

## **COVID-19 response proposal: reduce trauma by temporary urban speed limit reduction**

**Outcome:** Free up beds for COVID-19 response by reducing motor-vehicle related injuries presenting to NSW emergency departments

**Proposal:** Temporary change of default urban speed limit to 30km/hour speed limit in all NSW cities and towns.

**Proponents:**

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Reducing the speed limit will lower the frequency and severity of motor-vehicle crashes, which make up one third of severely injured patients presenting to hospitals. This measure will allow emergency departments to direct added resources to the treatment of COVID-19 affected patients.

### **Motor vehicle trauma is a heavy load on Emergency Departments**

- Motor-vehicle related crashes make up one third of seriously injured patients presenting to hospitals in 2018 in Australia (And 12% of all patients presenting to emergency departments, over 60,000 a year).<sup>1,2</sup>
- These injuries are consistently higher in severity and resource intensive in their treatment compared to other severely injured patients.
- The added cost of paramedics, firefighters and police attending to crash sites could also be re-purposed for the treatment of COVID-19 patients.
- A flattening of existing trauma loads on hospitals brought by a reduction in motor-vehicle crashes can increase the capacities of hospital workers to treat patients with complications from the COVID-19 virus presenting to emergency wards and Intensive Care Units.

### **Reducing the speed limit significantly reduces injury and death**

- Research demonstrates 30km/h speeds dramatically reduce rates of death and injury, thereby freeing up frontline health workers re-direct their resources elsewhere.
- Pedestrians are more at risk of serious injury when hit by a motor-vehicle. Their survival rates dramatically improve if hit at or below 30km/h.
- Changing the default urban speed limit in NSW cities and towns is a low cost and simple measure.
- Use of Public Health Act provisions should be considered. Transport for NSW and NSW Police would need to advise on implementation.
- Temporarily reducing the default urban speed limit in NSW cities and towns will have the additional benefit of making pedestrians and cycling safer.
- Making cycling and walking safer will reduce crowding pressure on other outdoors spaces (such as parks) and facilitate people's safe entry onto roads to ensure appropriate distances between themselves and other pedestrians, given the narrowness of many footpaths.
- With the increased dependency on food delivery systems by bicycle, facilitating safer cycling on roads will additionally assist public compliance with distancing recommendations.

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## Evidence

Across Australian hospitals in 2018, of 8,454 severely injured patients that presented to emergency departments 45% of these cases were caused by transport related trauma.<sup>1</sup>

- Of these 8,454 patients in Australia, 51% of injuries occurred on streets and highways.<sup>1</sup>
- Motor-vehicle crashes (including motorcycles) were the leading reason for severely injured patients presenting to emergency departments (36%) across Australian and New Zealand Hospitals.<sup>1</sup>
- One in three deaths in hospital between Australia and New Zealand in emergency departments were caused by transport related injuries.<sup>1</sup>
- Aside from low and high falls (predominantly among the elderly), motor-related injuries had the highest rates of severity (an ISS rating of 25-44).<sup>1</sup>
- Among all severely injured patients, 76% were delivered to hospital via ambulances direct from the scene of injury.<sup>1</sup> This number is likely far higher with regards to motor-vehicle related crashes and the corresponding resources required from first line police, firefighting and ambulance personnel.
- The median time spent by all severely injured patients in emergency departments was 4 hours and 12 minutes. The median length of stay in hospital was 7 days.<sup>1</sup>
- 36% of presenting patients were admitted to ICU. The median time spent receiving treatment in the ICU was 3.7 days.<sup>1</sup>

If these numbers can be reduced, hospital workers will have greater resources at their disposal to treat peak numbers of patients with COVID-19 and save lives.

By excluding arterial roads, this will maintain the continued passage of freight vehicles in high numbers, recognizing the increased demand on the trucking sector.

## Reducing the numbers of severely injured patients presenting to hospital:

The 'Towards ZERO, Victorian Road's Safety and Strategy Action Plan', recognises a fatal injury to a pedestrian is at least twice as likely to occur in a crash at 40km/h than at 30km/h. 30km/h speed limits dramatically increase chances of surviving a crash and reduce the severity of injuries incurred.<sup>3</sup>

The report of the 2018 Inquiry into the National Road Safety Strategy recommends 30km/h speed limits for the 'biomechanical tolerances of pedestrians and cyclists' when hit by motor-vehicles.<sup>4</sup>

Cyclists and pedestrians are the most vulnerable in busy areas, representing one in four serious injuries.<sup>5</sup>

Evidence from several countries has shown that a decrease of 1 km/h in mean traffic speed will result in a 3% decrease in the incidence of injury crashes, and a decrease of 4–5% for fatal crashes.<sup>6</sup>

The chances of surviving a crash decrease rapidly above certain impact speeds – for cars striking pedestrians, the threshold impact speed lies in the range 20 – 30 km/h.<sup>7</sup>

## Summary

A reduction in the 36% of all severely injured patients presenting to Australian Emergency Wards from motor-related injuries would elevate the trauma load capacities of the Australian health system responding to the COVID-19 virus. This measure would allow the procurement of more equipment and staff for the specific goal of treating COVID-19 by reducing one of the major contributors of stress to the Australian health system.

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## Reference List

- 1 Australian, New Zealand Trauma Registry '*Annual Report: management of the severely injured*', 2018, pp. 8, 11, 21, 27, 31.
- 2 Australian Institute of Health and Welfare, '*Trends in Hospitalised Injury, Australia*', 2017, p.28.
- 3 VicRoads, '*Towards ZERO 2016-2020, Victoria's Road Safety and Strategy Action Plan*', 2016, p. 15.
- 4 J. Woolley, J. Crozier, L. McIntosh, R. McInerney, '*Inquiry into the National Road Safety Strategy*', Department of Infrastructure, Transport, Regional Development and Communications, 2018, p. 58.
- 5 NSW Department of Roads, Maritime and Freight, '*Towards ZERO, NSW Road Safety Plan*', 2018, p. 28.
- 6 SWOV National Institute for Road Safety Research, '*SWOV Fact sheet: The relation between speed and crashes*', 2012, p.3.
- 7 Australian Transport Council, '*National Road Safety Action Plan, 2011– 2020*', 2011, p. 60.