

Trends in THC prevalence in crash-involved drivers in British Columbia.

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CARSP Conference, June, 2018

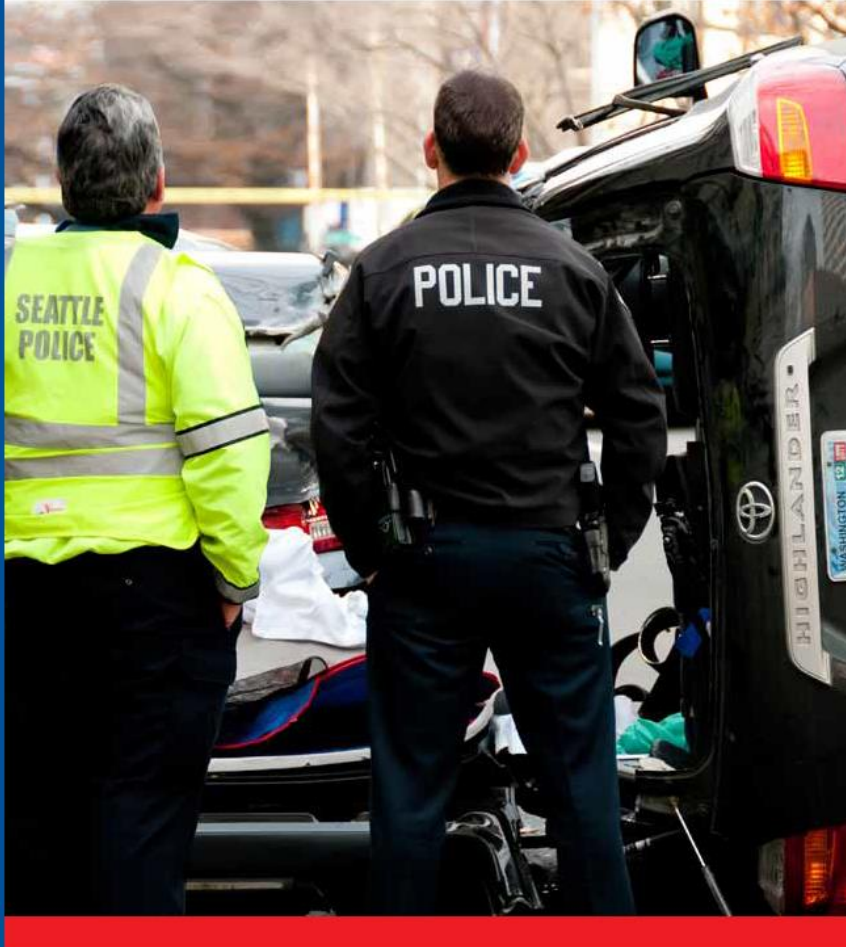
Disclosure

- Co-Investigators: Herb Chan, Shannon Erdelyi
- Funded by: CIHR, Transport Canada
- My Funding: Michael Smith Foundation for Health Research
- Department of Emergency Medicine, UBC
- No conflict of interest or commercial affiliation that can be a potential source of bias

CANADA TAKES ACTION
TO LEGALIZE AND STRICTLY
REGULATE CANNABIS

Canada





Prevalence of Marijuana Involvement in Fatal Crashes: Washington, 2010-2014

May 2016



Marijuana was legalized in Washington state in Dec 2012

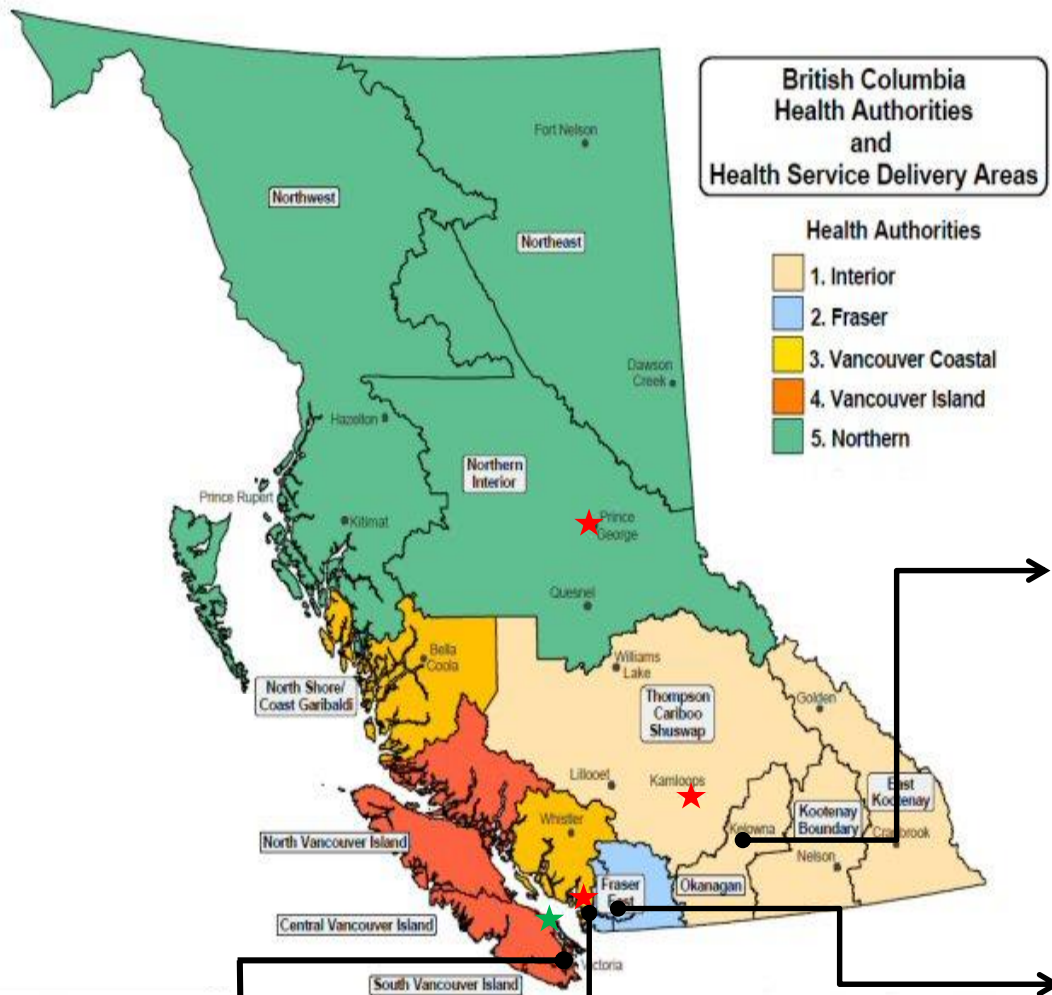
A *per se* limit for THC of 5 ng/mL was introduced at the same time.

Following legalization there was a 50% increase in the prevalence of THC in drivers involved in fatal crashes.

The increase started about 9 months after legalization.

Objective: to study trends in THC prevalence in injured BC drivers between Jan 2011 and July 2016.

Baseline data for future study of the effects of cannabis legalization.



Kelowna General



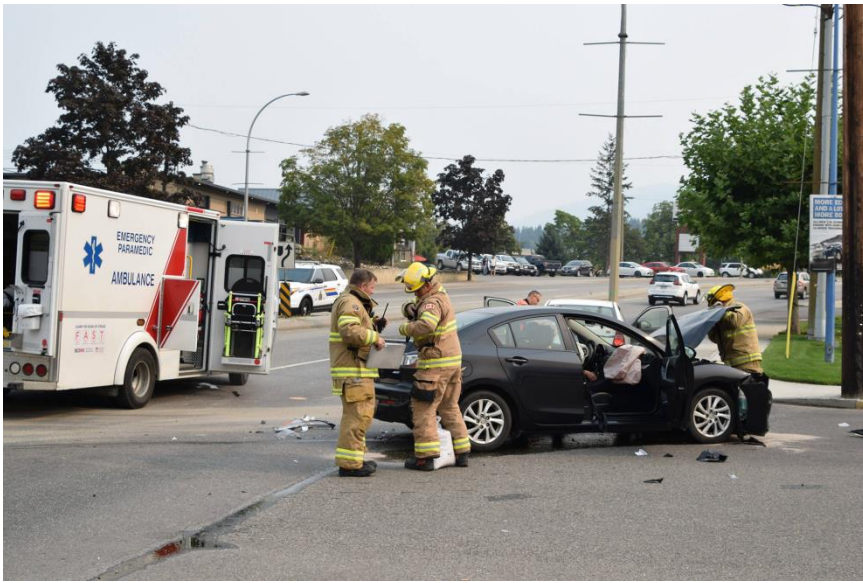
Royal Columbian



Victoria General



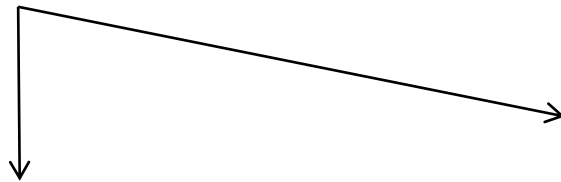
Vancouver General



All drivers of car or light truck
Blood obtained within 6 hours of crash
Excess blood available

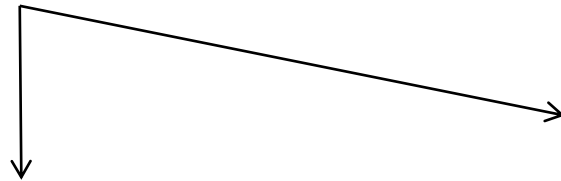
Patient Flow Chart

3147 = Injured drivers with bloodwork



3005 = Eligible drivers

142 missing crash times or later than 6 hours



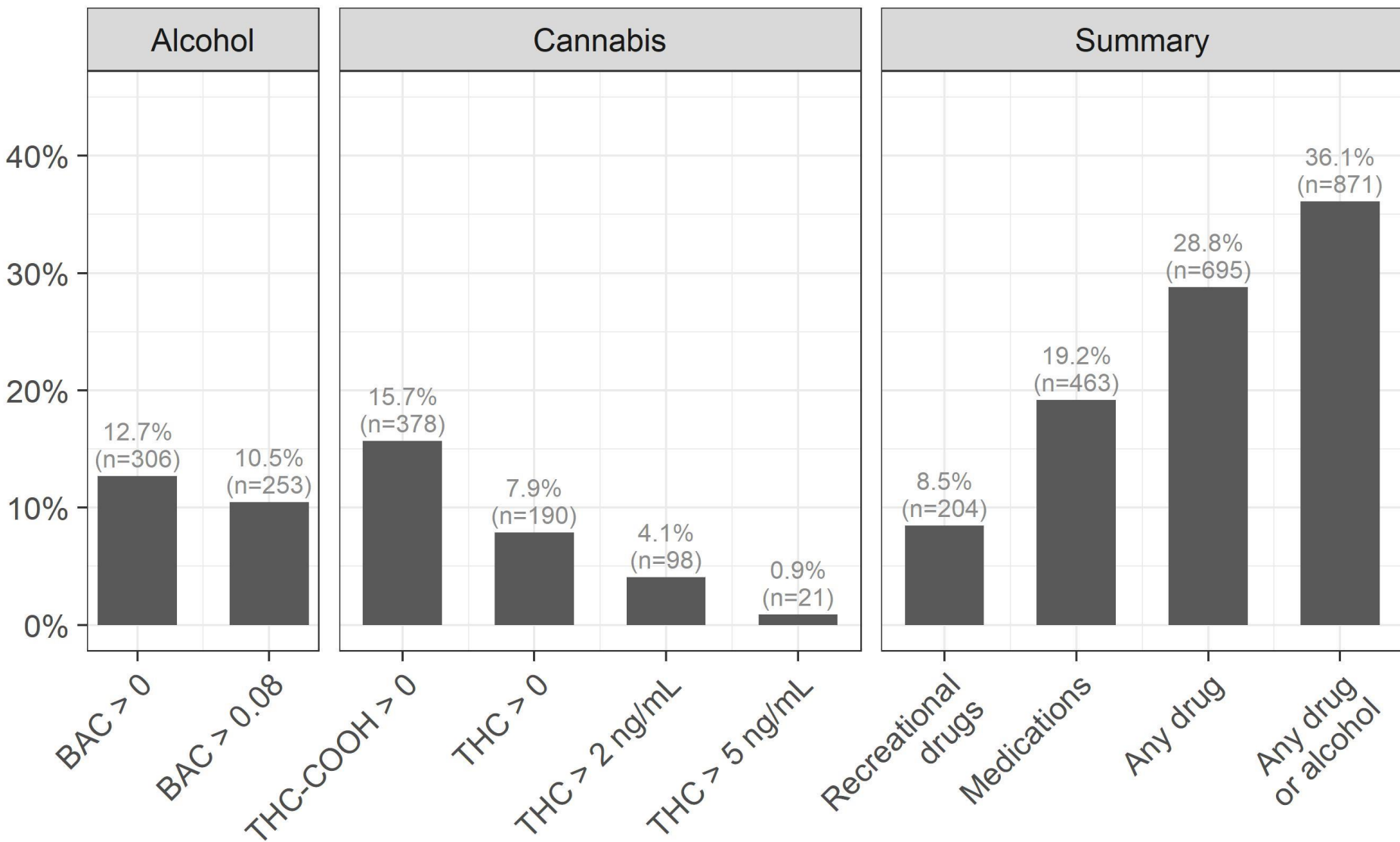
2412 = Drivers enrolled after methods established*

593 = Crash occurred before methods established

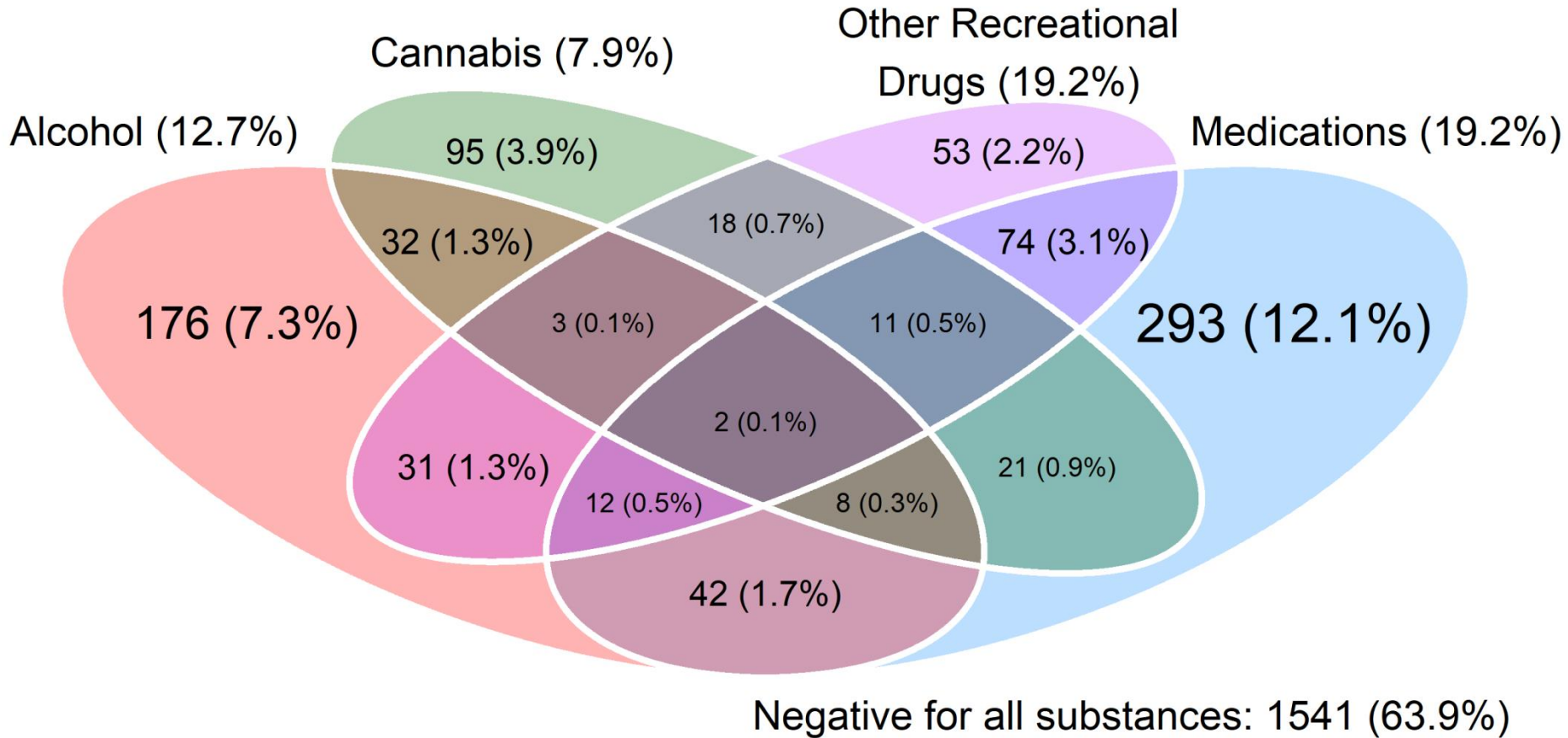
* Data collection was consistent starting in 2012 for Vancouver, Kelowna, and Royal Columbian; and 2014 for Victoria

Demographics

Drivers	n = 2412
Age	
< 20	n = 103 (4.3%)
20 – 29	n = 508 (21.1%)
30 – 59	n = 1303 (54.0%)
60 +	n = 487 (20.2%)
Male	n = 1456 (60.4%)
Crash type	
Single vehicle	n = 748 (31.0%)
Nighttime	n = 869 (36.0%)
SVNC	n = 352 (14.6%)
Admitted	n = 559 (23.2%)
Time from crash to blood draw (min)	
Mean (SD)	109 (73)
Median (IQR)	89 (60)
Within 60 min	n = 461 (19.1%)
60 to 120 min	n = 1254 (52.0%)
120 to 240 min	n = 514 (21.3%)

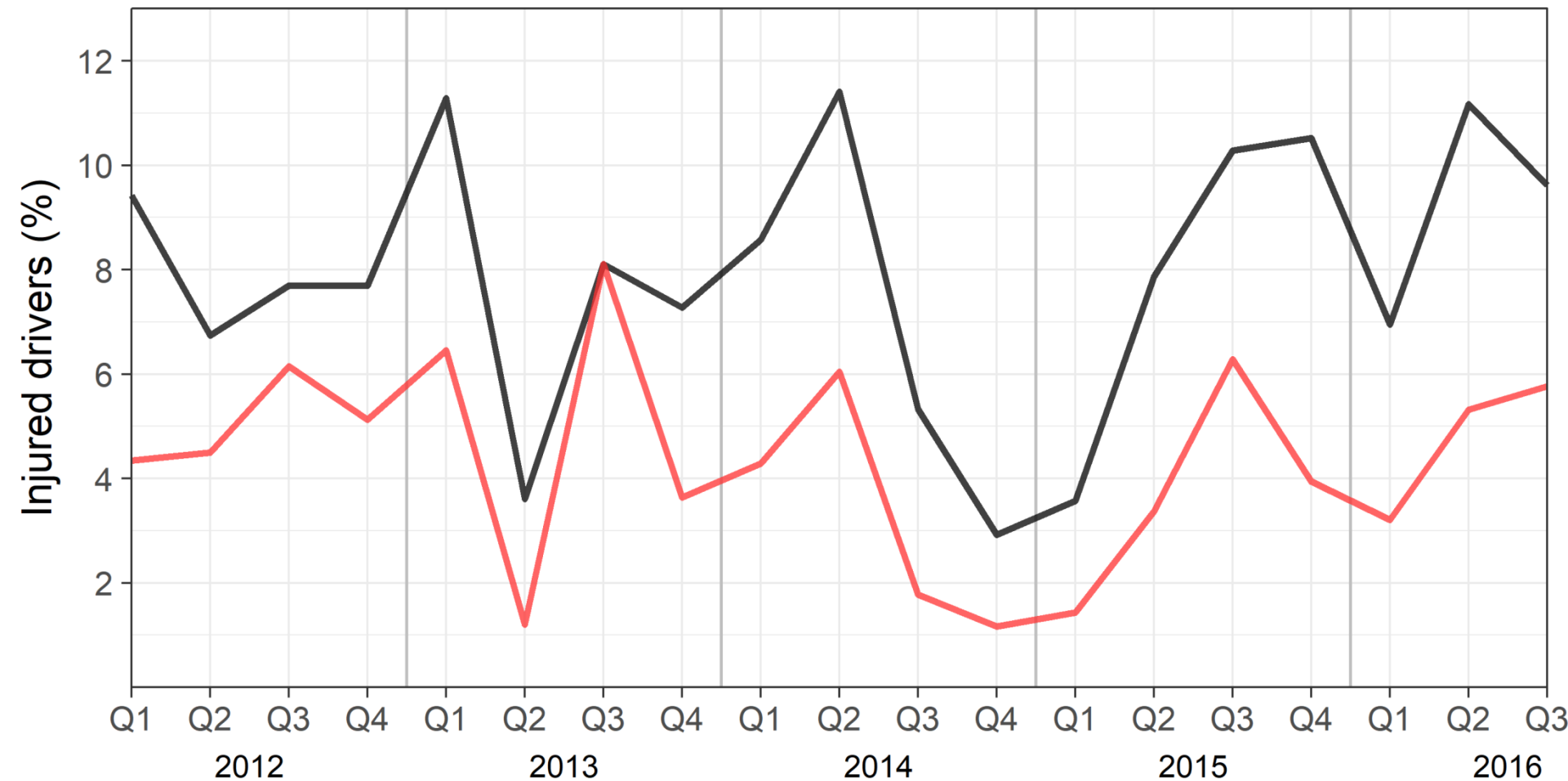


Polysubstance use is common



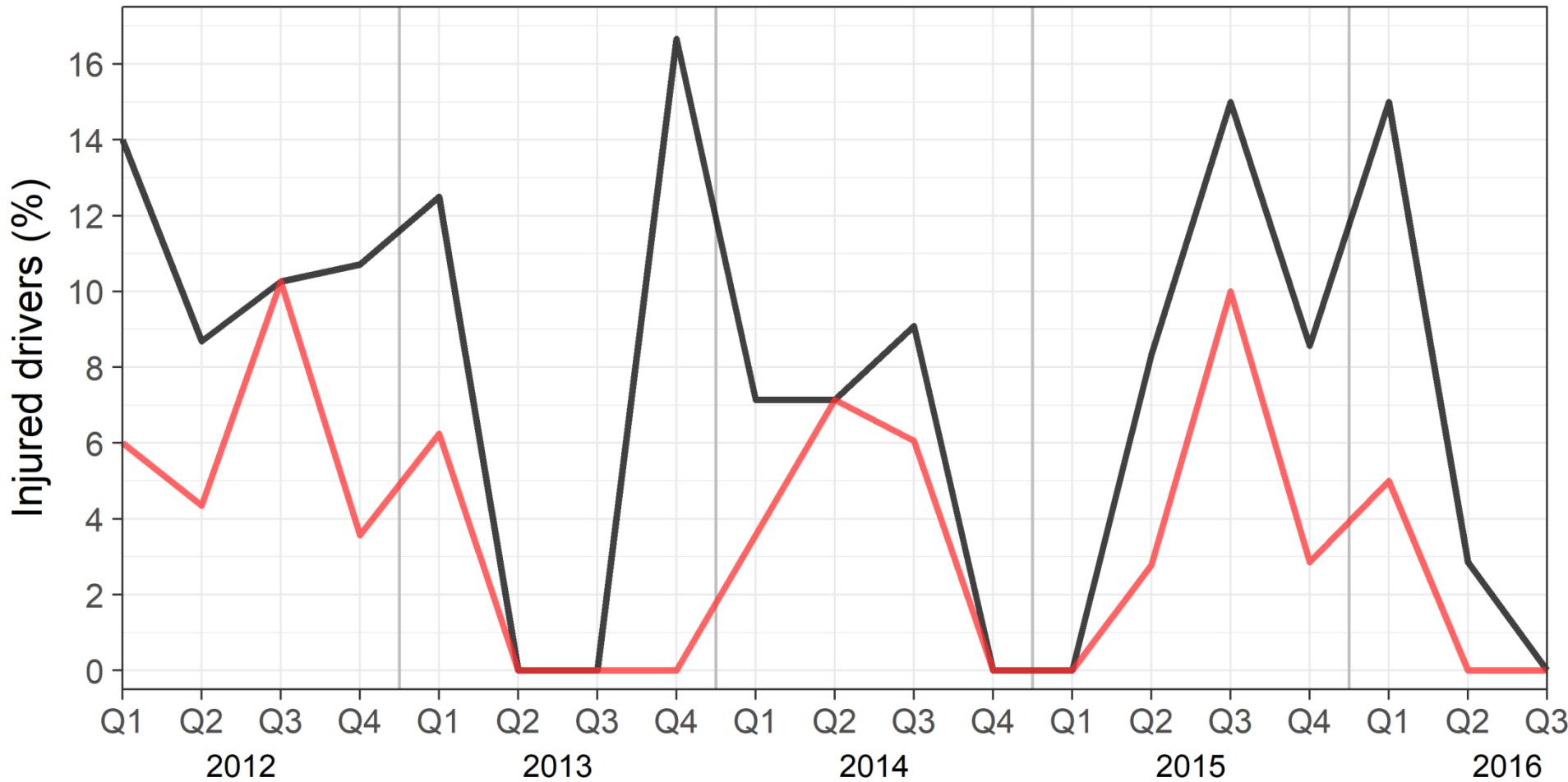
All injured drivers

— THC > 0 — THC > 2 ng/mL

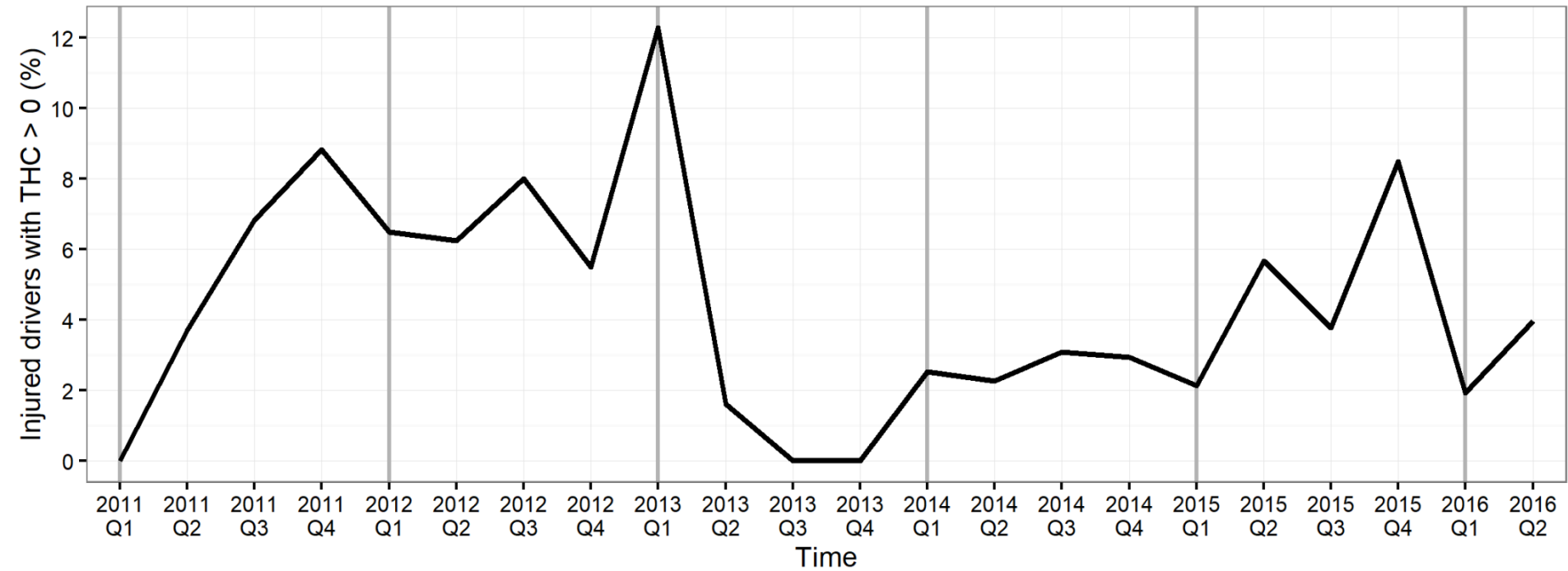


Serious Injuries (admitted to hospital)

— THC > 0 — THC > 2 ng/mL



Vancouver Cases Only



Conclusions

- Between Jan 2011 and July 2016, 7.9% of injured drivers treated in a BC trauma Centre, and 4.8% of those from Vancouver, tested positive for THC.
- There was no significant change in the prevalence of THC-positive drivers during this time period.
- This research will provide valuable baseline data for evaluating the effect of cannabis legalization on road safety.

Demographic and regional variation of drug impaired driving in Canada



- British Columbia
 - Victoria
 - Vancouver
 - New Westminster
 - Kelowna
- Alberta
 - Calgary
 - Edmonton
- Saskatchewan
 - Saskatoon
- Manitoba
 - (Winnipeg)
- Ontario
 - Toronto
 - Ottawa
- Quebec
 - (Montreal)
 - (Quebec City)
- Maritimes
 - (Halifax)
 - (St John's)

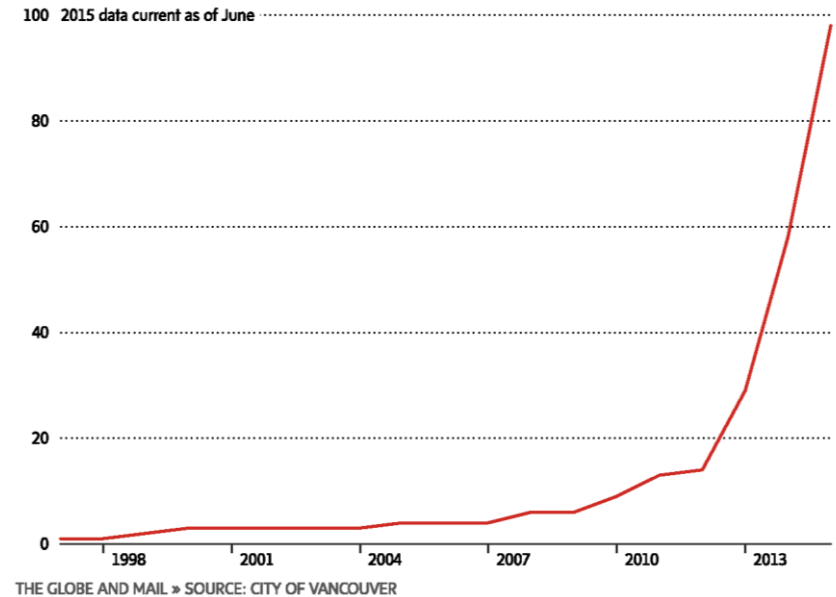
QUESTIONS?



Commercialization of medical marijuana in BC



Growth of medical marijuana dispensaries in the City of Vancouver



THE GLOBE AND MAIL

Vancouver issues its first business licence to a marijuana dispensary

[Mike Hager](#)

VANCOUVER — The Globe and Mail

Published Tuesday, May 17, 2016 10:17PM EDT

Last updated Wednesday, May 18, 2016 8:25PM EDT

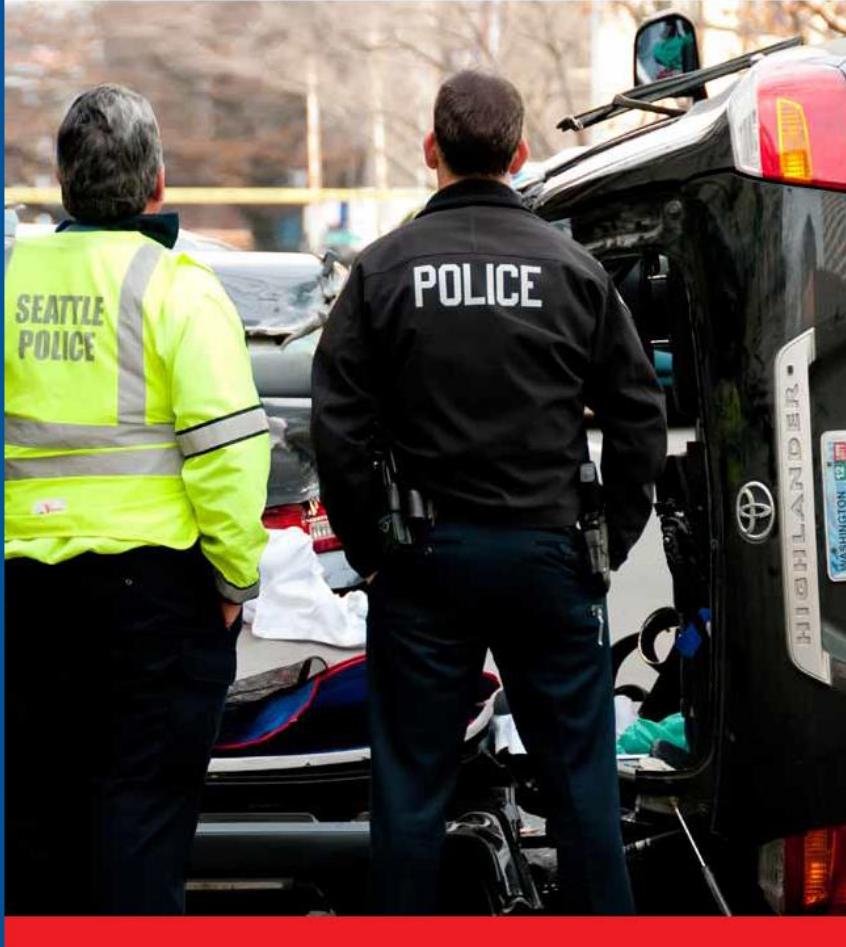
No doctor's note for pot? No problem, say Vancouver dispensaries



GLENN SCHAEFER

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Published on: July 14, 2016 | Last Updated: July 14, 2016 4:51 PM PDT



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The increase started about 9 months after legalization.



Other jurisdictions reported an increase in cannabis-related crashes following legalization



Evaluation of the effect of cannabis legalization on traffic crashes in Canada requires baseline data that accounts for prior trends.

Objective: to study trends in THC prevalence in injured BC drivers between Jan 2011 and July 2016.