

SUTRA Model

SUTRA (Susceptible, Undetected, Tested (positive), and Removed Approach) is a government of India backed model to track the trajectory of the [COVID-19](#) pandemic in the country.

The model has recently been in the news after its prediction about the second wave in India failed. The virus has claimed thousands of lives in the country, where the model had predicted that a second wave in the country is unlikely.

About SUTRA Model

- National COVID 19 Supermodel Committee was formed by the Government of India to make projections about the spread of COVID 19 in India
- The committee comprises scientists from IIT Kanpur and Hyderabad
- The model uses three main parameters to predict the course of the pandemic which are:
 - **Beta** - Also known as contact rate, it measures how many people an infected person infects per day. It is related to the R0 value, which is the number of people an infected person spreads the virus to over the course of their infection
 - **Reach** - It is a measure of the exposure level of the population to the pandemic
 - **Epsilon** - It is the ratio of detected and undetected cases

SUTRA Model - Challenges

- One of the key causes of unsuccessful outcomes of the SUTRA Model is the rapidly changing mutants of the virus
- Scientists have stated that it is clear that the nature of the virus has been changing very rapidly. In such a context, any prediction for COVID-19 must be continually readjusted, sometimes almost daily
- Mathematical models by SUTRA are only effective if the virus dynamics remain constant. Mathematical models can also provide a mechanism to predicting alternate scenarios corresponding to various policy decisions such as non-pharmaceutical interventions
- Also, many scientists are of the view that the exponential rise was not calculated as there was a contact between people and populations that went wrong every time