

## Is it time to advocate for a vulnerable road user protection law in New Zealand?

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### Abstract

After a spate of recent New Zealand cyclist deaths, cycle advocates and several policy makers have been pondering the issue of increased penalties aimed at drivers deemed at fault. A key question is whether vulnerable road users (VRUs), including pedestrians, workers, animal riders, stranded motorists, skateboarders, cyclists, and others, are likely to be protected through enhanced penalties for at fault drivers of motor vehicles. We explored current policy and the international literature to examine whether or not enhanced penalties would be likely to increase motor vehicle driver motivation to exercise greater caution around VRUs leading to improved road safety.

Proponents of vulnerable road user (VRU) protection laws, hoping to improve driver behaviour and safety, point out that legal redress often results in no or minor penalties to careless motorists (as opposed to the distinct case of alleged criminally negligent defendants) with little equivalency to the severity of harm to the injured victim or survivors. There may be several motivations to such a law ranging from politics, to justice, to injury control, and road safety. From an effectiveness standpoint, however, there are no studies examining whether such laws actually have the desired population level effects.

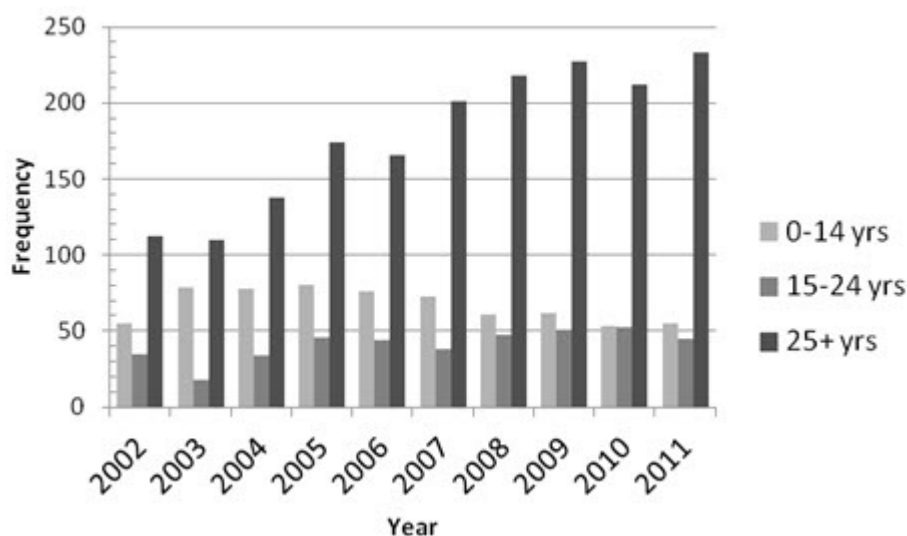
Little is known about the effectiveness of VRU laws and, any positive impact is far from guaranteed. The possibility of unintended consequences, as well as the time, resources and effort to lobby, enact, publicise, enforce and prosecute under vulnerable road user laws might best be spent elsewhere if the primary aim is to improve road safety.

### Policy explored

According to the World Health Organization, a “vulnerable road user” is any “non-motorist” road user in the role of a pedestrian, a highway worker, a person riding an animal, a stranded motorist, a skateboarder, roller skater, a scooter, or a cyclist, to name a few.<sup>1</sup>

The definition may even be extended to other “motorists” such as operators or passengers of powered scooters, electric bikes, farm equipment, and motorcycles; thus commonly including any road user that is not enclosed in the relative protection of an automobile or truck.<sup>1,2</sup>

**Figure 1. Trends in serious cyclist traffic injury, New Zealand, 2002–2011**



Discussions about VRU protection laws periodically emerge following a specific case, a widely publicised group of cases or VRU deaths or concern over increasing trends. Such a cluster of cyclist fatalities occurred in New Zealand in 2010 and 2011.

The Waikato Coroner, heading a National investigation, reported 34 bicycle fatalities involving motor vehicles since 2007. This has led to regional hearings looking for common factors among these deaths.<sup>3</sup> Prior to this group of fatalities, there was also evidence of increased number of cases over time of serious traffic-related injury among adult cyclists (Figure 1).<sup>4</sup> Thus, there have been calls for increased legal protection of vulnerable road users in New Zealand.

The purpose of this commentary is to discuss, from a public health perspective, the background and ramifications of enhanced penalties to at fault drivers for injuries to VRUs in general and for New Zealand and cyclists in particular.

Everyone is a VRU at one time or another. Most drivers walk at some point each day, if only from a parked car to their destination. There will come a time for almost everyone when they will no longer drive due to age or illness. Thus, the aims and possible implementation of VRU laws should be of interest to all.

Generally, VRU laws do not try to criminalise a new set of behaviours. Instead, when a victim is seriously injured or killed through “carelessness”, such laws increase the likelihood of enhanced penalties, costs, and other burdens upon the driver.

By specifying a narrow set of circumstances where such laws apply, they attempt not to burden the legal system while theoretically attempting to send a deterrent message to other drivers. They come into play when incidents to VRUs, leading to either serious injury or death, go unpunished or under-punished, especially if the victim was not at fault or shared any blame.

This can occur when law enforcement and judicial officials are unable or unwilling to penalise motorist actions that result in serious injury to vulnerable road users for

“*carelessness*” that does not rise to the level of dangerous driving, criminal negligence, leaving the scene or intent to harm. The situation of concern is distinct from when the driver of the non-vulnerable vehicle is engaged in ‘dangerous’ driving or is criminally negligent; for example, due to drink or drugged driving, speeding, cell phone and texting use or wilful intent. These latter types of events are usually treated separately or as criminal cases and are not a focus of this discussion. We focus here on those situations where driver actions or inactions are related to *careless* errors and unintended collisions that result in serious injury or death. These include, for example:

- Failure to “see” the VRU due to cognitive or perceptual limitations (“*I never saw him, Officer!*”);
- Misjudging the traffic environment and vulnerable user movements (“*I really didn't think he was moving so fast, Officer!*”); and
- Distracted driving from a large variety of common but not necessarily prohibited activities (e.g. passenger distractions, operating audio and GPS equipment, pets, insects, eating, smoking, adjusting climate controls, scanning dashboard instruments, moving windows and visors, etc., “*By the time I looked up, Officer, it was too late to stop!*”).

While drivers involved in a crash under these types of circumstances may be charged with an offence, imposed penalties are not always proportional to the seriousness of the collision. However, the lay and legal concept of “carelessness” in bicycle (and other)/motor vehicle crashes is complicated by reports that in as much or more than half of all car/bike crashes, the drivers claim they never saw the cyclist or saw them too late to avoid the crash. Similar results are reported from the motorcycle injury literature.<sup>5</sup>

Cognitive research backs up these claims as a real phenomenon.<sup>6,7</sup> Is this “carelessness”? Or, does the concept of carelessness lead, in some circumstances, to penalising limits to human perception in all its nuances and variations? A law cannot have much impact on deterrence if the people it is directed against are not aware they are doing or have done anything that they perceive to be wrong. Then there is the question of how law enforcement officials are able to determine if the driver really did not “see” the vulnerable user or is instead lying, forgetful or confused?

The problem of driver carelessness escalates when the legal outcome results in little or no sanction to the motorist, leading to an unbalanced scale of redress to the seriously injured victim or their family. Some believe a VRU protection law makes the point that responsibility and respect should accompany the privilege of operating powerful, large, fast-moving vehicles and this could help make VRUs feel safer, thus encouraging more people to cycle and walk.<sup>8,9</sup>

Choosing the right mix of penalties is also important in gaining acceptance from both advocates and potential opposition. Too harsh an increased penalty and politicians, police, judges, media, and the driving public will struggle against its heavy handedness. Too light, and advocates will feel it doesn't accomplish anything.

Questions that come up around balancing penalties include:

- Should the new law add penalties to existing offences?
- Should the new law create a new class of offences?
- Should the law account for partial fault by the VRU?
- If so, what type of penalties (increased fines, suspensions, court hearings, public service)?
- How high should the fines be?
- Should the law contain an option to attend a traffic safety course and or transport related community service in lieu of the monetary fines?
- How will such a law be enforced and treated by the courts?

## **How the health burden is addressed**

**Current laws**—Laws to protect VRUs are in place in several countries and local jurisdictions. Such a law might look like the 2008 Oregon state statute (USA), one of the first such laws that strengthened the penalties for careless injuring or killing of a VRU, without making it a crime.<sup>10</sup>

As one advocate explains, it “incorporates the inherent vulnerability of humans who use the roads without being encased in a protective steel shell”.<sup>11</sup> Other US states have had VRU bills passed including Oregon, New York, Delaware and Washington State (see Table 1).<sup>10,12-14</sup>

The pace of VRU law introductions in the US appears to be picking up with bills being introduced as of early 2012 in Connecticut, Massachusetts, Michigan, Nevada, and Rhode Island.<sup>15-19</sup> Other states have introduced VRU bills in the last few years, but have not had them signed into law. These include Texas, Illinois and New Mexico.<sup>20-22</sup>

Strict liability rules for compensation currently apply in the Netherlands and Germany.<sup>23</sup> Similarly, England is considering making car drivers' insurance companies legally liable for compensating pedestrian and cyclist victims of road crashes.<sup>9</sup> Strict liability says that anyone who uses a potentially dangerous vehicle should be liable to compensate for injuries arising from the use of that vehicle.

A government publication, *Cycling in the Netherlands*, puts it this way: “The Dutch philosophy is: Cyclists are not dangerous; cars and car drivers are: so car drivers should take the responsibility for avoiding collisions with cyclists. This implies that car drivers are almost always liable when a collision with a bicycle occurs and should adapt their speed when bicycles share the roads with cyclists”.<sup>24</sup>

The responsibility is put on motor vehicle operators, sending the message the road is a shared space. But with far better cycling infrastructure than most of North America and New Zealand, lower speeds, and safety in numbers from a much higher number of cyclists on Dutch roads, it is unknown what impacts this policy has on the lower rates of Dutch cycle injuries. These are also laws that impact on liability. It is not clear how they apply to traffic fines, penalties and criminal proceedings. With no-fault insurance

schemes in New Zealand and some US states, it is problematic how such strict liability policies can be applied with such schemes in place.

**Law effectiveness**—Unfortunately there are no published evaluations of the effectiveness of any such laws in reducing VRU injury risk. It would probably be very difficult to do so from a research methodology perspective unless many more states and countries passed such laws allowing properly controlled cross-jurisdictional comparisons. In the absence of VRU law evaluations, it is worth exploring conceptually whether such a law would be expected to have much effect.

Like all such laws, acceptability and passage depends on it appealing to a broad constituency, designed not to offend too many people, and to be consistently enforceable. Drunken driving laws are acceptable and work to the extent that they do by fulfilling these criteria. Importantly, they also dissuade many people from breaking the law before they do any harm, while removing (by arrest) some offenders from the road before harm is done to others. A large part of the dissuasion comes from drivers knowing they can get caught and punished for breaking the law, *even if they don't have a crash and harm anyone*. By definition, careless drivers impacted by VRU laws will usually be charged only after their actions or inactions lead to harm.

Few drivers will exhibit or even be aware of actionable pre-crash event careless behaviours, until something actually happens. Thus, considerably lower rates of deterrence would be expected against the ill-defined after-the-fact behaviour that amounts to carelessness, compared to laws against drunk driving and speeding where fear of getting caught may be the primary deterrent.

The added dissuasion of increased penalties beyond mere traffic fines also assumes that drivers are constantly aware of the law and will usually take additional actions. This is unlikely to play out in the real world due to limitations of driver perceptions, knowledge and focus on a new law, over and above the already existing moral, financial and legal incentives to avoid harming fellow road users. The only effect VRU laws are likely to have is in perceived justice where the punishment for being responsible for the event better fits the impact the event had on the victim. That is not prevention, however, it is retribution.

Absent criminal conduct such as alcohol and drug use or evidence of medical problems, the kinds of people charged under VRU laws are not likely to serially reoffend and thus a focus on drivers that have been careless will have little impact on the long tail of drivers likely to be involved in future crashes related to carelessness.

Lastly, without evaluation, unintended consequences cannot be ruled out. One theoretical scenario has some VRUs feeling they are more protected by such a law resulting in letting their guard down and practicing less defensive movement (risk compensation theory).<sup>25</sup> Another unintended consequence might be alienating and threatening so many drivers that support for other more effective initiatives lack public support or garner active opposition.

**Table 1. Enacted vulnerable road user (VRU) laws in the United States compared to New Zealand’s careless driving law**

<b>Component</b>	<b>Oregon</b>	<b>New York</b>	<b>Delaware</b>	<b>Washington State</b>	<b>New Zealand</b>
Name/URL	HB 811.135	A07917D (S.5292)	SB 269	SB 5326	Not a VRU - Careless Driving, Land Transport Act
Effective Date	1/2008	8/2010	9/2010	7/2012	1998
Definition of Vulnerable User	Pedestrian, a highway worker, a person riding an animal or a person operating any of the following on a public way, crosswalk or shoulder of the highway: A farm tractor or implement of husbandry without an enclosed shell; A skateboard; Roller skates; In-line skates; A scooter; or A bicycle.	Bicyclist Pedestrian Domestic animal.	A pedestrian, including those persons actually engaged in work upon a highway, or in work upon utility facilities along a highway, or engaged in emergency services within the right-of-way; or A person riding an animal; or A person operating any of the following on a public right-of-way, crosswalk, or shoulder of the highway: 1. A farm tractor or similar vehicle; 2. A skateboard; 3. Roller skates; 4. In-line skates; 5. A scooter; 6. A moped; 7. A bicycle; or 8. A motorcycle.	A pedestrian A person riding an animal; A person operating any of the following on a public way: A farm tractor or implement of husbandry, without an enclosed shell; A bicycle; An electric-assisted bicycle; An electric personal assistive mobility device; A moped; A motor-driven cycle; A motorized foot scooter; or A motorcycle.	Careless or dangerous driving may be charged if any person is injured or killed, so it is not necessary to specify user types in injury crashes.
Fine and punishment	Up to \$12,500	No more than \$500 or by imprisonment for not more than 15 days or both.	Up to \$550 and suspension of driving privileges if course and community service not fulfilled.	\$1,000 to \$5,000; and have his or her driving privileges suspended for 90 days.	Maximum 3 months imprisonment or a fine not exceeding \$4,500; and licence disqualification for 6 months or more.
Community service option	Yes	No	Yes	Yes	Yes

Penalty for in-complete service	Yes	NA	Yes	Yes	Yes
Misdemeanour or Crime	Misdemeanour	Misdemeanour	Misdemeanour	Misdemeanour	NA
Comments	According to Doug Parrow, the chair of the Bicycle Transportation Alliance's legislative committee, the Oregon law has been reported to result in few fines being charged but one pedestrian case was reported in 2011.	Law sets up new traffic violation called careless driving for cases where conviction on a charge of criminal negligence or recklessness is unlikely. Requires that every driver of a vehicle shall exercise due care to avoid colliding with the defined road users.	Amends the careless or inattentive driving law by enhancing the penalty for a careless or inattentive driver who contributes to the serious physical injury of a vulnerable user in a public right of way.	A new traffic offence is created that fills the gap between a simple ticket and a crime. It establishes an enhanced offence for those drivers whose behaviour maims or kills and reinforces the need to exercise due care when driving around vulnerable populations.	Careless driving causing injury – section 38 of the Land Transport Act 1998: “It is an offence to operate a vehicle on a road carelessly or without reasonable consideration for other persons using the road, and by that act or omission cause an injury to or the death of another person.”



**New Zealand laws**—Recently, the New Zealand Ministry of Transport explored the cost/benefit of increasing the penalty for both categories of careless and dangerous offences.<sup>26</sup> They examined the possible impacts of raising the maximum imprisonment for careless driving from three months to three *years* for deaths, and two years for injury and a fine of up to \$10,000 (up from \$4,500) and license disqualification for 1 year or more (up from 6 months). They utilised an estimate of the range of the potential deterrent effect of these increased penalties from 1 to 5 per cent. How this five-fold range of effect was estimated was not described, casting doubts that it was empirically derived.

Some complexities aside, the break-even point for balancing the social cost savings against the increased costs of prison beds and court costs for increasing the penalties was estimated to require a 3.8 per cent deterrent effect, a level they considered unlikely to be obtained.

Since there is no-fault financial liability in NZ through the Accident Compensation Corporation (ACC) scheme, injured VRUs already receive comprehensive personal injury coverage. Therefore, a financial liability policy like in the Netherlands serves little remunerative purpose.<sup>27,28</sup> But can a careless driver, whose actions, inattentiveness, or failure to see and avoid the VRU that lead to serious injury or death, go unpunished relative to the harm that resulted under current law?

New Zealand Transport Law already differentiates careless driving causing death or injury from: a) Aggravated careless driving and careless driving under the influence of drink or drugs, and b) Dangerous driving (refers specifically to dangerous/reckless driving, illegal street racing, drink/drug driving, and failing to stop after a crash involving injury or death).<sup>26</sup> A comparison of dangerous driving penalties to the United Kingdom, United States, Australia and Canada suggest that NZ penalties are more lenient in terms of maximum prison sentences for dangerous driving.<sup>26</sup> However, careless driving penalties are generally stricter than the US VRU laws (see Table 1).

The relative contribution of dangerous and careless drivers to casualty crashes of all types, not just those involving a VRU, was reported by the Ministry of Transport for 2009.<sup>26</sup> Among 10,106 police-reported injury crashes where the driver of at least one vehicle was deemed “at fault”, 1,004 (9.9%) were convicted of careless driving; and 291 (2.9%) were convicted of dangerous or reckless driving. Road user type was not described in that report.

A separate study reported in 2009 there were 546 “at fault” drivers involved in a bicycle/single motor-vehicle casualty collision (5.4% of all at fault crashes).<sup>29</sup> A breakdown of the convictions for the bicycle-related incidents was not reported. This suggests that among at fault casualty crashes, only a small proportion of drivers are convicted for careless driving. Whether this is due to injuries being minor, and what proportion of serious injuries/deaths did not lead to a careless driving conviction is unknown.

Taken together, these data suggest that convictions for vulnerable road user injury for careless driving already takes place in New Zealand, but the consistency of convictions in cases of serious injury and death is not known. This is a critical gap in current knowledge that needs to be filled before making any final conclusions about



the adequacy of current New Zealand laws to consistently, much less fairly, penalise careless drivers of vehicles at fault for injuring VRUs.

## Conclusions

From a preventive (deterrent) perspective, it is difficult to envision how VRU laws can accomplish much by themselves. Realistic expectations can help avoid future criticism and loss of credibility. If retribution is the goal, it appears adequate laws are already on the books in New Zealand to penalize careless drivers.

It remains a question whether these laws are enforced consistently and regularly brought to bear on the most egregious cases of harm inflicted to VRUs by careless drivers. But it should be acknowledged that stricter enforcement, if undertaken, will probably come at a price of increased penalties for some road users in situations they may not have much real control over.

Hoping that a law, by itself, will have any measureable effect on changing driver behaviours and “Copenhagnize” our transportation system is naive. Slowing traffic down, lowering traffic density, designing and building safer intersections, making cars come to a full stop instead of giving way at intersections, separating motor vehicles from VRUs, greatly increasing the numbers of calmed bicycle boulevards, designing actual shared spaces, and greatly increasing the number and visibility of VRUs; those are the efforts that will likely have a much more certain and larger impact on reducing dangers to VRUs than increased penalties or enforcement for careless driving.

Seen as one facet in reducing the culture of road danger for all users, VRU laws may provide an impetus for attitudinal change that sets the tone for operating our transport system with safety for all users among its most important characteristic. But it would not be the only such way to achieve that goal.

Great care and wisdom needs to be taken when to rollout these types of punitive changes in our public spaces. The success of VRU laws at reducing injury are far from guaranteed and implemented too early in the evolution of a more balanced modal share approach could come at a cost of time, effort and resources that might best be spent in other endeavours.

**Competing interests:** Nil.

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