

Cycling Near Misses: why they matter and how we can stop them

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Why the project is important

- Near misses may predict at least some types of collision risk situations
- Growing evidence that near misses strongly affect cycling experience, more so than collisions
- Clarify relationship between ‘perceived’ and ‘objective’ risk

Peer-reviewed published papers, so far

- Cycling near misses: Their frequency, impact, and prevention R Aldred, Transportation Research Part A: Policy and Practice August 2016, Volume 90, Pages 69–83
- Investigating the rates and impacts of near misses and related incidents among UK cyclists, R Aldred, S Croweller, Journal of Transport & Health 2 (3), 379-393, Volume 2, Issue 3, September 2015, Pages 379–393

Sample characteristics (1)

		No. (%) 2014	No. (%) 2015
		1525 (100%)	1061 (100%)
Gender	Male	1096 (72%)	770 (73%)
	Female	423 (28%)	282 (27%)
Age	20-29	261 (17%)	129 (12%)
	30-39	482 (32%)	295 (28%)
	40-49	455 (30%)	339 (32%)
	50-59	224 (15%)	203 (19%)
	60+	84 (6%)	91 (9%)
Day of the week	Weekday	1407 (92%)	977 (92%)
	Weekend	118 (8%)	84 (8%)
Local cycling prevalence	0-1.9%	414 (28%)	306 (29%)
	2-3.9%	361 (24%)	291 (28%)
	4-5.9%	255 (17%)	192 (18%)
	6-9.9%	341 (23%)	186 (18%)
	10%+	131 (9%)	78 (7%)

Sample characteristics (2)

		No. (%) 2014	No. (%) 2015
		1525 (100%)	1061 (100%)
Cycling experience	11+ years	-	656 (64%)
	5-10.9 years	-	216 (21%)
	2-4.9 years	-	111 (11%)
	<2 years	-	42 (4%)
Region	Non-London	1019 (68%)	791 (75%)
	London	483 (32%)	270 (25%)

Daily incident rates, 2014 and 2015

	Incidents per day	
Gender	Male	2.21
	Female	2.42
Age	20-29	2.47
	30-39	2.38
	40-49	2.29
	50-59	2.00
	60+	1.84
Day of the week	Weekday	2.28
	Weekend	2.08
Region	Non-London	2.21
	London	2.41

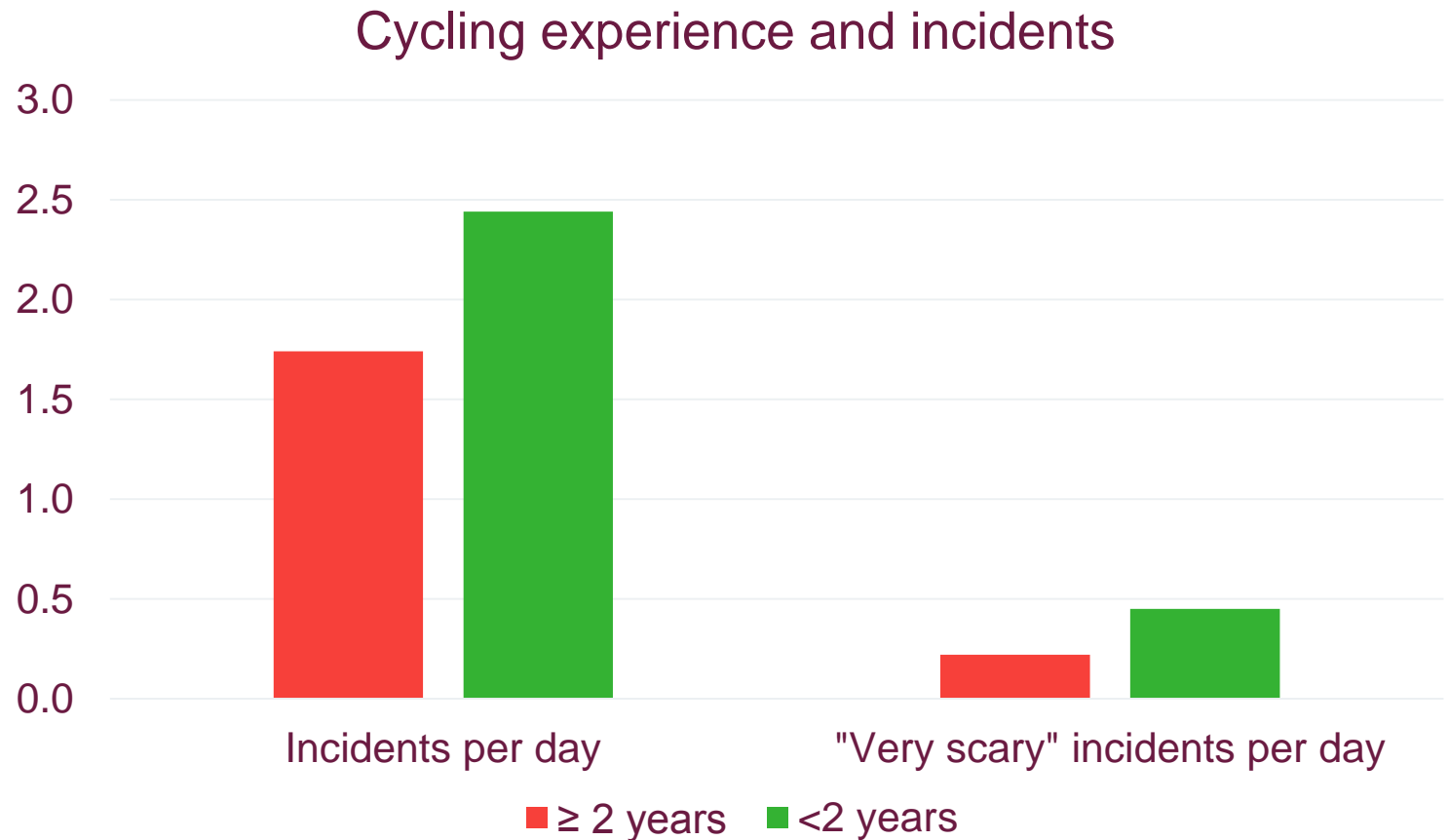
There was no evidence that incident rate was associated with the local prevalence of cycling

Comparing injury and non-injury incident rates (2014 data)

Type of Incident	Rate per year, regular UK commuting cyclist
Death	.000125 (once every 8,000 yrs)
Reported serious injury	.0025 (once every 400 yrs)
Reported slight injury	.015 (once every 67 yrs)
Any injury (reported or not)	.05 (once every 20 yrs)
Harassed/abused	20
'Very scary' incident	60
Any non-injury incident	450

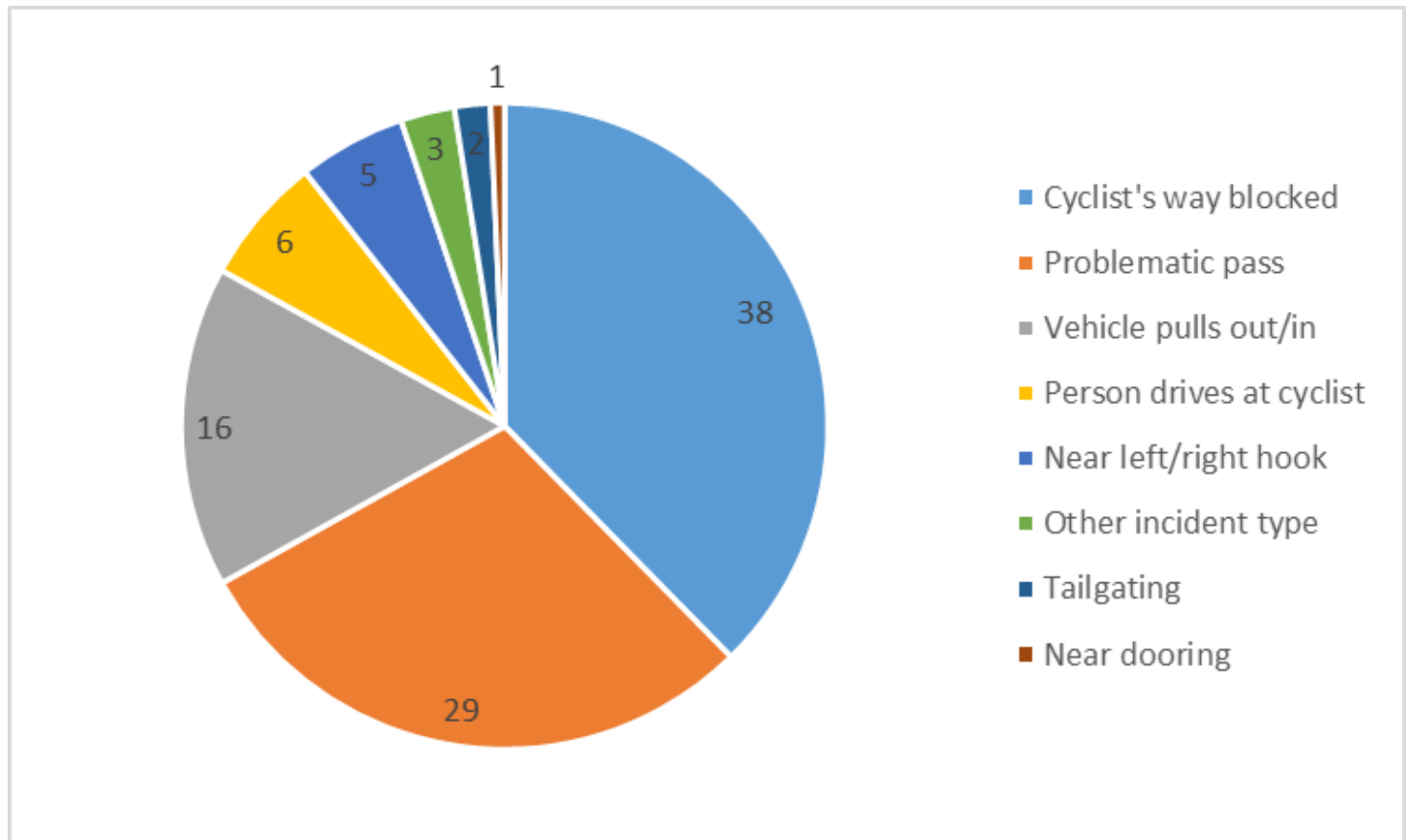
Final three figures derived from Near Miss Project data for Year 1. First four derived from published academic sources – see Aldred and Crossweller (2015).

New cyclists have twice as many very scary incidents per day*



* 2015 data, gap persists when adjusted for demographics, distance, speed

What are 'incidents'?

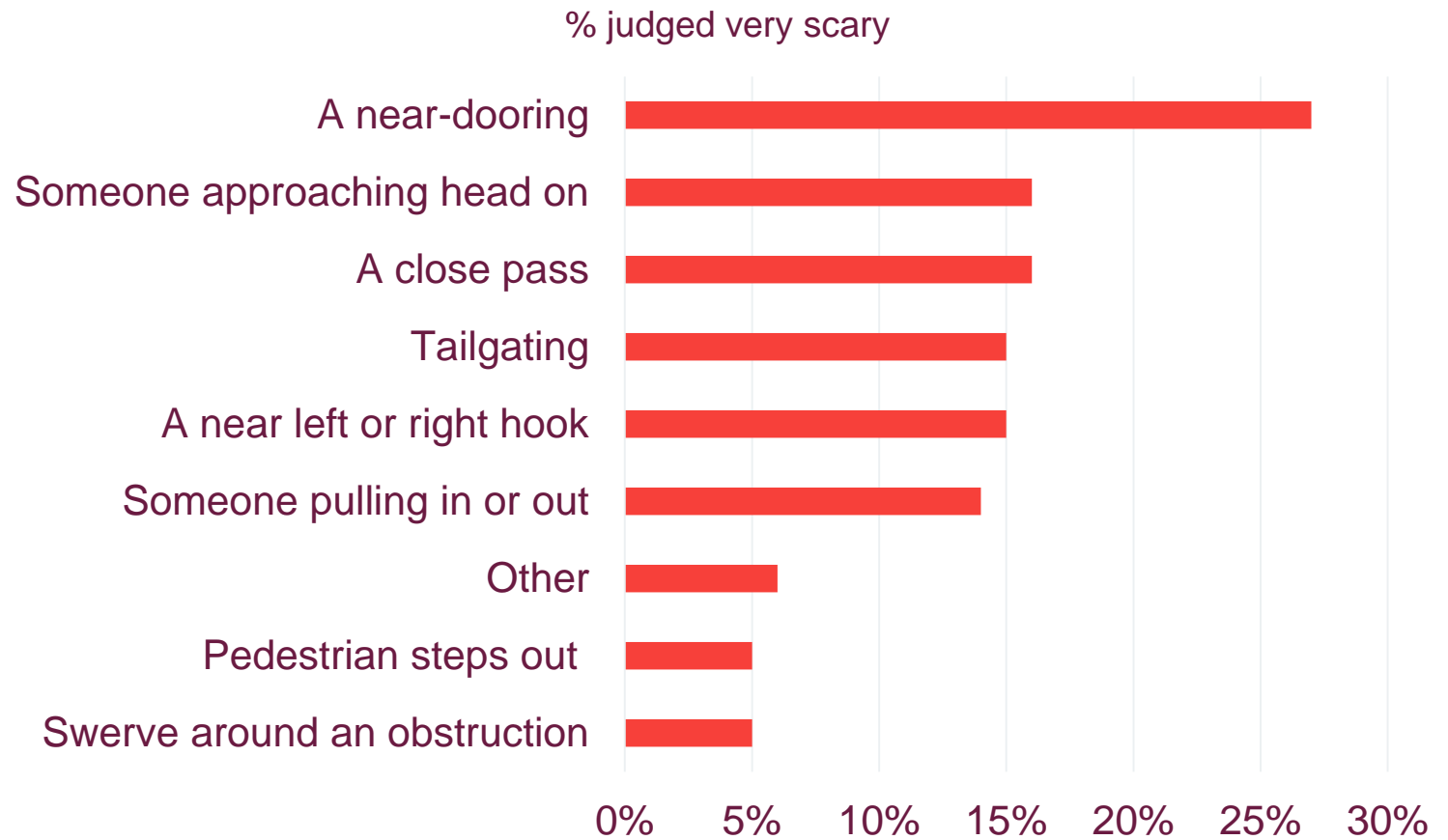


2014 data

Infrastructure/Behaviour

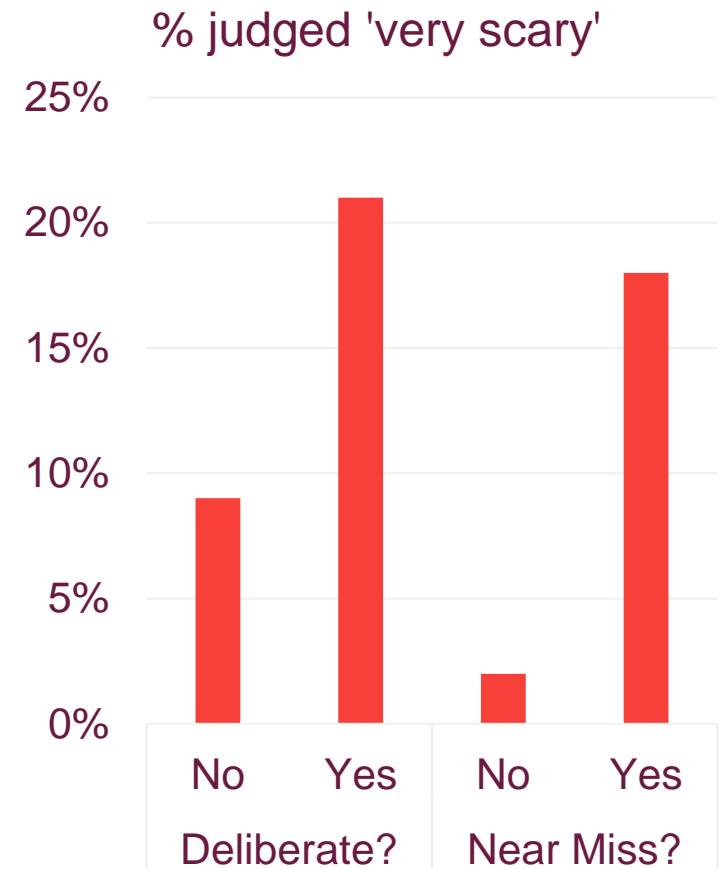


Incident scariness

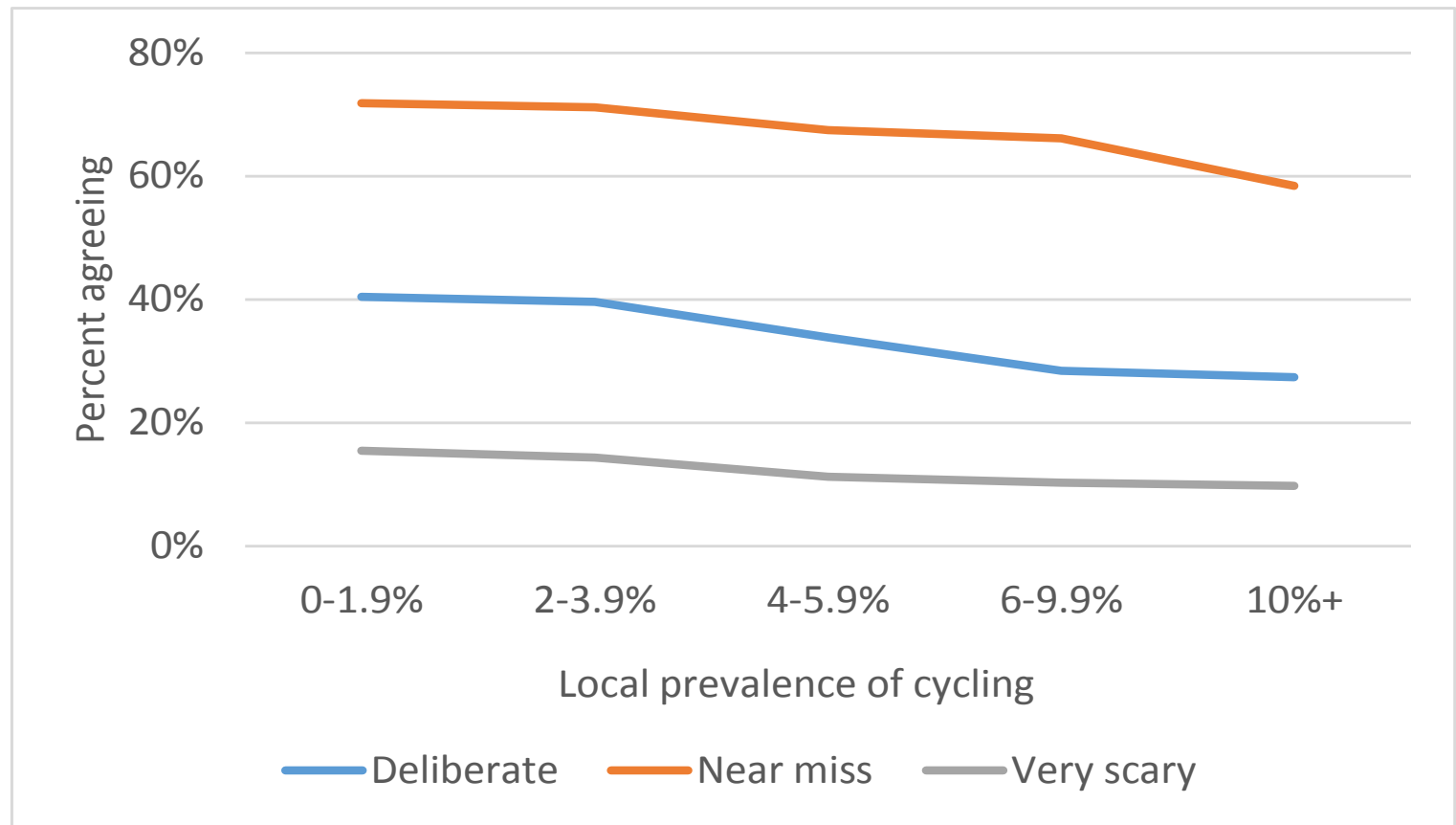


Incident scariness: underlying factors

- 2015 survey asked about whether an incident was a ‘near miss’ and whether it was ‘deliberate’
- Strongly associated with incident type
 - Interestingly pedestrians stepping out was unlikely to be judged ‘deliberate’



Incident characteristics vs. cycling prevalence



2015 data

Impacts on future cycling

- ‘I already approach this junction, and indeed every portion of the campus where I have to cycle on the road, with considerable caution. I can only attempt to cycle even more cautiously in future.’
- ‘An accumulation of these events over the years has made me super cautious, and I now believe it’s not sufficient simply to obey the rules to stay alive. To stay alive one must also anticipate that all others will be careless.’
- ‘At the moment I lack confidence & feel nervous when vehicles come from behind. I’m fed up with drivers overtaking me towards oncoming traffic & providing me with insufficient room &/or nearly pushing the other vehicle off the road.’

Preventing near misses

- Infrastructural and behavioural causes (and solutions) related
 - Attempts to drive infrastructural change can be stymied by culture/attitudes, while cultural change can be blocked by poor infrastructure/road environments
 - Cyclists feel marginalised by drivers and road environments
- Near miss data can be used in planning infrastructure change
 - Potentially to reduce crashes and to increase feelings of safety
- Safety campaigns combined with police enforcement are most effective (Phillips et al 2011 meta-analysis)

Near miss reporting for enforcement/planning

 Avon and Somerset Constabulary  

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Share:    

Report a cycling near miss

This page is not to be used for reporting actual collisions where personal injury or physical damage is involved.

It is designed to gather data which we can use with our partner agencies in order to improve cycling safety within the force area. Your information is not intended for use in formal prosecutions.

If you are reporting an actual collision involving personal injury and/or damage, or if you wish to report an extreme and dangerous manner of driving, [fill in the Report a Crime or Incident form](#).

A red asterisk (*) denotes a required field.

Near miss information

Are you reporting a near-miss as a... *

Cyclist

Non-Cyclist

What was the location? *

Enforcement targeting close passes



The screenshot shows the West Midlands Police website. At the top left is the police crest logo. To its right is the text "West Midlands Police" and the tagline "Preventing crime, protecting the public and helping those in need". Below this is a blue navigation bar with links for "Home", "Your Local Police", "Latest News", "Keeping You Safe", and "Advice Centre". A breadcrumb trail reads "Home > Latest News > News". A yellow box highlights the heading "LATEST NEWS". The main article title is "WMP targets cycle 'close pass' drivers in UK policing first". Below the title are social media sharing icons for Facebook, Twitter, Google+, Email, and a plus sign, followed by a counter showing "86". The date "16/09/2016" is displayed. The article text begins with "Cycling groups have praised West Midlands Police for becoming the first force in the country to proactively target 'close pass' drivers who endanger riders." and "Rules of the road stipulate motorists should give cyclists at least the same space as vehicles when overtaking."

West Midlands Police *Preventing crime, protecting the public and helping those in need*

Home Your Local Police Latest News Keeping You Safe Advice Centre

Home > Latest News > News

LATEST NEWS

WMP targets cycle 'close pass' drivers in UK policing first

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16/09/2016





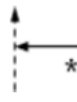
Cycling groups have praised West Midlands Police for becoming the first force in the country to proactively target "close pass" drivers who endanger riders.

Rules of the road stipulate motorists should give cyclists at least the same space as vehicles when overtaking.

Anyone encroaching inside that safe passing distance – widely considered to be a

Use of conflict analysis in LCDS

Table 2: The five conflict types most commonly resulting in KSIs to cyclists during 2011-13

Conflict rank	Indicative diagram	Manoeuvre description	Seriously injured casualties (% of total)	Fatal casualties (% of total)
1		Other vehicle turns right across path of cyclist	243 (14%)	2 (5%)
2		Cyclist hits open door / swerves to avoid open door of other vehicle.	160 (10%)	2 (5%)
3		Cyclist and other vehicle travelling alongside each other.	146 (9%)	4 (9%)
4		Other vehicle turns left across the path of cyclist	125 (9%)	11 (25%)
5		Other vehicle fails to give way or disobeys junction control and collides with cyclist	96 (6%)	1 (2%)

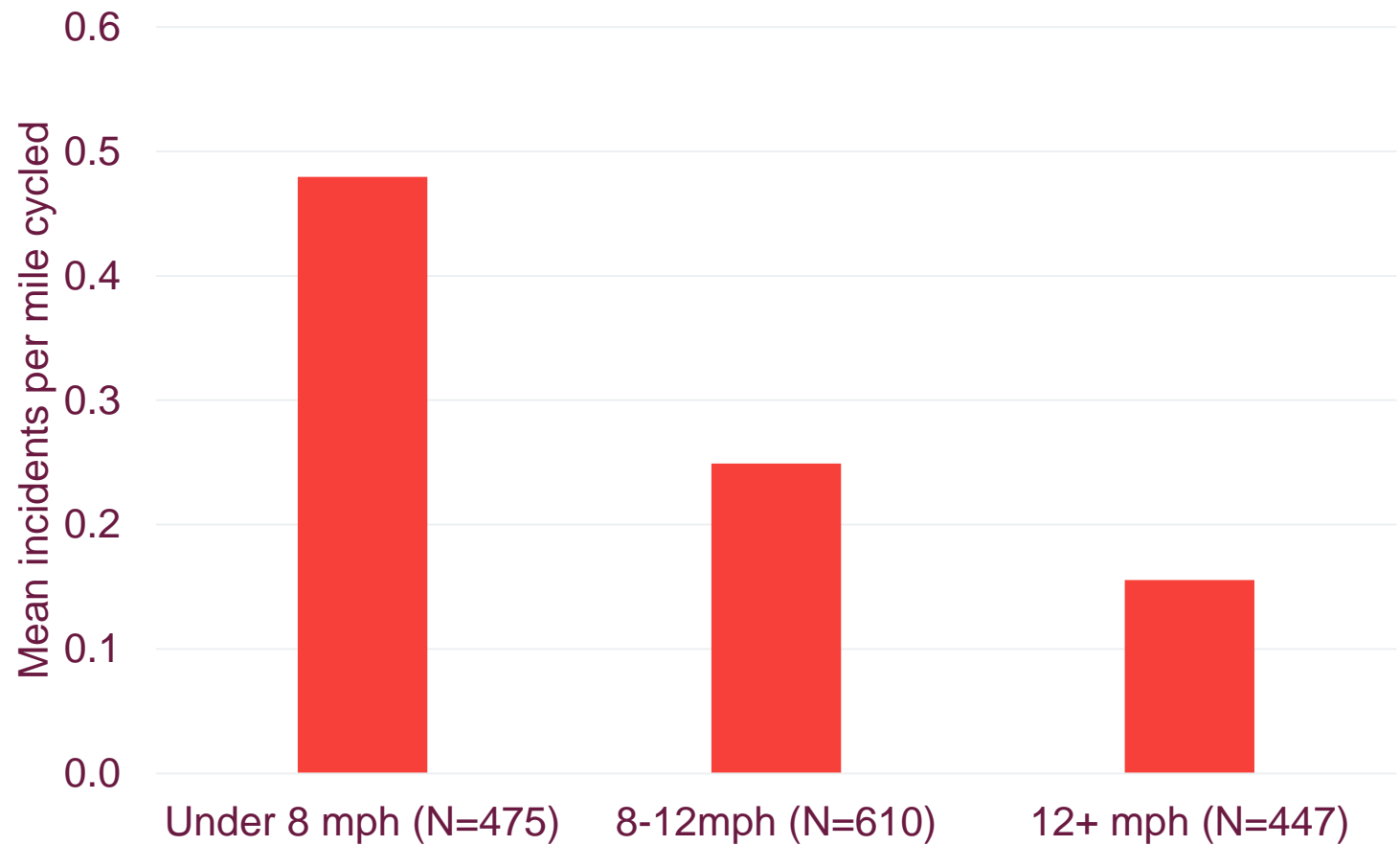
Future steps? #1

The vulnerability of cyclists provides a particular road enforcement challenge. A “near miss” involving a cyclist can be close to a fatal accident, and “near miss” reports involving cyclists should be considered in that light. It is clear that there is a problem with the actual and subjective safety of the roads for cyclists, as well as the perception of the likely result of reporting offences to the police. The level to which cyclists feel unsafe on the roads due to a perceived failure to enforce traffic law is at odds with the Government’s aim to promote cycling, and must be addressed.

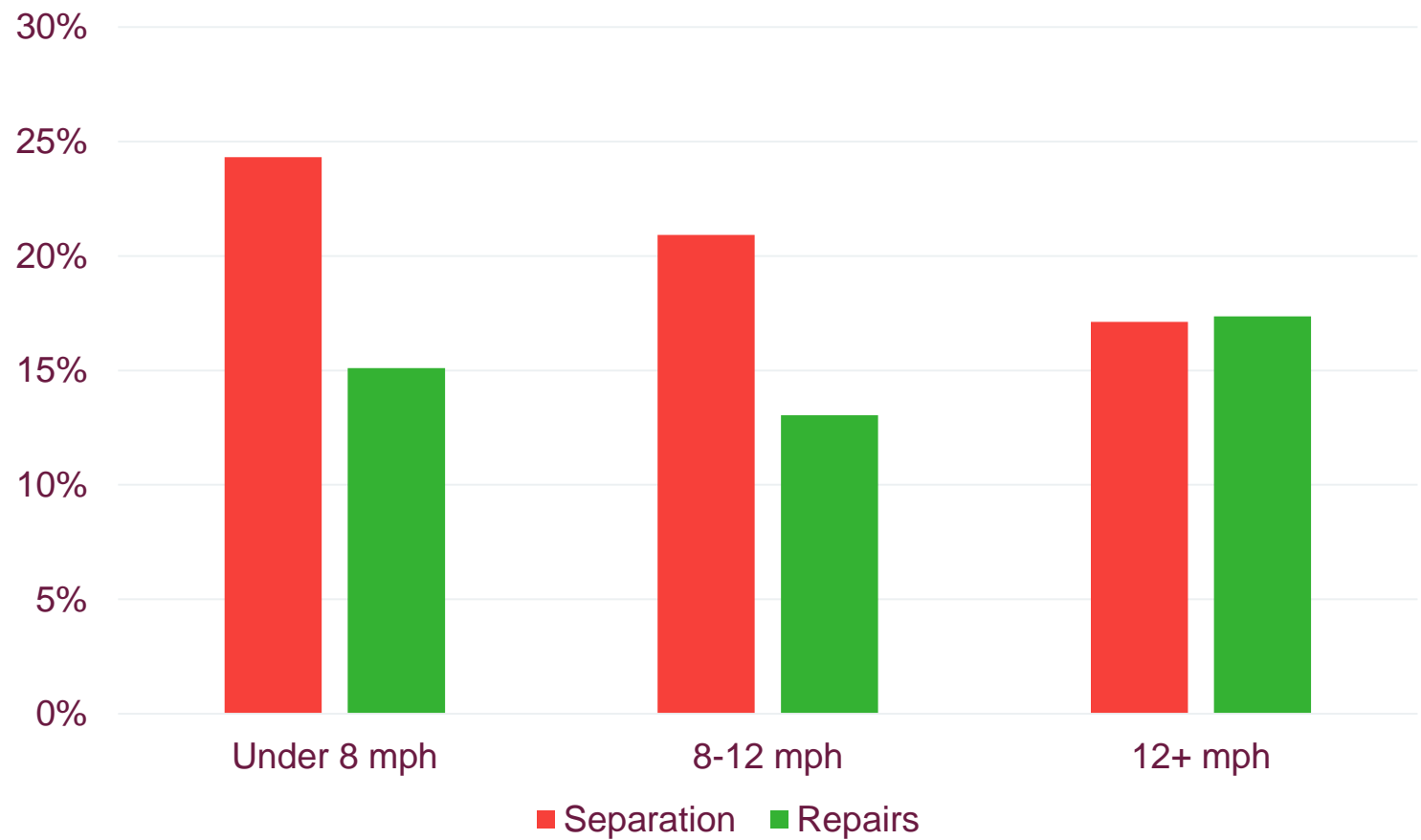
- *We recommend that the Government’s strategy should not only promote cycle use, but must do so whilst reducing the proportion of people who consider that it is too dangerous for them to cycle on the roads.*

<http://www.publications.parliament.uk/pa/cm201516/cmselect/cmtrans/518/518.pdf>

Speed and incidents



Speed and suggested infrastructural changes



2014 data

Future steps? #2

There appears to be substantial feeling that collisions or near misses involving cyclists are sometimes not effectively handled. More generally, there is great variation between police forces in how a road user is able to report near misses, and the development of best practice would be of benefit to all road users.

- *We recommend that the Home Office commission research on how collisions or near misses are handled by the police, particularly how this varies between each force area, and how this impacts the proportion of people who believe it is too dangerous to cycle on the roads*

<http://www.publications.parliament.uk/pa/cm201516/cmselect/cmtrans/518/518.pdf>

Final thoughts

- Near misses regular occurrences for UK cyclists
- Significantly more frequent for new cyclists
- Infrastructural change and improved enforcement/education needed
 - Few areas currently collect near miss data, use it in planning, think about near misses in infrastructure design, or enforce near misses as careless / dangerous driving

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