

NAPCRG 52nd Annual Meeting — Abstracts of Completed Research 2024.

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Title

Geospatial analysis of neighbourhood-level primary care attachment in Ottawa, Canada

Priority 1 (Research Category)

Secondary data analysis

Presenters

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Abstract

Context: Canada has a primary care crisis, with fewer family physicians providing care to meet population needs. Identifying communities with greater disparities in primary care access requires integration of data from a range of sources. Objective: To examine primary care access across neighbourhoods in Ottawa, Canada. Study Design and Analysis: We conducted a cross-sectional study of primary care attachment rates by examining correlations with neighbourhood-level sociodemographic factors of resident age, race, income, and socioeconomic advantage. We used GIS geospatial mapping techniques to visualize attachment rates and distribution of family physicians across 'natural' neighbourhoods as defined by the Ottawa Neighbourhood Study. Setting or Dataset: Ottawa, Canada's capital, with a population of one million residents and approximately 1,700 practicing family physicians. We used a) 2022 primary care attachment rates obtained from the Ottawa Community Health Profiles Partnership, b) neighbourhood-level data from Statistics Canada's 2021 Census, and c) 2024 registry data from the College of Physicians and Surgeons of Ontario. Population Studied: Residents eligible for publicly-funded provincial healthcare. Outcome Measures: i) The proportion of residents unattached to primary care using a previously validated algorithm; and ii) the ratio of family physicians to residents. Results: 15.6% of Ottawa residents (n=165,362) were unattached to primary care. Rates of unattachment varied significantly across neighbourhoods, ranging from 7.4% to 27.7%. We found a significant gradient in the proportion of unattached residents by neighbourhood disadvantage (11.7% in most advantaged quintile vs 22.1% in least advantaged quintile), although the least advantaged neighbourhoods had the highest ratios of family physician to residents. We observed strong correlations between primary care attachment and other sociodemographic factors, with greater unattachment in neighbourhoods with a greater proportion of residents who were living on a low income ($R^2 = 0.75$), young adults aged 20-34 years ($R^2 = 0.66$), living alone ($R^2 = 0.55$), unemployed ($R^2 = 0.51$), or racialized

($R^2 = 0.32$). Conclusions: Our findings highlight the influence of socioeconomic factors on primary care attachment and emphasize the importance of targeted interventions to address disparities and promote equitable healthcare access across Ottawa.

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