Multi-scale dynamics of COVID-19

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May 23, 2022

COVID-19 is a respiratory diseases caused by the virus SARS-CoV-2. SARS-CoV-2 originated in Wuhan, China in late 2019 and subsequently caused a worldwide pandemic leading to the death of tens of millions of people. The spatial spread of SARS-CoV-2 in the US followed a wave-like pattern in which new variants were typically reported first from urban and coastal regions and then flowed to rural and interior locations. However, the spatial spread of SARS-CoV-2 within states was often idiosyncratic.

The UGA COVID-19 working group has created a tracker allowing the user to visualize trends and download data sourced from various providers. These data may be accessed online. Your task is to create a visualization to compare temporal trends in the number COVID-19 cases at the state level with trends of the individual counties in Georgia. Do the dynamics at the state level largely reflect the dynamics at key locations? Are there leading and lagging counties? Are there consistent patterns? How do the dynamics in the individual counties aggregate to produce a state-level pattern?