

# Reaction-diffusion spatial modeling of COVID-19 in Chicago

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- ① The COVID Problem
- ② Project Context and Objectives
- ③ Current Work
- ④ Future Goals



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Identified in Wuhan, China in December 2019.  
Caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

In the United States alone, we currently have

- **37,768,911** total cases
- **626,833** total deaths



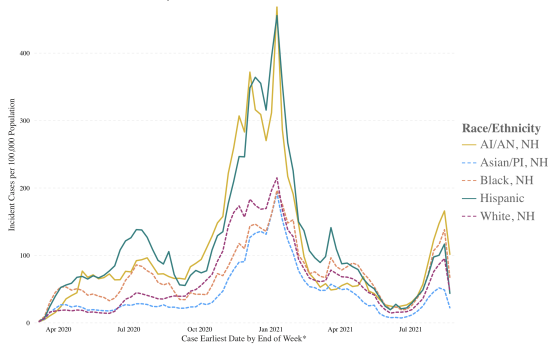


Transmission by exposure to infectious respiratory fluids:

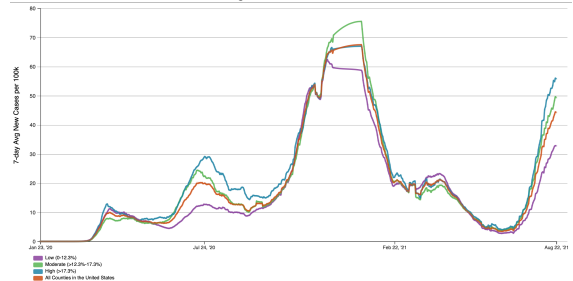
1. Inhalation of virus
2. Deposition of virus on exposed mucus membranes
3. Touching mucous membranes with soiled hands contaminated with virus



## COVID-19 Weekly Cases per 100,000 Population by Race/Ethnicity, United States



## COVID-19 Weekly Case Rate per 100,000 Population by Percentage of County Population in Poverty, United States





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