

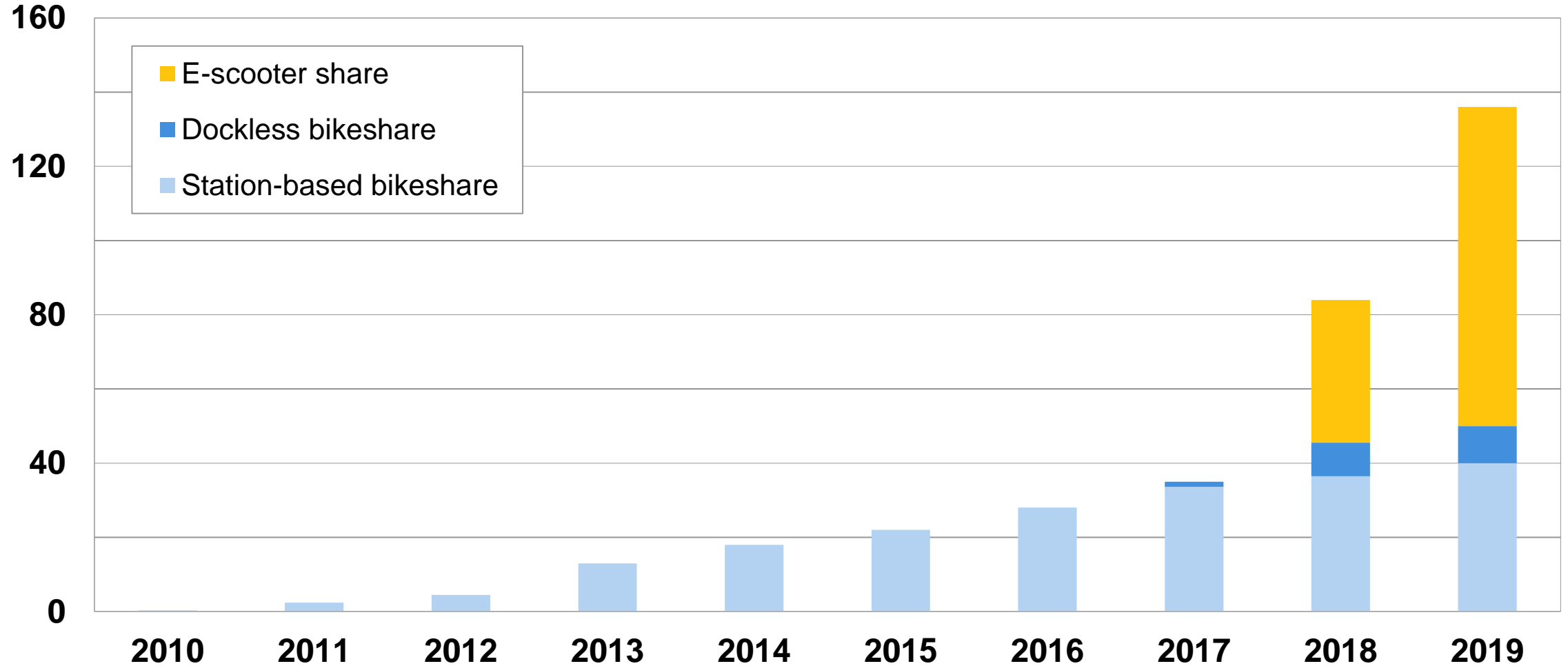
# E-scooter user injury characteristics and circumstances in Washington, DC

Vision Zero: Research on the Road  
June 10, 2021

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# Shared micromobility trips, in millions

National Association of City Transportation Officials



# Could the Pandemic Drive an **E-scooter** Revolution?

CNN, 12/17/20

## Portland **E-scooter** Ridership Ramping Up after COVID-19 Outbreak

KGW8, 7/22/20

## **Scooters** Are Rebounding from the Pandemic 'Nuclear Winter'

Government Technology, 2/5/21

## Lime's CEO on the future of **scooters**: 'COVID has turned from a headwind into a tailwind'

The Verge, 10/28/20

## The **E-scooters** Loved by Silicon Valley Roll into New York

# Washington, DC's shared dockless e-scooter program

- ▶ Introduced March 2018
- ▶ By end of 2019
  - Eight operators (Bird, Bolt, Jump, Lime, Lyft, Razor, Skip, Spin)
  - More 4,600 scooters
  - Over 400,000 monthly trips
- ▶ Currently
  - Six operators (Bird, Lime, Lyft, Razor, Skip by Helbiz, Spin)
  - More than 10,000 scooters authorized
- ▶ No riding on sidewalk in central business district
- ▶ Top speed of e-scooters restricted at 10 mph in January 2019



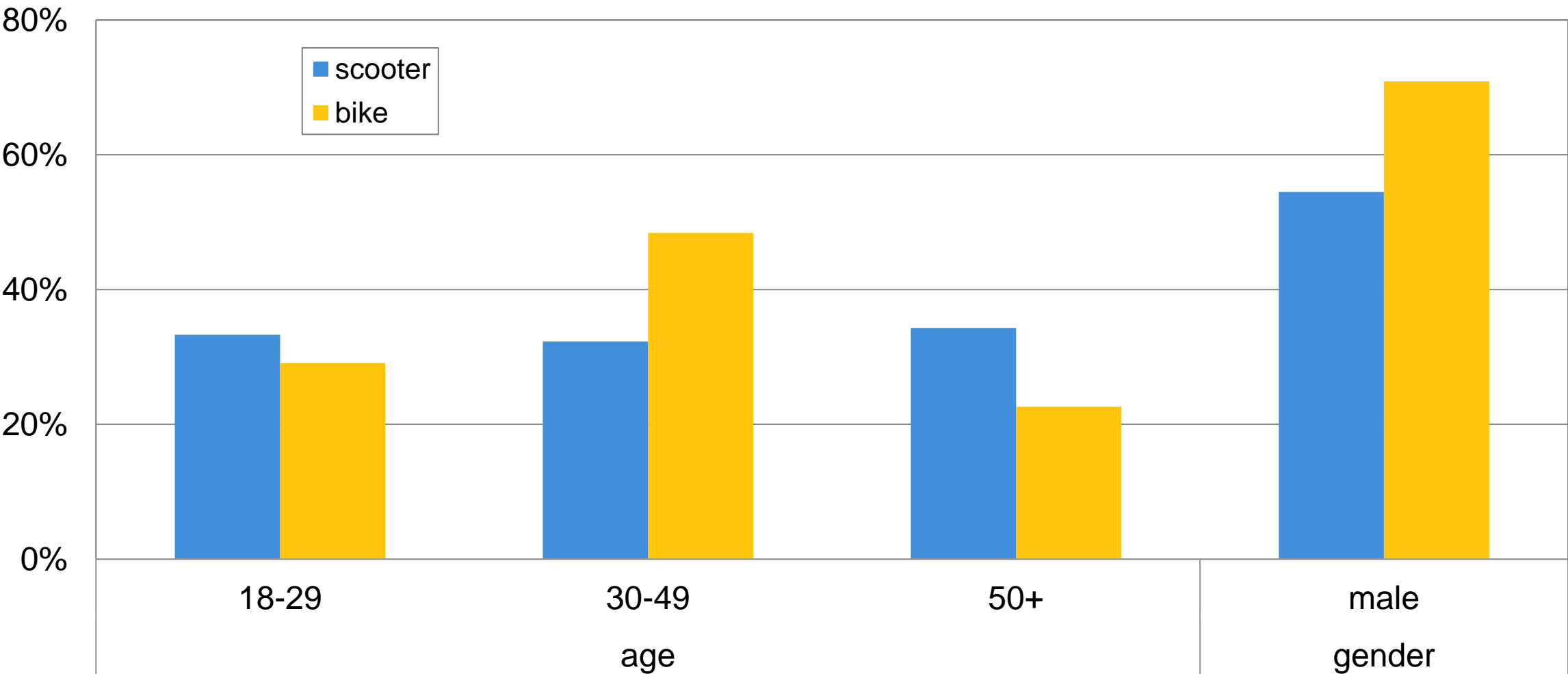




# E-scooter injury study in Washington, DC

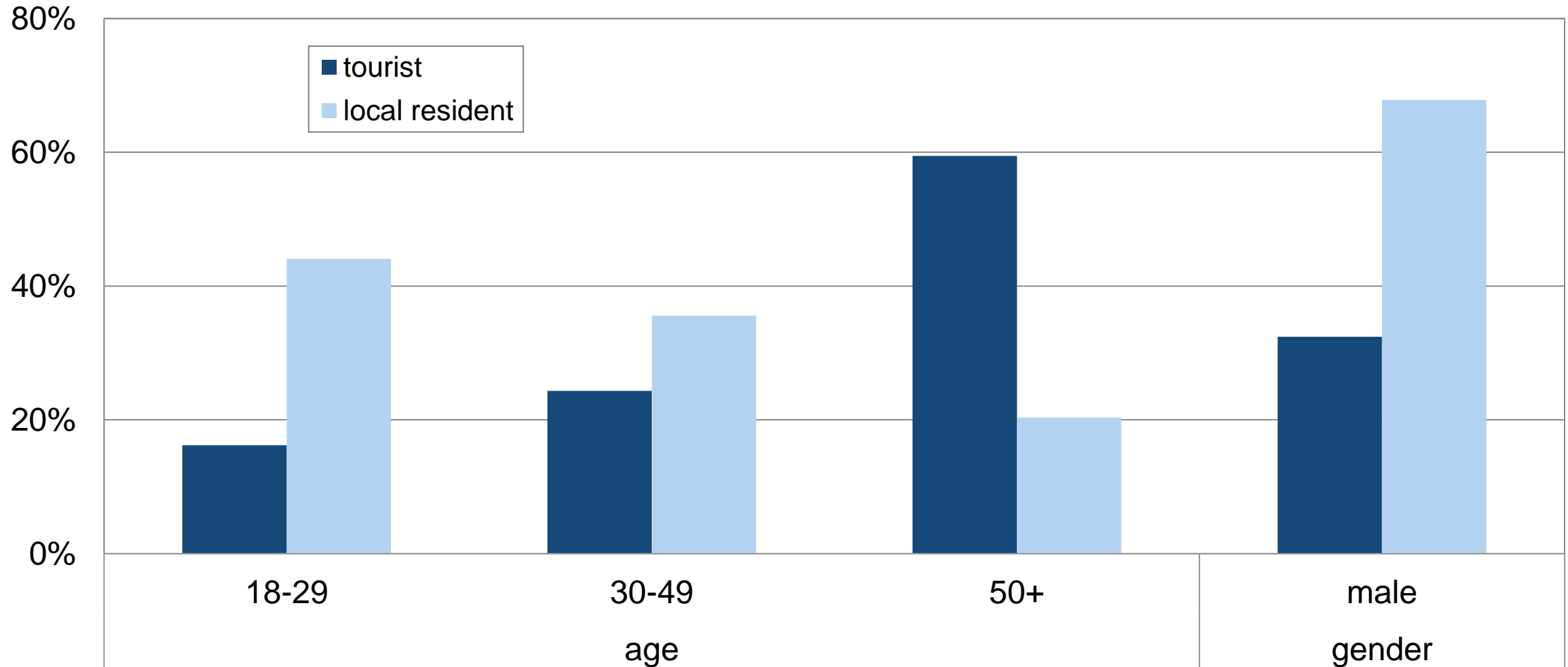
- ▶ Interviewed 99 injured adult e-scooter riders seeking treatment in emergency department at George Washington University Hospital
  - March-November 2019
  - 9 a.m. — 10 p.m.
- ▶ Collected information on injuries, circumstances, trip purpose, demographics
- ▶ Compared with 337 adult cyclists interviewed for earlier study during 2015-2017

# Age and gender of injured riders



# Tourist and resident e-scooter riders have different demographics

About 40% of injured riders were tourists or visitors



# E-scooter riders were less experienced and had higher injury rates than cyclists



**21 visits to the study ED  
per million miles traveled citywide**

Among injured e-scooter riders...

36% were on first ride  
55% were on social or recreational rides



**6 visits to the study ED  
per million miles traveled citywide**

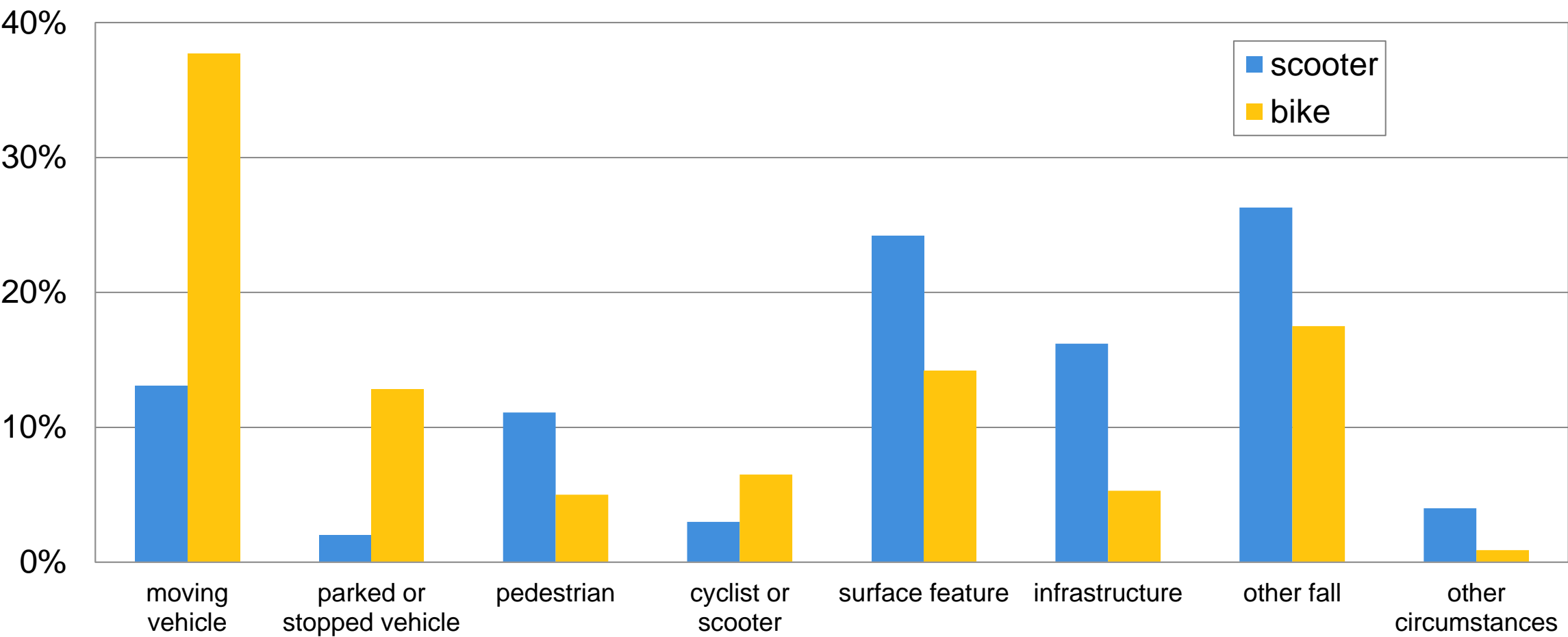
Among injured cyclists...

79% ride most days during peak season  
52% were commuting

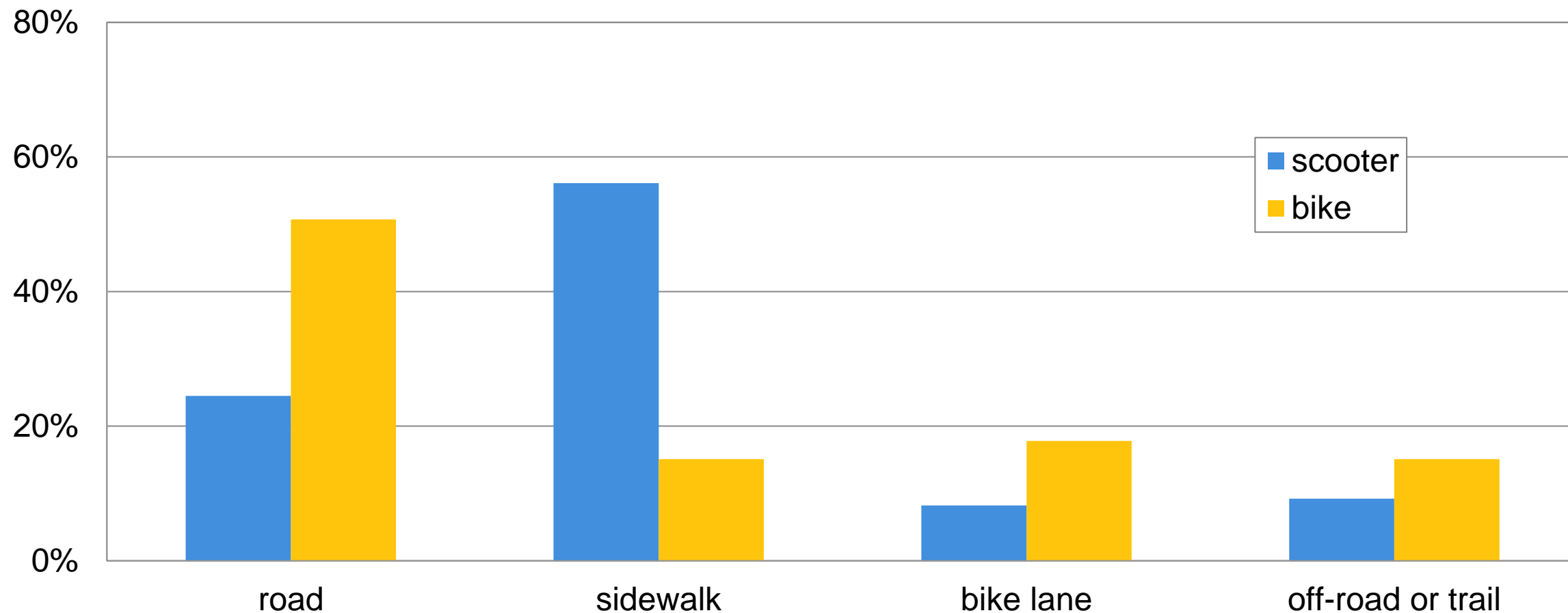


# Incident circumstances

Percent of riders reporting reasons for ED visit

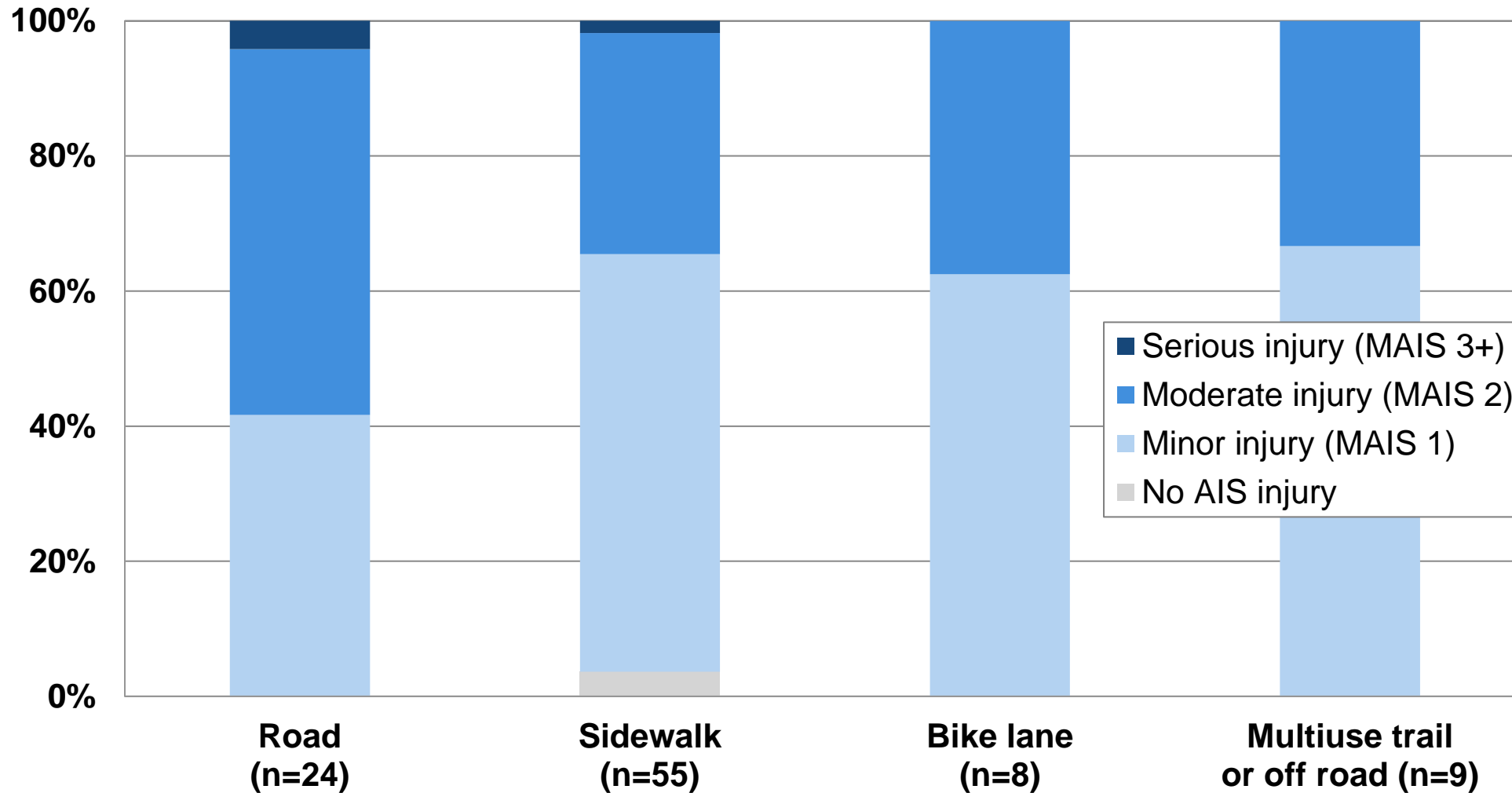


# Type of location where riders were injured

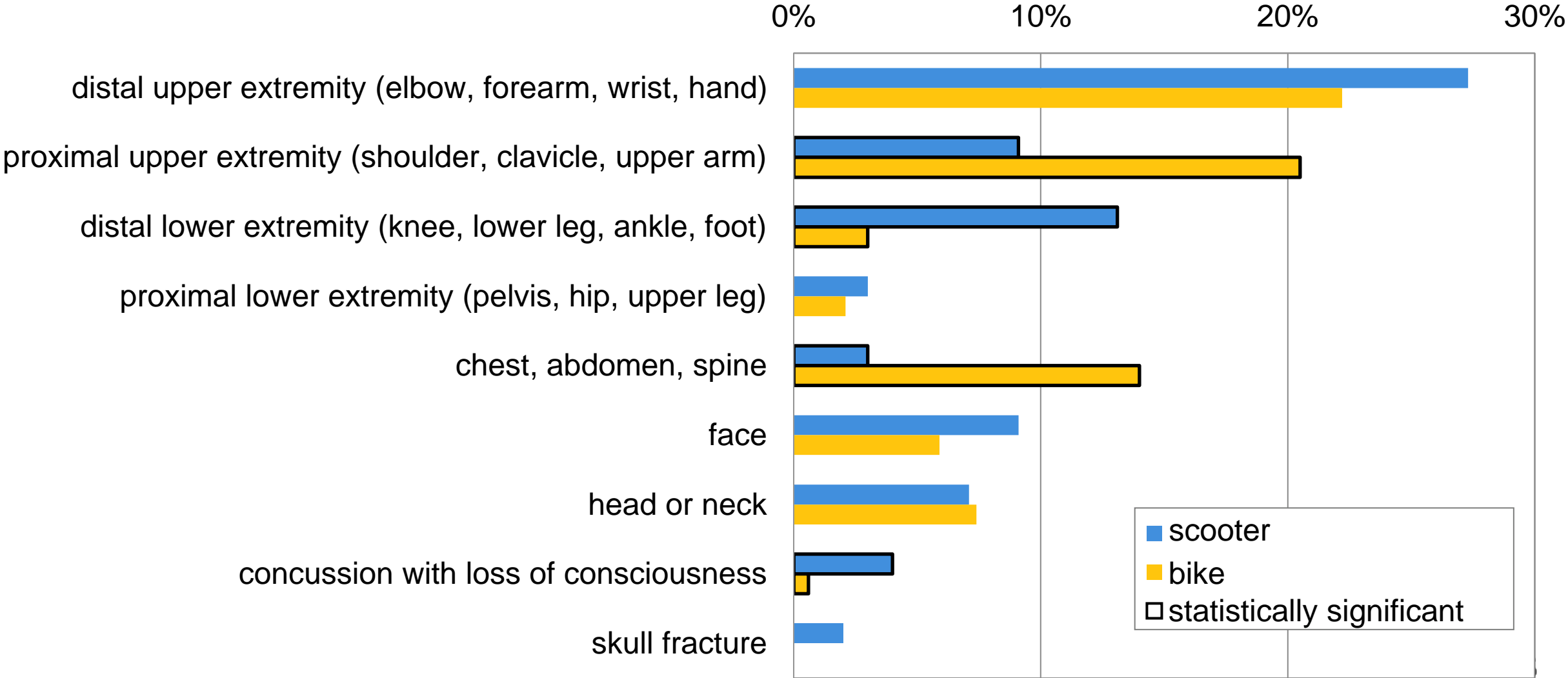


# Injuries were more severe on the road

Percent of e-scooter riders with injuries of various severities by location



# Types of injuries sustained





# Closing thoughts

- ▶ Where should e-scooters ride?
  - Lower injury severity on sidewalks, but possibly more opportunities for conflict
  - E-scooters on sidewalks can be impediments for pedestrians, people with disabilities
  - For e-scooter users to ride in bike lanes, they need to be built where they are riding
- ▶ Rider profiles can vary widely
- ▶ How to compensate for inexperience?





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