Crash Types & Contributing Factors: Canadian & US Naturalistic Driving Studies

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Seventh International Symposium on Naturalistic Driving Research

NDRS 2018

Blacksburg, Virginia, August 28-30, 2018

Canada

OVERVIEW

- The Motivation for the Canadian Naturalistic Driving Study

- The Data:
  - Overview comparing Canada & US
  - Major crash types & Contributing Factors
  - Weather

Transport Canada
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MOTIVATION: CANADIAN NATURALISTIC DRIVING STUDY

- SHRP2 provided an opportunity to work with the US on a NDS
- Canadian project benefits greatly from all the work done in SHRP2
- Data from both Canada & US are valuable due to our shared interests in road safety

MOTIVATION: CANADIAN NATURALISTIC DRIVING STUDY

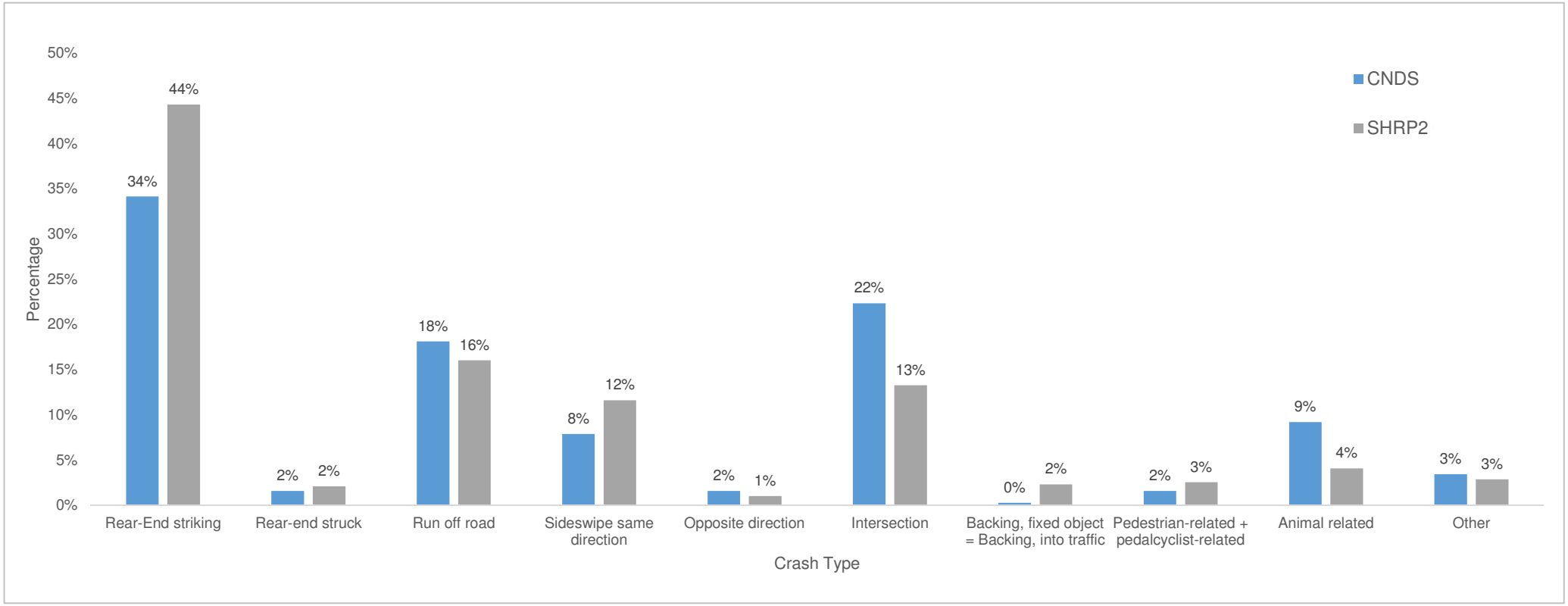
Why Saskatoon, Saskatchewan, Canada?

- Urban / Rural highways
- Winter conditions
- Relatively high mileage drivers
- Data: prevalence of risky behaviors
- Opportunity for truck data
- Cooperation among levels of gov't, provincial insurers, University of Saskatchewan, CODMT, VTTI & others

HOW DO THE 2 DATA SETS COMPARE?

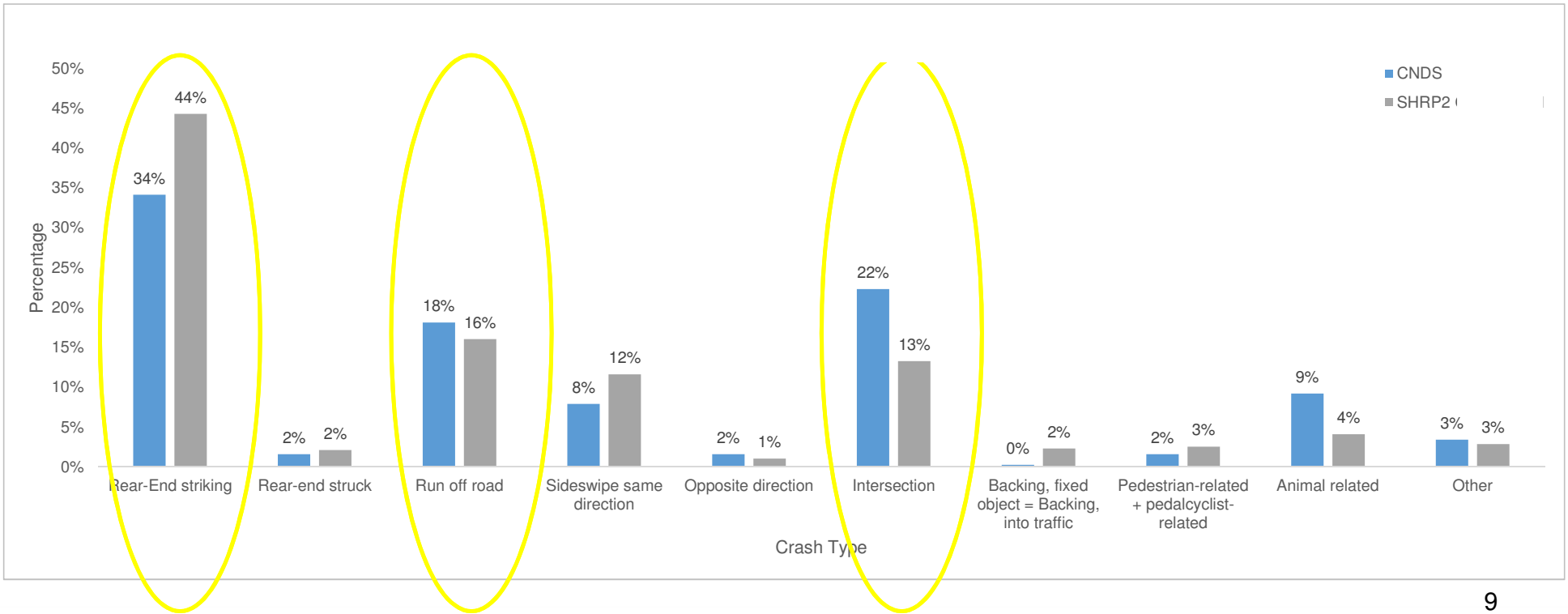
1. Comparison of CNDS & SHRP2 data:
   - Combined crash & near crash
   - 10 crash categories
   - % of each crash type for each NDS set

CRASH TYPES: CNDS & SHRP2 (C/NC)



Canada

CRASH TYPES: US & CDN DATA

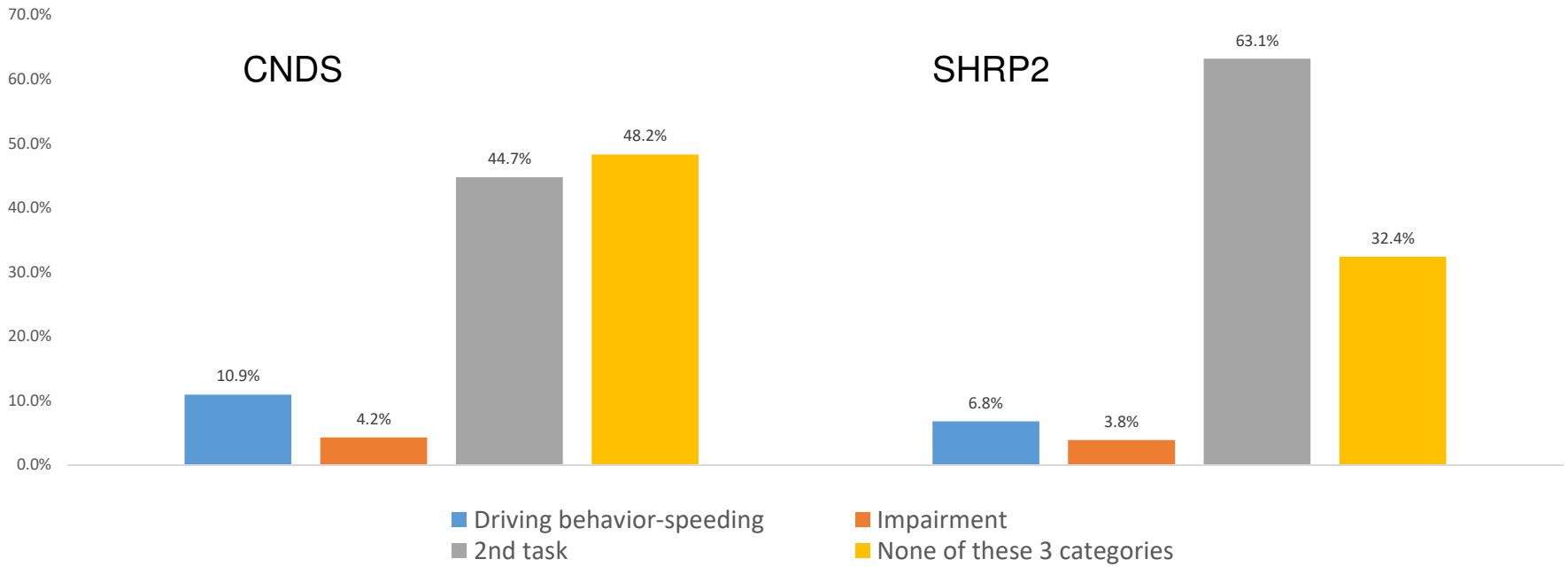


Canada

HOW DO THE 2 DATA SETS COMPARE?

2. Combine 3 main crash types: Rear End, RoR, Intersection
   - Contributing factors:
     - Speeding
     - Impairment
     - Secondary task
     - Other

CONTRIBUTING BEHAVIORS IN CRASHES

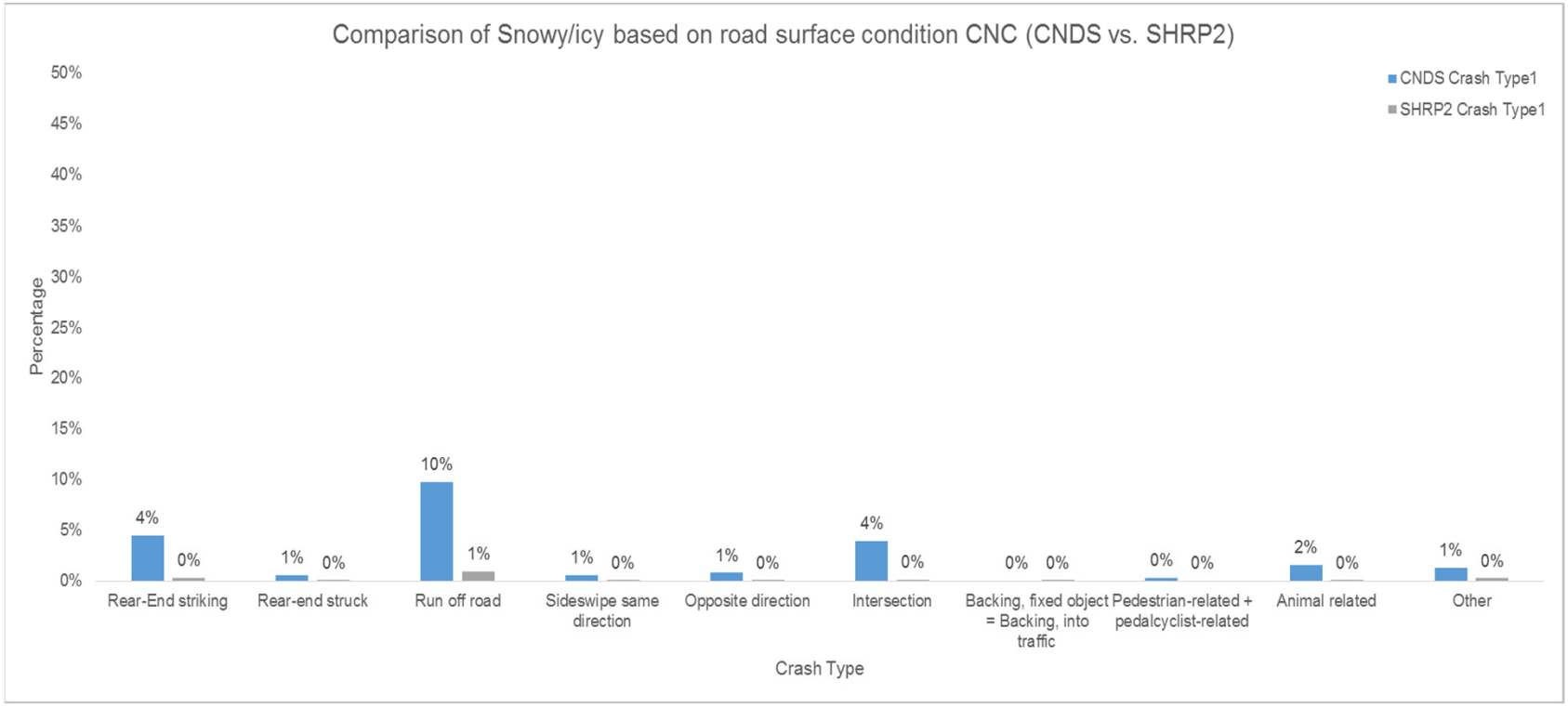


Canada

HOW DO THE 2 DATA SETS COMPARE?

3. Weather
   - Snowy & icy conditions

SNOWY/ICY ROAD SURFACE CONDITIONS



CNDS 23.1%
SHRP2 1.8%

Canada

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CONCLUSIONS

- Real value: Compare, contrast & combining NDS data sets
- Use with other data types, observational studies, infrastructure, etc
- Ask questions of data to get answers not previously possible

- Opportunities:
  - What can we learn from other countries?
  - What can we learn about crash countermeasures?
  - What can we learn about typical driving?
  - What can we learn that is useful for AV/CV development?
  - …….

Canada

CNDS DATA ACCESS

INSIGHT CANADA

https://insight.canada-nds.net/

Canada

Thank you!

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Human Factors and Crash Avoidance
Motor Vehicle Safety
Transport Canada