

Dr Mark Bekhit
(Auckland ED
House Officer)

Dr James Le Fevre
(FACEM)

Dr Colleen Bergin
(Radiologist and
Associate
Professor,
University of
Auckland)

Regional healthcare costs and burden of injury associated with electric scooters

Disclaimer

- I ride an e-scooter!!
 - With a helmet
- No other conflicts of interest to disclose



Background – Media

stuff national Lime scooters launch in New Zealand's two largest cities

Michael Hayward • 18:55, Oct 15 2018



stuff

stuff national E-scooters strain emergency departments, cost ACC \$1.4m reports show

Matthew Rosenberg • 11:52, May 03 2019



auckland

23-year-old man dies after being injured in Lime e-scooter accident

Caroline Williams • 22:23, Sep 20 2019



The San Diego Union-Tribune Riding an e-scooter without a helmet to be legal in California. What could go wrong?



SAN DIEGO, CA 9/14/2018: An electric scooter rider travels on the sidewalk of B Street near Sixth Avenue in downtown San Diego. (Howard Lipin/San Diego Union-Tribune)

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ARTICLE HIGHLIGHT TRANSPORTATION 06.17.2018 09:24 PM

Discombobulated Cities Wrestle With an Electric Scooter Influx

San Francisco just passed a bill to take more control of how these scooter systems work, and it's not the only city struggling to divide precious space.



Background – Literature



249 patients

Original Investigation | Emergency Medicine

Injuries Associated With Standing Electric Scooter Use

Tarak K. Trivedi, MD, MS; Charles Liu, MD; Anna Liza M. Antonio, DrPH; Natasha Wheaton, MD; Vanessa Kreger, MD, MPH; Anna Yap, MD; David Schriger, MD, MPH; Joann G. Elmore, MD, MPH



Journal of Medical Imaging
and Radiation Oncology

63 patients

Medical Imaging—Original Article | [Free Access](#)

Impact of e-scooter injuries on Emergency Department imaging

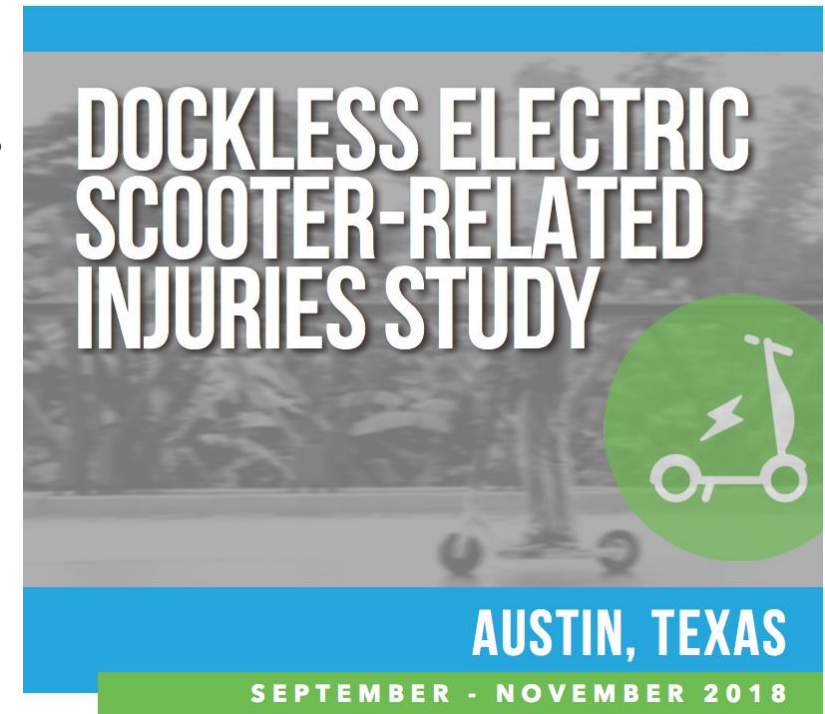
Laura J Mayhew✉, Colleen Bergin

First published: 11 April 2019 | <https://doi.org/10.1111/1754-9485.12889> | Citations: 1

LJ Mayhew MBChB; **C Bergin** MBChB, FRACR.

Conflict of interest: None.

271 patients



Format: Abstract ▼

N Z Med J. 2019 Aug 30;132(1501):57-63.

21 patients

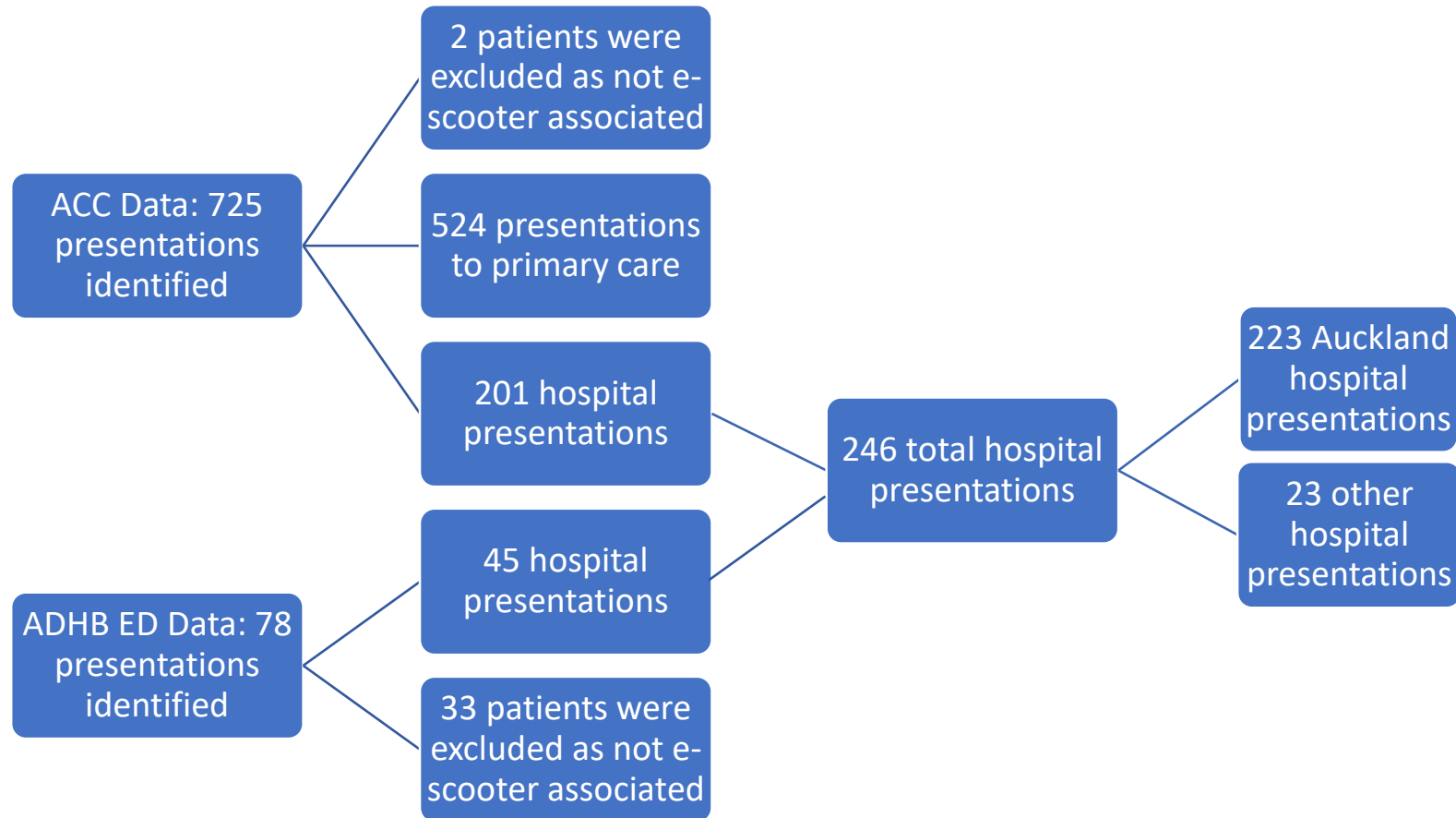
The cost of electric-scooter related orthopaedic surgery.

Campbell A¹, Wong N², Monk P³, Munro J³, Bahho Z⁴.

Author information

- 1 Orthopaedic Registrar, Auckland City Hospital, Auckland.
- 2 House Officer, Auckland City Hospital, Auckland.
- 3 Consultant Orthopaedic Surgeon and Lecturer, University of Auckland, Auckland.
- 4 Senior Orthopaedic Registrar, Auckland City Hospital, Auckland.

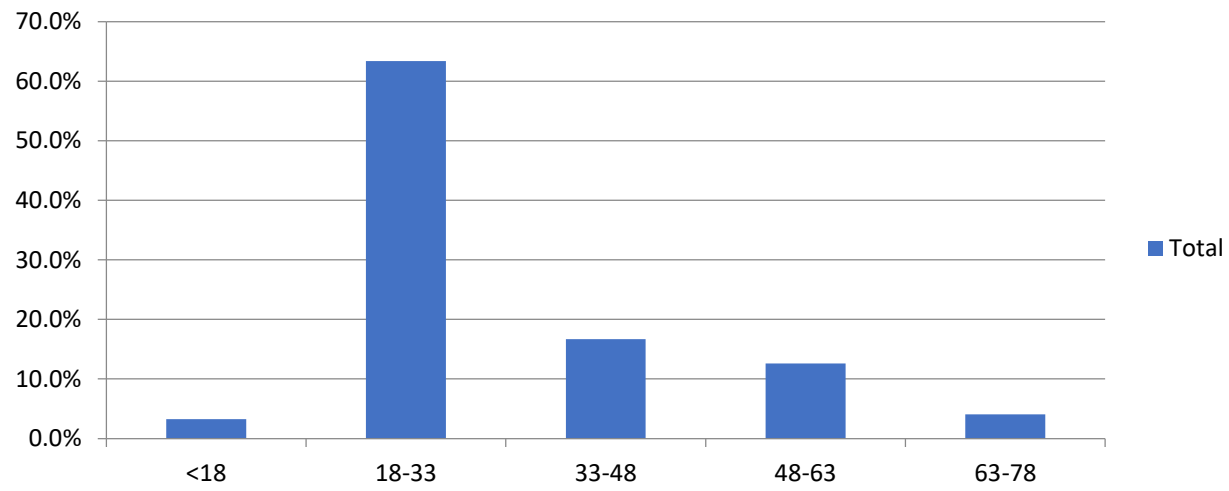
Methodology



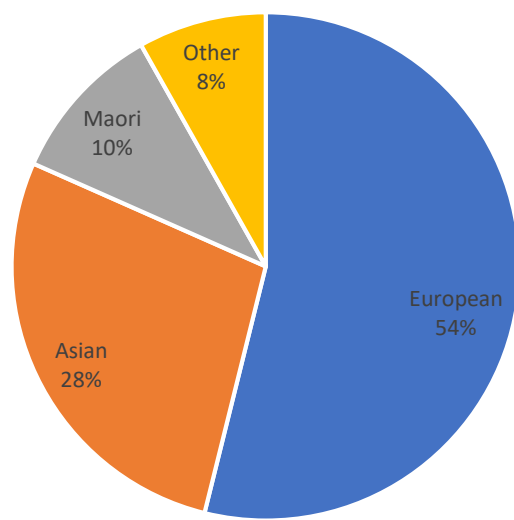
All eligible e-scooter injury patients identified by both ACC and Auckland Hospital ED

Demographics

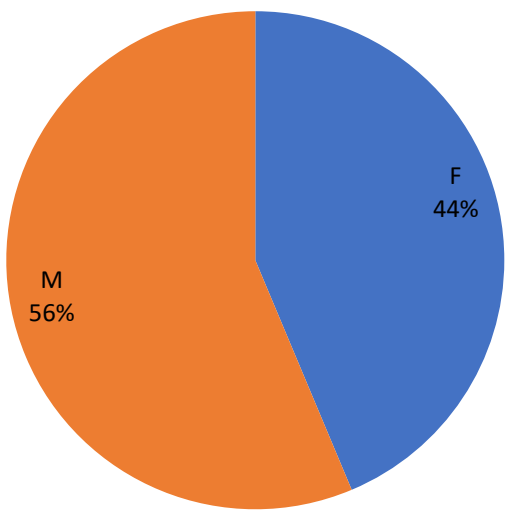
Number of injured patients by Age Group



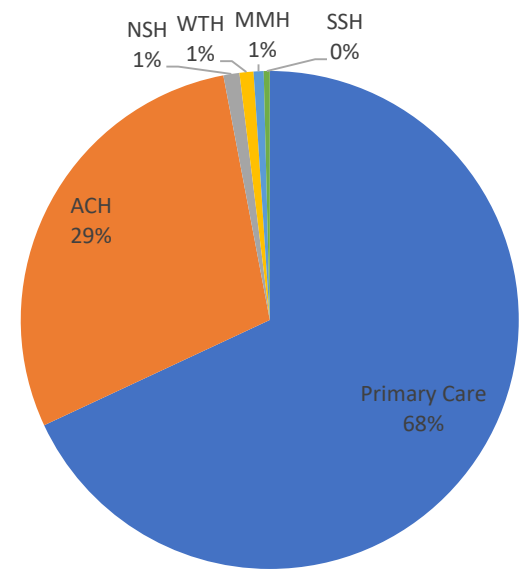
Ethnic Distribution of Patient Injuries



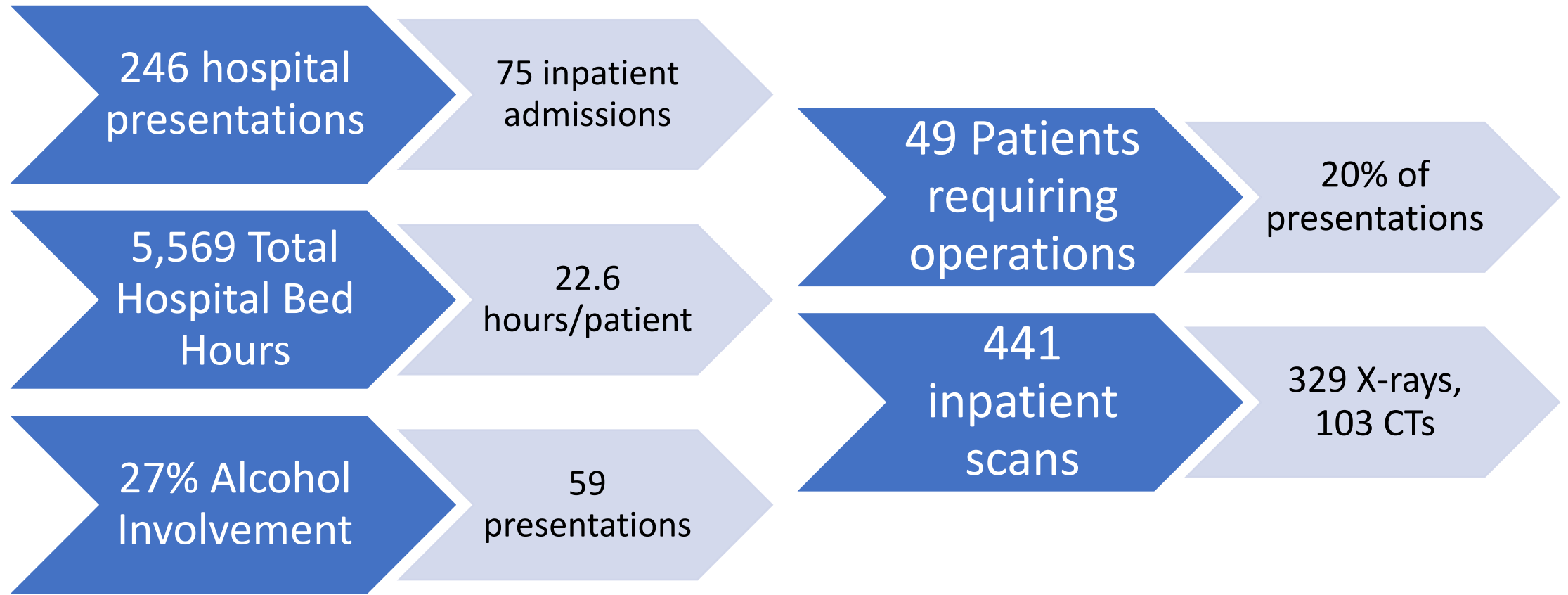
Gender Distribution



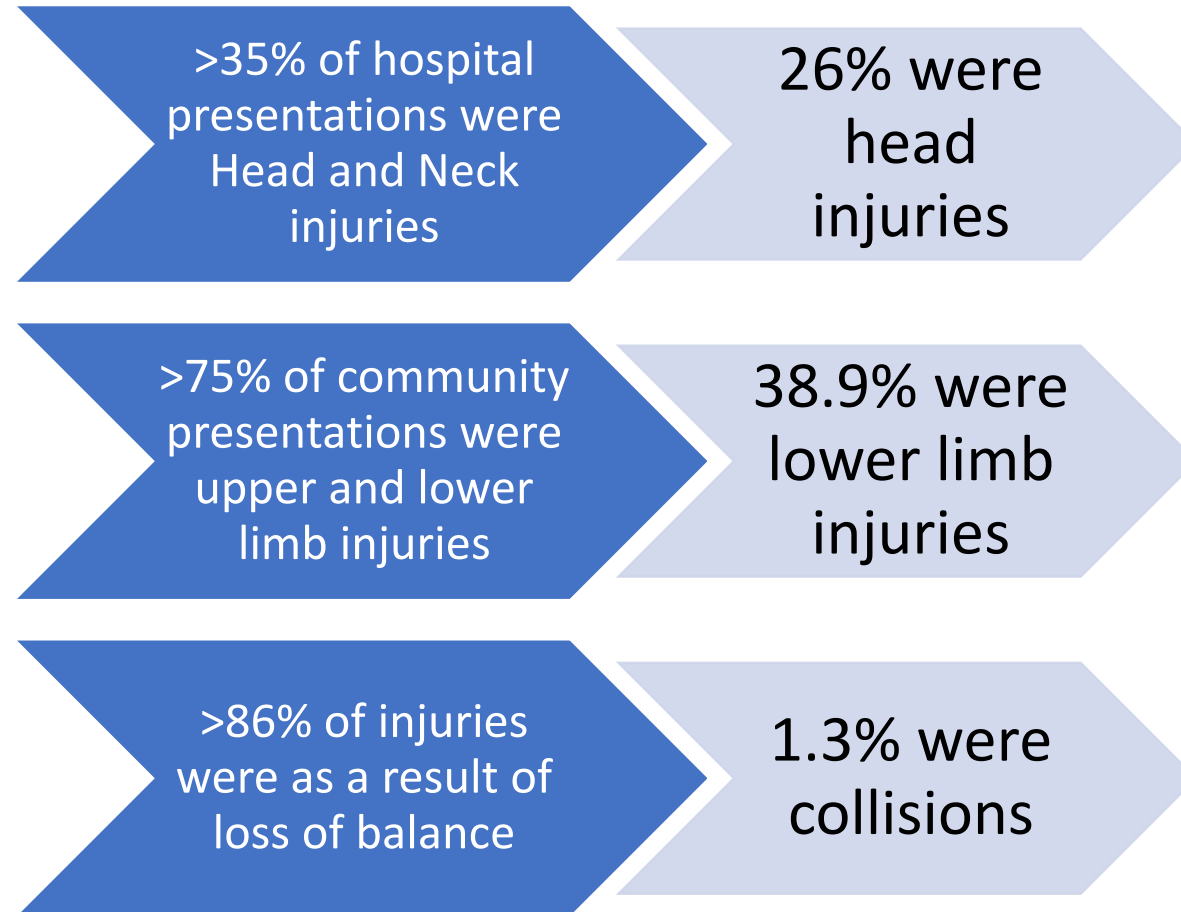
Distribution of Impact Across Auckland Region



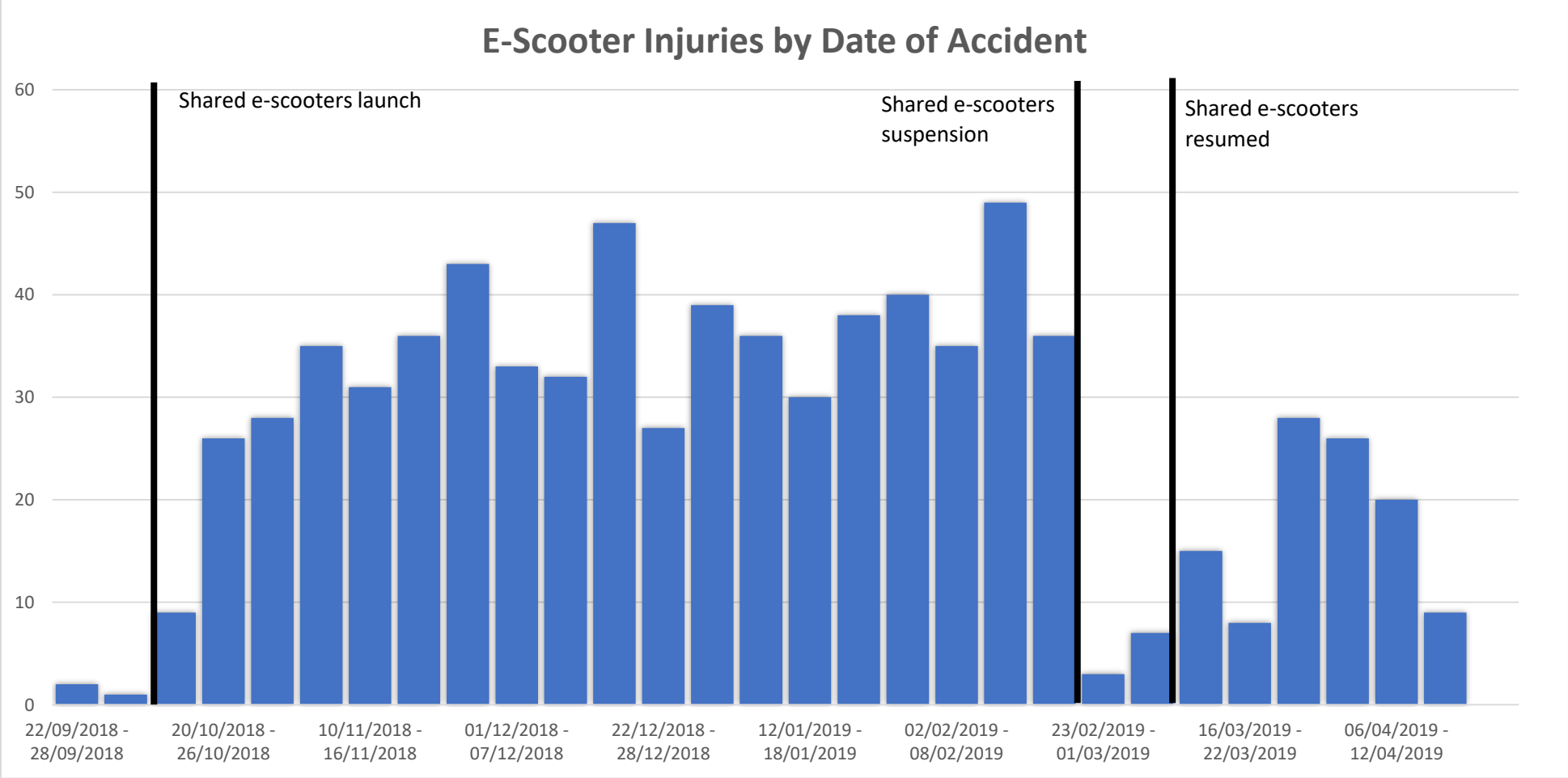
Summary Results



Injury Location/Type



Timeline of Injuries



A timeline of e-scooter injuries per week in the Auckland region

Regional Costs

Auckland

ACC:
\$694,312

ADHB:
\$608,843

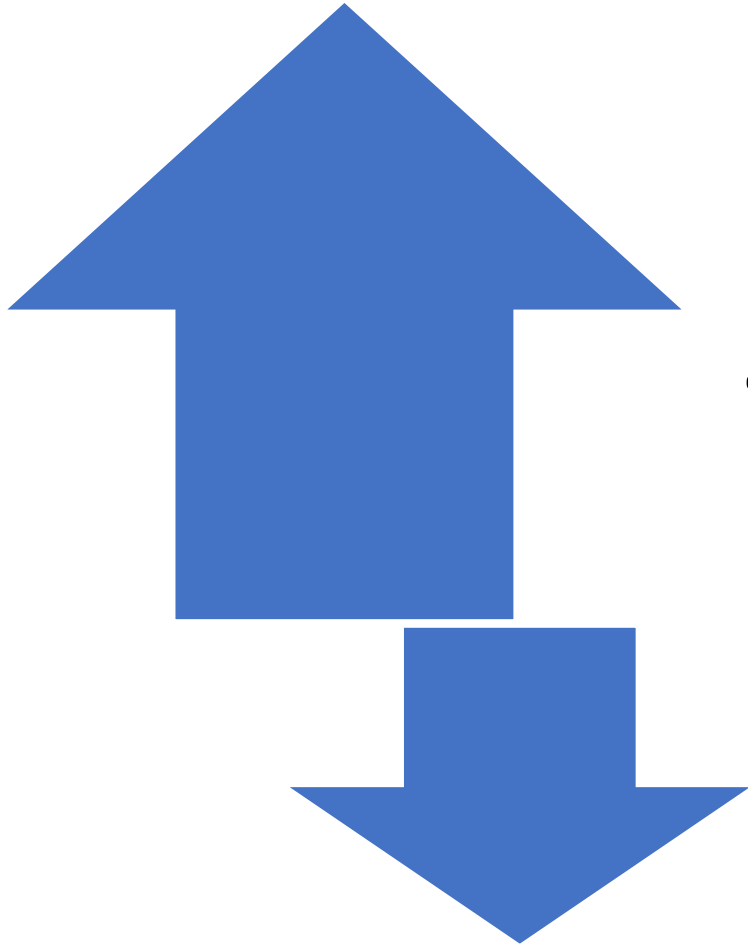
Total:
\$1,303,155

New Zealand

ACC:
\$4M

Total:
~\$8M

Cost Comparison



Healthcare costs:
\$1,300/e-scooter

Council Licensing Fees:
\$5-35/e-scooter

Discussion



Helmets



Alcohol



Licensing Fees



Outpatient
impact

Acknowledgements

- Dr James Le Fevre and Dr Colleen Bergin
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- Dr Mark Gardner – ADHB Emergency Department
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 - ADHB Cost Data
- ADHB Emergency Department
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