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Analysis of perinatal mortality in Ukraine

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Abstract

A study conducted on the basis of the branch statistical data for 2000–2010, as well as the data of mother and child health monitoring carried out by the Centre for Medical Statistics of the Ministry of Healthcare of Ukraine (2007–2010) demonstrated a 2.6 times decrease in the rates of perinatal mortality listed according to the WHO criteria during the observation period. At the same time, the general level of the registered perinatal mortality in Ukraine remains high compared with European rates, exceeding the average European rate by 43.2% and that of the EU by 60.9%. Considerably higher proportional rates (1.8 times) of perinatal mortality of infants weighing more than 1,500 g, compared with those weighing under 1,500 g, are evidence of both the low-quality medical services at all stages (obstetric care before and during delivery, neonatological assistance), and insufficient reliability of infant registration at birth, which can cause a deformation shift in healthcare priorities.

Key words

perinatal mortality, general rates, proportional rates

INTRODUCTION

One of the most important specific rates of infant mortality is perinatal mortality. Objective information about the level and structure of perinatal mortality and its dynamics serve as a basis for a comparative analysis of the newborn's state of health, as well as for planning the material and personnel resources necessary for treatment and health-improvement measures. The rate of perinatal mortality depends on both a woman' health before conception and during pregnancy, and the level of medical service rendered at antenatal clinics, obstetric and paediatric (neonatological) hospitals, and is widely used to assess the quality of medical assistance for the pregnant, new mothers and babies in the early neonatal period [11].

The aim of the paper is to study the peculiarities of the perinatal mortality in Ukraine and define the measures to reduce it.

MATERIALS AND METHOD

The study was performed on the basis of the branch statistical data of 2000–2010, as well as the data of mother and child health monitoring carried out by the Centre for Medical Statistics of the Ministry of Healthcare of Ukraine in 2007–2010.

Statistical processing of the data obtained was carried out using the biometrical analysis methods offered by the software packages Excel 2003® and Statistica 6.0 (StatSoft nc.).

RESULTS AND DISCUSSION

According to the State Statistics Committee, the level of the perinatal mortality in Ukraine in 2000 – 2010 was on the rise, from 10.11 up to 10.6 per 1,000 newborn normal and stillborn (Fig. 1). However, such assessment is not quite correct as different criteria determining the perinatal period were used in the rate calculations. Before 2006, the perinatal period in Ukraine encompassed the time starting with the 28th week of antenatal life of the foetus (when it normally weighs 1,000 g) and up until 7 days after delivery. From 2007, the country switched over to the criteria defined by WHO when the start of the perinatal period falls on the 22nd week (154th day) of the antenatal life of the foetus, when its weight is normally 500 g.

Further analysis of the perinatal mortality dynamics was carried out on the basis of the rates listed according to the WHO criteria for the whole observation period. This approach decreased the level of the perinatal mortality in 2000–2010 by 2.6 times, from 27.1 down to 10.6 per 1,000 newborn normal and stillborn (Fig. 1).

The gradual reduction in the perinatal mortality rate in 2001–2004 (by 4–8% a year) was interrupted by its steep drop in 2005 by almost 19% (from 20.6 to 16.7 per 1,000 newborn normal and stillborn), which is explained by the reconsideration of the reasons on the basis of which termination of pregnancy of 12 – 22 weeks length is possible [9] (Fig. 2). As a result, most of the previously valid social indicators for such abortion [8] were abolished, namely: three or more children; divorce during the time of pregnancy; husband's death during the period of pregnancy; the term of imprisonment for husband or wife; custody denial for wife; wife having a disabled child; husband's severe disease or injury during his wife's pregnancy. As a result, the level of perinatal mortality, estimated by the WHO criteria, dropped sharply in 2005–2006 from 20.6 to 15.2 per 1,000 newborn normal and stillborn. The second steep decrease by 28.9% (from 15.2 to 10.8 per 1000 newborn normal and stillborn) was registered in 2007 after official adoption in Ukraine of the WHO criteria of live childbirth. In 2008–2010, no substantial changes in the perinatal mortality rate were registered.

In 2010, perinatal mortality in Ukraine exceeded the average European mortality by 43.2% (7.38‰) and that of the EU by 60.9% (6.57‰). Such a comparison, however, is not totally correct because in the European WHO data base 'Health for everybody' the mortality rate was calculated for death cases of babies weighing 1,000 g or more, while in Ukraine the weight was 500 g or more. Thus, one can state that differences in Ukrainian and European rates exist, although they are not decisive.

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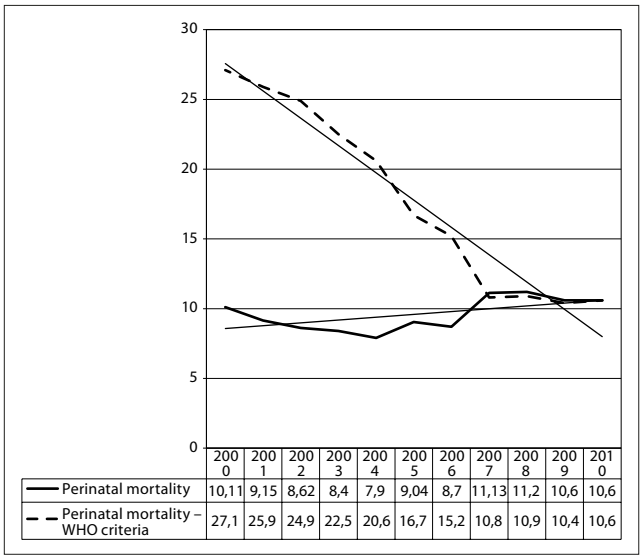


Figure 1. Dynamics of perinatal mortality per 1,000 alive and dead infants in Ukraine 2000–2010

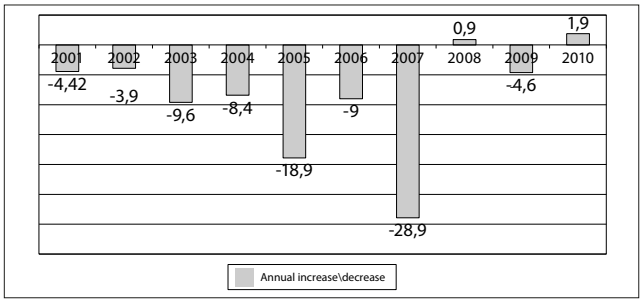


Figure 2. Annual increase/decrease in perinatal mortality per 1,000 newborn normal and stillborn in Ukraine 2001–2010

Depending on the time of death, the following constituents are defined in the structure of perinatal mortality: antenatal – before childbirth, intranatal – during delivery, postnatal – during the 168 hours after childbirth.

In 2000–2010, antenatal mortality rate decreased more than 3 times (from 17.4‰ to 5.4 ‰). In 2000–2004, the changes could be described as gradual, by 4–10% annually (Fig. 3). In 2005, the antenatal mortality rate decreased almost threefold compared with the previous year due to the revision of the grounds for abortion, as mentioned above. A new rapid decline rate (by 40.8%) was registered in 2007, which happened at the same time as the official criteria changes in the live childbirth in Ukraine were monitored, but the rate was not explained by objective reasons. In 2008–2010, the antenatal mortality rate remained stable.

The index of intranatal and antenatal mortality decreased more than three times (from 3.1 ‰ to 0.8 ‰) during the monitoring period. Its dynamics in 2000–2006 showed a steady decrease tendency (by 7–30% annually). In 2006–2010, the intranatal mortality rate did not undergo any significant changes and ranged 0.97 ÷ 1.19 ‰.

Early neonatal mortality decreased 1.7 times (6.6 ‰ and 3.89 ‰) for the period from 2000 to 2010.

In the structure of perinatal mortality cases, the majority (52.6%) were deaths before delivery (in the antenatal period), over a third (37.8%) constituted deaths within 168 hours after birth (early neonatal period), up to 10% (9.6%), and in the process of delivery (in intranatal period). During the

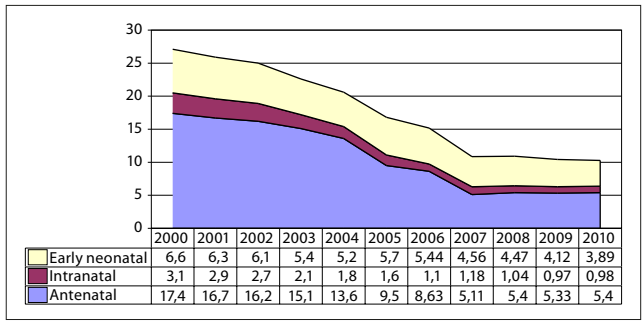


Figure 3. Dynamics of individual components of perinatal mortality per 1,000 newborn live and stillborn in Ukraine 2000–2010

monitoring, the proportion of deaths in the antenatal period decreased significantly (from 64.2% to 50.9%; p <0.001), and in the early neonatal period increased correspondingly (from 24.4% to 36.7%). The proportion of deaths during delivery changed slightly (from 11.4% to 9.2%; p <0.001) (Tab. 1).

Analysis of perinatal mortality in the regions of Ukraine (Fig. 4) was revealed that the rate differences in some definite territories were in the two-digit area (2.1 times). The highest levels (more than 12 ‰) were registered in Oblasts of Donetsk (13.85), Kirovohrad (13.6), Zakarpattia (12.1) and Dnipropetrovsk (12.1); the lowest (8 ‰ or less) were registered in the Oblasts of Kiev (6.5), Khmelnitsky (7.0), Zhitomir (8.0) and in Kiev (7.9). It was found that the regional rates of perinatal mortality showed a strong connection with infant mortality rates (r = 0.76; p <0.001), i.e. higher levels of perinatal mortality corresponded to higher infant mortality, which is natural because the two indicators included and

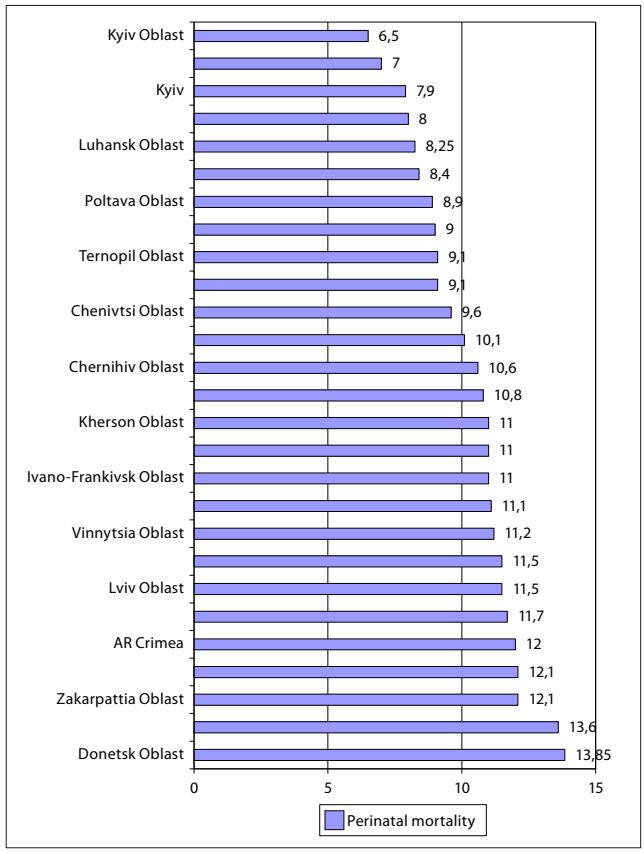


Figure 4. Perinatal mortality rates in the regions of Ukraine per 1,000 newborn normal and stillborn in 2010

Table 1. Structure of perinatal mortality over the time of a fatal case onset, % in 2000–2010

Components of perinatal mortality	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Antenatal	64.2	64.5	64.8	66.8	66.0	56.5	57.0	47.2	49.5	52.1	52.6
Intranatal	11.4	11.2	10.8	9.3	8.7	9.5	7.3	10.9	9.5	9.4	9.6
Early neonatal	24.4	24.3	24.4	23.9	25.2	33.9	35.8	41.9	41.0	38.5	37.8
Total	100	100	100	100	100	100	100	100	100	100	100

accounted for a significant proportion of infant mortality in the early neonatal period [1].

To assess the level of obstetric, emergency and intensive neonatal care it is important to make the structural ratio of stillbirths and early neonatal deaths among all perinatal losses. According to a large-scale study conducted in 195 countries in 1995–2009, based on optimization modeling, it was found that even the registered most optimal ratio of 1:4 was 36% less than in reality [10], which means that the proportion of the stillborns in the structure of perinatal mortality should be about 53–55%. In Ukraine, the share of stillborns in the dynamics for 2000–2010 decreased by 19%, but was still high – 62.2% (Tab. 1). The increase in the proportion of stillbirths may indicate a lack of antenatal foetal protection, deficiencies in the conduct of childbirth and neonatal intensive care, as well as drawbacks in the registration of live births [7].

The level of perinatal as well as infant mortality depends largely on birth weight. Perinatal mortality in the group of those born with extremely low birth weight (619.22 per 1,000 newborn normal and stillborn) was 2.4 times higher than those born with very low birth weight (256.96‰), 11.3 times higher compared with the group of those born with low birth weight (54.58‰), and 144 times higher than those born with normal weight (4.3‰) (Fig. 5). Over the 5-year period (2006–2010) the greatest positive dynamics of perinatal deaths was registered in the group of those born weighing 500–999 g – a 28.7% decrease; in other weight groups the decrease in the levels of perinatal mortality rates was significantly lower – by 8.4–11%.

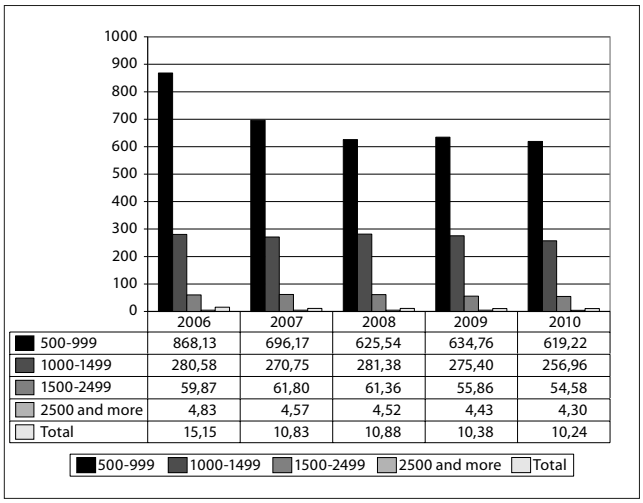


Figure 5. Dynamics of specific indicators of perinatal mortality in certain weight categories of newborns per 1,000 live births and stillborn – Ukraine 2006–2010

For a more detailed analysis of perinatal mortality and identification of its causes for each of the components (antenatal, intranatal and postnatal) in different weight categories at birth, nowadays a special WHO technique is used – the 'Baby Matrix' (BABIES-MATRICA).

'BABIES-MATRICA' is a Table of the distribution of live births and infant deaths in the perinatal period for the birth weight of 500 grams or more – '500–999 g', '1,000–1,499 g', '1,500 – 1,999 g', '2,000 – 2,499 g', '2,500–2999 g', '3,000–3499 g', '3,500 g or more'. These weight classes, are additionally grouped in two weight categories – 'less than 1,500 g' (low birth weight) and '1,500 g or more'. In the weight category '1,500 g or more', the newborns fall into two groups – those born weighing '1,500 – 2,499' (intermediate birth weight) and '2,500 and more' (normal birth weight). These tables are used to calculate the weighted indicators of perinatal mortality and its components which are calculated as the corresponding rates for each weight category multiplied by the fraction, which is the number of live births and the dead in this weight category to the total number of live births and the dead in all weight categories.

The use of 'BABIES-MATRICA' techniques allows identification of the weaknesses in the mother and child healthcare system as it has been proved that the level of proportional rate of perinatal mortality in different age groups is influenced by various factors (Tab. 2). In particular, the death of children born with a weight of 1,500 g, the mother's health before pregnancy and her behaviour during pregnancy, play the primary role. For infants born with a weight more than 1,500 g, the main cause of a fatal case in the antenatal and intranatal periods, are the shortcomings in medical care of mother and foetus in the postnatal period, defects in newborn care in the early neonatal period. Proper choice of the method to improve the level of healthcare for girls and women before impregnation, during pregnancy and childbirth, and infants after birth in health facilities, will help to reduce perinatal and infant mortality.

Table 2. Dependence level of proportional rate of perinatal mortality in individual weight classes of infants upon women's health and quality of medical care

Weight, g	Dead infants		
	Antenatal	Intranatal	Postnatal
500–999	Women's and mothers' health		
1000–1499			
1500–1999	Medical service quality for mothers and fetus		Medical service quality for infants
2000–2499			
2500–2999			
3000–3499			
3500 and more			
Total			

Analysis used for perinatal mortality in Ukraine on the basis of the 'BABIES-MATRICA' method are the materials of the mother and child health monitoring in 2006–2012

and presented in the analytical and statistical reference guides issued by Medical Statistics Centre of Ukraine [3–6]. According to the WHO data, the rate of perinatal mortality is determined by its high level in the group of new-born babies with underweight (less 1500 g), and in the group of extreme underweight at childbirth (500–999 g).

An opposite tendency is observed in Ukraine. In 2010, the proportional rate level of perinatal death of infants weighing more than 1,500g was 1.8 times higher (6.63 per 1,000 newborn normal and stillborn) than those underweight (3.61%), which may indicate the low quality of medical services. The proportional index of antenatal and intranatal foetus mortality with the weight of more than 1,500 g during delivery was twofold higher (4.4%) than the proportional index of postnatal mortality of infants in this weight category (2.23%) (Tab. 3). It should be noted that according to the WHO criteria, the proportional index of early neonatal mortality among infants with underweight of 1,500 g during delivery, should not exceed 1.0 per 1,000 newborn normal and stillborn [4]. In Ukraine, this rate exceeded the necessary standard more than 2.2 times, which indicates drawbacks in obstetric assistance before and during delivery, as well as in neonatal assistance.

The dynamics of proportional indexes of perinatal mortality over five years (2006–2010) was characterized by a rapid decrease of 2.2 times of the index for underweight newborns at birth (less than 1,500 g), beginning from 2007 – from 7.81‰ in 2006 to 3.65‰ in 2007; thus, the proportional index of perinatal mortality for newborns with body weight of 500–999 g decreased almost three times (from 6.77‰ in 2006 to 2.23‰ in 2007), and the index for newborns with body weight of 1,000 – 1,499 g increased by 1.3 times (from 1.08‰ to 1.42‰, respectively), and further on, the proportional indices for perinatal mortality remained on a relatively stable level (Tab. 4). The levels of proportional index of perinatal mortality of new-born with body weight at birth of more than 1,500 g in 2006–2010, went down (1.1 times, from 7.31‰ to 6.64‰), mostly due to reduction of the index in newborns with body weight of more than 2,500 g (from 456 to 4.06 per 1,000 infants born live and dead). The percentage of newborns with body weight less than 1,500 g at birth went down from 51.8 in 2006 to 352 in 2010 (Tab. 5).

In the opinion of experts, dramatic changes in the proportional index level of perinatal mortality, both among all newborns and in some weight categories, must attract attention to reliability of babies' registration on the criteria of live and stillborn childbirth, as well as determining the weight at birth.

Thus, the primary analysis of proportional indices of perinatal mortality provides the reason to assume that in 2006–2010 the best success was attained in the less guided and inertia sector of the medical service. It is the improvement of the health of a woman up to impregnation, where results are achieved due to a prophylaxis, early exposure and timely treatment of extragenital pathology among girls of 17 and women of fertile age. The biggest problems which are increasing in the course of time are related to the medical services for pregnant women in antenatal clinics and obstetric hospitals during delivery, and for the newborns in neonatological institutions.

Table 3. Proportional index of perinatal mortality in some weight categories per 1,000 newborn normal and stillborn in Ukraine 2010

Weight, g	Antenatal	Intranatal	0–6 days	Perinatal
500–999	0.94	0.16	1.01	2.10
1,000–1,499	0.80	0.08	0.63	1.51
1,500–1,999	0.79	0.06	0.43	1.28
2,000–2,499	0.82	0.08	0.39	1.30
2,500–2,999	0.81	0.15	0.41	1.37
3,000–3,499	0.72	0.21	0.49	1.43
3,500 and more	0.51	0.24	0.51	1.26
Total	**5.40**	**0.98**	**3.87**	**10.24**
Less than 1,500	1.74	0.23	1.63	3.61
1,500–2,499	1.61	0.15	0.82	2.58
2,500 and more	2.04	0.60	1.41	4.06
Total	5.40	0.98	3.87	10.24
Less than 1,500	1.74	0.23	1.63	3.61
1,500 and more	3.65	0.75	2.23	6.63
Total	**5.40**	**0.98**	**3.87**	**10.24**

Source: *Monitoring of the state of mother and child health:* analytically-statistical reference book for 2010, Medical Statistics Centre of the MHO of Ukraine, 2011, 48 pp. [6]

Table 4. Dynamics of proportional indexes of perinatal mortality per 1,000 newborn normal and stillborn in Ukraine 2006–2010

Weight class, g	2006	2007	2008	2009	2010
500–999	6.77	2.23	2.27	2.12	2.10
1,000–1,499	1.08	1.42	1.52	1.50	1.51
1,500–2,499	2.75	2.85	2.82	2.58	2.58
2,500 and more	4.56	4.32	4.27	4.18	4.06
Total	**15.15**	**10.83**	**10.88**	**10.38**	**10.24**

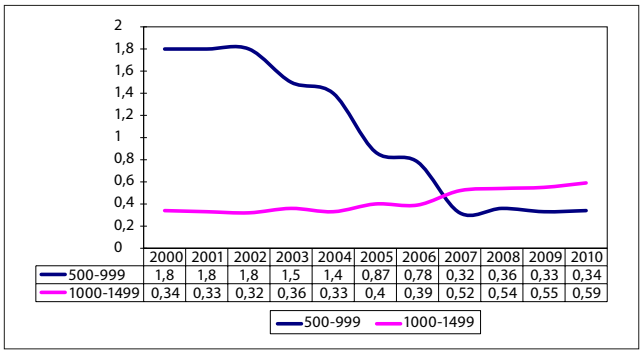
Source: *Mother and child health status monitoring*: analytical and statistical reference books 2007–2010 [3–6].

Table 5. Structure of perinatal mortality according to weight classes, %, Ukraine 2006–2010

Weight class, g	2006	2007	2008	2009	2010
500–999	44.7	20.6	20.9	20.4	20.5
1,000–1,499	7.1	13.1	14.0	14.5	14.7
1,500–2,499	18.2	26.3	25.9	24.9	25.2
2,500 and more	30.1	39.9	39.2	40.3	39.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Is should be noted that the detected phenomenon could be explained by the change in the indices of the registered newborn body weight after Ukraine adopting the WHO live childbirth criteria (Fig. 6).

While in 2006 (before adopting the new live childbirth criteria) the proportion of underweight newborns (less than 1,500 g) comprised 1.17%, and extremely underweight newborns (500–999 g) – 0.78%, in 2007 the part of the newborn with body weight less than 1,500 g decreased 1.4 times (to 0.84%), of the newborn with body weight 500–999 g – 2.4 times (to 0.32%). Such changes in the live and still childbirth rates are inconsistent with the biological laws of generative health [3] and give rise to doubts as to their



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
500-999	1,8	1,8	1,8	1,5	1,4	0,87	0,78	0,32	0,36	0,33	0,34
1000-1499	0,34	0,33	0,32	0,36	0,33	0,4	0,39	0,52	0,54	0,55	0,59

Figure 6. Underweight newborn (up to 1,500 g) per 100 newborn normal and stillborne in Ukraine 2000–2010
Source: *Моніторинг стану здоров'я матері та дитини: аналітично-статистичний довідник за 2010 рік.* – К.: Центр мед. статистики МОЗ України, 2011. – 48 с. [2]

registration credibility, which has been proven by the data of the analysis performed by the experts of the Ministry of Public Health of Ukraine in 2008 (Ukrainian Institute of Strategic Research of Ministry of Public Health of Ukraine) [4]. According to the WHO, the proportion of newborns with the body weight of 500–999 g and 1,000–1,499 g has to comprise 1÷1.5% in the live and still childbirth rates [12].

The success of the policy aimed at the increase of babies' chances for survival also depends upon availability of reliable information about the number of those born and those deceased. According to the data of the mother and child health monitoring provided by the Center for Medical Statistics of the Ministry of Public Health of Ukraine in 2010, on condition that the proportion of the newborn in the weight category is real, i.e. equals 1%, the proportional index of early neonatal mortality per 1,000 newborns normal and still, will increase twofold – from 3.8 to 7.94. Figure 7 shows that the real proportional index of early neonatal death exceeds the factual proportion in all regions of Ukraine, which demands additional measures in terms of the healthcare for children on the early stage of their lives.

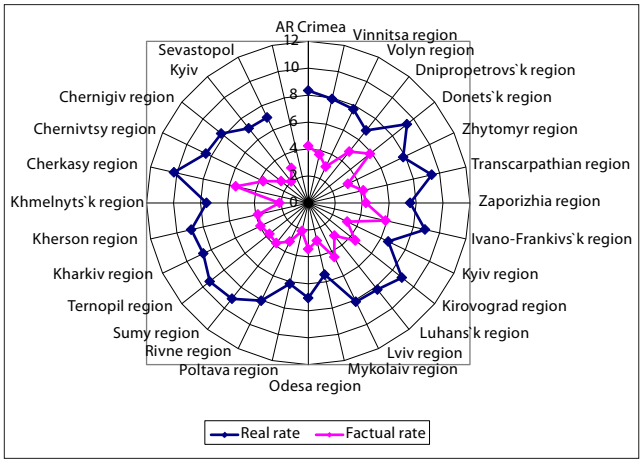


Figure 7. Factual and real proportional early neonatal mortality rate per 1,000 newborn normal and stillborn in Ukraine 2010

The biggest (over 5 points) excess of the factual index of early neonatal mortality per 1,000 newborn normal and stillborn was registered in eight regions (Oblasts of Zakarpattia, Luhansk, Sumy, Ternopil, Kherson, Khmelnitskyi, Chernihiv, and Kiev), and the lowest (up to 3 points) – in 2 regions (Oblasts of Dnipropetrovsk and Mykolaiv) (Fig. 8).

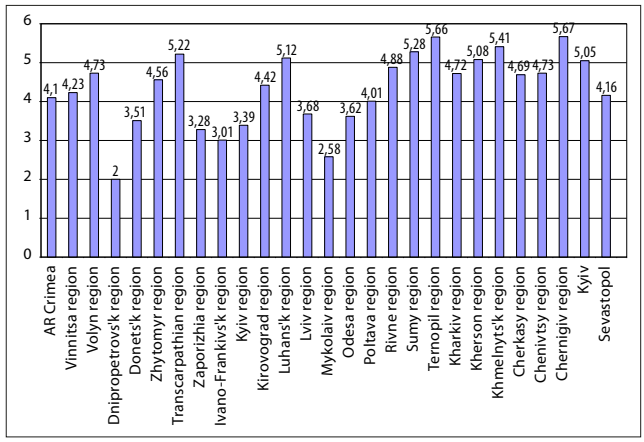
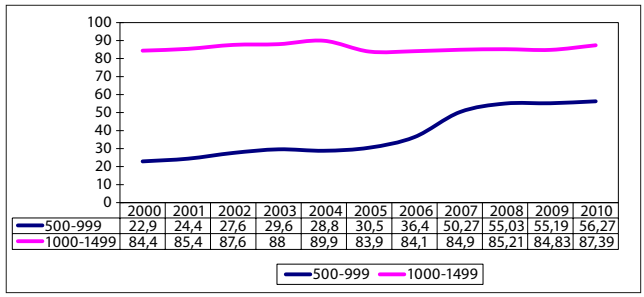


Figure 8. Difference between factual and real proportional early neonatal mortality rate per 1,000 newborn normal and stillborn in Ukrainian regions 2010

Simultaneously, there was a great increase in the survival rate among newborn babies with extremely low body weight (500–600 g) during the first 168 hours of life per 100 newborn live – from 36.4% in 2006 to 50.27% in 2007, while the survival rate of newborn babies with body weight 1,000–1,499 g ranged from 84.4% – 87.4% in 2000–2010 (Fig. 9). These high rates of the survival of babies with low body weight at birth give rise to doubt, because the reference criteria of survival given by the WHO are as follows: for industrially-developed countries the survival rate among babies with body weight 500–999 g is approximately 30%; body weight 1,000–1499 g – about 70%. For post-Soviet countries these rates are 10–15% among newborn babies with body weight ranging from 500–999 g, and 50% among babies with body weight from 1,000 – 1,499 g [2].

The extremely low percentage of the newborn with low and extremely low body weight, and the high survivability of such children, can testify to the failure to meet the requirements regarding the weighing procedure and possible weight decline in the non-viable newborn.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
500-999	22,9	24,4	27,6	29,6	28,8	30,5	36,4	50,27	55,03	55,19	56,27
1000-1499	84,4	85,4	87,6	88	89,9	83,9	84,1	84,9	85,21	84,83	87,39

Figure 9. Survival of newborns with low body weight at birth (less than 1,500 g) after the first 168 hours of life per 100 live newborns in Ukraine 2000–2010.
Source: *Monitoring of the state of health of mother and child*: analytically-statistical reference book for 2010. K.: Centre for Medical Statistics of the Ministry of Health of Ukraine 2011, 48 pp. [2]

It should be noted that the artificial improvement of one index of the 'BABIES-MATRICA' causes worsening of the other, and thus denies an opportunity to deduce the real drawbacks of the out-patient and in-patient medical aid, and take the necessary administrative decisions to rectify the situation and improve of quality of medical services.

CONCLUSIONS

1. Analysis of the dynamics of perinatal mortality in 2000–2010, conducted on the basis of the rates defined by the WHO criteria during the whole observation period, showed its 2.6 times reduction. It was revealed that the tendency of a gradual decline in the perinatal mortality rate was broken by its sharp fall twice: in 2005 (in connection with reduction of legal grounds for the abortion on social grounds) and in 2007, which coincided with the acceptance of the WHO criteria of live childbirth in Ukraine.
2. The tendency to the decline was typical of all the constituents of perinatal mortality. It was more common for the ante- and intranatal death rates, and less common for the early new-natal death rate. However, the general level of the registered perinatal mortality in Ukraine was substantially higher in comparison with European rates. Despite the incomplete comparability of differences in the approaches to the calculation of perinatal mortality in Ukraine and the WHO European database 'Health for all', in 2009 the perinatal mortality in Ukraine exceeded the average European rate by 43.2% and the average EU rate by 60.9%. The proportion of perinatal mortality in the structure of perinatal losses diminished gradually, but it was higher in comparison with the WHO criteria by 13% (62.2% against 53–55%), which testified to defects both in the provision of medical aid for children and in the registration of the newborn.
3. The regional differences between the rates of perinatal mortality were rather high: the difference between the highest and the lowest rates equaled 2.1 times. The levels of perinatal mortality revealed a close connection with the levels of baby death rate($r=0.76$; $p<0.001$).
4. It was established that the level of perinatal mortality depends on body weight at birth. In the group of those born with extremely small body weight, the special rate of perinatal mortality exceeded the same rate in the group of those born with normal body weight 144 times.
5. Analysis of the data of the mother and child health monitoring conducted by the Center for Medical Statistics of Ukraine since 2006, with the use of the WHO 'BABIES-MATRICA' special methodology, showed that in Ukraine there is a correlation of proportional rates of perinatal mortality in the newborn with body weight at birth of more and less than 1,500 g (1.8 times). This contradicts the scientifically proven regularity of the perinatal mortality rates being dependent on the higher levels of the proportional rates in the group of the newborn with low bodyweight (less than 1,500 g). Such a tendency can indicate the low quality of medical aid at all stages – during the provision of obstetric assistance before and during the delivery and the provision of neonatological help, which is additionally confirmed by a 2.2 times excess of the proportional rate of early neonatal mortality among babies with bodyweight at birth over 1,500 g, in comparison with the standards recommended by the WHO.
6. It was established that in Ukraine in the structure of the registered newborn ranged as to their body weight, the proportion of the newborn live and stillborn with the extremely low (500–999 g) and very low (1,000–1,499 g) body weight, was considerably lower in comparison with the data of international research on the levels of their survivability, which substantially exceeded the rates of the developed countries of the world. Such results reveal the insufficient reliability of registration of babies on the criteria of live and still childbirth and determination of their weight at birth. This is the cause of the understated data about perinatal and baby mortality in Ukraine, and could be the reason for the deformation of priorities in the healthcare system.

The prospects of further research consist in the solution of problems of more reliable registration of babies on the criteria of live and still childbirth, and correct determination of their weight at birth.

REFERENCES

1. Дудіна ОО, Лазоришинець ВВ, Моісеєнко РО, Лізунова ГІ. Діяльність служби охорони здоров'я матері і дитини в Україні. Щорічна доповідь про результати діяльності системи охорони здоров'я України. 2008-2009.pp.102–137 (in Ukrainian).
2. Дудіна О. О. Діяльність служби охорони матері і дитини в Україні. In: Дудіна О О, Моісеєнко РО. Щорічна доповідь про результати діяльності системи охорони здоров'я України. 2007-2008.pp.91–117 (in Ukrainian).
3. Голубчиков МВ, Педан ВБ, Руденко НГ, et al. Моніторинг стану здоров'я матері та дитини : аналіт.-стат. дов. за 2007 рік. Центр мед. стат. МОЗ України, 2008.p. 26 (in Ukrainian).
4. Голубчиков МВ, Педан ВБ, Коломейчук ВМ, et al. Моніторинг стану здоров'я матері та дитини : аналіт.-стат. дов. за 2008 рік. Центр мед. стат. МОЗ України, 2009.p.40 (in Ukrainian).
5. Голубчиков МВ, Педан ВБ, Руденко НГ, et al. Моніторинг стану здоров'я матері та дитини : аналіт.-стат. дов. за 2009 рік. Центр мед. стат. МОЗ України, 2010.p. 42 (in Ukrainian).
6. Голубчиков МВ, Осташко СІ, Руденко НГ, Мельник ММ. Моніторинг стану здоров'я матері та дитини : аналіт.-стат. дов. за 2010 рік. Центр мед. стат. МОЗ України, 2011.p.48 (in Ukrainian).
7. Перинатальная смертность – причины и профилактика http://www.medmoon.ru/beremennost/ak22.html (access: 2014.04.30) (in Ukrainian).
8. Про порядок штучного переривання вагітності від 12 до 28 тиж.: постанова Кабінету Міністрів України від 12.11.1993 р. № 926; www.rada.gov.ua (access: 2014.04.30) (in Ukrainian).
9. Про реалізацію статті 281 Цивільного кодексу України : постанова Кабінету Міністрів України від 15.02.2006 р. № 144; http://zakon.rada.gov.ua/cgi-bin/laws/main.cgi?nreg=144-2006-%EF (access: 2014.04.30) (in Ukrainian).
10. Causens S, Blencome H, Stanton C, et al. National, regional and wordwide estimates of stillbirth rates in 2009 with trends since 1995: systematic analysis. Lancet 2011; 377: 1319–1330.
11. Neonatal and perinatal mortality : country, regional and global World Health Organization Geneva 2006.p.75; http://whqlibdoc.who.int/publications/2006/9241563206_eng.pdf (access: 2014.04.30).
12. Vishnubhakta V. Perinatal periods of risk analysis. In: Vishnubhakta V. Delawere Health and Social Services Division of Public Health. Center for Family Health Research and Epidemiology, 2010.p.49.

Analiza umieralności okołoporodowej na Ukrainie

Streszczenie

Analiza danych statystycznych z lat 2000–2010, oraz danych dotyczących monitorowania stanu zdrowia matki i dziecka przeprowadzona przez Centrum Statystyki Medycznej Ministerstwa Opieki Zdrowotnej Ukrainy (2007–2010) wykazały, że w analizowanym okresie nastąpił 2,6-krotny spadek współczynnika umieralności okołoporodowej, notowanej zgodnie z kryteriami WHO. Jednocześnie, ogólny poziom umieralności okołoporodowej na Ukrainie nadal pozostaje wysoki, w porównaniu ze współczynnikami europejskimi, przewyższając średni współczynnik europejski o 43,2%, oraz współczynnik dla krajów Unii Europejskiej o 60,9%. Znacznie wyższe współczynniki umieralności okołoporodowej niemowląt o wadze powyżej 1500 g (1,8 razy), w porównaniu z niemowlętami ważącymi poniżej 1500 g, są dowodem zarówno na niską jakość usług medycznych na wszystkich etapach (opieka położnicza przed i podczas ciąży, opieka noworodkowa), jak i na niedostateczną wiarygodność rejestracji niemowląt przy porodzie, co może spowodować niekorzystne przesunięcie priorytetów w opiece zdrowotnej.

Słowa kluczowe

umieralność okołoporodowa, współczynniki umieralności ogólnej, współczynnik umieralności proporcjonalnej