

## **ABSTRACT**

### **The aim of the study**

The aim of the study was infant mortality rate in Podkarpacie within the period from 2000 to 2010, and defining the relations between infant mortality and chosen sociodemographic and biological factors carried out by their mothers. Deliberations included in the study focus on connections between infant mortality and factors among mothers: such as age, place of permanent residence, education, performed work, number of pregnancies, implementing healthy practices (including in early care, continuity of care) and maternity failures. The main aim of the study was to define the dynamics of changes in infant mortality in podkarpackie province within the years 2000-2010.

### **Material and methods**

The statistical survey was conducted in a group of 699 mothers of children who died before one year of age (test group) and in a group of 3436 randomly chosen women after delivery (control group), whose children were living at least one year. All data concerning the infant mortality used in the study come from the sources of the Central Statistical Office. The source of the information concerning mothers was the medical documentation collected at the time of their stay at gynaecology-obstetrics wards. Pearson's chi-squared test, Student's t-test, Shapiro-Wilk test, Levene's test, Mann-Whitney U test, ANOVA Kruskal-Wallis H test and test of multiple comparisons of average rates for all groups were used during the statistical survey. The verification of the statistical surveys conducted, was done at the level of statistical significance  $\alpha = 0,05$ .

### **Results**

There was a positive decreasing tendency of infant mortality rate observed in podkarpackie province within the years 2000-2010. The mortality rate decreased within that period from 7,17 to 5,23 per 1000 live births. At the same time its equivalent to Poland decreases appropriately from 8,11 to 4,98 per 1000 live births.

The biggest number of infants died in their first weeks of live and no matter how that percentage had been changing within the years 2000-2010 and decreasing, it was still 50 and more percent of the total deaths. Within the whole period, both in podkarpackie province and the whole country, the phenomenon of high mortality rate among boys, that is the number of boy deaths was higher than the number of girl deaths was present. In the whole studied period, the absolute number of infant mortality in podkarpackie province in the country was bigger than in the city, whereas the rate of mortality usually reached bigger numbers among children living in a city. The highest percentage of infant mortality (60-75%) was in case of premature births, and at the same time in the structure of infant mortality, children of low birthweight were predominating. The significant influence of mother age, her place of living, type of work performed, number of pregnancies and maternity failures in the past on the level of infant mortality in Podkarpackie was justified in that study.

## **Conclusions**

Within the period of 2000-2010 infant mortality in Poland was decreasing. In comparison with the national data, the situation in Podkarpackie seemed however, less favourably. The average annual speed of mortality was 3,1% in case of infants and 2,4% in case of new born babies. The decreasing tendencies observed, however positive, were not able to reach the speed of decreasing of the mortality among children in Poland, which for infants was 4,8%, and for new born babies 4,5% annually. One of the possible reasons of such a state, resulting from the conducted research, was low value of the indicator of the continuity of care over the pregnant woman, which in the analysed period was on average 4,5 and was significantly lower than the recommended by the Polish Gynaecological Society (at least 7-8 in case of the pregnancy without complications). This indicates unwavering need of: improving the accessibility to gynaecological-maternity clinics, continuous education of future mothers within the proper health care during pregnancy and creating them the best socio-economic conditions.

**Key words:** infant mortality, new born babies mortality, reasons of mortality, risk factors.