**Part3:**

Previously, we made a relatively complete modification and final construction of the previous model through the initial construction and solution of the model, and after considering the correlation between the number of drugs and various socio-economic factors. The effect can also be demonstrated through the previous model application section. Next we will introduce the policy of counter opiate drug transmission by combining the content of part1 and part2, and the entire complete policy will be divided into fundamental level with basic level.

Basic level policy: In this part of the policy, we will not consider the impact of various socio-economic factors on the quantity of opioids. Through the unmodified model, we can more accurately predict that a certain county in a certain state in the next year will become a flashpoint and affect the number of opioids in many other counties. Then the government can focus on these counties and achieve the goal of countering at a basic level. Specifically, it is important to focus on WOOD of West Virginia in 2019, ALLEGHENY of Pennsylvania in 2022, and KENTON of Kentucky in 2025. These three places will explode on a large scale in the next few years, and induce a surge in the number of opioids in counties in their respective states, which is a point that needs to be focused.

Policy at a fundamental level: This time we will focus on the impact of socio-economic factors on the number of opioids. This will be done through the modified model in our part2. Because we have developed a well-developed model and derived socio-economic factors that specifically affect the number of opioids, we reduce the impact of these socio-economic factors at the fundamental level. We will recommend relevant government departments to strengthen the concern for single-parent families, grandparents raising their grandchildren families, and families with migrants. The process of model solving shows that the number of opioids has a great relationship with these factors. At the same time, the government should expand the coverage of social welfare, because we found that the number of non-social welfare people and the number of opioids are directly related to the process of solving the model.

We use the model we have built to test and implement the relevant policies (the basic level pays special attention to certain counties, and at the fundamental level to improve social welfare protection and the assistance of specific groups of people) and to see what impact will it have in five years. (We assume that the implementation of the relevant system is in 2019, in accordance with the two possible results we predicted in 2024) as followings:

**24 years of two figures**

**Summary：**

The United States is facing a huge crisis of opioids, and if we does not take certain measures, it will bring many adverse effects. A sufficiently good model of drug spread propagation needs to be built to find the cause of the current level of opioids, and to give predictions about the spread of future drug spreads, so that measures can be taken to some extent to prevent this from happening.

We tried to find a model that could describe the drug's propagation relationship to fully assess the problem. We first consider measures of time and space. If we can know whether there is certain correlation between these two standards and the construction of this model, then the whole model will become simpler. Based on the available data, we examined the correlation between the number of opioid reports in the same geographical area and the time and space. The number of opioid reports in the same geographical area was correlated with time, but not in spatial location. So we believe that the number of opioid reports will be deduced over time, and geographical distance will not affect it.

After completing the basic model, we used the influence intensity matrix between the counties as a model to measure the drug delivery medium. The initialization of the matrix requires an exploration of the relationship between states. Based on the available data, we find the intensity of influence between states on each other's transmission, and then use these values ​​as the intensity of each county's influence in different states. After completing the initialization process, we performed the modification of the value of each element in the matrix using existing data in a similar way to the state. It is then possible to make a rough estimate of the trends for the next few years through this already built matrix.

Although the model has been built to predict future data, this prediction is based entirely on the macro level. It can only be said to obey such a trend, but in fact many internal factors will affect the entire county and even the state. So we need to modify the model that has been successfully built and add an analysis of the micro factors.

Through seven years of data, we tried to find out the correlation between the number of drugs in each county and the various factors of the county, and the magnitude of the correlation of these factors was described to some extent by the weight matrix.

Finally, we identified several factors that have the greatest impact on the number of drugs in a county, and proposed policies trying to control the continued proliferation of these drugs from both macro and micro levels. And then we completed the solution process for the entire problem.

**Keywords: impact intensity matrix, trend prediction, socio-economic factors**