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National Mortality Tendencies of Population in Ukraine and the Kharkiv Region

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The purpose of the study was to determine national tendencies of mortality in Ukraine and the Kharkiv region.

Materials and methods. Data from official sources of statistical information of Ukraine were used and systematic analysis and generalization of the obtained data was performed and tendencies of mortality in Ukraine were calculated.

Results and discussion. According to the dynamics of mortality rates of the population of Ukraine in 2010–2019, there was a decrease in almost all nosological forms of disease. For some groups of diseases there was a tendency of increasing mortality per 100 thousand population with tendencies for the general population +3.0% and +3.9%, for men +3.4% and +1.1% and women +2.2% and 8.3%.

Obtained results on the overall dynamics of declining tendencies in mortality due to major diseases in recent years and their growth due to some nosologies and structural characteristics of the main causes of mortality are in complete agreement with other studies.

The study noted an increase in tendencies of mortality of population of Ukraine in 2010–2019 (per 100 thousand population) in several disease groups: neoplasms (tendency +3.0%: males +3.4 %, females +2.2%) and diseases of digestive system (respectively +3.9%: +1.1% and +8.3%). The Kharkiv region leads among other regions in 2019 in such classes: overall – 3rd place (40,611 cases), diseases of the circulatory system – 2nd (28,079), coronary heart disease – 2nd (21,154), diseases of the digestive system – 2nd (1,624), external causes of death – 2nd (2,225), neoplasms – 3rd (5,714), cerebrovascular disease – 4th (5,009), diseases of the respiratory system – 4th (810), diseases of the genitourinary system – 4th (196) and congenital malformations, deformities and chromosomal abnormalities – 4th (69). Significant increase in tendencies found in the Kharkiv region during 2018–2019 both in absolute counts and per 100 thousand: complications of pregnancy, childbirth and postpartum period (+300.0 and +293.8%), certain conditions that occur in the perinatal period (+14.3 and +24.3%), other causes (+13.8 and +14.5%) and urolithiasis (+12.0 and +12.9%) with defined structural characteristics of mortality in diseases of the circulatory system (69.09%), neoplasms (14.04%) and accidents and trauma (5.26%).

Conclusion. The obtained results of the general dynamics of decreasing mortality tendencies due to major diseases and their growth due to some nosologies and structural characteristics of the main causes of mortality in Ukraine completely coincide with the data of other studies.

Keywords: non-infectious diseases, mortality, tendencies, the Kharkiv region.

Connection of the study with scientific programs, plans, topics. The work was carried out according to the plan of scientific research work of the Department of Public Health and Health Care Management of the Kharkiv National Medical University of the Ministry of Health of Ukraine "Medical and social aspects of the quality of life of young people with excess weight and obesity".

Introduction. The registration and analysis of the causes and medical and epidemiological characteristics of mortality is widely used to prioritize investment and track progress towards global health goals [1], especially in view of the abrupt changes in its structure that require constant and dynamic adjustment of global economic and social orientations, strategic decisions and updating global assessments [2–4].

It is determined that the characteristics of mortality vary significantly depending on geographical, medical, demographic, temporal and other characteristics [4].

Thus, studies of recent years show an abrupt increase (by 15.9%) in the age mortality indices during

2019–2020 (from 715.2 to 828.7 deaths per 100 thousand population) [5].

The results of a study by Roth G. A. et al. [6] identify tendencies in the dynamics of the main characteristics of global mortality for 2007–2017. Quantitative population growth has contributed to the increase in overall mortality due to 20 leading causes, among which noncommunicable diseases (NCDs) remain the leading cause of death worldwide and their burden is constantly increasing. Thus, the main causes of death in 2017 were NCDs, which accounted for 73.4% (95.0% confidence interval (CI) 72.5–74.1), while the percentage of other causes (infectious, maternal, neonatal and related to nutrition) amounted to 18.6% (95.0% CI 17.9–19.6) and 8.0% – injuries (95.0% CI 7.7–8.2). The total number of deaths from NCDs in 2007–2017 increased by 22.7% (95.0% CI 21.5–23.9), which is a quantitative increase in deaths by 7.61 million (95.0% CI 7.20–8.01), and in general, global mortality due to NCDs decreased by 7.9% (95.0% CI 7.0–8.8). The number of deaths due to other (infectious, maternal, neonatal and food-related) causes decreased by 22.2% (95.0% CI 20.0–24.0), and global mortality – by 31.8% (95.0% CI 30.1–33.3). The total number of deaths due to injuries increased by 2.3% (95.0% CI 0.5–4.0), and mortality decreased by 13.7% (95.0% CI 12.2–15.1).

Among the main NCDs, the largest number of deaths is due to cardiovascular diseases (17.8 million [95.0% CI 17.5–18.0] deaths), neoplasms (Neo) (9.56 million [95.0% CI 9.40–9.69] deaths) and chronic respiratory diseases (3.91 million [95.0% CI 3.79–4.04] deaths).

The importance of careful study and analysis of the main characteristics of mortality is confirmed by Foreman K. J. et al. [7], who noted that for most countries, prioritizing NCDs and preventing risk factors for their development in health care planning and investment decisions can significantly reduce overall premature mortality rates by 2040. It is projected that by 2040 (compared to 2016) NCDs will take the largest part of years of life lost (YLL) in almost all regions of the world (67.3% of global YLL [95.0% CI 61.9–72.3]). Also, a significant percentage of the world's countries (especially low-income ones) by 2040 will have high levels of other (infectious, maternal, neonatal and nutrition-related) diseases, which will account for a significant proportion of YLL (53.5%) in 2040 [95.0% CI 48.3–58.5] in Sub-Saharan Africa).

The purpose of the study was to determine national tendencies of mortality in Ukraine and the Kharkiv region.

Materials and methods. Data from official sources of statistical information of Ukraine (State Institution "Center for Medical Statistics of the Ministry of Health of Ukraine") were used to determine national tendencies of mortality in Ukraine. A systematic analysis and generalization of the obtained data was performed and tendencies of mortality in Ukraine were calculated.

Research results. Mortality tendencies in Ukraine and the Kharkiv region for 2010–2019 were determined for some infectious and parasitic diseases (SIPD), Neo, blood and hematopoietic organs diseases (BHOD), endocrine system diseases and eating and metabolic disorders (ESDEMD), mental and behavioral disorders (MBD), diseases of the nervous system (DNS), diseases of the eye and appendix (DEA), diseases of the ear and mammary process (DEMP), diseases of the circulatory system (DCS), hypertension (HTN), coronary heart disease (CHD), cerebrovascular disease (CVD), diseases of the respiratory system (DRS), diseases of the digestive system (DDS), diseases of the skin and subcutaneous tissue (DSST), diseases of the musculoskeletal system (DMSS), diseases of the genitourinary system (DGUS), complications of pregnancy, childbirth and postpartum period (CPCPP), certain conditions that occur in the perinatal period (CPP), congenital malformations, deformities and chromosomal abnormalities (CMDCA), trauma, poisoning and some other consequences of external causes (TPEX), symptoms, signs and abnormalities found in clinical and laboratory studies, not classified in other headings (NC) and external causes of death (ECD).

According to the dynamics of mortality rates of the population of Ukraine in 2010–2019, there was a decrease in almost all nosological forms of disease (SIPD, DCS, DRS and ECD). For some groups of diseases (Neo and DDS) there was a tendency of increasing mortality per 100 thousand population with tendencies for the general population +3.0% and +3.9%, for men +3.4% and +1.1% and women +2.2% and 8.3% (**Table 1)**.

By regions of Ukraine, the highest mortality rates (in absolute numbers) were observed in the Dnipropetrovsk (50,929 cases), Donetsk (41,087) and Kharkiv (40,611) regions and the city of Kyiv (33,137) (**Table 2)**. In terms of 100 thousand population, the highest mortality in 2019 was noted in the Chernihiv (1,861.2 percent), Kirovohrad (1,644.9), Poltava (1,644.2) and Cherkasy (1,642.9) regions (**Table 3**).

The Kharkiv region, among all regions of Ukraine, had significant mortality rates due to major diseases, both in absolute terms and per 100,000 population (**Tables 2 and 3**). Thus, in 2019, in absolute terms, the mortality rate in the Kharkiv region due to major diseases in total amounted to 40,611 cases, which is why it ranked third among all regions. Mortality due to SIPD was 348 cases (8th place), Neo – 5,714 (3rd), ESDEMD – 94 (8th), MBD – 23 (16th), DNS – 122 (17th), DCS – 28,079 (2nd), CHD – 21,154 (2nd),

Table 1 – Mortality of Ukraine population during 2010–2019 according to main classes of causes of death and gender with exclusion of temporary occupied territory of the Autonomous Republic of Crimea, Donetsk and Lugansk regions (no., per 100 thousand population) [8]

Year	Classes of diseases according to IDC-10													
	Total		I. SIPD (A00-B99)		II. Neo (C00-D48)		IX. DCS (I00-I99)		X. DRS (J00-J98)		XI. DDS (K00-K92)		XX. ECD (V01-Y89)	
	No.	Per 100 thousand	No.	Per 100 thousand	No.	Per 100 thousand	No.	Per 100 thousand	No.	Per 100 thousand	No.	Per 100 thousand	No.	Per 100 thousand
Total														
2010	698,235	1,522.2	14,642	31.9	88,767	193.5	465,093	1,013.9	19,480	42.5	26,817	58.5	43,955	95.8
2019	581,114	1,466.4	8,120	20.8	78,223	199.3	389,348	989.2	12,504	32.0	24,144	60.8	30,009	77.7
Tendency	-16.8	-3.7	-44.5	-34.8	-11.9	+3.0	-16.3	-2.4	-35.8	-24.7	-10.0	+3.9	-31.7	-18.9
Male														
2010	341,249	1,611.5	11,036	52.1	48,987	231.3	198,510	937.4	13,700	64.7	17,004	80.3	34,462	162.7
2019	287,513	1,560.6	5,815	32.0	43,598	239.1	171,487	937.1	9,107	49.8	14,975	81.2	24,064	134.3
Tendency	-15.7	-3.2	-47.3	-38.6	-11.0	+3.4	-13.6	-	-33.5	-23.0	-11.9	+1.1	-30.2	-17.5
Female														
2010	356,986	1,445.6	3,606	14.6	39,780	161.1	266,583	1,079.5	5,780	23.4	9,813	39.7	9,493	38.4
2019	293,601	1,384.4	2,305	11.0	34,625	164.6	217,861	1,034.5	3,397	16.5	9,169	43.0	5,945	28.5
Tendency	-17.8	-4.2	-36.1	-24.7	-13.0	+2.2	-18.3	-4.2	-41.2	-29.5	-6.6	+8.3	-37.4	-25.8

Table 2 – Regional mortality in Ukraine in 2019 according to main classes of causes of death with exclusion of temporary occupied territory of the Autonomous Republic of Crimea, Donetsk and Lugansk regions (no.) [8]

Region	Total	I. SIPD (A00–B99)	II. Neo (C00–D48)	IV. ESDEMD (E00–E89)	V. MBD (F01–F99)	VI. DNS	IX. DCS (I00–I99)	CHD (I20–I25)	CVD (I60–I69)	X. DRS (J00–J98)	XI. DDS (K00–K92)	XIV. DGUS (N00–N99)	XVII. CMDCA (Q00–Q99)	XVIII. NC (R00–R99)	XXX. ECD (V01–Y89)
Vinnytsya	24,132	143	2,969	103	48	148	17,686	15,923	1,203	341	927	68	45	260	1,301
Volynska	13,332	204	1,592	78	38	102	9,023	6,717	1,957	362	706	61	29	281	793
Dnipropetrovsk	50,929	1,325	7,204	82	7	194	34,518	25,164	3,265	885	2,460	284	64	841	2,804
Donetsk	41,087	541	5,128	116	40	416	24,785	14,505	9,399	715	1,714	163	37	5,654	1,633
Zhytomyr	19,933	231	2,216	37	58	210	14,143	8,192	1,335	409	776	71	30	613	1,044
Zakarpatska	15,527	344	1,920	101	215	256	9,610	3,962	2,581	410	932	47	89	810	682
Zaporyzzhya	27,823	424	4,487	39	8	392	17,492	9,887	4,979	630	988	104	26	1,483	1,652
Ivano-Frankivsk	17,551	117	2,144	53	10	53	12,465	10,718	947	204	661	42	55	916	755
Kyiv	28,522	351	3,855	87	4	117	19,969	14,413	2,000	516	1,204	96	35	580	1,619
Kirovohrad	15,451	300	1,981	72	56	45	9,893	8,434	1,163	341	491	55	23	1,292	850
Lugansk	16,011	154	1,883	55	–	83	11,083	7,297	2,961	356	700	71	23	959	598
Lviv	32,839	395	4,432	329	76	174	20,169	14,710	2,462	990	1,426	99	86	2,823	1,660
Mykolaiv	17,087	284	2,098	38	54	154	11,974	8,293	1,326	376	784	63	28	272	912
Odesa	33,091	958	4,990	194	7	371	21,255	11,512	7,888	731	1,602	225	90	406	2,082
Poltava	22,915	192	3,266	65	3	265	16,163	11,372	3,813	256	740	45	35	766	1,055
Rivne	14,182	159	1,778	57	33	87	10,250	7,241	1,824	270	548	56	48	70	734
Sumy	17,404	172	2,526	63	25	283	11,477	5,584	5,359	396	661	82	19	646	993
Ternopil	14,754	62	1,738	67	37	202	10,831	8,954	1,189	474	447	46	35	104	668
Kharkiv	40,611	348	5,714	94	23	122	28,079	21,154	5,009	810	1,624	196	69	1,109	2,225
Kherson	16,027	245	2,089	28	33	253	9,711	4,556	3,720	298	710	108	30	1,447	1,005
Khmelnytskyi	19,399	196	2,381	130	145	255	11,882	6,106	2,414	611	836	88	50	1,801	931
Cherkasy	19,702	192	2,479	88	19	143	13,840	8,194	3,729	562	843	84	29	243	1,121
Chernivtsi	11,084	96	1,547	46	49	46	8,103	7,446	532	272	283	46	38	39	482
Chernihiv	18,584	203	2,037	80	121	108	13,688	11,311	1,729	442	590	76	22	192	959
Kyiv (city)	33,137	484	5,769	135	–	136	21,259	16,696	3,448	847	1,491	219	66	1,070	1,451

Table 3 – Mortality of the population of Ukraine by regions in 2019 by main classes of causes of death without taking into account the temporarily occupied territory of the Autonomous Republic of Crimea and Donetsk and Luhansk regions (per 100 thousand population) [8]

Region	Total	I. SIPD (A00–B99)	II. Neo (C00–D48)	IV. ESDEMD (E00–E89)	V. MBD (F01–F99)	VI. DNS	IX. DCS (I00–I99)	CHD (I20–I25)	CVD (I60–I69)	X. DRS (J00–J98)	XI. DDS (K00–K92)	XIV. DGUS (N00–N99)	XVII. CMDCA (Q00–Q99)	XVIII. NC (R00–R99)	XXX. ECD (V01–Y89)
Vinnytsya	1,554.0	9.2	191.2	6.6	3.1	9.5	1,138.9	1,025.4	77.5	22.0	59.7	4.4	2.9	16.7	83.8
Volynska	1,290.1	19.7	154.1	7.5	3.7	9.9	873.2	650.0	189.4	35.0	68.3	5.9	2.8	27.2	76.7
Dnipropetrovsk	1,595.7	41.5	225.7	2.6	0.2	6.1	1,081.5	788.5	102.3	27.7	77.1	8.9	2.0	26.4	87.9
Zhytomyr	1,641.7	19.0	182.5	3.0	4.8	17.3	1,164.8	674.7	109.9	33.7	63.9	5.8	2.5	50.5	86.0
Zakarpatska	1,236.9	27.4	153.0	8.0	17.1	20.4	765.6	315.6	205.6	32.7	74.2	3.7	7.1	64.5	54.3
Zaporyzzhya	1,639.9	25.0	264.5	2.3	0.5	23.1	1,031.0	582.7	293.5	37.1	58.2	6.1	1.5	87.4	97.4
Ivano-Frankivsk	1,280.5	8.5	156.4	3.9	0.7	3.9	909.4	782.0	69.1	14.9	48.2	3.1	4.0	66.8	55.1
Kyiv	1,607.3	19.8	217.2	4.9	0.2	6.6	1,125.3	812.2	112.7	29.1	67.9	5.4	2.0	32.7	91.2
Kirovohrad	1,644.9	31.9	210.9	7.7	6.0	4.8	1,053.2	897.9	123.8	36.3	52.3	5.9	2.4	137.5	90.5
Lviv	1,304.7	15.7	176.1	13.1	3.0	6.9	801.3	584.4	97.8	39.3	56.7	3.9	3.4	112.2	66.0
Mykolaiv	1,518.2	25.2	186.4	3.4	4.8	13.7	1,063.9	736.8	117.8	33.4	69.7	5.6	2.5	24.2	81.0
Odesa	1,391.1	40.3	209.8	8.2	0.3	15.6	893.5	483.9	331.6	30.7	67.3	9.5	3.8	17.1	87.5
Poltava	1,644.2	13.8	234.3	4.7	0.2	19.0	1,159.7	816.0	273.6	18.4	53.1	3.2	2.5	55.0	75.7
Rivne	1,227.7	13.8	153.9	4.9	2.9	7.5	887.3	626.9	157.9	23.4	47.4	4.8	4.2	6.1	63.5
Sumy	1,619.2	16.0	235.0	5.9	2.3	26.3	1,067.8	519.5	498.6	36.8	61.5	7.6	1.8	60.1	92.4
Ternopil	1,415.5	5.9	166.7	6.4	3.6	19.4	1,039.2	859.1	114.1	45.5	42.9	4.4	3.4	10.0	64.1
Kharkiv	1,522.7	13.0	214.2	3.5	0.9	4.6	1,052.8	793.2	187.8	30.4	60.9	7.3	2.6	41.6	83.4
Kherson	1,551.8	23.7	202.3	2.7	3.2	24.5	940.3	441.1	360.2	28.9	68.7	10.5	2.9	140.1	97.3
Khmelnytskyi	1,540.0	15.6	189.0	10.3	11.5	20.2	943.2	484.7	191.6	48.5	66.4	7.0	4.0	143.0	73.9
Cherkasy	1,642.9	16.0	206.7	7.3	1.6	11.9	1,154.1	683.3	310.9	46.9	70.3	7.0	2.4	20.3	93.5
Chernivtsi	1,227.5	10.6	171.3	5.1	5.4	5.1	897.3	824.6	58.9	30.1	31.3	5.1	4.2	4.3	53.4
Chernihiv	1,861.2	20.3	204.0	8.0	12.1	10.8	1,370.8	1,132.8	173.2	44.3	59.1	7.6	2.2	19.2	96.0
Kyiv (city)	1,119.8	16.4	195.0	4.6	–	4.6	718.4	564.2	116.5	28.6	50.4	7.4	2.2	36.2	49.0

CVD – 5,009 (4th), DRS – 810 (4th), DDS – 1,624 (2nd), DGUS – 196 (4th), CMDCA – 69 (4th), NC – 1,109 (7th) та ECD – 2,225 (2nd) (**Table 2)**.

According to the mortality of the population of the Kharkiv region, calculated per 100 thousand population due to major diseases in general, it ranked thirteenth with values of 1,522.7 ppm, SIPD – 19th (13.0), Neo – 6th (214.2), ESDEMD – 18th (3.5), MBD – 16th (0.9), DNS – 21st (4.6), DCS – 11th (1,052.8), CHD – 8th (793.2), CVD – 10th (187.8), DRS – 14th (30.4), DDS – 12th (60.9), DGUS – 7th (7.3), CMDCA – 12th (2.6), NC – 11th (41.6) and ECD – 12th (83.4) (**Table 3)**.

In terms of mortality tendencies due to major diseases in 2018–2019, a slight decrease was noted in the Kharkiv region in most cases both in absolute terms and per 100 thousand population, except CPCPP mortality (tendencies respectively +300.0% and +293.8%), CPP (+14.3% and +24.3%), other causes (+13.8% and +14.5%), urolithiasis (+12.0% and +12.9%), alcoholic liver disease (+7.1% and +8.0%), BHOD (+5.3% and +5.6%), DSST (+3.5% and +4.2%), Neo of blood, lymph and related tissues (+3.4% and +4.2%), respiratory system Neo (+2.8% and +3.5%), DGUS (+1.6% and +2.4%) and alcohol toxicity (+0.9% and +1.5%) (**Table 4)**.

Analysis of main causes of mortality in the Kharkiv region for 2019 year in main mortality classes revealed significant prevalence of DCS (69.09%), Neo (14.04%) and accidents and trauma (5.26%) (**Fig. 1**).

Discussion. Obtained results on the overall dynamics of declining tendencies of mortality due to major diseases in recent years and their growth due to some nosologies and structural characteristics of the main causes of mortality are in complete agreement with other studies. Thus, according to Rana J. S. et al. [10] in 2018, the three leading causes of global deaths were heart disease, oncology and accidents. Also, for

Table 4 – Mortality of the Kharkiv region population during 2018–2019 according to main classes of causes of death (no., per 100 thousand population) [9]

Causes of death	No.			Per 100 thousand		
	2018	2019	Tendency	2018	2019	Tendency
All the reasons	42,600	40,611	-4.7	1,590.52	1,526.75	-4.0
SIPD, incl.:	371	344	-7.3	13.85	12.93	-6.6
- tuberculosis	232	210	-9.5	8.66	7.89	-8.9
Neo, incl.:	5,801	5,709	-1.6	216.59	214.63	-0.9
- malignancies	5,761	5,672	-1.5	215.09	213.24	-0.9
- digestive system	2,047	2,019	-1.4	76.43	75.90	-0.7
- respiratory system	977	1,004	+2.8	36.48	37.74	+3.5
- mammal glands*	561	516	-8.0	39.02	36.15	-7.4
- female genital organs*	491	474	-3.5	34.15	33.21	-2.8
- blood, lymph and related tissues	319	330	+3.4	11.91	12.41	+4.2
BHOD	19	20	+5.3	0.71	0.75	+5.6
Endocrine system diseases, incl.:	100	94	-6.0	3.73	3.53	-5.4
- diabetes mellitus	89	83	-6.7	3.32	3.12	-6.0
MBD, incl.:	36	23	-36.1	1.34	0.86	-35.8
- results of alcohol consumption	27	16	-40.7	1.01	0.60	-40.6
DNS	140	115	-17.9	5.23	4.32	-17.4
DEA	–	–	–	–	–	–
DEMP	9	7	-22.2	0.34	0.26	-23.5
DCS, incl.	29,852	28,060	-6.0	1,114.56	1,054.90	-5.4
- acute rheumatic fever (all forms)	32	19	-40.6	1.19	0.71	-40.3
- HTN (all forms)	18	7	-61.1	0.67	0.26	-61.2
- CHD	22,531	21,152	-6.1	841.22	795.20	-5.5
- CVD	5,254	5,007	-4.7	196.16	188.24	-4.0
DDS, incl.:	894	797	-10.9	33.38	29.96	-10.2
- acute respiratory infections	1	1	–	0.04	0.04	–
- flu and pneumonia	644	578	-10.2	24.04	21.73	-9.6
DRS, incl.:	1,685	1,623	-3.7	62.91	61.02	-3.0
- diseases of esophagus, stomach and duodenum	259	190	-26.6	9.67	7.14	-26.2
- alcohol liver disease	70	75	+7.1	2.61	2.82	+8.0
- other liver diseases	898	864	-3.8	33.53	32.48	-3.1
DSST	57	59	+3.5	2.13	2.22	+4.2
DMSS and connective tissue	24	19	-20.8	0.90	0.71	-21.1
DGUS, incl.:	186	189	+1.6	6.94	7.11	+2.4
- urolithiasis	25	28	+12.0	0.93	1.05	+12.9
CPCPP*	1	4	+300.0	0.16	0.63	+293.8
CPP**	70	80	+14.3	3.67	4.56	+24.3
CMDCA	77	66	-14.3	2.87	2.48	-13.6
TPEX, incl.:	2,166	2,137	-1.3	80.87	80.34	-0.7
- alcohol toxicity	332	335	+0.9	12.40	12.59	+1.5
Other causes	1,112	1,265	+13.8	41.52	47.56	+14.5

Notes: * – per all female population, ** – per female population of fertile age, *** – per 1,000 livebirths

the period of 2011–2018, the following changes were noted in the total number of deaths and age-related mortality rates related to the 10 main causes of death: the largest percentage decrease was observed for deaths from Neo (-11.8%), influenza and pneumonia (-5.1%) and chronic lower respiratory diseases (-6.6%); and the largest increase – from Alzheimer's disease (+23.5%), accidents (+22.8%) and suicide (+15.4%). According to Woolf S. H. et al. [11] in the period of 1999–2016 there was an increase in all-

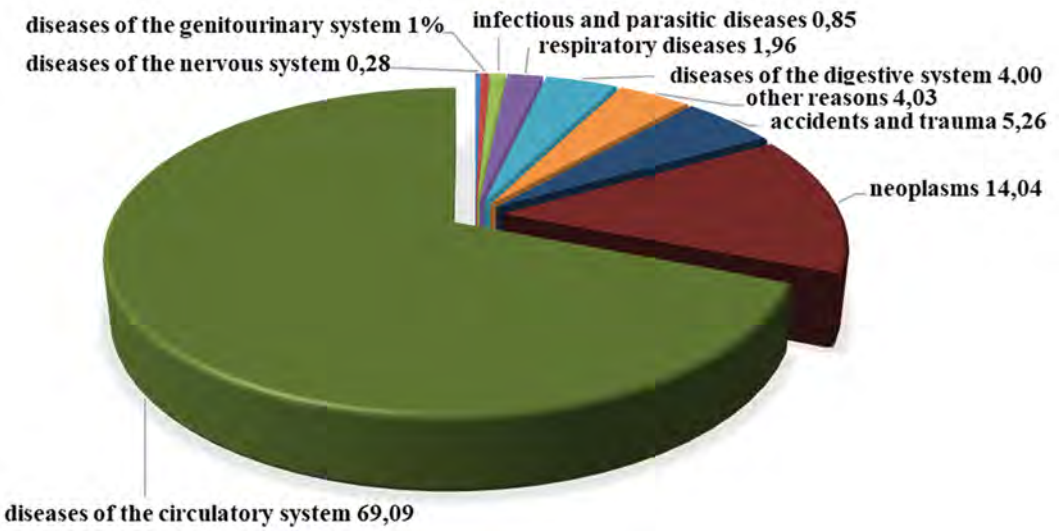

Figure 1 – Structural characteristics of mortality in the Kharkiv region in 2019 according to main mortality classes (%) [9]

cause mortality among the middle-aged population (25–64 years) and a decrease due to infectious and parasitic diseases, tumors, diseases of the musculoskeletal system and connective tissue. Sidney S. et al. [12] showed in recent decades a halt in the decline in age-adjusted mortality rates due to heart disease and a significant percentage reduction in cancer rates.

Conclusion

1. The study noted an increase in tendencies of mortality of population of Ukraine in 2010–2019 (per 100 thousand population) in several disease groups: Neo (tendency +3.0%: males +3.4%, females -2.2%) and diseases of digestive system (respectively +3.9%: +1.1% and 8.3%).
2. The Kharkiv region leads among other regions in 2019 in such classes: overall – 3rd place (40,611 cases), DCS – 2nd (28,079), CHD – 2nd (21,154), DDS – 2nd (1,624), ECD – 2nd (2,225), Neo – 3rd (5,714), CVD – 4th (5,009), DRS – 4th (810), DGUS – 4th (196) and CMDCA – 4th (69).
3. Significant increase in tendencies found in the Kharkiv region during 2018–2019 both in absolute counts and per 100 thousand: CPCPP (+300.0% and +293.8%), CPP (+14.3 and +24.3%), other causes (+13.8 and +14.5%) and urolithiasis (+12.0 and +12.9%) with defined structural characteristics of mortality in DCS (69.09%), Neo (14.04%) and accidents and trauma (5.26%).

Perspectives of further research. In further studies, it is planned to determine the tendencies of morbidity, disability and mortality from cerebrovascular disease in the Kharkiv region.

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Національні тенденції смертності населення України та Харківської області

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Резюме. *Мета дослідження:* визначити національні тенденції смертності в Україні та Харківській області.

Матеріали і методи: використано дані офіційних джерел статистичної інформації України, проведено систематичний аналіз та узагальнення отриманих даних та розраховано тенденції смертності в Україні та Харківській області.

Результати та висновки. Дослідження відзначило зростання трендів смертності населення України у 2010-2019 рр. (на 100 тис. населення) за кількома групами захворювань: новоутворення (тенденції +3,0 %: чоловіки +3,4 %, жінки +2,2 %) та захворювання органів травлення (відповідно +3,9 %: +1,1 % та 8,3 %). Харківська область лідирує серед регіонів у 2019 році в таких класах: загальний показник – 3 місце (40611 випадків), хвороби системи кровообігу – 2 (28079), ішемічна хвороба серця – 2 (21154), захворювання органів травлення – 2 (1624), зовнішні причини смерті – 2 (2225), новоутворення – 3 (5714), цереброваскулярні захворювання – 4 (5009), захворювання дихальної системи – 4 (810), захворювання сечостатевої системи – 4 (196) і вроджені вади розвитку, деформації та хромосомні аномалії – 4 (69). У Харківській області протягом 2018-2019 рр. виявлено значне зростання трендів як в абсолютних показниках, так і в розрахунку на 100 тис.: ускладнення вагітності, пологів і післяпологового періоду (+300,0 та +293,8 %), певні стани, що виникають у перинатальному періоді (+14,3 та +24,3 %), інші причини (+13,8 та +14,5 %) та сечокам'яна хвороба (+12,0 та +12,9 %) з визначеними найбільшими структурними характеристиками смертності при хворобах системи кровообігу (69,09 %), новоутвореннях (14,04 %), а також нещасних випадках та травмах (5,26 %). Отримані результати загальної динаміки трендів зниження смертності від основних захворювань та їх зростання за окремими нозологіями та структурними характеристиками основних причин смертності в Україні повністю збігаються з даними інших світових досліджень.

Ключові слова: неінфекційні захворювання, смертність, тенденції, Харківська область.

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