

# A Scoping Review of Canadian Evidence on the Relations Between Urban Form and Health in Children and Adolescents

Tona Pitt, CARSP 2019

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# Scoping Review

Objective: To identify and synthesize research related to health outcomes and the urban form that is specific to Canada

# Urban Form / Built Environment







# Scoping Review

1) complete a comprehensive systematic search of the peer-reviewed literature to identify health-focused studies that have included an objective indicator of urban form and outcomes specific to those under 18 years of age

# Search Strategy

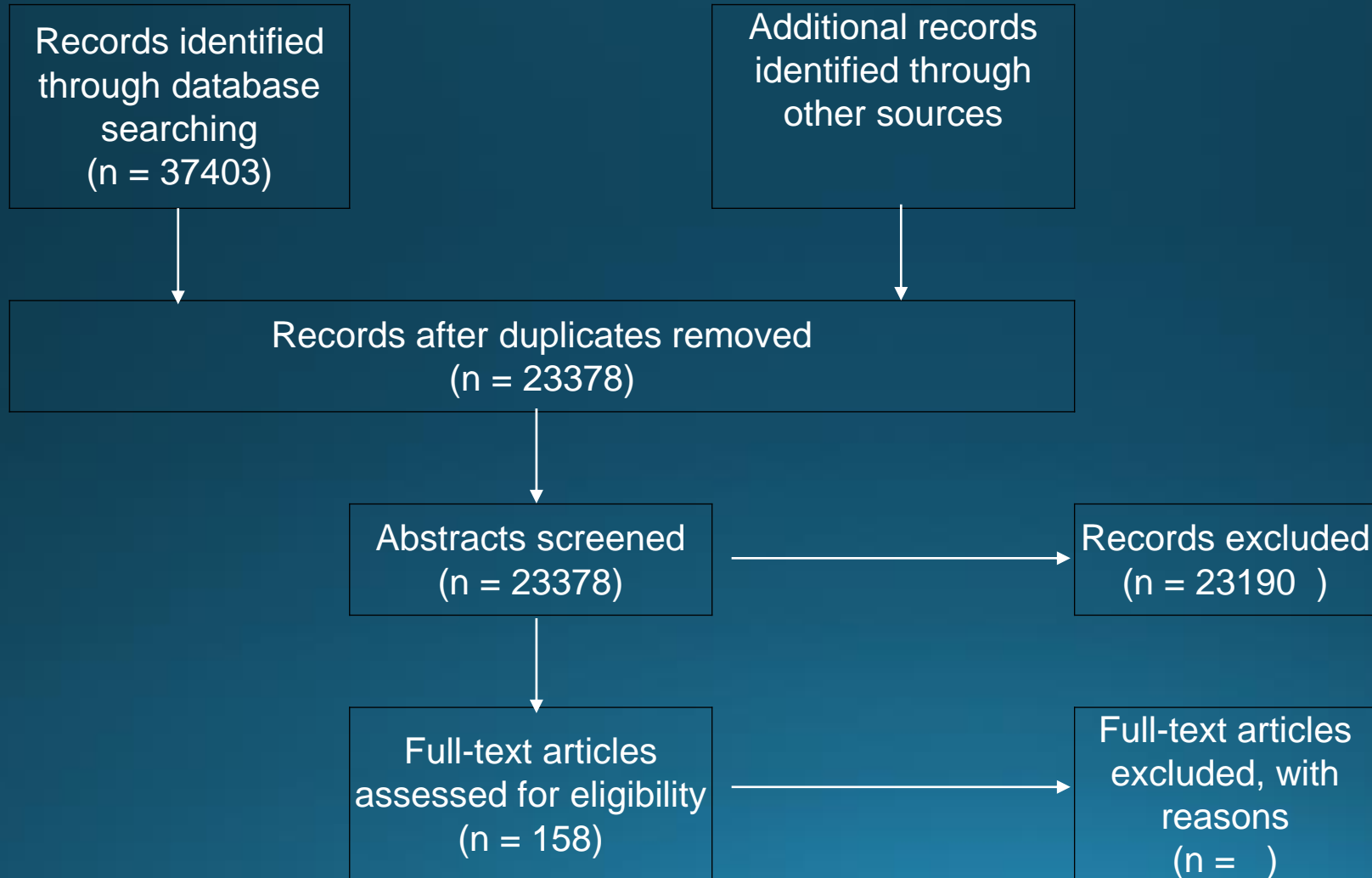
Thirteen Databases examined:

CINAHL, EMBASE, Environment Complete, MEDLINE,  
PsycInfo, PubMed, Scopus, SocIndex, SportDiscus,  
TRID, Urban Studies, Web of Science and CAB Abstracts

# Search Strategy

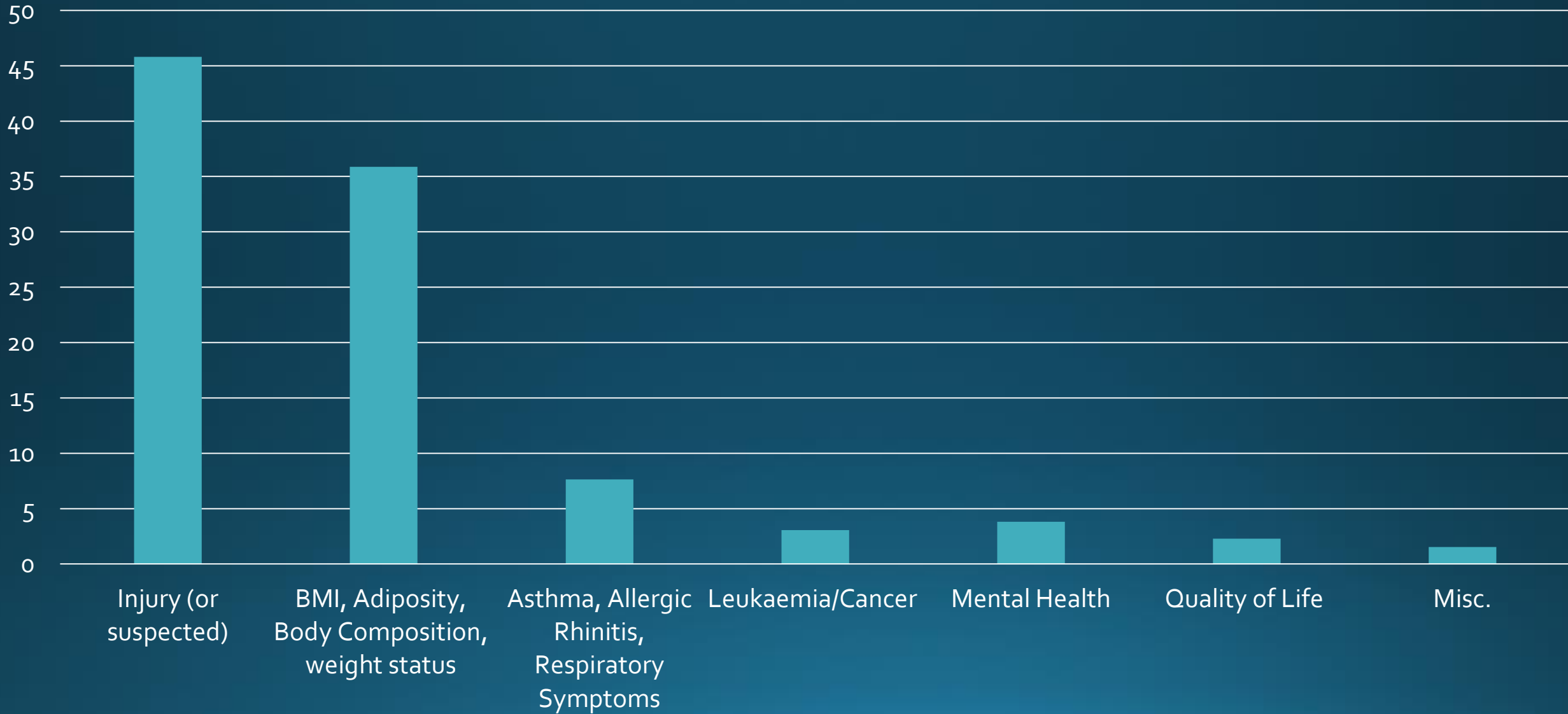
| Population Terms  |   | Exposures   |   | Location   |
|---|---|---|---|--|
| MESH  | Keywords  | MESH  | Keywords  | MESH   |
| exp adolescent/<br>exp child/<br>exp child, preschool/<br>exp infant/<br>*students/<br>exp young adult/ | pediatric<br>paediatric<br>school-aged<br>child*<br>Adolescent<br>infant<br>youth<br>juvenile | exp environment/<br>exp residence characteristics/<br>exp automobile driving/<br>exp environment design/<br>schools/<br>exp transportation facilities/<br>exp noise, transportation/<br>exp transportation/<br>exp geographic information systems/<br>exp public facilities/<br>exp urbanization/<br>exp population density/<br>exp architecture/<br>exp city planning/<br>geography/ | bikeab*<br>blue space*<br>built characteristic*<br>built environment*<br>built form*<br>communit*<br>cyclability<br>destination*<br>dwelling*<br>fast food*<br>food desert*<br>food environment*<br>food retail<br>geographic information system*<br>GIS<br>green space*<br>infrastructure<br>intersection density<br>land us*<br>neighborhood*<br>neighbourhood*<br>open space*<br>park*<br>pedestrian*<br>place making<br>playground*<br>sprawl*<br>street connectivity<br>streetscape<br>traffic*<br>urban form*<br>urban plan*<br>walkab*.<br>walkshed*<br>zoning | Canada<br>Alberta<br>British Columbia<br>Saskatchewan<br>Manitoba<br>Ontario<br>Quebec<br>Nova Scotia<br>New Brunswick<br>Newfoundland<br>Prince Edward<br>Island<br>Northwest<br>Territories<br>Yukon<br>Nunavut<br><br><u>Keywords:</u><br>Canadian*<br>Canada<br>Alberta*<br>British Columbia*<br>Saskatchewan<br>Manitob*<br>Ontari*<br>Quebec*<br>Nova Scotia*<br>New Brunswick<br>Newfoundland*<br>Prince Edward<br>Island<br>Northwest<br>Territories<br>Yukon<br>Nunavut |

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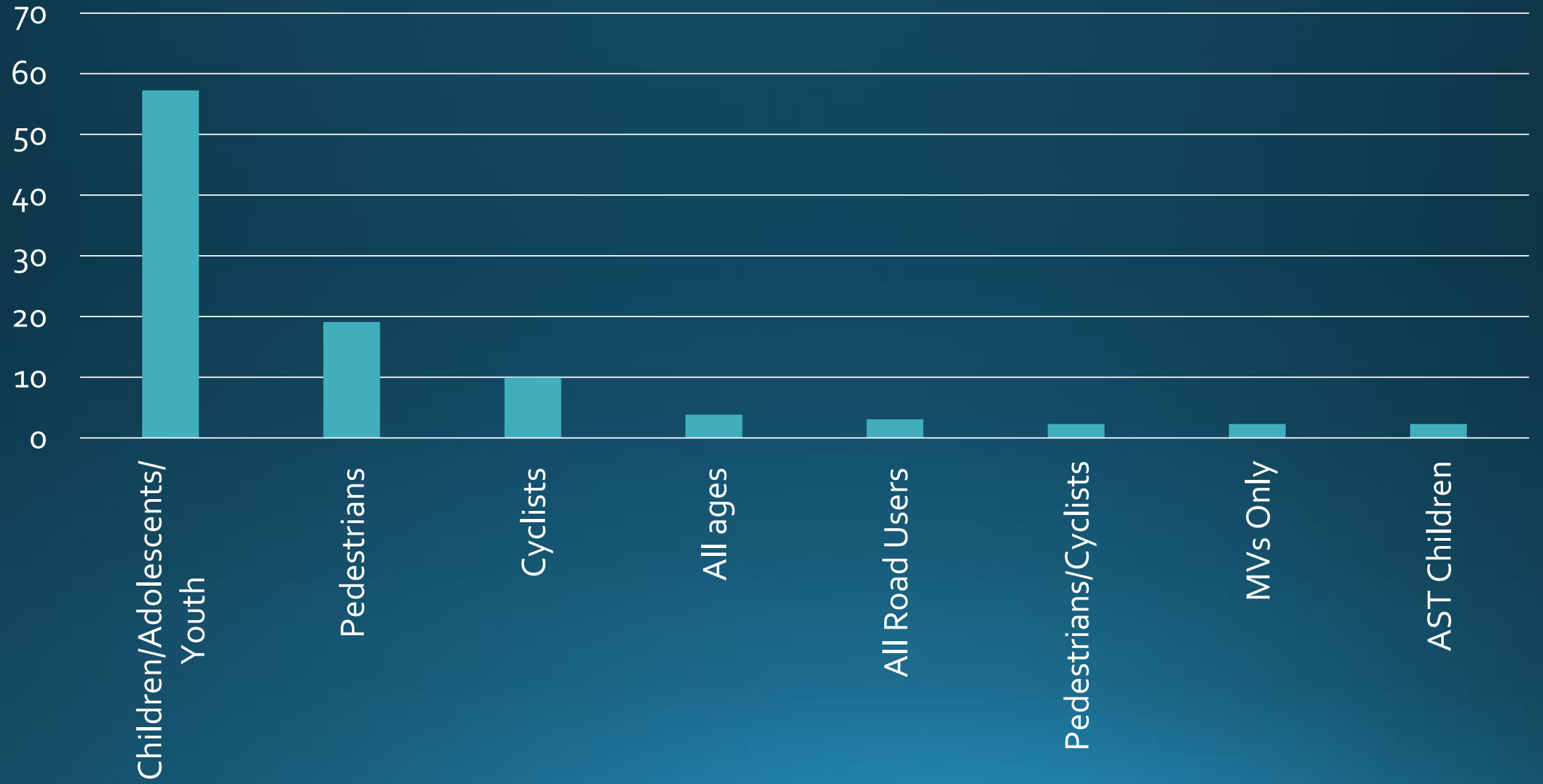




## Observed Health Outcomes



# Specific Groups



# Overview of Data- Exposures

Many focus on BE broadly or non-specifically in abstracts

Focused BE features identified related to road safety:

Street crossings, Path type, Road Type, Major Roads, Land Use, Traffic Volume, Mode Share, VRU volume, Intersection type, Intersection Status, Intersection Geometry, Path Obstructions, Pedestrian Countdown Signals, Crossing Guards, Population Density, Housing Density, Traffic Control Devices, "Traffic Calming Density", Traffic Speed, Park Proximity, Cross Walk Length, Bike Signs.

# Overview of Data- Exposures

Most Common Exposures:

Path type, Road Type, Land Use, Traffic Volume, VRU volume, Mode Share, Intersection Type/Geometry, Population Density, Housing Density, Traffic Control Devices, Traffic Speed.



# Conclusions and Future Directions

- BE may influence Health in children in a variety of ways
- Injury is the most common health outcome and relates to MV Traffic or interactions with MV traffic
- Obesity is a common health outcome examined, with a focus on Food Environment or Walkability
  - Although traffic fears may be a deterrent to AT, traffic related factors (traffic volume, traffic calming, intersection density) are less examined.
- SES seems to be a modifying factor that is related to urban form and subsequent health outcomes
  - About 10% related to SES (60% of those related to injury)

# Future Directions

- Full text review will help to understand study designs and strengths of findings
- Full text will also indicate the exact measures used for assessing BE and injuries/injury severity
- Apparent gaps indicate that there is little variation in HO compared with adults
- Clear overlap between Public Health and Road Safety, but these outcomes rarely synthesized in these papers.

# Thank You

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