

# **Trends in Death License: Analyzing the Distribution of Death Licenses in Great Toronto Area in the Past Decade and Potential Realation to the Extreme Weather and Covid-19\***

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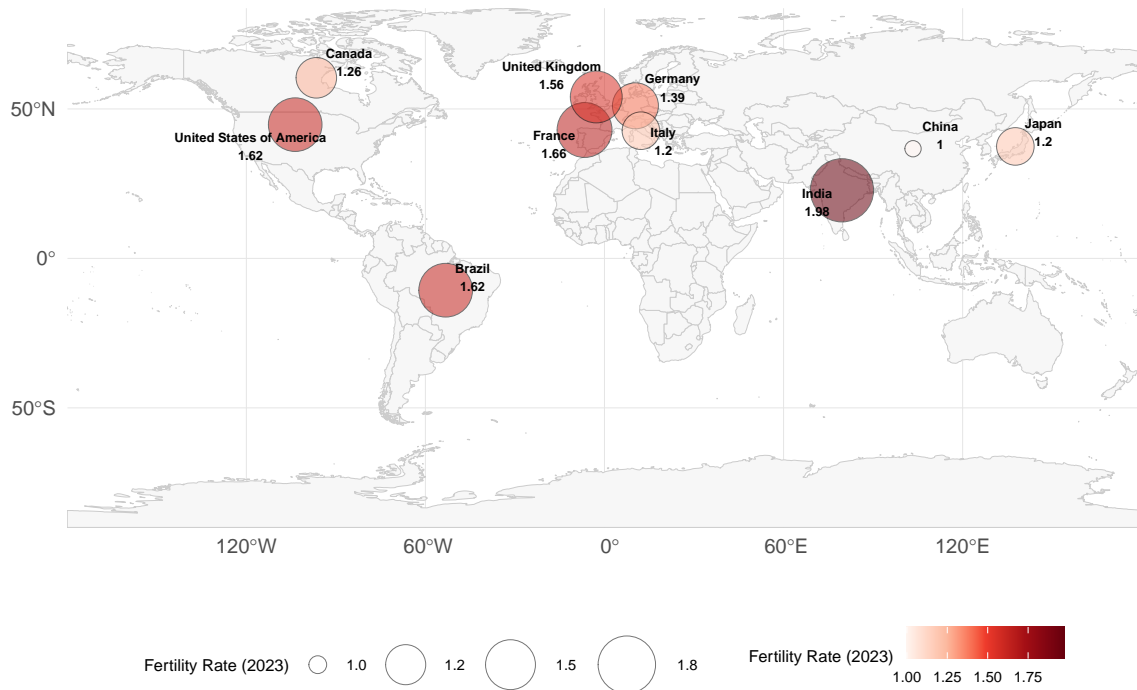
Urbanization amplified the inequality between urban area and rural area, in various aspects, including population density, economic growth, infrastructure, and public health services. During 2019-2023 the global-wide public health panic Covid-19 and the rising number in extreme weather, all it cause the rising mortality not just in Toronto, also global wide. As death number and death license are two relatively separate concept. It is obvious that the Covid-19 and severe climate have positive correlation with number of death record, while number of death license only show a positive relation with severe weather in January specifically and uncorrelated with Covid-19, by analyzing Toronto and Outside City Limits data.

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\*Code and data are available at: <https://github.com/Jie-jiao05/Paper-1.git>

### Fertility Rate (2023): G8 + China, India, Brazil

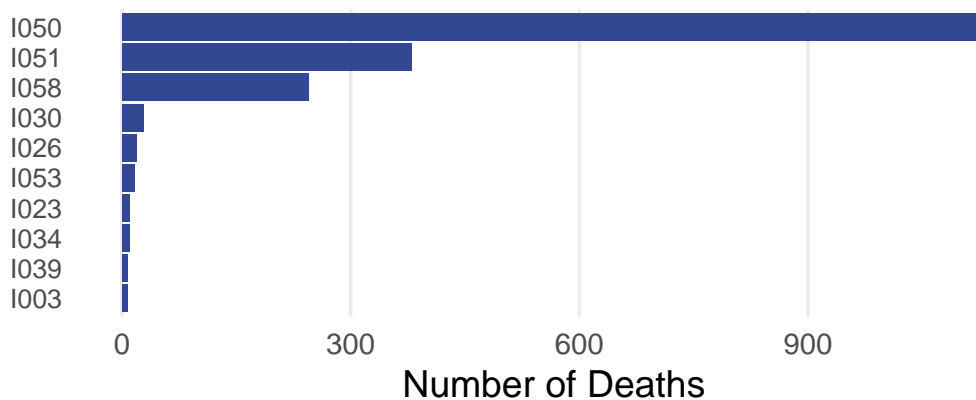
Bubble size and color represent births per woman



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## Leading Causes of Death in Canada (2022)

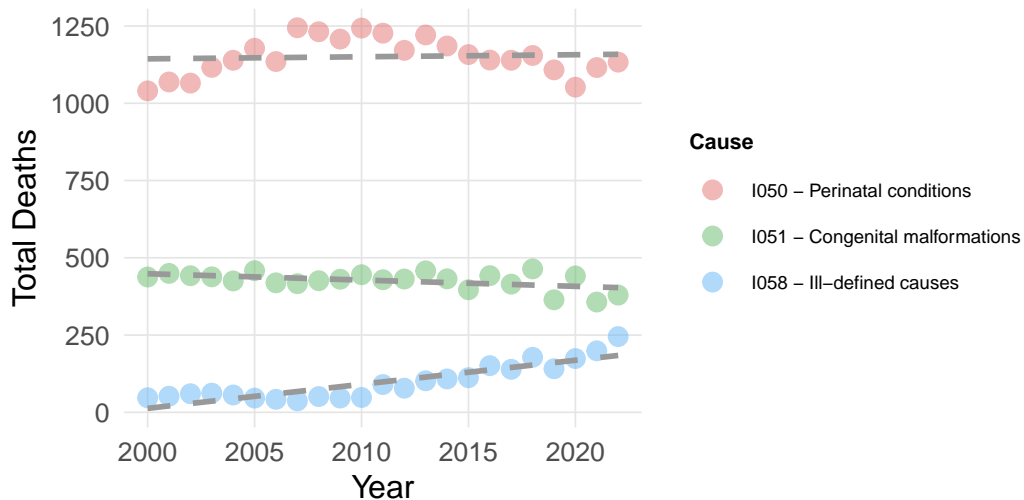
Excluding causes with 0 deaths and I000



I003 – Septicaemia      I023 – Other cancer (incl. in situ, benign, or uncertain neoplasms)  
 I034 – Other heart diseases      I051 – Congenital malformations, deformations, and chromosomal abnormalities  
 I026 – Other endocrinologic and metabolic diseases      I039 – Pneumonia  
 I050 – Certain conditions originating in the perinatal period      I030 – Other diseases of nervous system  
 I053 – Other accidents      I058 – Other ill-defined, unspecified and unknown causes of death

## Infant Mortality in Canada (2000–2022)

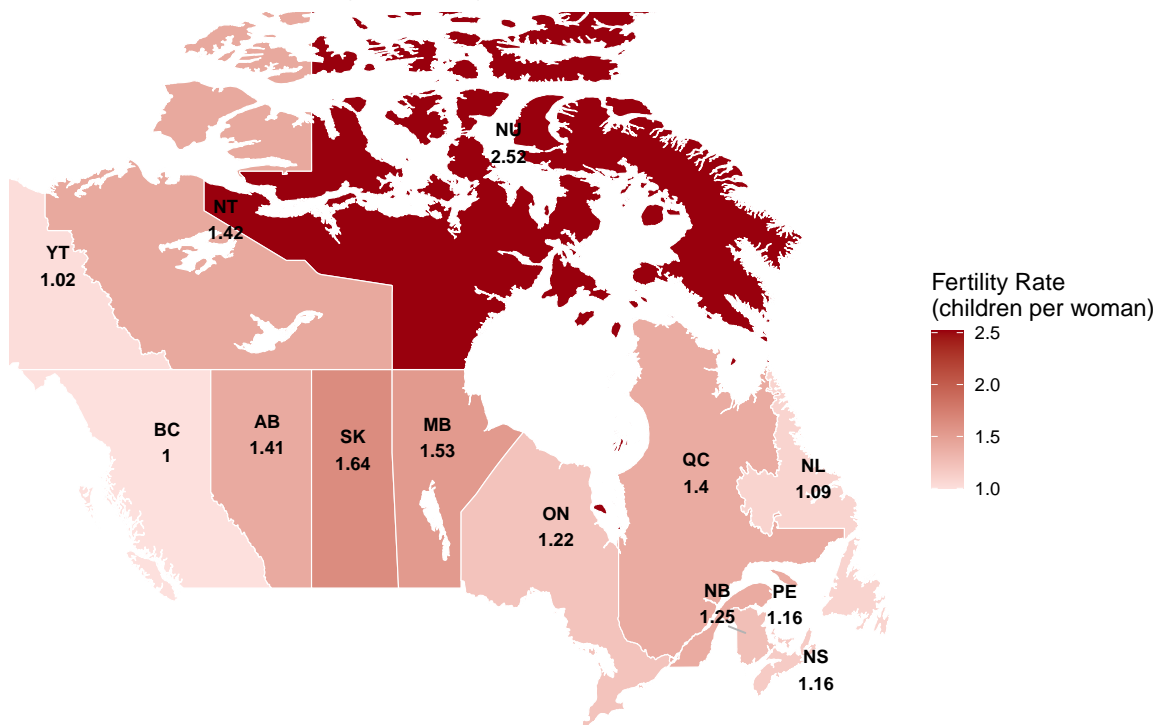
Age group: 0 years



Source: Statistics Canada

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## Total Fertility Rate by Province (2023)

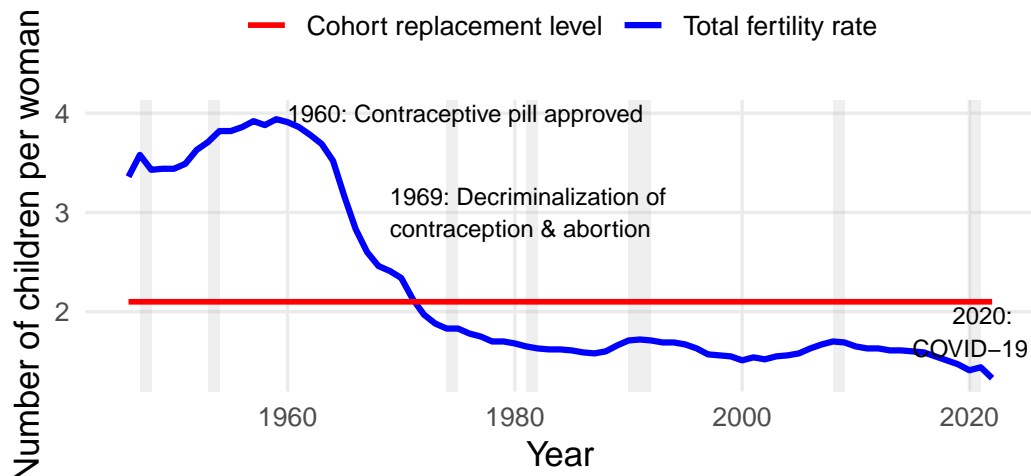


Source: Statistics Canada

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## Total Fertility Rate and Historical Events, Canada (1946–2022)

Number of children per woman



Source: Statistics Canada