British Columbia traffic deaths could be cut in half, study says

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A study by a Simon Fraser University researcher shows British Columbia has much higher traffic death rates than most northern European countries. Comparisons to the safest country, the Netherlands, suggest B.C. could reduce the number of traffic deaths by more than 200 per year.

It also found that fatality and injury risks varied by travel mode.

"Many studies have shown that overall, considering both potential physical activity benefits and injury risks, cycling and walking are on the whole very healthy travel activities," says SFU health sciences assistant professor Meghan Winters, senior author of the study published in the Canadian Journal of Public Health.

However, the study, Exposure-based Traffic Crash Injury Rates of Travel in British Columbia, confirmed using B.C. data that amongst travel modes, cyclists and pedestrians do indeed carry higher injury risk than drivers. It also demonstrated that traffic fatality risks are far lower in other countries, indicating that safety improvements are possible.

"The results fit with the common perception that cyclists and pedestrians are vulnerable road users. However, we were surprised to see how similar the risks were between these two modes," says Winters.

"Another surprise was comparing fatality risk for these modes to public transit and motorcycling (for which we had to look at research from the

U.S. since B.C. data was not sufficient). In the U.S., where pedestrian, cyclist, and car exposure-based fatality rates were similar, bus travel had 20 times less risk than other modes, and motorcycle travel 25 times higher risk."

According to the study, injury risks vary by mode of transportation – car, bicycle, and walking – and understanding the differences is important for prevention. It adds that since these travel modes are not used equally, injury rates calculated with a population denominator may reflect differences in burden, not differences in risk, between modes.

Exposure-based denominators take into account factors like the proportion of trips or the distances travelled by each mode. Examples:

- Motor-vehicle occupants had the lowest fatality rates using exposure-based denominators (9.6 per 100 million person-trips and .97 per 100 million kms)
- Cyclists and pedestrians had similar fatality rates using trip denominators (13.8 vs 14.7 per 100 million person-trips, respectively), but cyclists had a lower rate using distance denominator (2.60 vs 7.37 per 100 million kms)

Winters believes more data about travel behaviour in Canada is needed. Creating a national trip diary could provide researchers with data to help reduce fatalities.

"Since there is no national data collection on travel for travel behaviour data, it is not possible to make comparisons, either within Canada or internationally, that would allow us to identify safer jurisdictions and learn about traffic safety measures that could be adopted here," says Winters.