

Evaluation of the ACT Government's Safer Cycling Reforms: Minimum Passing Distance and Allowance to Ride Across Pedestrian Crossings

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Abstract

Two major components of the ACT Government's safer cycling reforms trial were evaluated: (i) minimum passing distance (MPD) rule and (ii) allowance for cyclists to ride across pedestrian crossings. The evaluation involved analysis of crash and enforcement data during the pre-trial and trial periods as well as pre-trial and post-trial community surveys, correspondence from community members and comments from a cyclist organisation. The MPD rule has likely improved cyclist safety in the ACT, and overall public awareness and perception of potential cycling safety benefits increased. However, crashes between motor vehicles and cyclists riding across pedestrian crossings also increased.

Background

Previous studies (Schramm, Haworth, Heesch, Watson & Debnath, 2016; Transport for New South Wales, 2018) indicated that minimum passing distance (MPD) improved cycling safety in Queensland and New South Wales. In 2015 the ACT Government commenced a two-year "Safer Cycling Reforms" trial, which introduced a MPD rule (minimum 1 metre passing distance on roads zoned 60 km/h and less and 1.5 metres on roads zoned above 60 km/h) as well allowance for cyclists to ride across pedestrian crossings without dismounting (ACT Government, 2018). This study aimed to evaluate the effects of the ACT trial on cyclist safety as well as the public perceptions of the trial rules.

Method

The evaluation involved the analysis of (i) crash data as well as (ii) enforcement data during the pre-trial (Nov. 1, 2013 – Oct 31, 2015) and trial periods (Nov. 1, 2015 – Oct. 31, 2017) and (iii) pre-trial and post-trial community surveys, correspondence from community members and comments from a cyclist organisation.

Results

Crash and enforcement data

A summary of the analysis of crash and infringement data is shown in Table 1. Results were not statistically significant, likely due to the small amount of data available.

Table 1. Summary of crash and infringement data related to MPD and allowance to ride across pedestrian crossings (pre-trial and trial periods)

MPD-RELATED CRASHES BETWEEN CYCLISTS AND MOTOR VEHICLES					
	Pre-Trial		Trial		Change
	<i>Rear-End Crashes</i>	<i>Side-Swipe Crashes</i>	<i>Rear-End Crashes</i>	<i>Side-Swipe Crashes</i>	<i>Rear-End & Side-Swipe Crashes</i>
Injury Level					
- Fatalities	-	-	1 [‡]	-	+1
- Injuries	6	3	5	3	-1
- PDOs	7	4	5	4	-2
Subtotal (by Crash Type)	13	7	11	7	-2
Total MPD-related crashes	20		18		-2
BICYCLE-MOTOR VEHICLE CRASHES WHILE RIDING ACROSS PEDESTRIAN CROSSINGS					
	Pre-Trial		Trial		Change
Injury Level					
- Fatalities	-		-		-
- Injuries	8		12		+4
- PDOs	14		23		+9
Total	22		35		+13
VEHICLE HEAD-ON CRASHES AS A CONSEQUENCE OF AN OVERTAKING MANOEUVRE					
	Pre-Trial		Trial		Change
Injury Level					
- Fatalities	2		-		-2
- Injuries	3		1		-2
- PDOs	3		3		-
Total	8		4		-4
INFRINGEMENTS RELATED TO MPD RULE OR RIDING ACROSS PEDESTRIAN CROSSINGS					
	Pre-Trial		During Trial		
	<i>TINs</i>	<i>Cautions</i>	<i>TINs</i>	<i>Cautions</i>	
MPD RELATED					
- Overtake bicycle rider too closely	-	-	6	5	
- Not keep out of path of bicycle/pedestrian	-	1	-	-	
Sub Total (per Period)	1		11		
CYCLISTS AT PEDESTRIAN CROSSING					
- Proceed on crossing on bicycle (with red crossing lights)	-	-	1	-	
- Bicycle cross on children's pedestrian crossing	1	-	-	-	
Sub Total (per Period)	1		1		
Total Infringements (per Period)	2		12		

Public support

A summary of the post-trial survey rating of support of the MPD and allowance to ride across pedestrian crossings is shown in Figure 1.

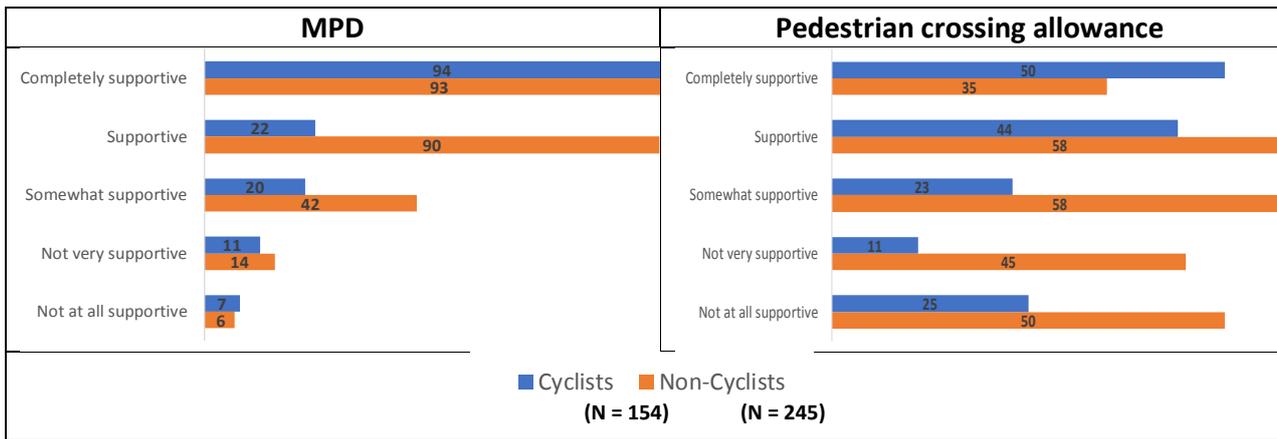


Figure 1. Support of the MPD and allowance to ride across pedestrian crossings in the post-trial survey (number of participants disaggregated by cyclists and non-cyclists)

Conclusions

MPD

The number of cyclist rear-end crashes caused by following motor vehicles reduced slightly during the trial period. However, the crash rate decline may have been larger given that an increased number of people cycled throughout the trial period. (Munro, 2015; Munro, 2017)

No evidence seems to suggest an increased crash risk for motorists due to the introduction of the MPD. Indeed, motorist head-on crashes during overtaking manoeuvres decreased during the trial.

The small number of infringements of the MPD rule combined with the fact that in some cases the infringement was based on reports referred from cyclists, suggests that methods or technologies should be investigated that could allow the Police to routinely evaluate and enforce MPD compliance in the future.

Allowance to ride across pedestrian crossings

No crashes occurred between pedestrians and cyclists riding across pedestrian crossings during either the pre- or trial periods. However, crashes between motor vehicles and cyclists riding across pedestrian crossings increased during the trial. Note that crash reporting and coding practices remained the same throughout the entire period covered in this research. However, no specific information is available regarding whether the number of riders riding across pedestrian crossings may have increased during the trial.

The increase of crashes with cyclists riding across pedestrian crossings seems to confirm initial concerns from some ACT residents that cyclists may suddenly ride across pedestrian crossings from footpaths without giving motorists enough time to react, despite the rule requires that riders must slow down to a speed equal of below 10 km/h and be ready to stop when approaching a pedestrian crossing.

Further investigation with a detailed analysis of the causes for each of those crashes and remediation is recommended. Infrastructure changes at shared path and road interfaces, that can calm both bicycle and motor vehicle traffic and increase situational awareness, may help reduce these crash types.

Public perception

Awareness of the trial rules as well as the public perception of their potential safety benefits, increased throughout the trial. However, some ACT residents argued that the MPD rule may not be practical on narrow roads and suggested better education of cyclists regarding the reforms were necessary.

Awareness of cyclists among motorists increased as a result of the safer cycling reforms.

Cycling participation in the ACT

A slight decline in general cycling participation among ACT residents occurred following the commencement of the trial according to the post-trial phone community survey; however, the number of cyclists that reported riding regularly increased during the same period. Independently, according to the National Cycling Participation survey, there was a general increase in cycling in the ACT for the period 2015-2017.

References

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