Income as a Determinant of the Speed of Transmission: Study of the Fifth Wave of SARS-CoV-2 in Toronto, Ontario

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This paper reports our analysis of opioid prescriptions in Kentucky, USA, and its relationship with income and education at the level of counties. Data were obtained from the Washington Post database and the US Census.

Keywords: opioids, education, income, spatial analysis

Introduction

- Describe the when COVID first cases in Toronto,
- First and Second wave, policy the government implemented
- What lead to the third wave

    - Relaxing of restrictions
    - Emergence of Omnicron

Background

Study area

Income and change in COVID-19 incident was examined at the neighbourhood level for the City of Toronto (See Figure 1). Toronto was specifically selected because of the availability of both COVID-19 and income at such a fine spatial scale. In total there are 140 unique areas. The large number neighbourhoods enable this study to capture a diverse levels of wealth accross the city. There were created by City of Toronto to help government and other planning oganizations with obtaining socio-economic data. The boundaries are based around the Canadian Census Tracks. Each niehgbourhood may contain between two to five census tracts. (City of Toronto 2017)
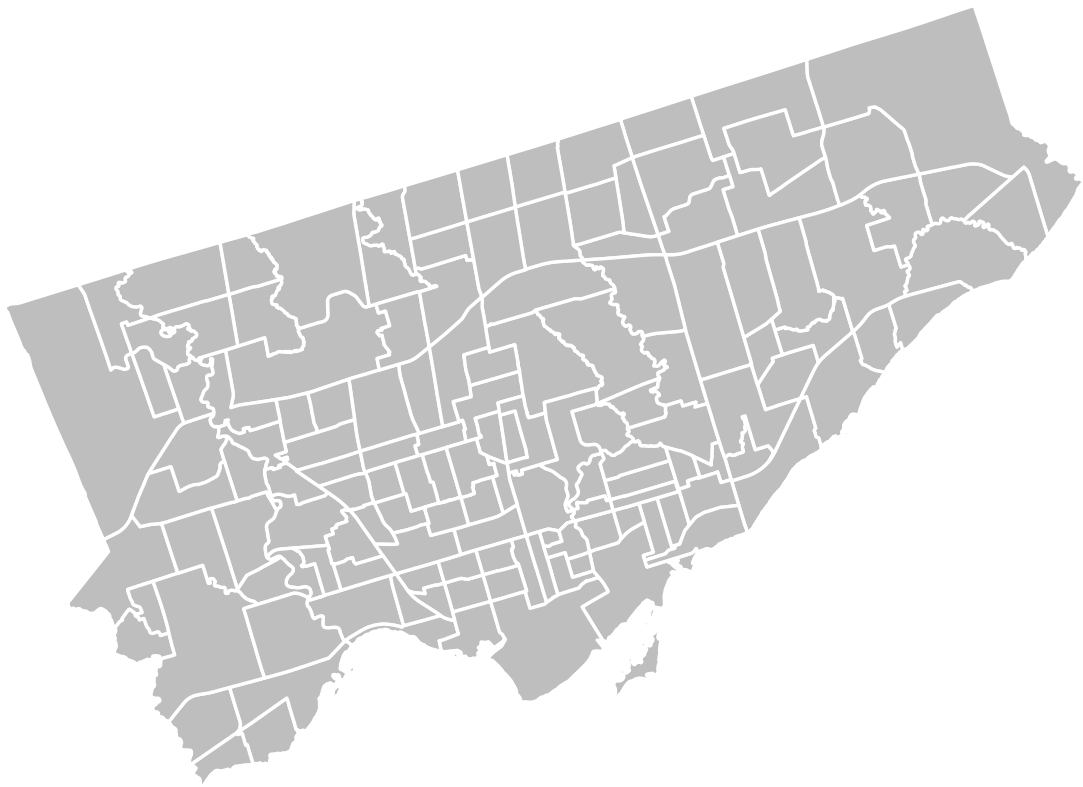
Figure 1: Neighbourhoods in Toronto, Ontario, Canada

Data

The COVID-19 data was retreived from the City of Torontro Open Data portal (Toronto Public Health 2022). The data was downloaded as a comma-seperated values (CSV) file. This data is updated weekly by the city and reports each individual case as a record. For this study the time period of interest is through December 2021, corresponding to the fifth wave of the pandemic in Ontario. The cases from the first week of December 2021 (Dec. 1 - Dec. 7) and the last week (Dec. 25 - Dec. 31) were filtered out and aggregated by neighbourhood. The income data used in this study were also retrieved from Toronto Open Data and come from a neihgbourhood profile which contains an assortment of other socio-economic variables (Toronto Social Development, Finance & Administration 2011).

Methods

Results

Analysis

Conclusion

References

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