Understanding Pedestrian Crashes

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Study details

- Led by Jennie Oxley and Steve O'Hern at MUARC

- Funded by TAC Community Road Safety Grant

- Literature review

- Data analysis (ten years):

  - Police/TAC data (CrashStats with more detail)

  - Hospital data – admissions and ED presentations
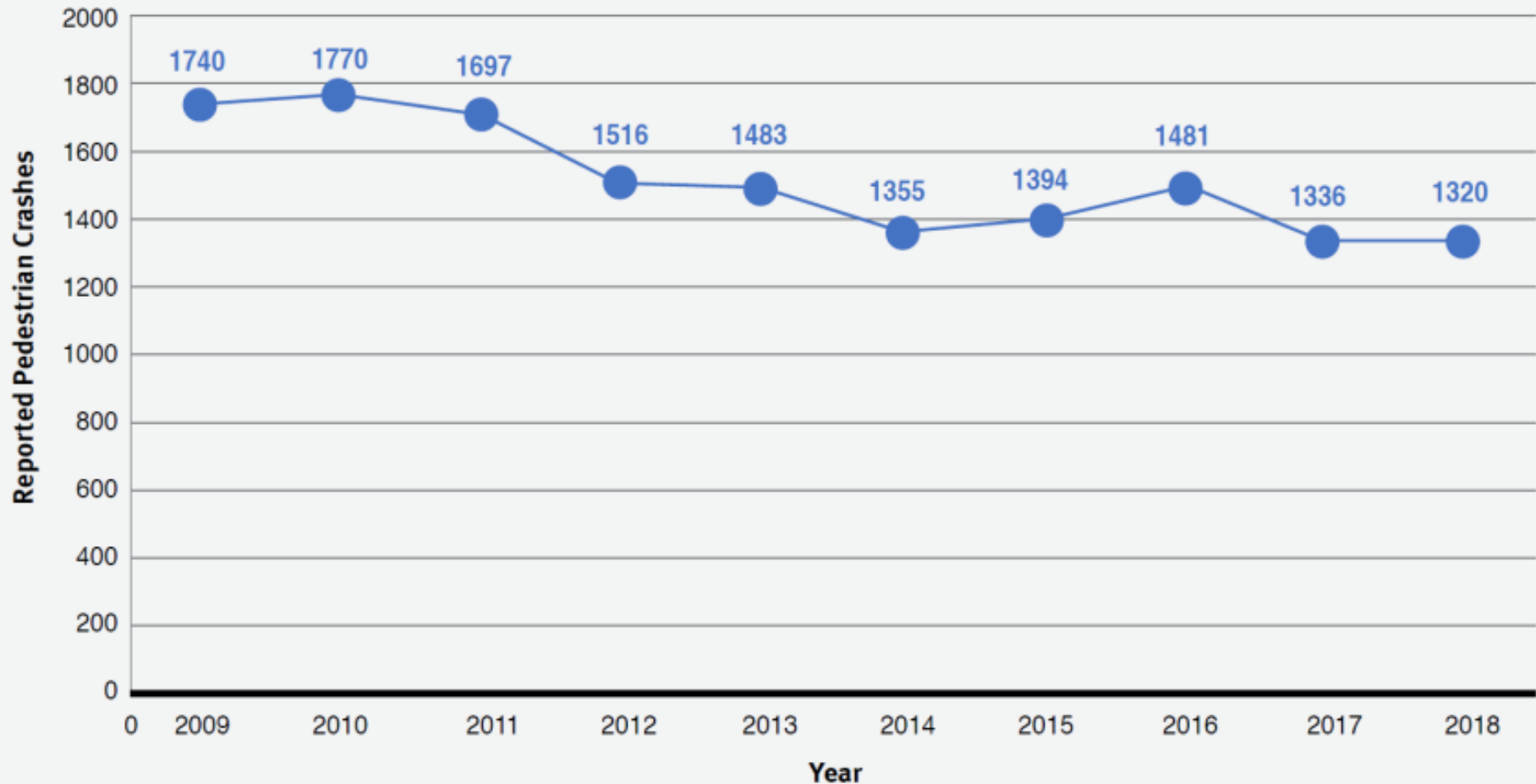
  - National cause of death data

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Literature review

- Speed

- Intoxicated pedestrians (possibly 30-45% of fatalities)

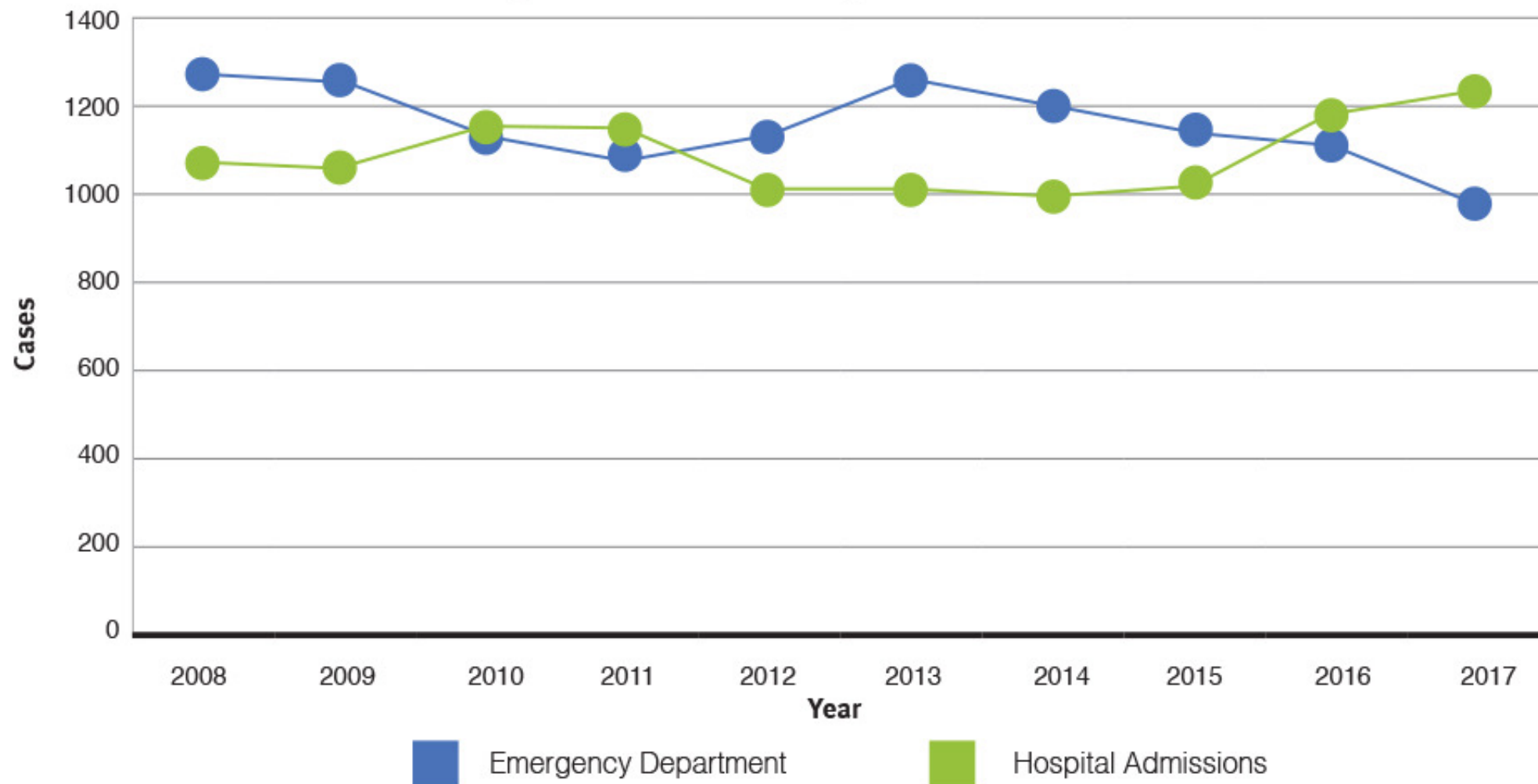- Distracted pedestrians

- Driver behaviour

- Vehicle design

Crash data suggests crashes are declining, BUT…

Figure 1: Reported pedestrian crashes (VPARS 2009-2018)

PEDESTRIAN HOSPITAL PRESENTATIONS (2008-2017) – VICTORIA

Emergency Department

Hospital Admissions

https://www.victoriawalks.org.au/pedestrian-crashes

Little info on crash circumstances in data

Crash Details		Frequency (n)	Percent (%)
Definition for Coding Accidents (DCA)	Nearside (100)	5,148	34.1
	Far side (102)	3,306	21.9
	Other pedestrian (109)	2,984	19.8
	Emerging (101)	827	5.5
	Driveway (107)	784	5.2
	Playing, working, lying, standing on carriageway (103)	708	4.7
	On median/ footpath (106)	420	2.8
	Struck while boarding or alighting a vehicle (108)	409	2.7
	Walking with traffic (104)	343	2.3
	Facing traffic (105)	163	1.1

Little info on crash circumstances in data

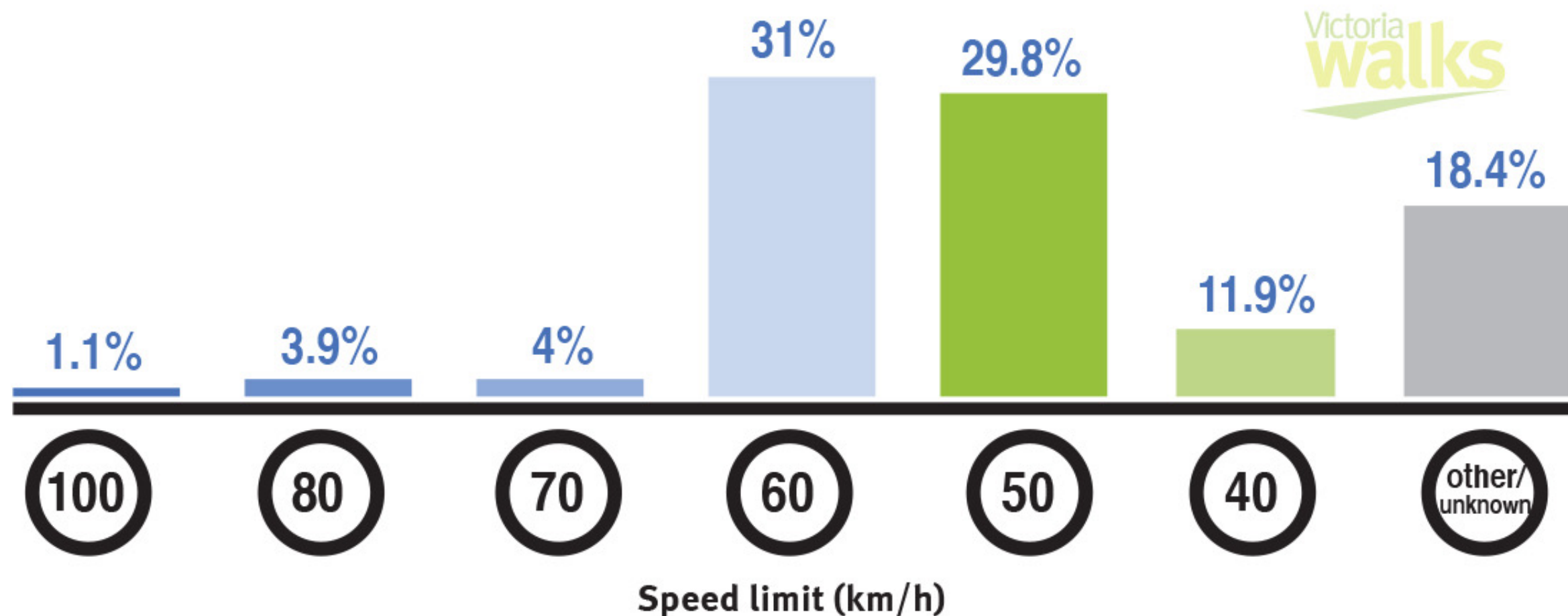| Vehicle movement	Going Straight Ahead	6,563	43.5
	Turn Right	2,364	15.7
	Turn Left	1,276	8.5
	Reversing	1,012	6.7
	Parking - into / Out	338	2.2
	Leaving a Driveway	316	2.1
	Other/unknown	3,223	21.3

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Where?

- Areas with lots of pedestrians:
  - CBD and inner suburbs
  - Activity centres
  - Around railway stations
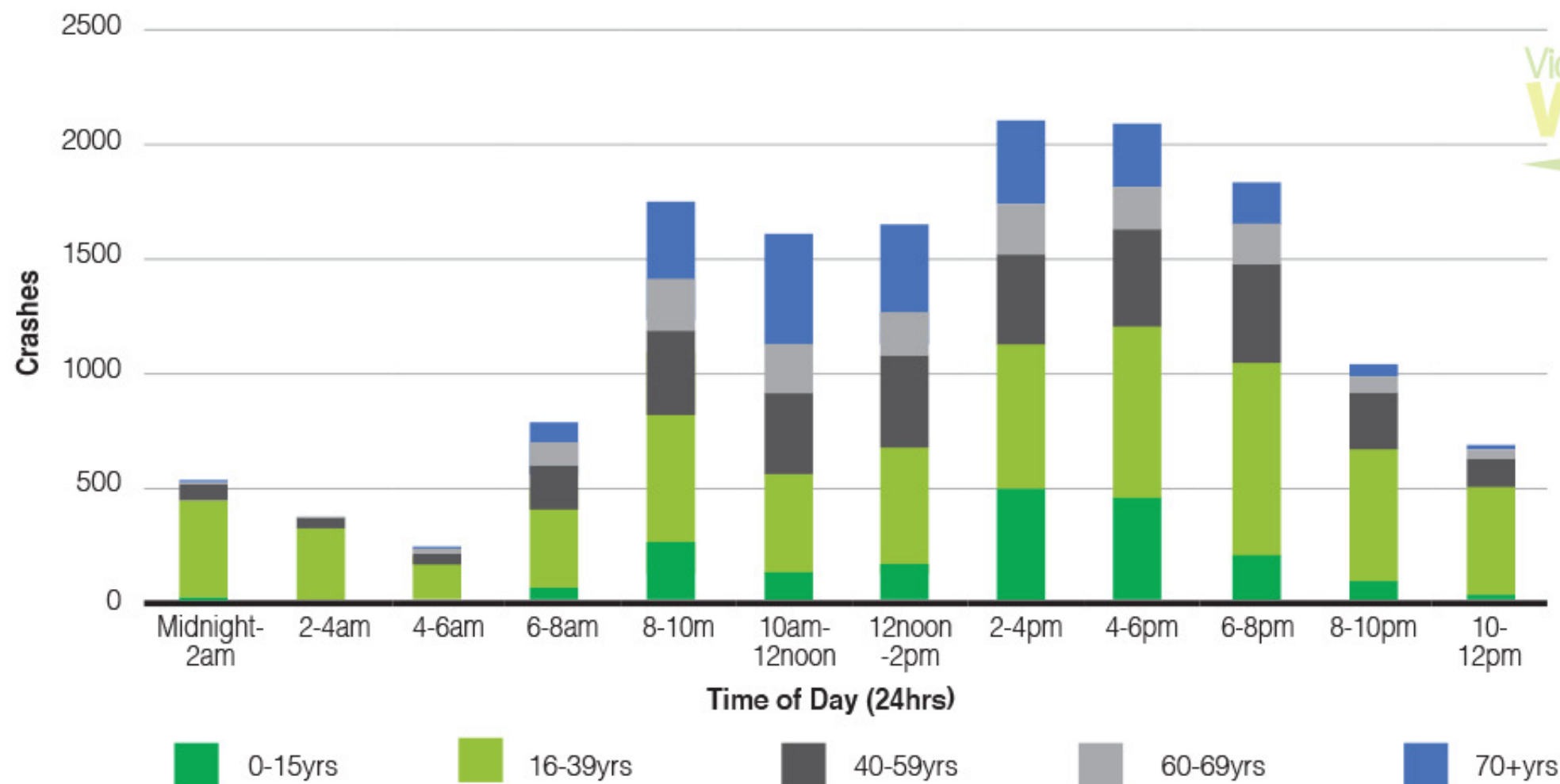- Major intersections and arterial roads

Crashes per SQKM
- <= 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- > 90

0   10   20 km
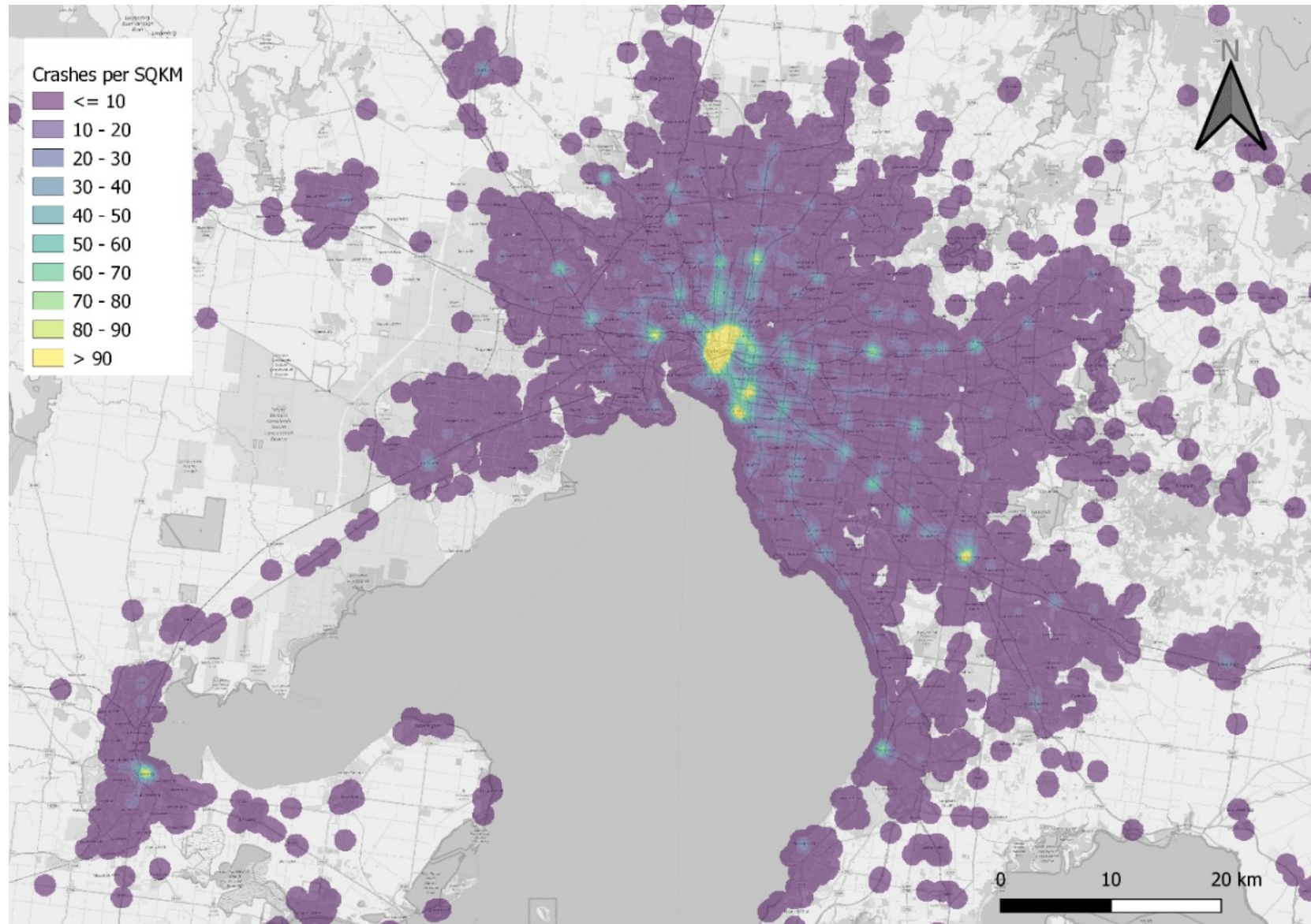
Council areas

Local Government Area		Frequency (n)	Percent (%)
Metropolitan Melbourne	Melbourne	1,639	10.9
	Moreland	626	4.1
	Boroondara	568	3.8
	Dandenong	556	3.7
	Yarra	555	3.7
	Darebin	528	3.5
	Stonnington	522	3.5
	Glen Eira	512	3.4
	Monash	501	3.3
	Port Phillip	482	3.2
Regional Victoria	Geelong	561	3.7
	Ballarat	238	1.6
	Bendigo	208	1.4
	Latrobe	154	1.0
	Shepparton	126	0.8

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SPEED LIMITS WHERE PEDESTRIAN CRASHES OCCUR (2009-2018) – VICTORIA

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Speed limit (km/h)						
1.1%	3.9%	4%	31%	29.8%	11.9%	18.4%
100	80	70	60	50	40	other/unknown

Speed limit (km/h)

PEDESTRIAN REPORTED CRASHES BY TIME OF DAY (2009-2018) – VICTORIA

https://www.victoriawalks.org.au/pedestrian-crashes

LIGHTING CONDITIONS FOR
PEDESTRIAN CRASHES (2009-2018) – VICTORIA

Victoria walks

Day
63.6%

Dusk/dawn
6.8%

Dark -
no street lights
or Street lights off
3.6%

Dark -
street lights on
22.2%

Street lights
unknown
3.7%

https://www.victoriawalks.org.au/pedestrian-crashes
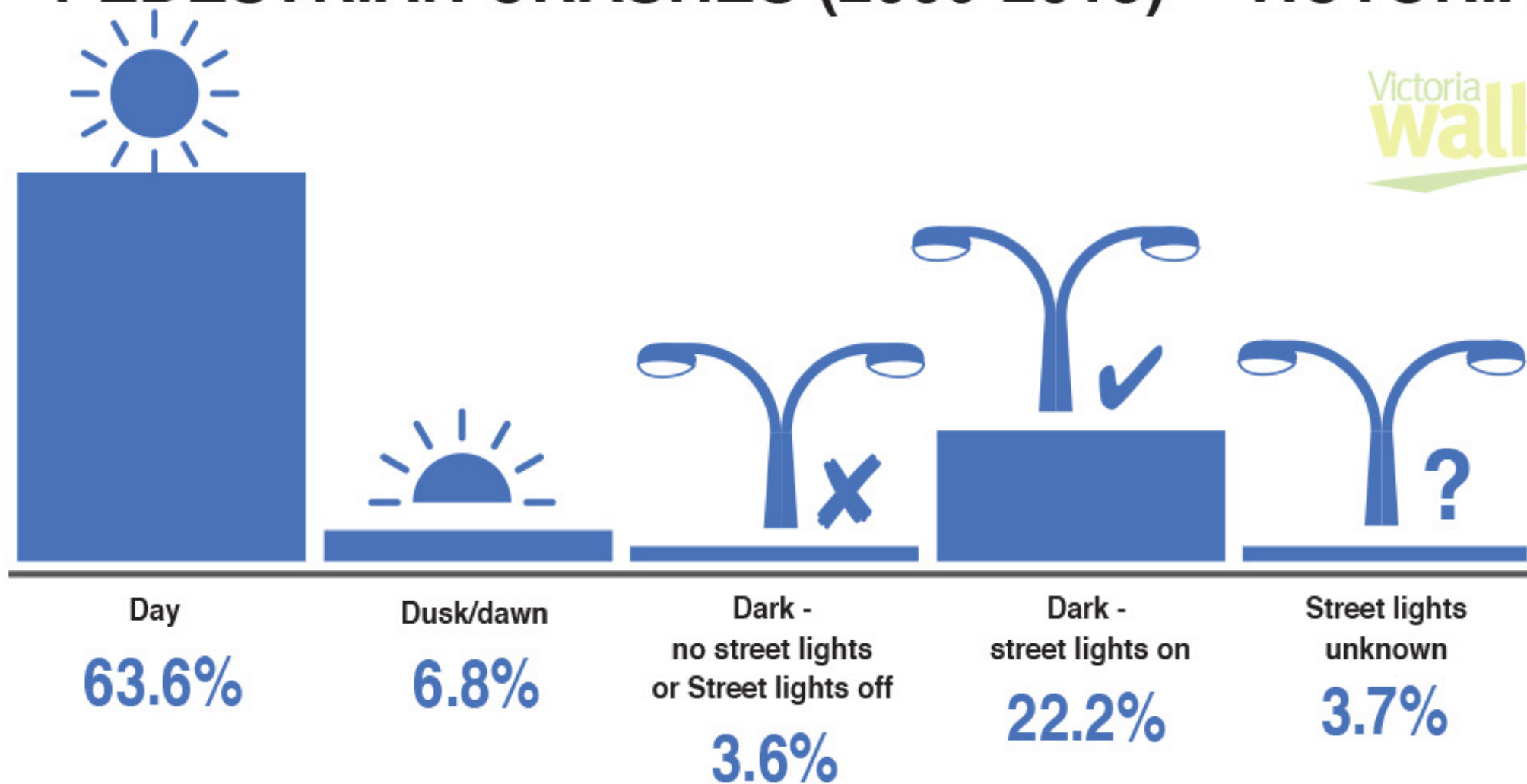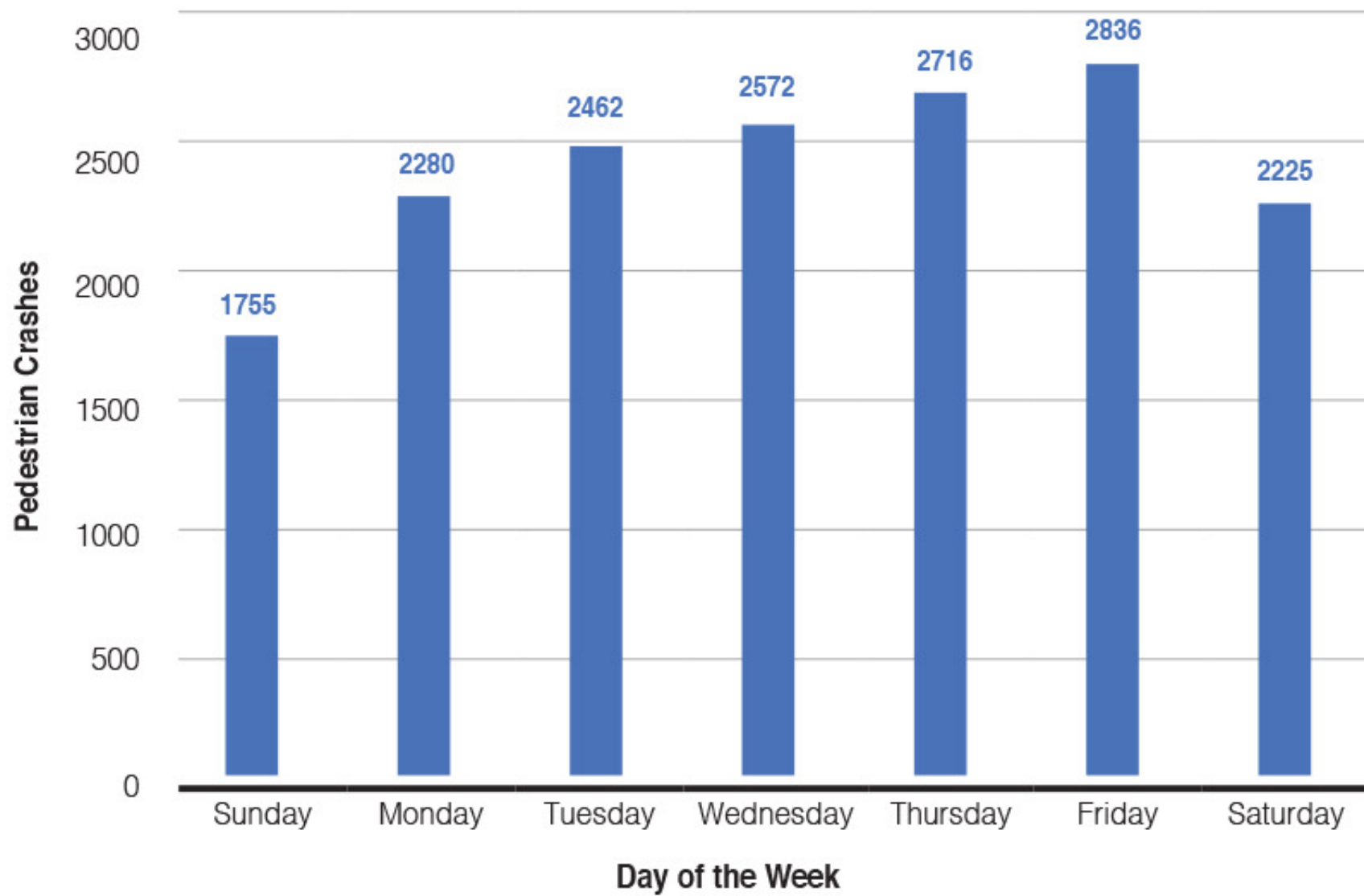
PEDESTRIAN REPORTED CRASHES BY DAY OF WEEK (2009-2018) – VICTORIA

https://www.victoriawalks.org.au/pedestrian-crashes

POLICE REPORTED DRIVER OFFENDING IN PEDESTRIAN CRASHES (2009-2018) – VICTORIA

Victoria walks

Offending
46.4%

Not Offending
35.5%

Not Known/Reported
18.1%

https://www.victoriawalks.org.au/pedestrian-crashes
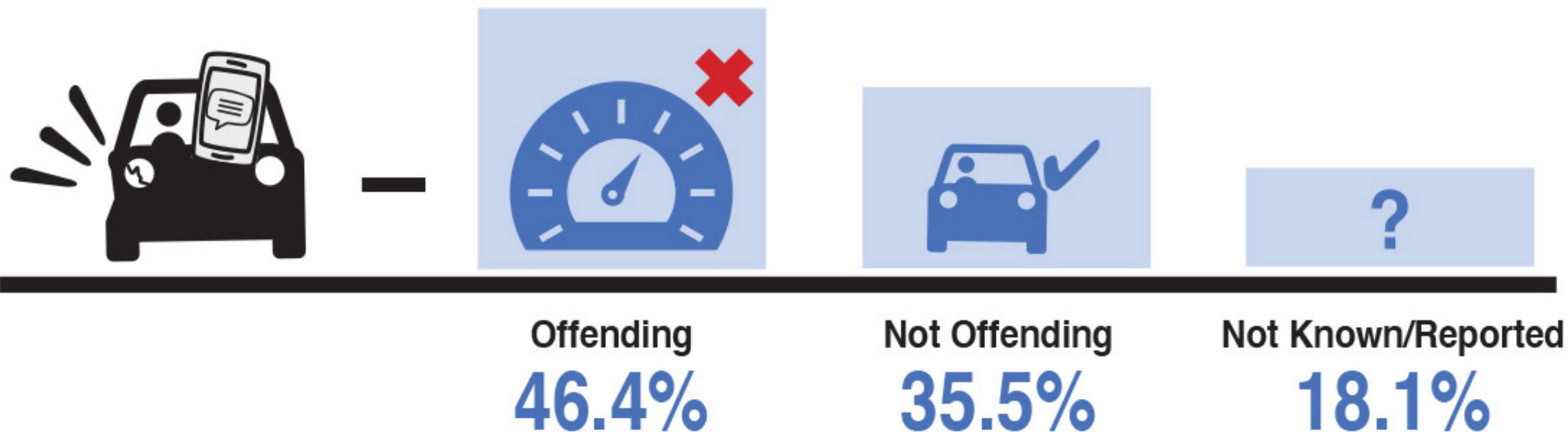
VEHICLES INVOLVED IN PEDESTRIAN HOSPITALISATION (2008-2017) – VICTORIA

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80.3%

3.6%

3.3%

2.4%

2%

8.5%

Car, pick-up truck or van

Heavy transport vehicle or bus

Pedal cycle

Two or three wheeled motor vehicle

Pedestrian conveyance

Other

https://www.victoriawalks.org.au/pedestrian-crashes
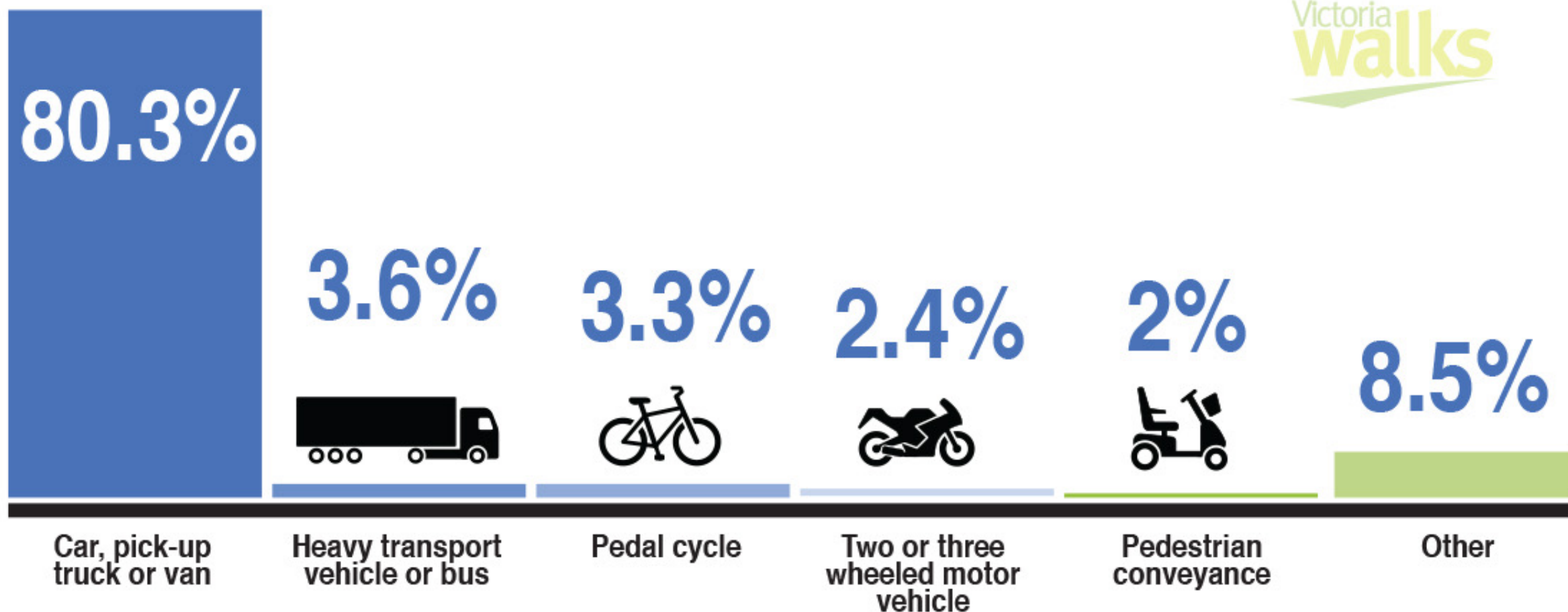
PEDESTRIAN INJURIES PER 100,000 REGISTERED VEHICLES (2009-2018) – VICTORIA

Car	Utility	Station Wagon	Panel van	Taxi	Motorcycle	Light Commercial Vehicle < 4.5 Tonnes	Heavy Vehicle > 4.5 Tonnes	Bus/coach
17.9	11.8	15.6	204.5	728.3	5.2	5.8	16.1	99.0

https://www.victoriawalks.org.au/pedestrian-crashes
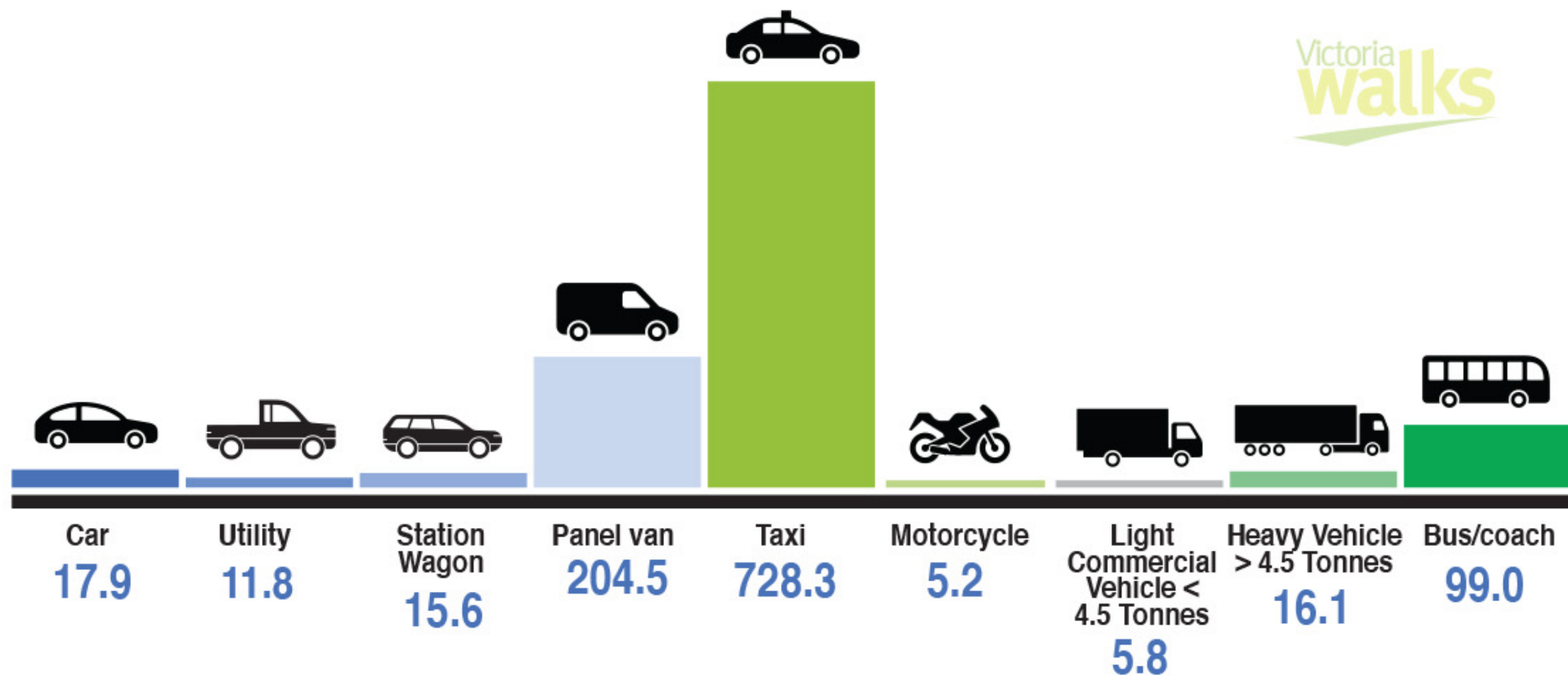
VEHICLES INVOLVED IN PEDESTRIAN FATALITIES (2008-2017) – VICTORIA

68.4%

13.1%

9.2%

1.8%

1.1%

6.4%

Car, pick-up truck or van

Heavy transport vehicle or bus

Railway train or railway vehicle

Two or three wheeled motor vehicle

Pedal Cycle

Other

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https://www.victoriawalks.org.au/pedestrian-crashes
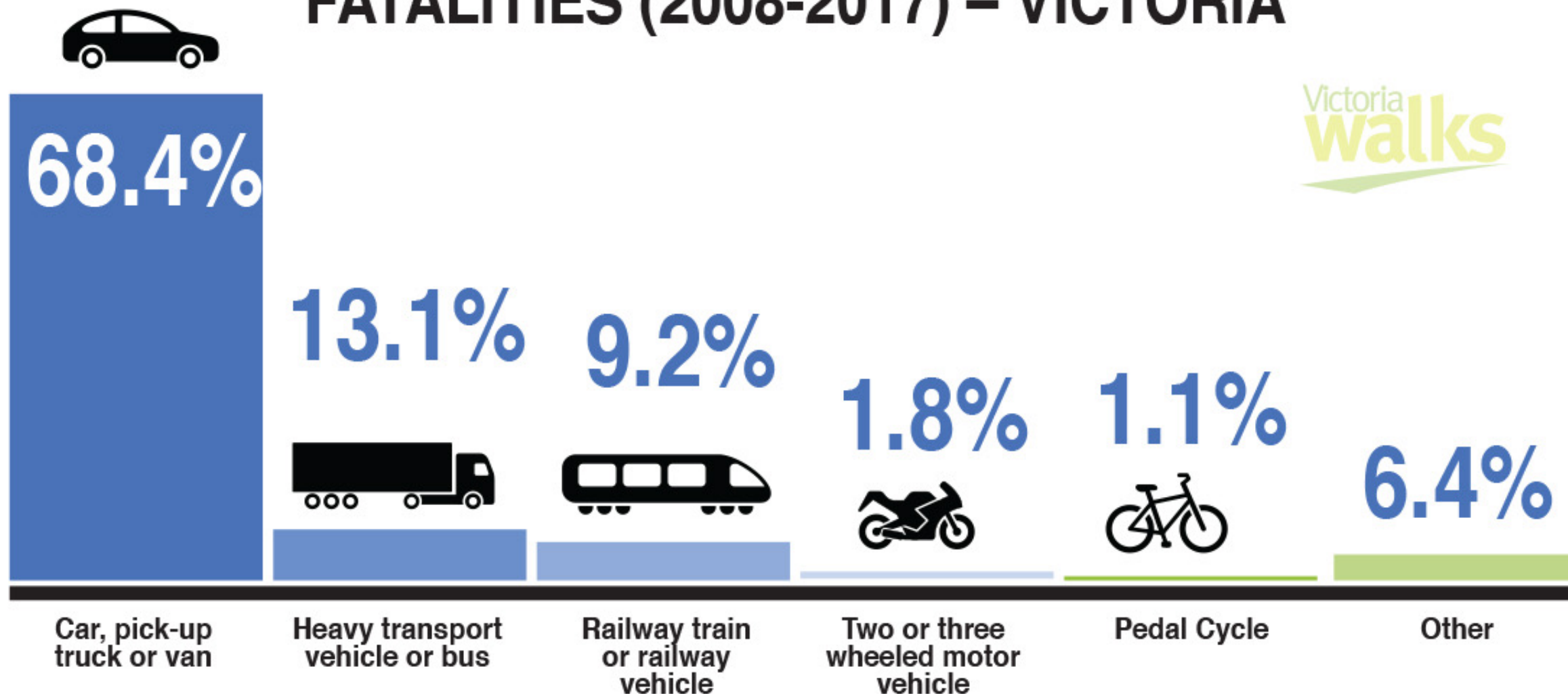
Recommendations

Recommendations under:

- Safer road users

- Safer vehicles

Safer roads – most relevant to LG:

- Reductions in speed limits, including 30 km/h in priority areas

- Traffic calming

- Safer crossing points and treatments to improve visibility of pedestrians

- **State govt investment to deliver above**

Thankyou

Report on our website under 'our work' and 'research'

URL:

https://www.victoriawalks.org.au/pedestrian-crashes/

Contact

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