

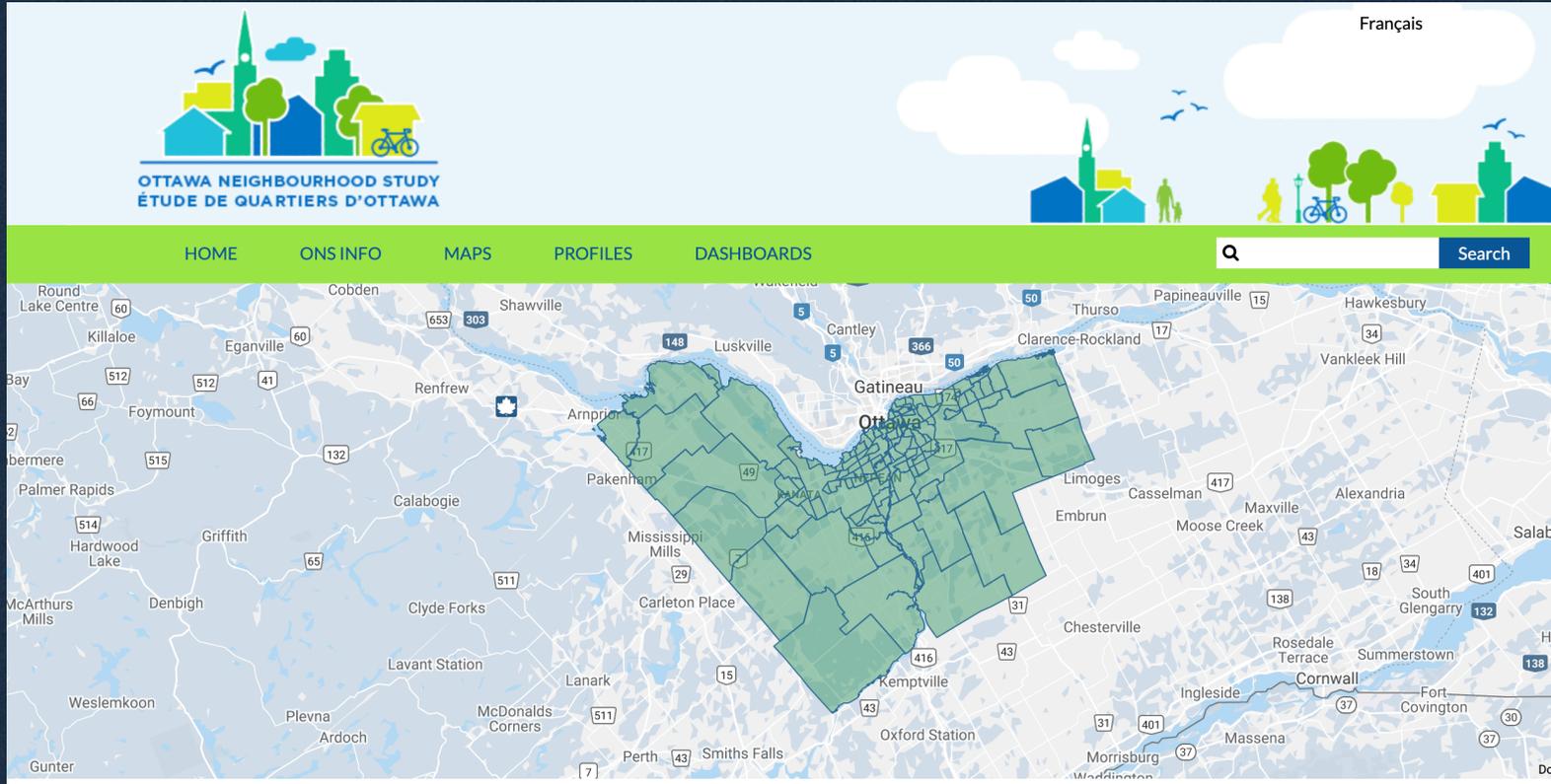
# Sociodemographic characteristics associated with higher rates of COVID-19 : a neighbourhood level study in Ottawa

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# Data source: The Ottawa Neighbourhood Study



Français

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## Welcome to Ottawa Neighbourhood Study

The Ottawa Neighbourhood Study (ONS) provides data on strengths and challenges for each neighbourhood in Ottawa. By all working together we can improve the neighbourhoods in which we live. Click on the map to identify a neighbourhood about which you would like to find more information.

Evidence is mounting that the neighbourhoods and communities in which we live affect not only our health but also the gap in health between rich and poor. The purpose of the Ottawa Neighbourhood Study (ONS) is twofold: to better understand the physical and social pathways by which neighbourhoods in Ottawa affect our health and well-being, and to provide citizens in Ottawa with facts that support evidence-based decision-making.

<https://www.neighbourhoodstudy.ca/>

# Objectives

To explore the sociodemographic characteristics associated with higher numbers of COVID-19 cases at neighbourhood level in Ottawa by employing a social determinants of health framework.

# Methods

This analysis is based on data on 108 neighbourhoods in Ottawa that were extracted from a publicly available website called Ottawa Neighbourhood study (ONS). The outcome variable was COVID-19 rate between March 09 2020 - January 31 2021). Explanatory variables included potentially vulnerable groups, Socioeconomic, neighbourhood, and demographic factors. Data were analysed using linear regression methods.

# Why neighbourhoods?

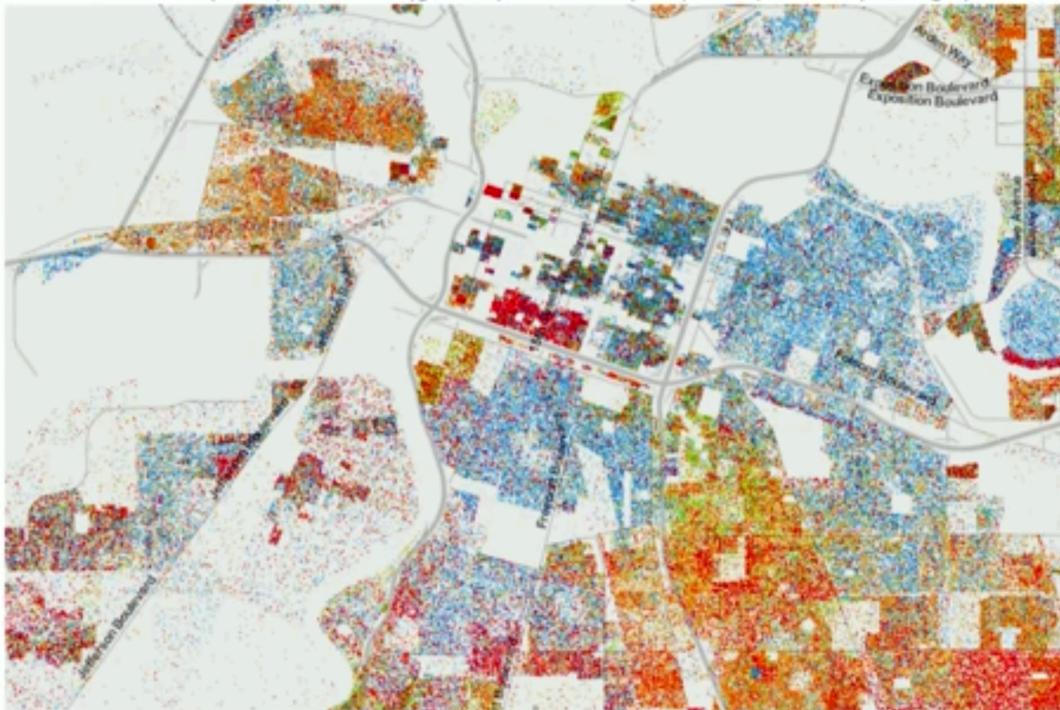
Social determinants of health -> conditions in which people are born, grow, live, work, and age (WHO)

(less racial segregation) one the highest rates of upward mobility in US

(more racial segregation) one the lowest rates of upward mobility in US

## Racial Segregation in Sacramento

Whites (blue), Blacks (green), Asians (red), Hispanics (orange)



Source: Cable (2013) based on Census 2010 data

## Racial Segregation in Atlanta

Whites (blue), Blacks (green), Asians (red), Hispanics (orange)

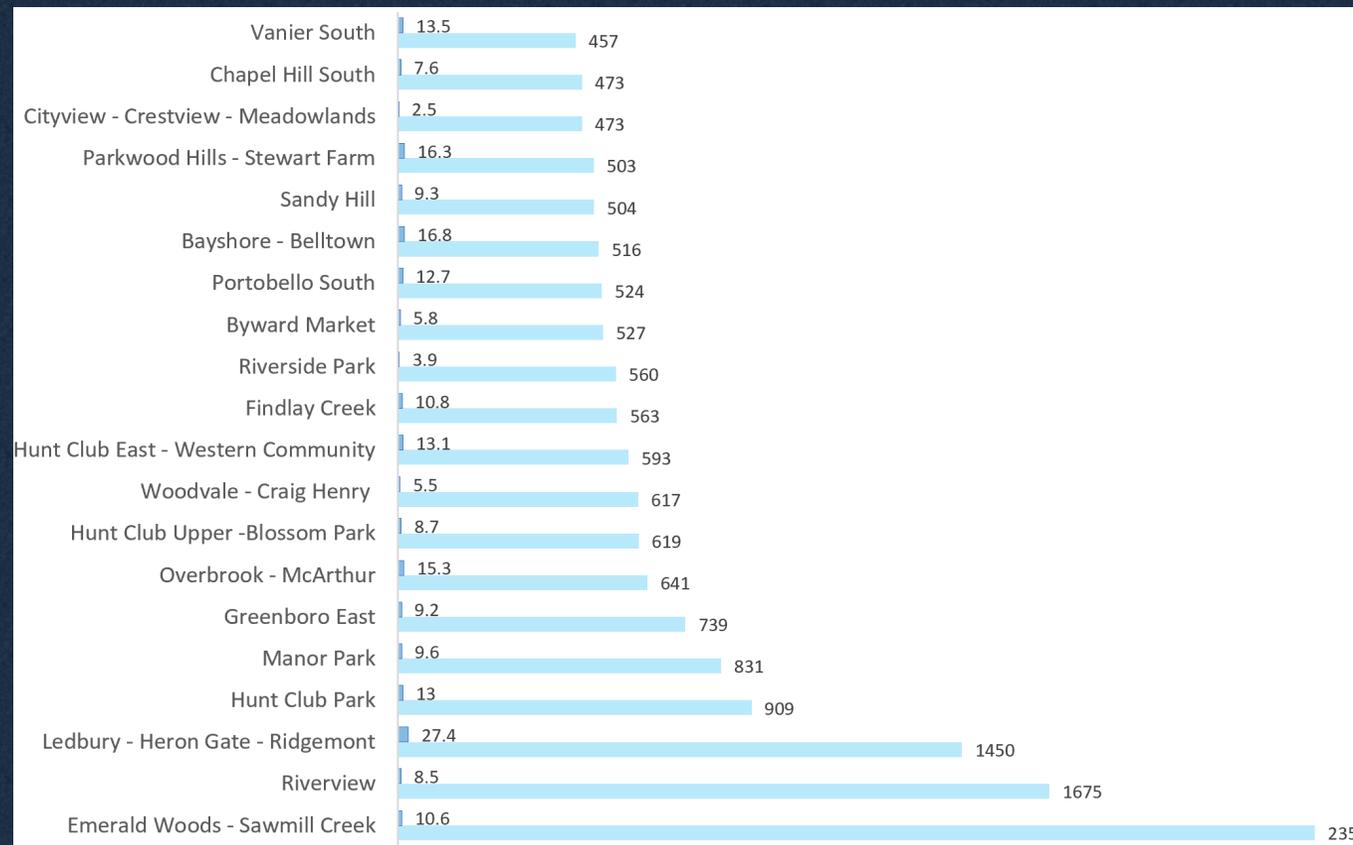
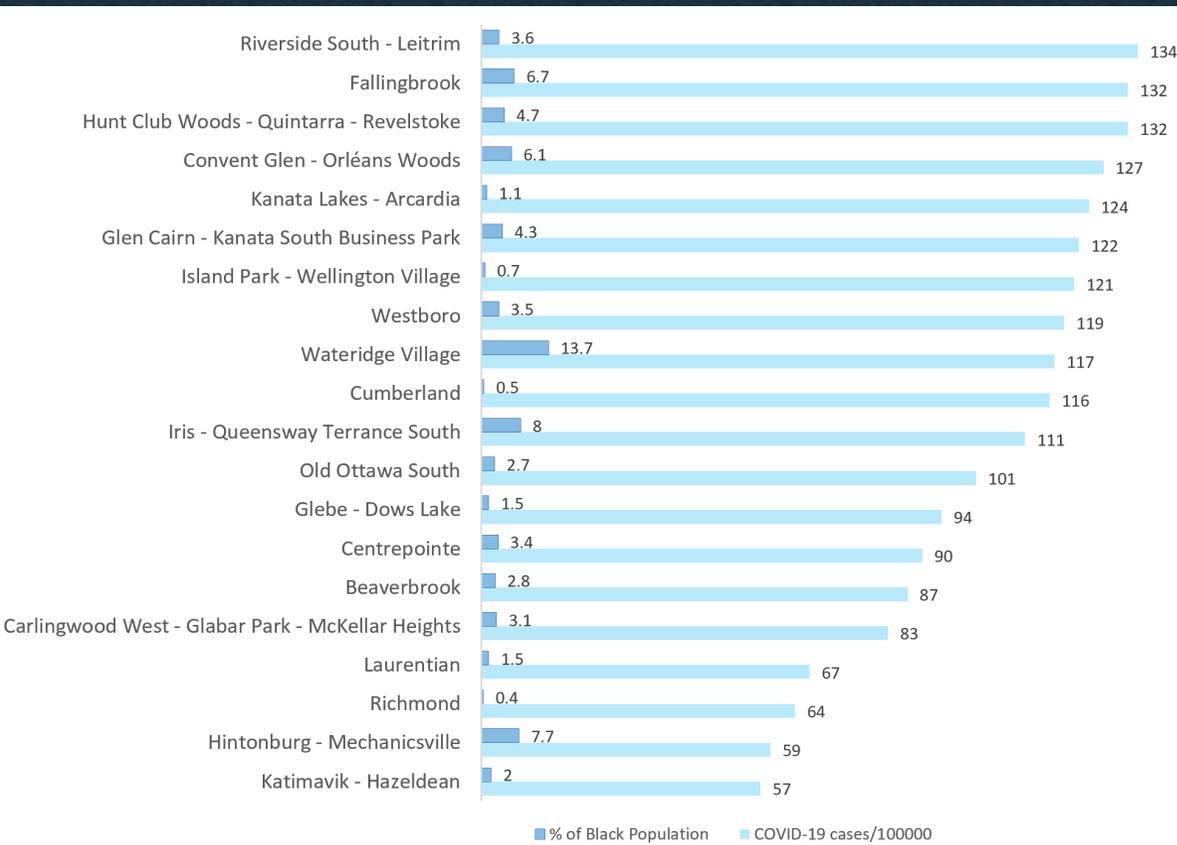


Source: Cable (2013) based on Census 2010 data

# Results

The neighbourhoods that had relatively number of total COVID-19 cases were Hunt Club, Hintonburg, and Hawthorne Meadows. According to the findings, higher percentage of refugee population ( $\beta = 0.39$ ,  $p < 0.05$ ) and newcomers ( $\beta = 0.44$ ,  $p < 0.05$ ) were positively associated with COVID-19 rates at Ottawa neighbourhoods. In the second model (addition of the socioeconomic factors), higher prevalence of low-income families ( $\beta = 0.68$ ,  $p < 0.05$ ) and households with multiple families ( $\beta = 0.65$ ,  $p < 0.05$ ) showed positive association with COVID-19 rates. Lastly, higher median age ( $\beta = 0.31$ ,  $p < 0.05$ ) also showed a positive association with COVID-19 rates.

Top 20 neighbourhoods for lowest (right) & highest (right) COVID-19 rates as of January 31, 2021 (per 100,000 residents)



# Results of regression analysis

	Vulnerable groups	Vulnerable groups+ Socioeconomic factors	Vulnerable groups+ Socioeconomic + demographic factors
% Refugee	0.39 (2.81)	0.15 (0.95)	0.14 (1.16)
% NC 2011-16	0.44 (2.60)	0.08 (0.39)	0.12 (0.85)
% of low income families		0.61 (5.63)	0.17 (1.57)
% Households with multiple familes		0.45 (1.91)	-0.08 (-0.43)
Median age			0.31 (2.58)
<i>R</i> <sup>2</sup>	0.203	0.614	0.848

# What makes Canadians sick?



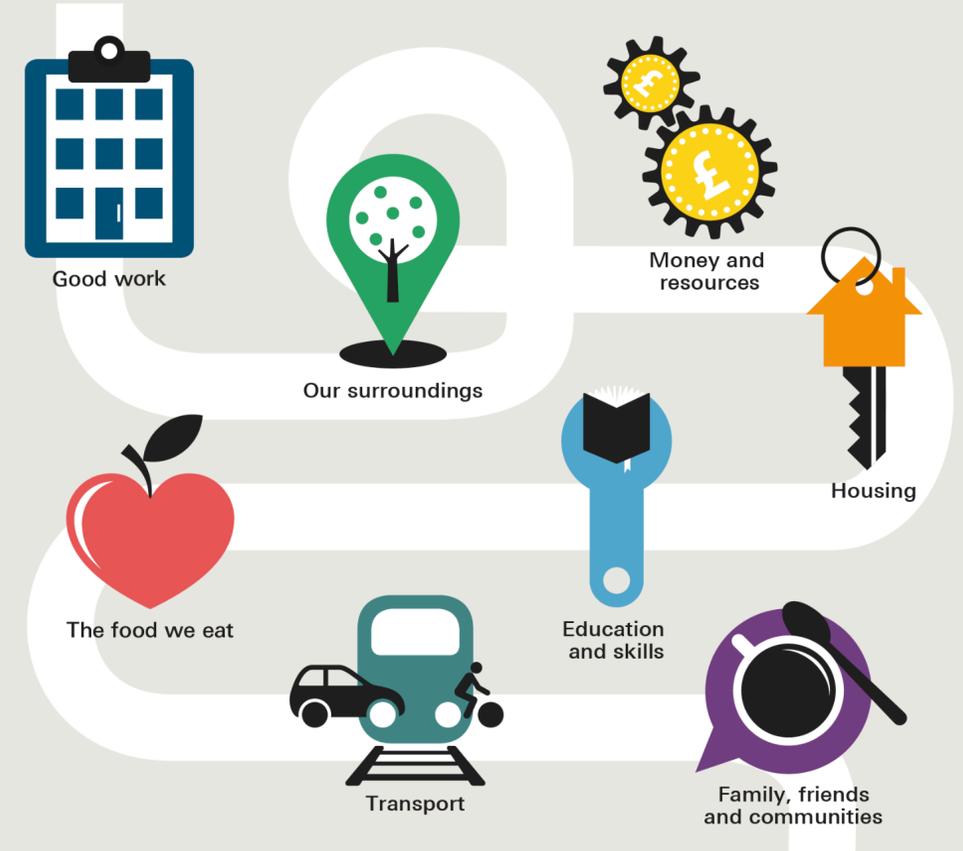
From the Canadian Medical Association ([www.cma.ca](http://www.cma.ca))



# What makes us healthy?

Good health matters, to individuals and to society. But we don't all have the same opportunities to live healthy lives.

To understand why, we need to look at the bigger picture:



The healthy life expectancy gap between the most and least deprived areas in England is over

**18** YEARS

Find out more: [health.org.uk/what-makes-us-healthy](http://health.org.uk/what-makes-us-healthy)

# Discussion & conclusion

- Neighbourhoods with higher percentage of multiple-family households are at higher risk of COVID-19 infection.
- There is a greater likelihood of COVID-19 infection in the neighbourhoods with lower socioeconomic status and poorer living conditions.
- Widespread presence and social transmission pathways require social responses (e.g. supplying more PPEs in the worst-affected neighbourhoods)
- Community participation & empowerment in the disadvantaged neighbourhoods may reduce the rate of transmission (promoting social capital).
- Targeted interventions should therefore be implemented to curb the spread of the pandemic among the disadvantaged communities (healthy neighbourhood approach)

# Thank you!

for questions:

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