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Association between neighbourhood poverty and type 2 diabetes risk. Does moving from a high to lower poverty neighbourhood reduce diabetes risk?

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Objectives

Diabetes, a pressing global public health crisis, is significantly impacted by social determinants, including neighborhood characteristics. This study aims to assess whether relocation from a high poverty to lower poverty neighbourhood is associated with a reduction in T2D incidence.

Methods and Results

This population-based, propensity-matched cohort study will use linked administrative health to examine the association between neighborhood relocation and T2D incidence. The study population will include adults (age ≥ 20 years) residing in high poverty urban neighborhoods between April 1st, 2002, to March 31st, 2021, as defined by an area Low-Income Measure - After Tax value of 38,730 dollars for a household size 4 based on the Canadian Census. Individuals will be followed for a new diagnosis of T2D using a validated algorithm based on hospitalization and physicians' claims data. Propensity score matching will be used to match individuals who moved from high-to-lower poverty neighbourhoods to one of two comparison groups: those moving from high-to-high poverty areas and those who remain in their original neighbourhood. Time-to-event analysis utilizing Cox proportional hazards regression with a robust variance estimator will be used to compare T2D incidence between matched groups. As a sensitivity analysis, non-propensity score modeling will be conducted using neighbourhood of residence as a time-varying covariate. The results of the aforementioned analyses will be presented during the conference.

Implications

By clarifying the link between neighborhood poverty and T2D incidence, the results will guide focused interventions to alleviate health inequalities in socioeconomically disadvantaged areas.



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