this could not significantly influence the mortality caused by avoidable deaths. On the other hand, due recognition should be given to the simplicity and quantitative assessment of the results by the methodology used, which is its obvious advantage.

Comparison of Changes in Avoidable Mortality for 2001–2008 With the Previous Investigations. As mentioned earlier, the analysis of avoidable mortality is internationally applied for indirect assessment of the effectiveness of health care at the population level. By reviewing results of avoidable mortality analysis in different periods, it is reasonable to compare the trends of these indicators in those periods. Comparing 2001–2008 data with the previous decade, a negative trend was observed: while the proportion of avoidable deaths in the population under 65 in 1990–2001 was 20.6% (9), it increased up to 22.9% in 2001–2008. Since within the last period the rate of increase of avoidable mortality was higher than that of overall mortality, it is likely that the proportion of avoidable mortality in the structure of overall mortality will not decrease. This means that it is unlikely to expect positive changes in the functioning of health system in the nearest future to occur at the population level as measured by this group of indicators.

The data of previous investigation period demonstrated two important directions in mortality changes in the population under 65: a significant increase in 1990–1994 (AAPC 7.3%) and a decrease in 1995–2001 (AAPC –3.8%). Similar trends in changes were observed in avoidable mortality, although statistically not significant (9). Within the health policy context, it is important to consider changes in trends of treatable and preventable diseases that allows assessing the functioning of different structures of the health system. Mortality caused by the diseases that could have been treated significantly increased in 1990–1994 (AAPC 6.0%) and significantly decreased in 1995–2001 (AAPC –4.7%). This was related to the increase of deaths caused by hypertension and stroke as well as tuberculosis in 1990–1994 and decrease of these deaths in 1995–2001 (AAPC 5.4% and –4.5%; and 14.6% and –6.7%, respectively). The data of 2001–2008 did not show any significant changes in the group of treatable diseases, although trends for cause-specific deaths were different. Special concern should be given to an increase in tuberculosis-associated mortality in females (AAPC 7.8%) when during 1995–2001 tuberculosis-caused mortality was declining (AAPC –7.5%). The national Programme for Prevention and Control of Tuberculosis has been operating since 2003. It goes without saying that action plan of this program for the period 2007–2011 needs to be revised.

One of the strategic tasks of the Lithuanian Health Programme – attainment of a significant increase in healthy life expectancy – could not be achieved without reorientation of national health system paying more attention and investing in health promotion and disease prevention (3). During the last decade, a number of prevention programs have been endorsed and funded by the government. These programs cover areas such as tobacco and alcohol control, healthy nutrition, high cardiovascular risk detection, and screening for cervical cancer, breast cancer, and prostate cancer. It is expected that these long-term programs will bring results in due time. The monitoring of avoidable mortality might be used as one of the tools to observe and assess the

implementation of these programs and to evaluate long-term results. For the time being, the avoidable mortality caused by ill-health conditions that could have been prevented was increasing (AAPC 4.6%, $P<0.05$). The major contribution to that was significantly increasing mortality caused by liver cirrhosis in both genders (AAPC 17.6%, $P<0.01$). In the previous decade, mortality caused by liver cirrhosis was 2-fold lower (AAPC 9.5%, $P<0.05$). The report of the Institute of Alcohol Studies in London (21) has declared that mortality caused by liver cirrhosis in the female population of England aged 35–44 years increased 10-fold during the last 30 years. In Lithuania, the increasing consumption of alcohol caused by liberalization of alcohol control policy has been reflected in the increasing of alcohol-related mortality during 2001–2007 (22, 23). For public and economic reasons, governments should play a strong role in alcohol retailing and strengthen alcohol control. Alcohol advertising was limited and decisions restricting access were adopted in Lithuania during 2007–2008. The last available data (2008) showed the decline of deaths caused by liver cirrhosis. Although liver cirrhosis is a chronic disease because of long-term excess consumption of alcohol, there are other signs of leveling-off of alcohol-related problems. Since 2008, a considerable decrease in acute alcohol-related problems, such as acute alcohol intoxication especially among teenagers, has been documented (23). Moreover, in 2008, there was a significant decrease in mortality caused by traffic accidents. All this taken together indicates that stronger alcohol control measures show the signs of improvement in health policy implementation.

Summarizing the results of comparative analysis during two study periods, it is obvious that the trends in overall avoidable mortality caused by both deaths that could have been avoided by treatment as well as by implementing the effective preventive measures were less favorable for the period 2001–2008 than the previous period. In fact, the avoidable mortality caused by treatable diseases leveled off, and mortality caused be preventable disease was increasing at a higher rate. It is likely that increasing alcohol consumption in 2001–2007 was the major contributor to the observed trend. Having in mind that an improvement in national health indicators was halted in the year 2000, and an increasing trend in total mortality was observed until 2008, systematic analysis, monitoring, and evaluation of avoidable mortality might be considered as a useful additional measure for the assessment of health policy implementation.

Conclusions

The avoidable mortality in Lithuanian population aged 5–64 years within the period 2001–2008 was increasing at a higher rate (AAPC 3.0%, $P<0.05$) than overall mortality (AAPC 1.7%, $P<0.05$). An observed increase in avoidable mortality was mainly determined by deaths that could have been prevented (AAPC 4.6%, $P<0.05$). Among the latter, liver cirrhosis was a major contributor to the avoidable mortality: it was increasing by 16.1% per year among males and 17.6% per year among females ($P<0.01$). The avoidable causes of death reduced the life expectancy by 1.77 years. The impact of deaths caused by preventable diseases was 2-fold higher than the treatable ones.

Statement of Conflict of Interest

The authors state no conflict of interest.

Išvengiamo mirtingumo kaita Lietuvoje 2001–2008 m. ir jos įtaka vidutinei tikėtinai gyvenimo trukmei

Vilius Grabauskas[1], Aldona Gaižauskienė[2], Skirmantė Sauliūnė[2], Rasa Mišeikytė[3]

[1]Lietuvos sveikatos mokslų universiteto Medicinos akademijos Profilaktinės medicinos katedra,
[2]Lietuvos sveikatos mokslų universiteto Medicinos akademijos Sveikatos vadybos katedra, [3]Higienos institutas

Raktažodžiai: išvengiamas mirtingumas, vidutinė tikėtina gyvenimo trukmė, pokyčiai, Lietuva.

Santrauka. Sveikatos priežiūros restruktūrizacijos Lietuvoje pasekmėms įvertinti tikslinga tęsti išvengiamo mirtingumo pokyčių stebėseną.

Tyrimo tikslas. Nustatyti išvengiamo mirtingumo lygį, išanalizuoti jo pokyčius 2001–2008 m. bei įvertinti išvengiamo mirtingumo įtaką vidutinei tikėtinai gyvenimo trukmei.

Tyrimo medžiaga ir metodai. Tyrimui naudota Statistikos departamento mirtingumo duomenų bazė. Buvo nagrinėjama 12 mirties priežasčių, suskirstytų į dvi ligų grupes: išgydomas ir perspėjamas. Mirtingumo kitimo greičiams palyginti apskaičiuotas vidutinis kasmetis procentinis kitimas (VKPK). Vidutinės tikėtinos gyvenimo trukmės sutrumpėjimas buvo skaičiuojamas iš išgyvenamumo lentelių.

Rezultatai. 2001–2008 m. mirtingumas nuo išvengiamų ligų didėjo sparčiau (VKPK – 3,0 proc., $p<0,05$.) nei bendrasis 5–64 metų žmonių mirtingumas (VKPK – 1,7 proc., $p<0,05$). Šiam kitimui žymiai didesnę

įtaką turėjo mirtingumo nuo perspėjamų ligų didėjimas (VKPK – 4,6 proc., p<0,05). Išvengiamų mirčių priežastys vidutinę tikėtiną gyvenimo trukmę sutrumpino 1,77 metų (perspėjamos – 1,12 metų, išgydomos – 0,63 metų). Pastebėta skirtingų mirtingumo nuo atskirų išvengiamų ligų pokyčių. Vyrų mirtingumas nuo lėtinių reumatinių širdies ydų bei plaučių piktybinių navikų mažėjo (VKPK atitinkamai –22,6 ir –2,1 proc., p<0,05). Tuo tarpu žymiai didėjo mirtingumas nuo kepenų cirozės (vyrų VKPK – 16,1, moterų – 17,6 proc., p<0,01), moterų mirtingumas nuo tuberkuliozės (VKPK – 7,8 proc., p<0,05).

Išvados. Išvengiamas mirtingumas Lietuvoje didėjo. Didžiausią įtaką mirtingumo didėjimui ir vidutinės tikėtinos gyvenimo trukmės mažėjimui turėjo mirtys, kurių galima būtų išvengti taikant profilaktines priemones.

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