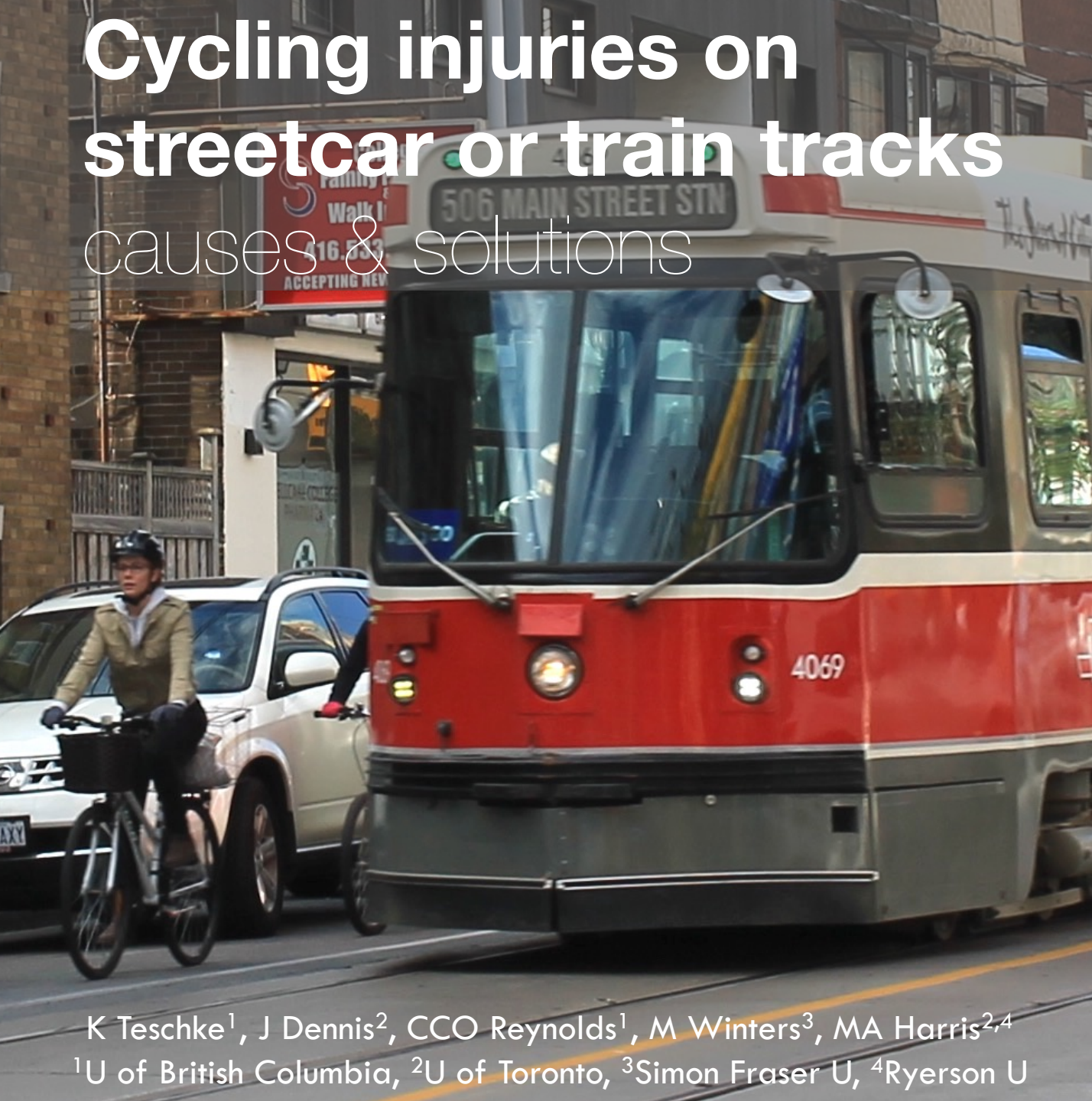


Cycling injuries on streetcar or train tracks

causes & solutions



On streets with tracks

injury odds ratio: 3.0 (95% CI: 1.8, 5.1)

Study of 690 cyclists treated in Toronto or Vancouver emergency departments

Toronto has largest streetcar system in North America → 80 km 2-way

276 injured cycling in Toronto

- 1/2 on streets with tracks
- 1/3 directly involved tracks
 - 15% → tires slipped on rails
 - 85% → tires caught in rail flangeways

K Teschke¹, J Dennis², CCO Reynolds¹, M Winters³, MA Harris^{2,4}

¹U of British Columbia, ²U of Toronto, ³Simon Fraser U, ⁴Ryerson U

At intersections, often multiple sets of tracks
... difficult to cross all at a right angle



Intersection crashes

32% of all track crashes

“I wanted to make a left turn and while moving to the centre of the lane my bike wheels got caught in the tracks.”

Left turn had greatly increased injury odds
vs. going straight, right turn, or non-intersection

To reduce these injuries ... 2-stage left turns

- education (left-turn risk not well known)
- design (protected intersection)

No cycling infrastructure,
parked cars
→ highest track injury odds



No cycling infrastructure,
no parked cars
→ 1/2 odds of track injury



Painted bike lane
→ 1/6 odds of track injury



Dedicated streetcar right of way
→ no track injuries



Non-intersection crashes

68% of all track crashes

Most involved sudden, unexpected manoeuvres

"I was cycling in the curb lane and a truck stopped in front of me. I went around him and my back wheel got caught in the track."

Route type made a difference

To prevent these injuries ... physical separation

- dedicated streetcar right of way
- cycle track