

FORECASTING TUBERCULOSIS DISEASES IN UKRAINE BY THE
METHOD OF SELECTION OF THE LARGEST POSSIBILITY

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Mathematical modeling is one of the most effective tools for predicting the epidemiological situation of tuberculosis, which is used to develop programs for the prevention and control of tuberculosis and assess their impact. The process of spreading tuberculosis infection varies significantly in different regions of the world. This is due to different epidemic background, geographical and climatic conditions, economic, demographic and social characteristics.

One of the most effective methods of forecasting is the maximum likelihood method. This time series analysis model is widely used in the world to predict cases of various diseases, including tuberculosis. The development of computer technology, the emergence of data processing programs that are in the open access, create favorable conditions for the application of this method in order to predict the number of new cases of tuberculosis in the future. The purpose of the work is to develop a time series model using the method of greatest similarity and prediction on the basis of TB in Ukraine.

The developed application makes it possible to trace the accuracy of patients with tuberculosis by 2018. The task of prediction of time series is actual and is solved based on the forecasting model. The developed methodology for predicting tuberculosis morbidity in the development of the epidemic process can be used to plan preventive and control measures. The relevance of the proposed methods of forecasting is largely due to the peculiarities of the epidemiological situation in the country. Introduction of new methods of forecasting will allow to define and plan the directions and scope of control and preventive measures. A model of forecasting of time series was developed based on the sampling of the maximum similarity of the types of the task of prediction of the time series - taking into account and without taking into account external factors.

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