

Assignment 5: Experimenting with a model-based view.

Ellen is excited to finally be able to interact with the DCD learning environment: The federal Department for Contagious Diseases (DCD) has recently contracted for a simulation-based learning environment to promote discussion about some of the more important dynamic forces shaping policy responses to the pandemic. She hopes that this workshop will give her a chance to explore some of the policies that her internal team is working on.

The DCD Learning Environment.

The DCD Learning Environment (Beta version) comes with a brief User's Manual containing helpful information about the simulator. The Manual has several pre-prepared exercises to help users explore pandemic dynamics as well as exercises and other "hands on" materials" that useful for:

1. Understanding the basic mechanisms that drive a pandemic in the absence of any human counter-measures.
2. Exploring how human reactions and counter-reactions can cause surges in the pandemic
3. Exploring effectiveness of lockdown, contact tracing, and quarantines
4. Exploring the impacts of vaccines of varying effectiveness with differing timings during the pandemic.
5. "What if" analysis of emergence of new variants (such as the Delta Variant at various times)

Ellen's Fifth assignment

Ellen and her work team have been invited to a session where they will get to meet several of the developers of the simulator. In order to get ready for that meeting, they want to explore the simulator, using the suggested exercises in the User's Manual.

In addition, Ellen found an online story that was based on the same simulator she was using in the workshop, *Even the CDC has "Flip-Flopped" on Mandating Masks*. In the technical appendix to that story, she found embedded a ten-minute video by the lead modeler, Ali Mashayekhi, that describes some of the technical details in how the simulator was built, *Technical Details for Ali's model*. Finally in that same story, she found another 10-minute video by an Epidemiologist and modeler, Dr. Dan Gordon that describes in more detail the behavior coming from the simulator, *Behavior of Total Infected in Ali's model*. Indeed, Dr. Gordon is one of the developers that Ellen and her team are going to be able to meet in person. Ellen asked the team to come prepared to ask questions about the types of evidence that were used to build the model and the value of this, and other models, as tools for policy making.