

## Trends in Socioeconomic Inequalities in Ischemic Heart Disease, 2000-2012

Smith, B<sup>1,2</sup>, Ramraj, C<sup>2</sup>, Smith, P<sup>3</sup>, Chen, H<sup>1</sup>, Tu, J<sup>4</sup>, Manson, H<sup>1</sup>, and Rosella, L<sup>2</sup><sup>1</sup>Public Health Ontario<sup>2</sup>University of Toronto<sup>3</sup>Institute for Work & Health<sup>4</sup>Institute for Clinical Evaluative Sciences

### Introduction

Low socioeconomic position (SEP) is an important risk factor for ischemic heart disease (IHD). Current surveillance methods use area-based SEP measures to monitor trends in socioeconomic inequalities in IHD. The extent to which these methods underestimate individual-level socioeconomic inequalities in IHD is unclear.

### Objectives and Approach

The study objective was to estimate socioeconomic trends in IHD by household income and material deprivation in Ontario from 2000 to 2012. A pooled cross-sectional study was conducted using data from 6 Canadian Community Health Survey (CCHS) cycles (2000-2012) linked to the Discharge Abstract Database ( $n=119,529$  over 35 years of age, 55% female). Relative-weighted Poisson regression models were used to estimate IHD prevalence rates (adjusted for age, sex, ethnicity and immigration) across quintiles of equivalized household income and area-level material deprivation. Socioeconomic inequalities were estimated using the slope index of inequality (SII) and relative index of inequality (RII).

### Results

Socioeconomic inequalities in IHD were observed across income and material deprivation quintiles. Measured using the SII, adjusted IHD rates were 345 per 10,000 (95%CI: 207,483) higher at the bottom of the income distribution than the top in 2000, decreasing to 167 per 10,000 (95%CI: 40,293) by 2012. These differences represented 2.52 (95%CI: 1.58,3.46) times higher IHD rates in 2000, an increased risk that remained in 2012 (RII: 1.80, 95%CI: 0.97,2.63). A similar pattern was observed across material deprivation quintiles, however with smaller absolute and relative inequalities observed in 2000 (SII:195 per 10,000, 95%CI:79,312; RII:1.64, 95%CI:1.16,2.11) and 2012 (SII:142 per 10,000, 95%CI:16,268; RII:1.54, 95%CI:0.94,2.14).

### Conclusion/Implications

Consistent socioeconomic inequalities in IHD were observed in Ontario, with an absolute reduction between 2000 and 2012. Area-level material deprivation underestimated individual-level socioeconomic inequalities in IHD.

