

ACCIDENTAL CYCLING FATALITIES IN ONTARIO:
A SIX-YEAR RETROSPECTIVE CHART REVIEW FROM 2010-2015

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EXECUTIVE SUMMARY:

Henderson, et. al conducted a detailed retrospective chart review of 131 accidental cycling deaths in Ontario (January 1, 2010 – December 31, 2015). All data collection protocols were approved by the Health Sciences Research Ethics Board (protocol #107663), and the Office of the Chief Coroner, Ontario.

Cyclist demographics

- The majority (114/131) of fatalities were male. Adults (aged 19 and older) represented 87% of deaths. All but 3 (14/17) of the cyclists aged 18 and under were between the ages of 15 and 18.

Collision timing

- Frequency peaked in July, August and September (64/131), with 99 deaths (76%) occurring between April and September.
- The majority of cycling deaths occurred during clear weather, on dry roads, with good visibility
- Of the 118 cases in which time-of-day information was available, 64 happened in daylight, 11 occurred in twilight, and 43 occurred during dark hours.

Collision Location

- Based on geographical information in the files, most of the deaths (122/129) occurred in Southern Ontario, and 86 deaths happened in urban areas. Of the 43 rural fatalities, 30 occurred on highways with higher speed limits.
- Motorist-cyclist collisions or single-cyclist crashes (falls) were classified in 129 cases. Motor vehicle collisions (111/129) represented 86%; falls 14% (18/129).

- Fatalities were high at intersections, with 33/111 of motor vehicle collisions (30%)
- Struck-from-behind is the primary location with 48/111 (43%). Police reports indicated that traffic volumes and speed, blind spots, and encroachment were aggravating factors.

Risk Factors Pertaining to Cyclists and Motorists

- Helmets were worn in 42 cases (36%). None of the 12 children wore helmets.
- Although reporting of reflective/visible clothing use was inconsistent, police reports documented only 3 cyclists wearing reflective clothing
- Cyclist distraction/encumberment was not a significant factor at 6% (14/131)
- 27% of cyclist deaths were found to have been cycling under the influence of drugs or alcohol, 32/34 of these cyclists were male.
- Only 11/111 motorists underwent alcohol and/or drug screening. Ten drivers were found to have alcohol and/or drugs in their system

Recommendations

- 1) Build motorist awareness of the one-metre passing law, and educate motorists about the risks associated with passing cyclists without enough space.
- 2) Educate motorists and cyclists about the dangers associated with intersections.
- 3) Educate cyclists about the dangers of cycling while under the influence of drugs and alcohol.
- 4) Educate cyclists about the importance of safety equipment while cycling. This should include education about helmet use, but also the importance of wearing fluorescent clothing during daylight hours, and retroreflective clothing at night.
- 5) Encourage the policing of dangerous driving practices, including the one-metre passing law.
- 6) Encourage the enforcement of existing conspicuity laws and bylaws (e.g., having lights and reflectors installed on bicycles).
- 7) Encourage the enforcement of helmet laws in children under the age of 18, and provide helmets to individuals that cannot afford one.

In addition to infrastructure development within the built environment (e.g., construction of segregated bicycle lanes, and improvements to complex intersections), there are many long-term strategies that should be considered:

- 1) Amendments to legislation to require cyclists of all ages to wear helmets.
- 2) Amendments to legislation to require all drivers to submit to roadside alcohol screening subsequent to involvement in collisions involving cyclists or pedestrians.
- 3) Development of standard police reporting forms that improve the documentation of collision/fatality characteristics (including conspicuity details, and environmental details concerning lighting, visibility, weather, and road conditions).