



Recent Trends in Child and Youth Pedestrian Emergency Department Visits by Socioeconomic Status in Ontario, Canada

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BACKGROUND

- Rates of death from unintentional injury decreased from 1971 to 1996
- Rates of death higher in children from lower income groups
- Inequality between income groups decreased over time

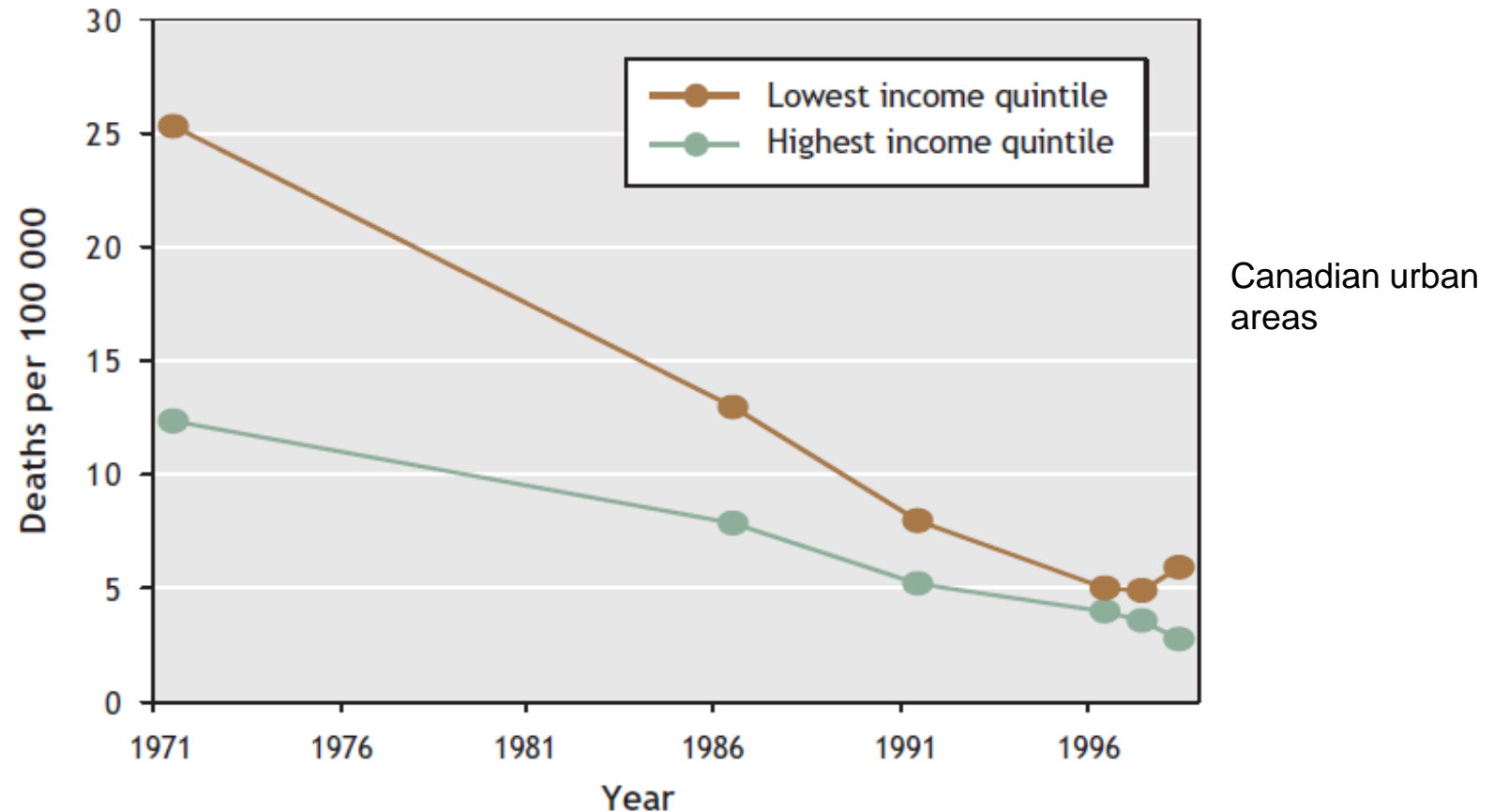


Fig. 1: Rates of death from unintentional injury per 100 000 children aged 14 years and less.

Reducing inequities in health is a policy goal in Canada

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Health Inequalities Data Tool

Health inequalities refer to differences in health status between groups in society. These differences can be due to biological factors, individual choices, or chance, but public health evidence suggests that many are attributable to the unequal distribution of the social and economic factors that influence health (e.g. income, education, employment, social supports) and exposure to societal conditions and environments largely beyond the control of the individuals concerned.

In 2012, Canada, along with other World Health Organization (WHO) Member States, endorsed the [Rio Political Declaration on Social Determinants of Health](#), pledging to take action to promote health equity (defined by the WHO as “the absence of avoidable or remediable differences among groups of people”). Strengthening the capacity to monitor and report on health inequalities was recognized as a critical foundation for achieving meaningful progress towards this goal.

The Health Inequalities Data Tool supports Canada’s pledges under the Rio Declaration. This resource is a collaborative effort of the Public Health Agency of Canada, the Pan-Canadian Public Health Network (PHN), Statistics Canada, and the Canadian Institute for Health Information, and builds on a [set of indicators of health inequalities](#) proposed by the PHN in 2010.

The Health Inequalities Data Tool contains data on indicators of health status and health determinants, stratified by a range of social and economic characteristics (i.e. social stratifiers) meaningful to health equity. Indicators are grouped into twelve framework components.

Key Health Inequalities in Canada: A National Portrait

The [Key Health Inequalities in Canada: A National Portrait](#) report highlights some of the most pronounced and developed by the Public Health Agency of Canada and the Pan-Canadian Public Health Network, in collaboration with the Canadian Institute for Health Information, and the First Nations Information Governance Centre.

OBJECTIVE



- To examine the relationship between emergency department (ED) visits due to pedestrian motor vehicle collisions (PMVC) among children 0-19 years and socioeconomic income status in Ontario, Canada between 2008-2015

METHODS

- **Outcome**

- Age adjusted PMVC rates per 100,000 children
- Population-based ED visits from ICES

- **Numerator**

- PMVC visits - National Ambulatory Care Reporting System (NACRS)

- **Denominator**

- OHIP Eligible Registered Population Database

METHODS: Exposure

- Neighbourhood socioeconomic quintiles derived from the Statistics Canada Postal Code Conversion File 2011
 - Quintile 1 = Lowest income quintile
 - Quintile 5 = Highest income quintile

Statistical Analysis

- Age adjusted ED visit rates were calculated using Ontario census data
- Poisson regression was used to model PMVC rates by year, age and income quintile
- Incidence rate ratios and 95% confidence intervals were calculated

RESULTS

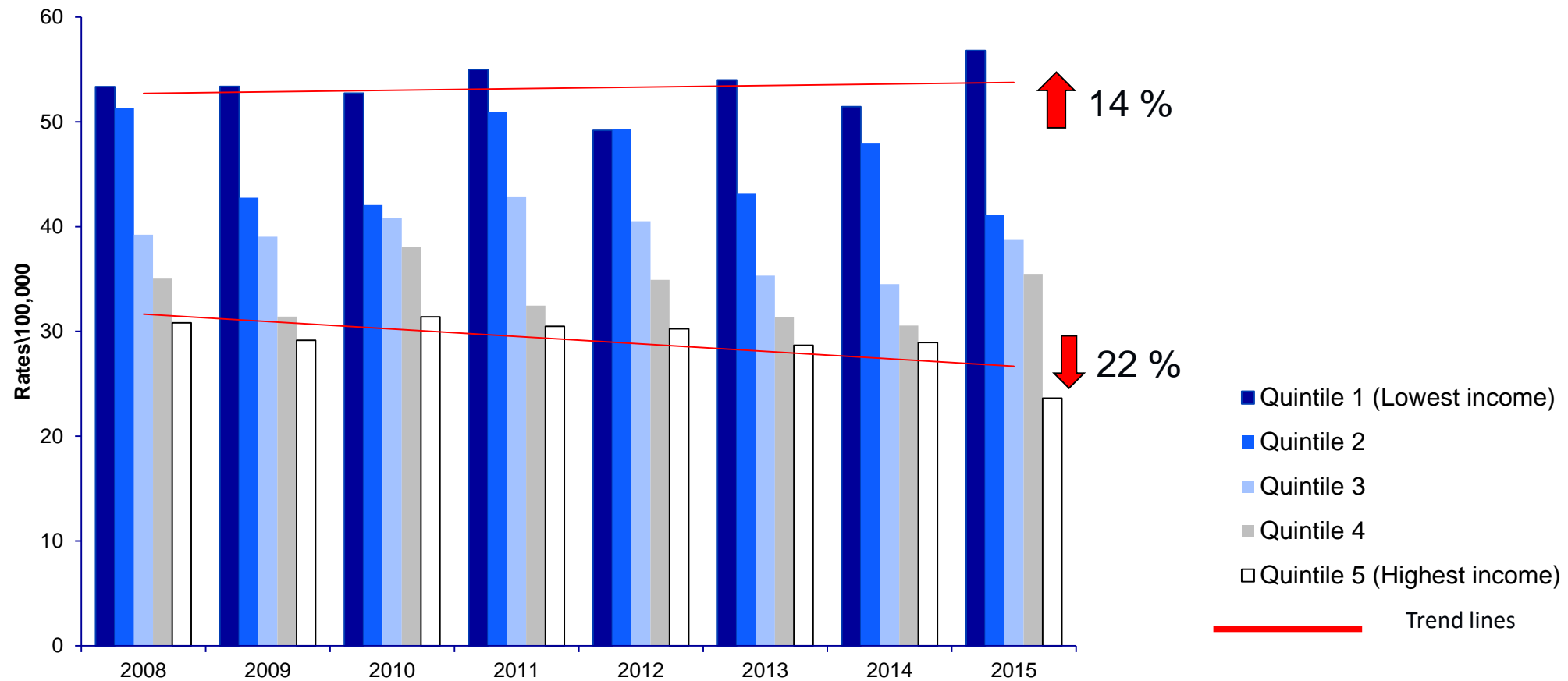
- Total of 11,187 ED visits due to PMVC from 2008 to 2015
- ED visit characteristics
 - Males (54%)
 - 15-19 years old (51%)
0-14 years old (26%)
 - Urban areas (73%), followed by suburban areas (20%)
 - Lowest income quintile: 3,022
Highest income quintile: 1,592



RESULTS

- Number of ED visits have decreased overall by 18%

PMVC Emergency Department visit rates per 100,000 children (0-19 years) in Ontario, 2008-2015



RESULTS



Table 2: Adjusted incident rate ratios (IRR) of child PMVC and 95% confidence intervals (CI)

Adjusted IRR (95% CI)	
Outcome: PMVC	
Year (2008-2015)	1.00 (0.99, 1.00)
Age	
0-4	0.19 (0.18, 0.20)
5-9	0.29 (0.28, 0.30)
10-14	0.52 (0.50, 0.54)
15-19	Reference
Income Quintiles	
1 (Low)	Reference
2	0.85 (0.82, 0.89)
3	0.72 (0.69, 0.75)
4	0.62 (0.60, 0.65)
5 (High)	0.52 (0.50, 0.55)

DISCUSSION



- There were significant differences in ED visits between the highest and lowest income quantiles
- The frequency of ED visits decreased over time, however there were no significant changes in age-adjusted rates by year
- Income disparities in the rates of ED visits in Ontario for child PMVC visits have persisted from 2008 to 2015

DISCUSSION

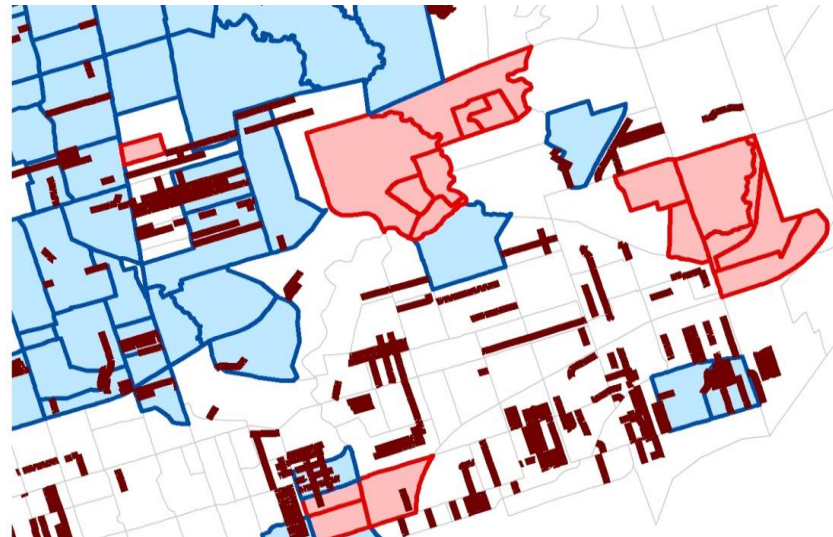
- Individual level factors related to income are difficult to modify
- Less safe traffic environments in lower income areas may be strong contributors to the inequities in PMVC
- Findings support our previous research that shows that the traffic environment is less safe in poorer areas

Injury Prevention

Original article

Spatial distribution of roadway environment features related to child pedestrian safety by census tract income in Toronto, Canada

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Spatial Distribution of Speed Humps

Significant clusters (CT)

- High income
- Low income
- Speed humps

CONCLUSIONS



- Income disparities in child PMVC still remain prevalent despite a focus of Canadian health policy to reduce socioeconomic disparities in health
- Need to improve traffic built environment in lower income areas, to equalize income disparities in child pedestrian injuries





Kids in poorer areas of Ontario face greater risk of getting hit by cars: study



Kids in poorer areas of Ontario face greater risk of getting hit by cars, study suggests



Researchers examined data on emergency department visits from 2008 to 2015

The Canadian Press - Posted: May 06, 2019 2:42 PM ET | Last Updated: May 6



New study suggests children in poorer areas of Ontario face greater risk of getting hit by vehicles than those in wealthier areas. (CBC)

QUESTIONS....

