

README

1. Model overview

The simulation model is named **Vaccination Simulation Model-2026-02-01.mdl** and runs in **Vensim DSS**. The model represents all 50 U.S. states and Washington, DC. By default, Connecticut (CT) is active. To analyze a different state, select the appropriate subscript from the top menu (see instructions below).

Required files

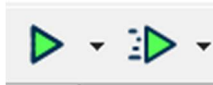
The following files must be saved in the **same folder** as the Vensim model file (.mdl):

- **Data.xlsx** and **Data.vdf**: input data used by the model.
- **JD parameter for CI-all.txt**: joint distributions of coefficient values used to simulate confidence intervals. The .txt file is tab-delimited and can be read directly by Vensim.
- **1.lst**: list file that saves the two main variables of interest for sensitivity analysis.

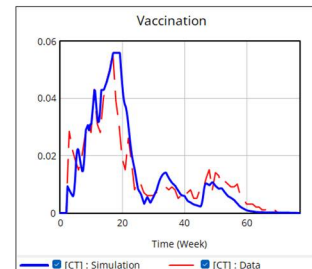
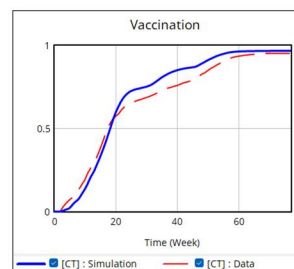
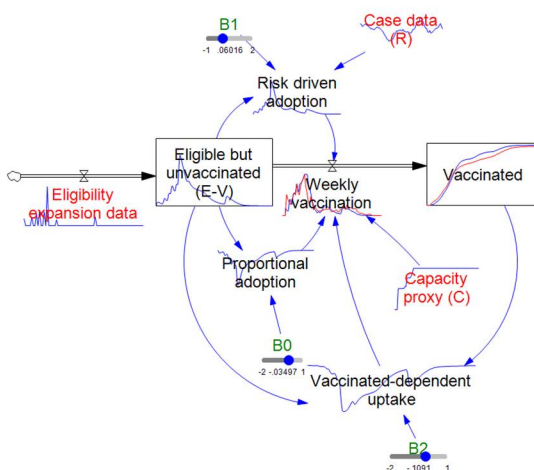
Other files for future reference: **coefficients.xlsx**: estimated coefficients from the regression model, and **JD parameter for CI-all.xlsx**, the source file for txt.

2. Running the model

To run the model, click on one of the run options at the top of the Vensim window.



For example, if you select the option on the right, the screen will display results using the estimated coefficients for the currently active state (by default, Connecticut).



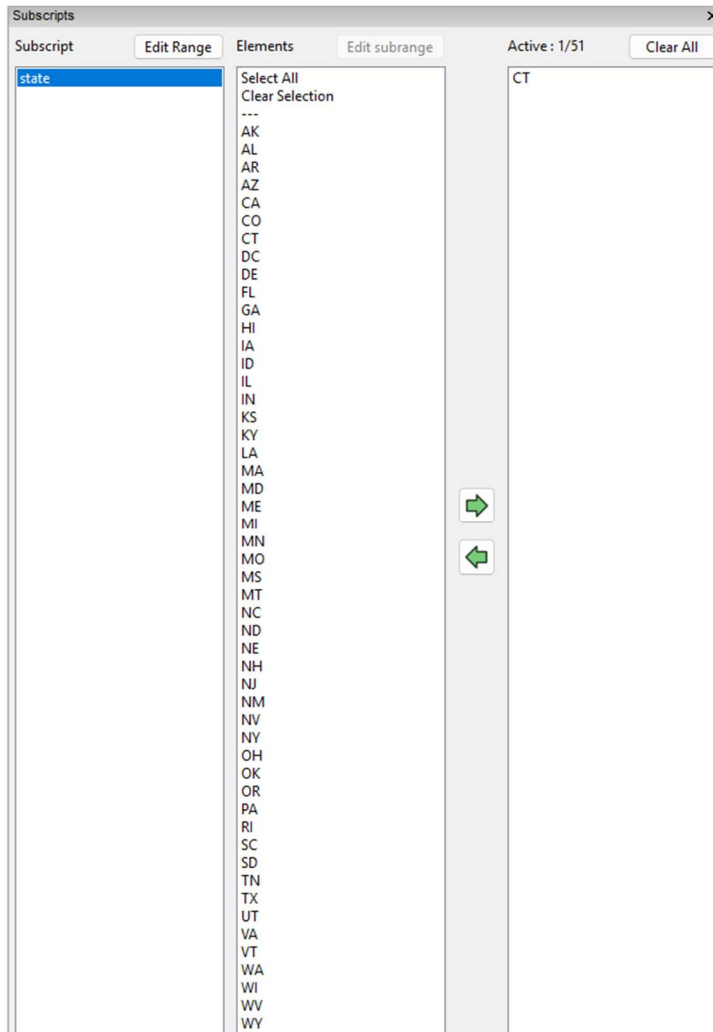
This model runs in Vensim DSS. The data files (Data.xlsx and Data.vdf) should be saved in the same folder as the Vensim model file (.mdl). The model includes all 50 U.S. states and Washington, DC. To select a specific state, choose the appropriate subscript from the top menu. If you are interested in plotting confidence intervals, you can do so using sensitivity analysis.

3. Selecting a different state

To see simulations for a different state: First click on the **Subscript Selection** icon at the top of

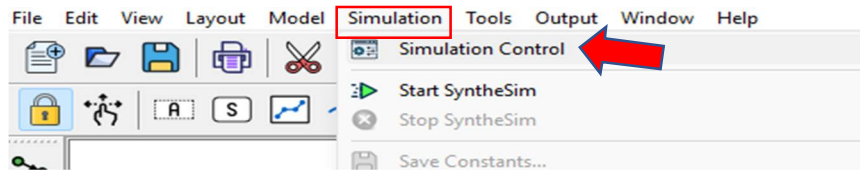


the screen. Then a panel will appear showing **CT** as the active subscript. Add or remove states from the *Active* panel to select the state(s) of interest.



4. Plotting confidence intervals (sensitivity analysis)

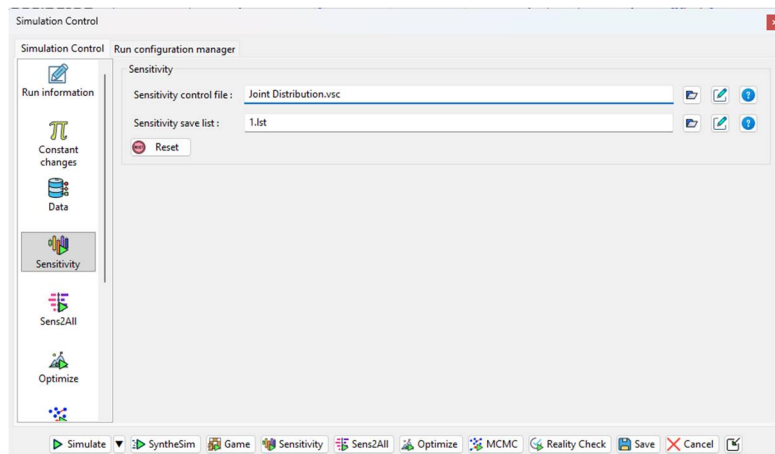
Confidence intervals can be generated using **Sensitivity Analysis**. First, click on the **Simulation** tab, and then select **Simulation Control**.



Then choose **Sensitivity**.



A sensitivity setup window will appear. Click the **Sensitivity** button at the bottom of this window to run the model.



To view the results of sensitivity analysis, select either **Weekly Vaccination** or **Vaccinated** from the model interface. Then Click on the **Sensitivity Graph** icon on the left side of the window.



For example, if **CT** is still the active subscript and you select **Vaccinated**, clicking the sensitivity graph icon will display the corresponding confidence interval plot.

