

Online simulation to help public understand how diseases spread

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Scientists have created an online simulation to help people understand how individual actions affect the spread of diseases.

In "Simuland: Beat the Epidemic," participants can adjust public behavior such as daily human contact and [personal hygiene](#) to see the impact on infection rates, hospital admissions and deaths.

Though it was created in response to COVID-19, the simulation is intended as an education tool only—not for decision-making relevant to the pandemic.

"People are being told to make various behavior changes—from social distancing to extra hand washing—and many might be struggling to understand why," said Professor Dave Hodgson, of the University of Exeter.

"Simuland is intended to show people the link between population-level behavior and the spread of [disease](#).

"By adjusting the web app's controls and watching the results, people can see the impact of human behavior on a simulated "SimulaVirus" outbreak."

The simulation shows the spread of the disease through a population over time, and ends when no active cases remain.

It is available free online, and includes lesson plans with different resources for home-schooling, schools and universities.

"When the COVID pandemic began, we thought about what we could do," said Professor Hodgson, Director of the Centre for Ecology and Conservation at Exeter's Penryn Campus in Cornwall.

"Members of our research group study wildlife diseases, population biology and social networks.

"The public are now hearing a lot on the news about scientific concepts like infection rates and herd immunity.

"Our simulation brings these concepts together in a simple model of a society of 500 people.

"Using the simulation, people can learn how one public action usually won't be enough—they have to be used in combination."

The [simulation](#) collects no [personal information](#) from participants, but the researchers will analyze both the outcomes of various approaches on the spread of the virus, and the choices people make when taking part.

More information: Simuland: Beat the Pandemic:
simuland.exeter.ac.uk/

Provided by University of Exeter

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