

Benefits from a UK law regarding motorists passing cyclists

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Abstract

Several countries have implemented laws requiring vehicles to leave a minimum clearance distance when overtaking cyclists. A recent petition to the UK government requests such a law. The UK petition¹ suggestion is for 1 metre when overtaking cyclists on roads with speed limits up to and including 30mph. On roads with higher speed limits, the minimum passing distance should be 1.5 metre. Consideration is given to the potential benefits of such legal requirements. In 2014 there were 21,287 cyclists injured in reported road accidents, including 3,514 who are killed or seriously injured. UK reported data on 2355 vehicle passing in urban areas recorded 109 passing within 1 metre. European data on the death rate per billion kilometre cycle² reported Norway with 11.0 cyclist deaths per billion kilometres cycled, followed by Denmark with 12.1, the Netherlands with 12.4, Sweden with 14.4 and Great Britain with 22.4. Data from GB shows that there is an urgent need to improve safety for cyclists.

Background

Sometimes cyclists are killed or seriously injured by vehicles either passing too close or by being hit from the rear. The Royal Society for the Prevention of Accidents (RoSPA) reports³;

'In 2014 21,287 cyclists were injured in reported road accidents, including 3,514 who are killed or seriously injured.'

And

'However, heavy goods vehicles (HGVs) present a particular danger for cyclists, especially in London where around 20% of cyclist fatalities occur involve an HGV. These often occur when an HGV is turning left at a junction'. About one quarter of accidents resulting in serious injury to a cyclist involved an HGV, bus or coach 'passing too close' to the rider.'

And

'Around half of cyclist fatalities occur on rural roads.'

UK data on passing clearances

Detailed measurements of the clearance between vehicles and bicycle were taken in urban areas by Dr Ian Walker from Bath University who reported on 2355 vehicle passes. Approximately 109 passes were within 1 metre and 20 passing within 0.8 metre. That is approximately 1 in 22 passing within one metre and 1 in 80 passes were within 0.8 metre. He reported being hit twice during the tests. The mean overtaking distances ranged from cars at 1.33 metre to buses at 1.08 metre⁴. Buses averaged 1.08 m and HGV's 1.14 m and both are referred to by RoSPA as risk factors in passing too close to cyclists. From the 20 close passes, 8 occurred on main roads and 11 on regular urban roads.

Cases of close passing are reported regularly by cyclists on UK web sites and it can be hazardous and extremely intimidating for them. Cyclist's report that in parts of Europe the same driving culture does not occur and drivers give more space to cyclists, perhaps in part due to the higher levels of cycling and more drivers are active cyclists. Some European data is

available on the number of kilometres cycled and the death rate per billion kilometre cycle⁵. Norway with 11.0 cyclist deaths per billion kilometres cycled, followed by Denmark with 12.1, the Netherlands with 12.4, Sweden with 14.4 and Great Britain with 22.4. Data from GB shows that there is an urgent need to improve safety for cyclists.

Countries with passing clearance laws

A number of passing laws have been approved in several countries. For example more than half the states in the USA have passing laws⁶. Some states in Australia, parts of Europe and Canada. Data from the USA reports the changes in cycling levels for 2005 to 2014 for each state⁷. The average increase for states with passing laws was approximately 56%, whereas for states without passing laws 22%. From this it appears that passing clearance laws results in a less intimidating road conditions for cycling.

Some USA states without state wide passing laws may have local laws, for example Texas. Vulnerable road user ordinances with language stipulating a safe passing distance have been passed in 23 Texas Cities, including Alamo, Alton, Austin, Beaumont, Brownsville, Corpus Christi, Denton, Edinburg, El Paso, Fort Worth, Harlingen, Helotes, Houston, McAllen, Mission, New Braunfels, Palmhurst, Pharr, Plano, San Antonio, San Juan, San Marcos, and Weslaco.⁸

Many factors can affect accident statistics and only a proportion of accidents are due to passing too close, but in some cases they will be the more serious accidents. In Texas from 2006 - 8, prior to their passing laws, 152 cyclists and 1245 pedestrians were killed. From 2009-2014, after they started with passing laws in 20+ cities, 292 cyclists and 2686 pedestrians were killed, the ratio cyclist to pedestrian reduced from 12.208% reduced to 10.871%. If the 12.208% had applied for the period 2009-2014 there would have been 328 cyclist deaths (12.208% of 2686) but they had 292 cyclist deaths, 36 fewer, approximately 6 per year. From 2005 to 2014 the proportion who commuted by bicycle increased by 19%.

For Australia they have had laws passed in Queensland and other states with cyclists from Western Australia seeking to provide similar laws.⁹ In Victoria they are also considering this issue¹⁰. The Queensland report¹¹ "Evaluation of the Queensland Minimum Passing Distance Road Rule" mentions,

'In conclusion, from the perspective of police officers, the introduction of the MPD road rule has improved cyclist safety despite the difficulties of enforcement leading to few infringements being issued.' (Minimum Passing Distance = MPD)

and

Most riders (73.2%) and drivers (59.5%) in the current survey agreed or strongly agreed that they have observed motorists giving bicycle riders more room when overtaking than they used to.

and

One-third of drivers and two-thirds of cyclists said that the rule has made it safer for cyclists.

The Queensland report details the fatality rate per month for cyclists and other road users for before to after the passing rule, both reduced with rate ratios of 0.65 for cyclists and 0.86 for other road users. The bicycle crash rate per month for before to after, for all injuries had a rate ratio of 0.87, also a substantial reduction. Actual cyclist deaths reduced from 23 to 10 and the number of serious (fatal and hospitalisations) reduced from 674 to 485. These reductions may be partly due to drivers having a better view of cyclists by vehicles in front moving out sooner and passing with more clearance. Drivers may moderate their speed knowing if they squeeze past at speed it may result in a fine. The passing laws had a positive effect and are enforceable with the right techniques.

Enforcement aspects

It is important to note that a mandated minimum overtaking distance is only one part of the approach to improving cyclist's safety. To effect behaviour change, ideally you need legislation, education and enforcement. Data from the Queensland evaluation shows the passing distances for individual roads and locations. The actual distance left between cyclists and passing vehicles was estimated from video observations at 15 sites. Portable equipment mounted on bicycles can also be used to measure the passing distance¹². Queensland police issued only 60 infringement tickets to drivers but survey information suggested approximately 95% of drivers were aware of the legislation.

In Queensland, a driver can get 3 demerit points and a \$353 fine if they do not give the minimum distance when they pass a bicycle rider. If the matter goes to court, a maximum fine of \$4,712 could apply.

The Amy Gillett Foundation's 'a metre matters' campaign, launched in November 2009 is based around a simple premise – drivers not hitting bicycle riders.¹³ They publish evidence in support and detail their approach.

The two images below are from the web illustrating the 1.0 metre rule.

<https://www.google.co.uk/search?q=a+metre+matters&biw=1003&bih=678&tbm=isch&tbo=u&source=univ&sa=X&sqi=2&ved=0ahUKEwip6cujluTMAhVIGsAKHbJHDdUQsAQIKg>)





Discussion

Changing driving habits to improve safety requires laws that lead to safer behaviour and the proposal for providing a minimum clearance of 1 metre when overtaking cyclists on roads with speed limits up to and including 30mph and 1.5 metre for roads with higher speed limits would contribute to safer cycling conditions. Approximately 4.6% of passes measured by Dr Walker in urban areas were within 1.0 m and 89.9% of the *21,287 cyclists reported injured in 2014 occurred in urban areas*. On narrow roads extra care could be required to pass only when safe and sufficient space. Extra passing places on some narrow roads may assist to improve safety and ease traffic flows at other times. Police enforcement and guidelines could take a number of factors into account when issuing fines. A passing law would be clearer about when unsuitable overtaking had taken place. Only in a small percentage of cases, approximately 4.6% for urban areas had drivers passed within 1.0 metres, so it can be concluded that dangerous overtaking occurs by a minority of drivers who are putting cyclists at risk. The risk factors for cycling can be calculated for road type, for example, major arterial roads in Melbourne were reported to be about nine times higher risk per kilometre of travel than minor roads¹⁴. The risk to cyclists from various types of vehicles when passing can also be calculated. If a passing law was introduced in the UK data from fines could be used to target areas where cyclists were put at high risk by altering the road layout or by other means to minimise close passing.

Conclusions

Introducing legal requirements for a minimum passing clearance for vehicles overtaking cyclists would provide an extra safety incentive to pass with care and be enforceable with

suitable evidence. The requirement would help to identify drivers who endanger others and could assist in improving overall road safety. The requirement would help reduce intimidating and aggressive driving. It would most likely lead to increasing cycling levels and contribute to a healthier society and help improve overall road safety. Overall the legal requirements suggested should be supported.

Author

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¹ Petitions, UK Government and Parliament, *To introduce a permanent, minimum passing distance when overtaking cyclists.*

<https://petition.parliament.uk/petitions/128190>

² Pedalling towards Safety, ETSC,

http://archive.etsc.eu/documents/BIKE_PAL_Safety_Ranking.pdf

³ RoSPA Road Safety Information, Cycling Accidents, Nov 2015,

<http://www.rospa.com/rospaweb/docs/advice-services/road-safety/cyclists/cycling-accidents-factsheet.pdf>

⁴ Walker B, Drivers overtaking bicyclists,

<http://www.drianwalker.com/overtaking/overtakingprobrief.pdf> and

<http://www.drianwalker.com/overtaking>

⁵ Pedalling towards Safety, ETSC,

http://archive.etsc.eu/documents/BIKE_PAL_Safety_Ranking.pdf

⁶ Safely Passing Bicyclists Chart, NCSL, USA

<http://www.ncsl.org/research/transportation/safely-passing-bicyclists.aspx>

⁷ WHERE WE RIDE Analysis of bicycle commuting in American cities

http://www.bikeleague.org/sites/default/files/Where_We_Ride_2014_data_web.pdf

⁸ Safe passing in Texas, <http://www.biketexas.org/en/advocacy/safe-passing>

⁹ Minimum passing distance, BWA, <https://www.bwa.org.au/bikes-and-riding/735/>

¹⁰ Victoria's proposed overtaking laws: Do cyclists always need a metre of space?

<http://cyclingtips.com/2016/04/victorias-proposed-overtaking-laws-do-cyclists-always-a-need-a-metre-of-space/>

¹¹ Evaluation of the Queensland Minimum Passing Distance Road Rule

<http://eprints.qut.edu.au/94655/>

¹² Police harness new technology to catch drivers who pass too close to cyclists

<http://www.cyclingweekly.co.uk/news/latest-news/police-harness-new-technology-to-catch-drivers-who-pass-too-close-to-cyclists-204275>

¹³ A metre matters, Amy Gillett Foundation's Australia.

<http://www.amygillett.org.au/programs-resources/a-metre-matters> and

¹⁴ Drummond A, Jee F, Risk of bicycle accident involvement,

<http://www.monash.edu/muarc/research/reports/muarc002>