ANALYSIS OF PRIMARY INCIDENCE OF ALL FORMS OF ACTIVE TUBERCULOSIS AMONG RESIDENTS OF DIFFERENT DISTRICTS OF MINSK

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An analysis of the incidence of newly diagnosed tuberculosis in residents of various territorial-administrative regions of the city of Minsk was carried out. The areas with the highest and lowest incidence of active tuberculosis in 2018 were identified. Attention is focused on the incidence rate of the disease under investigation in the Partizansky district of Minsk.

Keywords: incidence, tuberculosis, regression dependence.

To determine the area of Minsk that is the most unfavorable in the epidemiological plan for the incidence of active tuberculosis, the data of the summary report were analyzed. It should be noted that this report includes data from the 1st and 2nd city TB dispensaries in Minsk, as well as data from the dispensary department of the Republican Scientific and Practical Center for Pulmonology and Phthisiology.

In 2018, the highest incidence of tuberculosis was recorded in Zavodsky (16,99 per 100 thousand population), Partizansky (11,27 per 100 thousand population) and Pervomaisk (11,36 per 100 thousand population) districts of Minsk. The most prosperous epidemiologically, the Soviet (6,1 per 100 thousand population) and Leninsky (6,40 per 100 thousand population) areas. It becomes obvious that the population of Zavodskoy district is sick 2,79 times more often than the inhabitants of Sovetsky district.

Due to the fact that the educational institution "International State Ecological Institute named after A. D. Sakharova"of the Belarusian State University located on the territory of the Partizansky district is appropriate to pay attention to the dynamics of the incidence of tuberculosis in this area in the period 2013-2018.

The highest rate of morbidity decline was observed in 2018 and amounted to 31,07 %. The average incidence of active tuberculosis of all forms over six years corresponded to 21,22 cases per 100 thousand people. The average annual rate of decrease was 16,02 %. A regression dependence of the linear type (R2 = 0,93) was constructed, obeying the expression: $y = –3,40x + 33,11$, where y is the incidence of tuberculosis, and x is years. The predicted value of the incidence of tuberculosis in 2020 is 5,92 cases per 100 thousand population.

At the same time, it should be emphasized that the most dangerous in the epidemiological plan is pulmonary tuberculosis. Studies in this regard showed that in Partizansky district in 2018, the lowest incidence rate for the study period was recorded, which amounted to 8,2 cases per 100 thousand population of this region. It can be stated that the annual rate of decrease in the incidence of pulmonary tuberculosis is 11,26 %. A linear type regression model was constructed according to the incidence of pulmonary tuberculosis, which obeys the expression: $y = –2,88x + 27,24$, where y is the incidence of tuberculosis, x is the years. The approximation coefficient R2 was 0,95. The predicted tuberculosis incidence rate for 2020 is 4,16 cases per 100 thousand people.

It can be concluded that by the end of 2018 Partizansky, Zavodsky and Pervomaisky districts are the most unfavorable districts of the city of Minsk in the incidence of tuberculosis of all forms. Despite the decline in the incidence of newly diagnosed tuberculosis in Partizansky district over the period 2013–2018, the control of this situation remains an important task.

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