

# **Near Miss Study of Motorcycles**



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in

**Northern Ireland**

**Southern Ireland**

and

**Great Britain**

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**Elaine Hardy, PhD - Right To Ride Ltd**

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## A Study of Motorcyclists in Northern Ireland, Southern Ireland and Great Britain

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### **ABSTRACT**

During the months of May through to July 2009, a survey of 257 motorcyclists in Ireland (Northern and Southern) and Great Britain (England, Scotland and Wales) was carried out through the internet. The purpose of the survey was to find out from motorcyclists, whether they had experienced situations in which they believed they could have crashed and/or been injured (but were able to keep control of their motorcycle) as well as the type of situations they had experienced.

Overall, 78.2% of the respondents gave details of their experience of near miss situations. The findings of the survey have identified situations that appear to be more prevalent for motorcyclists, which are the potential for collisions between motorcycles and other vehicles, followed by problems with the conditions of roads and road infrastructure.

A focus group was conducted to gather the views of motorcycle experts including trainers, road safety officers, user representatives and a police officer (interviewed separately). The focus group discussed the results of the survey and also considered issues relating to road safety and casualty reduction including training, road infrastructure, legislation and enforcement and advertising campaigns to reduce casualties and the impact of manufacturer advertising on motorcyclists.

The findings of the survey and focus group aim to identify situations that appear to be prevalent in near miss events to support and compare to analysis of accident causation and prevention, but also to identify underlying factors that have up to now, not been the focus of discussions, such as the variations in training in different countries as well as the impact of both positive and negative advertising on rider behaviour.

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## 1. Introduction

Studies on motorcycle accident causation such as the seminal Hurt report (1981) have found that human errors are the primary accident contributing factor which indicates that vehicle operators are largely responsible for accident causation. While post crash analysis identifies how and where collisions happen, there is a lack of analysis of why collisions happen.

The objective of this study is to provide evidence as to why motorcycle collisions with other road users and road infrastructure occur. The link between actual crashes and near-misses is currently missing and perhaps the results from this study could help develop that link. Near miss research will aim to offer a perspective from the rider's point of view through analysis of a survey of motorcyclists.

During the months of May through to July 2009, a survey of 257 motorcyclists in Ireland (Northern and Southern) and Great Britain was carried out through the internet<sup>1</sup>. The purpose of the survey was to find out from motorcyclists, whether they had experienced situations in which they believed they could have crashed and/or been injured (but were able to keep control of their motorcycle) as well as the type of situations they had experienced.

A focus group was conducted in September 2009 to gather the views of motorcycle experts including trainers, road safety officers, and user representatives. In October a separate interview was held with the Bikesafe Coordinator, Northern Ireland. The focus group and subsequent interview discussed the results of the survey and also considered issues relating to road safety and casualty reduction including training, road infrastructure, legislation and enforcement and advertising campaigns to reduce casualties and the impact of manufacturer advertising on motorcyclists.

The findings of the survey and focus group aim to identify situations that appear to be prevalent in near miss events to support and compare to, analysis of accident causation and prevention, but also to identify underlying factors that have up to now, not been the focus of discussions, such as the variations of training and testing in different countries as well as the impact of both positive and negative advertising on rider behaviour.

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<sup>1</sup> Although Northern Ireland is part of the United Kingdom, it has an autonomous authority for the registration of vehicles as well as for the training and testing of car drivers, motorcyclists and commercial drivers and is governed by the Department of The Environment, Northern Ireland. England, Scotland and Wales form Great Britain and vehicle registration and licensing are governed by the same authority which is the Department for Transport, GB. Thus, legislation on vehicles and driver licensing and the interpretation of EU Directives can differ between these two authorities.

## 1.1 Background to Near Miss Research

While within the aviation, maritime and railway sectors, near miss – or pre-crash - studies have been an important part of safety research, the automotive and the motorcycling sector has only recently commenced near miss research. In the USA, the 100 car study identified behavioural issues with car drivers, while a more U.S. recent study evaluated driver distraction of commercial vehicle operators. In Europe studies such as the EU FP7 2-Be-Safe project have started to look at motorcyclists and naturalistic behaviour. These studies are valuable in identifying potential causes of crashes as well as hazards and could reveal what are the most common points of collision, the cause of the collision as well as perceptions of threats to near miss situations.

According to the U.S. Department of Transport, Research and Innovative Technology Administration (RITA)<sup>2</sup>, *“Virtually all transportation accidents are preceded by a chain of events or circumstances—any one of which might have prevented the accident if it had gone another way. In a large number of cases, operators are aware of these “close calls” or “near misses” and may have information that could prevent future accidents. However, most of our modal programs are focused on collecting data on mishaps only when they result in a reportable accident. This leaves unexposed the large majority of cases where we could develop useful data on accident precursors or on prevention strategies that have actually worked (...). “Near miss reporting systems can provide a data stream which complements accident investigations, and which may provide key data that would prevent low probability-high consequence accidents in particular. They may also provide new information on what works to break the accident chain before an accident occurs. As a result, we would expect more focused prevention efforts, better prevention, and a better ability to mitigate accidents”.*

The report, “Human Error and Road Transport” (2006)<sup>3</sup> recommended the investigation of a road transport incident reporting system which would allow road users “to report error-related actual and near-miss incidents in which they have been involved, including the nature of the incident and of any contributing latent conditions and errors” (2006:36). The recommendations also included an incident report form designed to gather information such as road user demographics (age, sex, and driving experience); type of vehicles involved; incident description; errors involved, environmental conditions, time of day and locations etc.

The authors propose the use of error data for the design and implementation of specific strategies and countermeasures in the road transport system which could include:

- Training
- Error management technique
- Road infrastructure design
- Vehicle design
- Policy, regulations and legislation; and
- Advertising campaigns.

## 1.2. Casualty Statistics

Casualty data collated from various EU countries highlight discrepancies<sup>4</sup>. Indeed, attempting to collect and compare data between member states is difficult due to the fact that there is no common collection method and a lack of consistency in recording casualties throughout Europe, for example, in Italy, fatalities are recorded within 24 hours of the incident, while in the UK, fatalities are recorded up to 30 days following the incident, which make comparisons unreliable.

<sup>2</sup> [http://www.bts.gov/publications/safety\\_data\\_action\\_plan/project\\_07.html](http://www.bts.gov/publications/safety_data_action_plan/project_07.html)

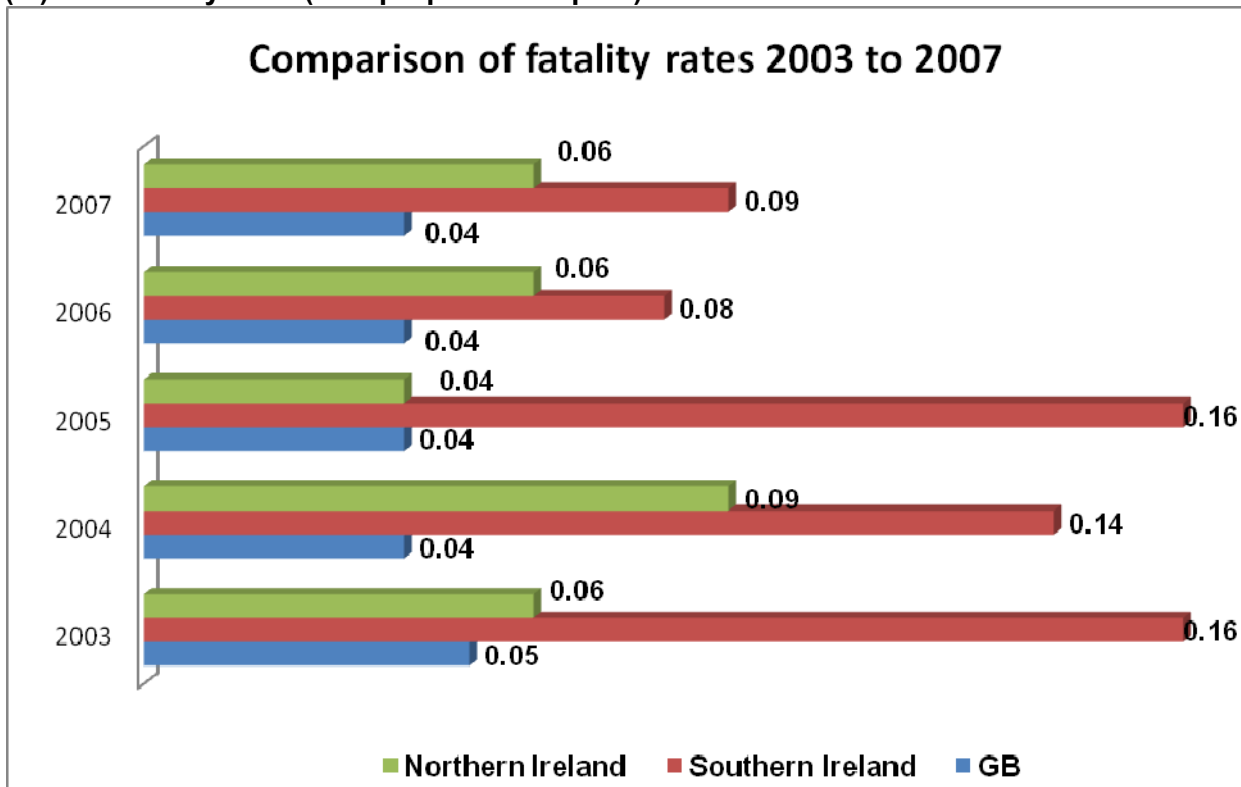
<sup>3</sup> Monash University Accident Research Centre: Report No. 257, January, 2006

<sup>4</sup> Motorcycle Safety in Northern Ireland – The Rider’s Perspective 2009 Annex 4; [www.writetoride.co.uk](http://www.writetoride.co.uk)

With this in mind, the average motorcycle<sup>5</sup> fatalities compared to the circulating parc in Europe is 0.04% and with the caveat of the different methods of recording fatalities, the European average of motorcycle fatalities compared to total road deaths is 19.9%. This varies from 27.1% in Luxembourg to 9.6% in Finland. However, in terms of fatalities as a proportion of circulating parc (in 2004), Ireland had the highest rate of 0.14% while both Finland and Italy had the lowest (0.01%).

The analysis of motorcycle casualty data from Northern, Southern Ireland and Great Britain highlights differences in the percentage rates for fatalities (as a proportion of parc).

**Figure One: Comparison of Northern Ireland, Southern Ireland and Great Britain Fatality rates (%) for motorcyclists (as a proportion of parc)**



As figure one highlights, Southern Ireland<sup>6</sup> had the highest percentage of fatalities (0.16% in 2003 decreasing to 0.09% in 2007). Northern Ireland averaged 0.06% of fatality rates over the five year period with the highest rate in 2004 (0.09%) and lowest in 2005 (0.04%). Fatality rates in Great Britain remained constant from 2004 (0.04%).

<sup>5</sup> The definition of Motorcycles in this report includes motorcycles, scooters and mopeds; Parc is the number of registered vehicles in circulation – in this case, motorcycles (including scooters and mopeds).

<sup>6</sup> In the case of Southern Ireland (Republic of Ireland), there is another issue which compounds the debate regarding motorcycle safety. Until recent changes in legislation, car drivers with provisional licences did not have to be accompanied, which according to the Road Safety Authority, was the cause of numerous motorcycle casualties (14% of all motorcycle casualties) As of June 2008, fines will be imposed on learner drivers who are not accompanied by a driver with at least 2 years' experience. Analysis revealed that the trend in the number of motorcyclists injured each year in collisions involving unaccompanied learner drivers of other vehicles is decreasing (possibly due to the change in legislation). In 2006, 59 motorcyclists were injured by unaccompanied learner drivers compared to 157 in 2002. At the end of 2007, there are 427,724 drivers with provisional licences of which 65,523 are aged 40 years and over (9,054 are aged over 60 years). The total number of provisional licence holders in the Republic of Ireland represents more than 20% of total licence holders.

## 1.2.1 Northern Ireland

Table One: Motorcycles licensed. Total fatalities, serious injuries and slight injuries for motorcyclists: 2003 - 2007<sup>7</sup>

	2003	2004	2005	2006	2007
Motorcycles	26,682	27,326	28,689	29,922	31,763
Fatalities	17	24	12	18	19
Percentage of parc	<b>0.06</b>	<b>0.09</b>	<b>0.04</b>	<b>0.06</b>	<b>0.06</b>
	2003	2004	2005	2006	2007
Motorcycles	26,682	27,326	28,689	29,922	31,763
Serious injuries	145	151	126	135	135
Percentage of parc	<b>0.54</b>	<b>0.55</b>	<b>0.44</b>	<b>0.45</b>	<b>0.43</b>
	2003	2004	2005	2006	2007
Motorcycles	26,682	27,326	28,689	29,922	31,763
Slight injuries	305	292	257	259	316
Percentage of parc	<b>1.14</b>	<b>1.07</b>	<b>0.90</b>	<b>0.87</b>	<b>0.99</b>

1.2.2. Southern Ireland<sup>8</sup>

Table Two: Motorcycles licensed. Total fatalities, serious injuries and slight injuries for motorcyclists: 2003 – 2007

	2003	2004	2005	2006	2007
Motorcycles	35,094	34,854	34,300	34,927	37,178
Fatalities	55	50	56	29	33
Percentage of parc	<b>0.16</b>	<b>0.14</b>	<b>0.16</b>	<b>0.08</b>	<b>0.09</b>
	2003	2004	2005	2006	2007
Motorcycles	35,094	34,854	34,300	34,927	37,178
Serious injuries	141	104	102	82	61
Percentage of parc	<b>0.40</b>	<b>0.30</b>	<b>0.30</b>	<b>0.23</b>	<b>0.16</b>
	2003	2004	2005	2006	2007
Motorcycles	35,094	34,854	34,300	34,927	37,178
Slight injuries	631	527	423	423	316
Percentage of parc	<b>1.80</b>	<b>1.51</b>	<b>1.23</b>	<b>1.21</b>	<b>0.85</b>

<sup>7</sup> N.B. Motorcycles include Motorcycles, Scooters and Mopeds; Table 6.8: Injury Road Traffic Collision Casualties by Severity of Injury and Type of Road User 2003/04 – 2007/08 (PSNI Statistics: Annual Statistical Report Statistical Report No. 6 INJURY ROAD TRAFFIC COLLISIONS AND CASUALTIES 1ST APRIL 2007 – 31ST MARCH 2008) Table 1.7 Vehicles currently licensed by body type: 2003-2007 (Northern Ireland Transport Statistics 2007-08)

<sup>8</sup> N.B. Motorcycles include Motorcycles, Scooters and Mopeds; Casualty data: Road Safety Authority: Table 18 All Casualties Classified by Road User Type: 2005,06,07, Motorcycle stats: 2003 <http://www.rte.ie/news/features/roadsafety/motorcyclestats.html>; An Garda Siochana: 2004



### 1.2.3 Great Britain<sup>9</sup>

**Table Three: Motorcycles licensed. Total fatalities, serious injuries and slight injuries for motorcyclists: 2003 – 2007**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Motorcycles</b>	1,314,000	1,338,300	1,367,100	1,376,200	1,467,200
<b>Fatalities</b>	693	585	569	599	588
<b>Percentage of parc</b>	<b>0.05</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Motorcycles</b>	1,314,000	1,338,300	1,367,100	1,376,200	1,467,200
<b>Serious injuries</b>	6,896	6,003	5,895	5,837	6,149
<b>Percentage of parc</b>	<b>0.52</b>	<b>0.45</b>	<b>0.43</b>	<b>0.42</b>	<b>0.42</b>
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Motorcycles</b>	1,314,000	1,338,300	1,367,100	1,376,200	1,467,200
<b>Slight injuries</b>	20,220	18,526	17,881	16,842	16,722
<b>Percentage of parc</b>	<b>1.54</b>	<b>1.38</b>	<b>1.31</b>	<b>1.22</b>	<b>1.14</b>

Road Casualties Great Britain: 2007 - Annual Report, describes the scope and limitations of the contributory factors information recently added to the national road accident reporting system, and presents results from the third year of collection. (For all factors see annex three)

**Table Four: The most prevalent contributory factor attributed to motorcycle accidents in 2007 (GB)<sup>10</sup>**

<b>Contributor Factor by vehicle type (motorcycle)</b>	<b>Number</b>	<b>Percent</b>
Driver/rider error or reaction	8,900	43.8
Vehicles with no contributory factor	7,225	35.5
Behaviour or inexperience	4,406	21.7
Injudicious action	3,369	16.6
Road environment contributed	2,491	12.3
Vision affected	991	4.9
Impairment or distraction	731	3.6
Special codes (stolen or emergency vehicle, other etc)	470	2.3
Vehicle defects	229	1.1
Pedestrian only (casualty or uninjured)	75	0.4

*N.B. Columns may not add up to 100 per cent as accidents can have more than 1 contributory factor.*

The most prevalent contributory factor is human error (43.8%) with 21.7% due to behaviour or inexperience as a factor. As the data in Annex three indicate, speed was a contributory factor in only 5.4% of cases while going too fast for the conditions contributed to 7.4% of the accidents.

<sup>9</sup> N.B. Motorcycles include Motorcycles, Scooters and Mopeds; includes passengers; Parc data: MCIA; Casualty data: Department for Transport, table 27 Number of casualties; by accident and casualty severity and road user type: 2005,06,07; table 39: 2003,04

<sup>10</sup> Table 4d: Contributory factors: vehicles<sup>1</sup> by vehicle type: GB 2007;

<http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/casualtiesgbar/roadcasualtiesgreatbritain2007>

## Post Accident Causation Research

Motorcycle casualties are often the focus of research, with many reports highlighting the perceived risk-taking of motorcyclists and the dangerousness of motorcycles. What seems apparent from these reports is a lack of understanding of motorcycles and motorcyclists.

In an interview with an American magazine<sup>11</sup>, Prof. Harry Hurt argued that “*motorcycle safety and crashes are poorly understood*”. Hurt believes that this is because many investigators do not understand the difference between single-track and dual-track vehicles and they approach the subject with a car-centric bias instead of ‘looking to find what’s there’ rather than what seems to have happened. He insists that ‘investigators’ also need to be riders themselves’. He said, “*If they aren’t motorcyclists, they cannot accurately evaluate motorcycle accident cause factors*”.

Hurt added that “*other studies have looked at ‘characteristics’ of motorcycle operators that make them dangerous. But, he asked, “Compared to what? They aren’t doing any comparison to other populations.”* He believes that this faulty approach leads to self-determining results.

### 1.3.1. The Hurt Report (1981 – US)

The most influential accident causation study was the report ‘*Motorcycle Accident Cause Factors and Identification of Countermeasure*’, also known as the ‘*Hurt Report*’, January 1981. It was a study conducted by the University of Southern California (USC). Using funds from the National Highway Traffic Safety Administration, researcher Harry Hurt investigated almost every aspect of 900 motorcycle accidents in the Los Angeles area. Additionally, Hurt and his staff analyzed 3,600 motorcycle traffic accident reports in the same geographic area.

Major findings are summarized as follows:

- Approximately three-fourths of these motorcycle accidents involved collision with another vehicle, which was most usually a passenger automobile.
- Approximately one-fourth of these motorcycle accidents were single vehicle accidents involving the motorcycle colliding with the road or some fixed object in the environment.
- Vehicle failure accounted for less than 3% of these motorcycle accidents, and most of those were single vehicle accidents where control was lost due to a puncture flat.
- In the single vehicle accidents, motorcycle rider error was the accident precipitating factor in about two-thirds of the cases with the typical error being a slide out and fall, due to over braking or running wide on a curve due to excess speed or under-cornering.
- Road defects (pavement ridges, potholes, etc.) were the accident cause in 2% of the accidents; animal involvement was 1% of the accidents.
- In the multiple vehicle accidents, the driver of the other vehicle violated the motorcycle right-of-way and caused the accident in two-thirds of those accidents.
- The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of motorcycle accidents. The driver of the other vehicle involved in collision with the motorcycle did not see the motorcycle before the collision, or did not see the motorcycle until too late to avoid the collision.

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<sup>11</sup> Motorcycle Consumer News, February 2005

- Intersections are the most likely place for the motorcycle accident, with the other vehicle violating the motorcycle right-of-way, and often violating traffic controls.
- The median pre-crash speed was 29.8 mph [48.0 Kph], and the median crash speed was 21.5 mph [34.6 Kph], and the one-in-a-thousand crash speed is approximately 86 mph [138 kph].
- The motorcycle riders involved in accidents are essentially without training; 92% were self-taught or learned from family or friends. Motorcycle rider training experience reduces accident involvement and is related to reduced injuries in the event of accidents.
- More than half of the accident-involved motorcycle riders had less than 5 months experience on the accident motorcycle, although the total street riding experience was almost 3 years. Motorcycle riders with dirt bike experience are significantly underrepresented in the accident data.
- Motorcycle riders in these accidents showed significant collision avoidance problems. Most riders would over brake and skid the rear wheel, and under brake the front wheel greatly reducing collision avoidance deceleration. The ability to counter steer and swerve was essentially absent.
- The typical motorcycle accident allows the motorcyclist just less than 2 seconds to complete all collision avoidance action.

### **1.3.2. MAIDS**

An accident causation study of 921 motorcyclists in four European countries was published in 2004 by a Consortium led by the Association of European Motorcycle Manufacturers – ACEM. This was called "MAIDS, In-depth investigation of motorcycle accidents".

The most important conclusion of the MAIDS report (2004) was that the object most frequently struck in an accident was a passenger car. The second most frequently struck object was the road itself, either as the result of a single vehicle accident or of an attempt to avoid a collision with another vehicle. Overall, the study found that human factors were the primary accident contributing factor in approximately 87.5% of all cases indicating that vehicle operators are largely responsible for accident causation.

### **1.3.3. On the Spot Study (OTS)**

Commencing in 2000, the TRL (Transport Research Laboratory) covering the Thames Valley area, and VSRC (Vehicle Safety Research Centre, attached to Loughborough University), covering the Midlands, provided expert investigators to attend the scene of an accident usually within 15 minutes of the incident occurring, using dedicated response vehicles and equipment.

The results of these investigations have provided over 200 motorcycle cases in the OTS database which can be analysed and compared to the MAIDS results. The results of the OTS study found that there were considerable differences between the accident populations of OTS and MAIDS data. However, some similarities exist in the accident populations of OTS and MAIDS data, which are:

- Collision partner: both OTS and MAIDS show that the major collision partner in motorcycle accidents are passenger cars, accounting for approximately two-thirds of accidents. This is the case regardless of whether the accident occurred in a rural or urban setting.
- Junction accidents: the proportions of accidents which occur away from a junction are similar between the studies (38% for MAIDS and 42% for OTS).

- Causation: a traffic scan error by the motorcycle rider contributed to the accident in 28% of MAIDS records and 22% of OTS records. Traffic scan errors by other vehicles users in the collision accounted for 64% of accidents in MAIDS and 67% of accidents in OTS.

#### 1.3.4. Behavioural Research in Road Safety (DfT, 2004)<sup>12</sup>

In November 2004, the Department for Transport in Great Britain published a report called 'Behavioural Research in Road Safety'. The report covers a variety of studies which focus on specific causes to road accidents. One of these studies is called 'An in-depth case study of motorcycle accidents using police road accident files' by the authors DD Clarke, P Ward, W Truman and C Bartle. This study considers accidents 'involving motorcyclists (and their blameworthiness) and the problem surrounding other road users' perception of motorcycles, particularly at junctions' (page 5).

The report considers factors such as 'drivers with relatively high levels of driving experience who nonetheless seem to have problems detecting approaching motorcycles' (ibid).

The study examined 1,790 motorcycle accidents from the West Midlands police reports with follow up questionnaires. However, the authors concentrated on c.1000 of these accident reports identified as 'A' class' which provided more detail of the accidents.

Accordingly, of the total cases, 681 (38%) involve ROWVs<sup>13</sup>. However, less than 20% of these involve a motorcyclist who rated as either fully or partly to blame for the accident. The majority of motorcycle ROWV accidents have been found to be primarily the fault of other motorists. This is an even higher level of "non-blameworthiness" in ROWV accidents than that observed in other in-depth studies, e.g. *Hurt et al 1981*. (op. cit.).

The most significant finding of this study with regards to right of way violation (ROWV) accidents, suggests that in particular, there is a marked problem with other road users observing motorcyclists. This is the phenomenon whereby drivers overlook a motorcyclist in the immediate foreground seems to be in agreement with the work of Mack and Rock (op. cit.), whose theory of 'inattentive blindness' showed that subjects may be less likely to perceive an object if they are looking at it directly than if it falls outside the centre of the visual field. 'Inattentive blindness' is suggested by research to be affected by four main factors: conspicuity, expectation, mental workload, and capacity (page 8).

The findings of the DfT survey support the findings of this study in terms of the sheer number of incidents involving cars entering the space of the motorcyclist.

#### 1.3.5 Bikesafe Northern Ireland Report

In a study by Bikesafe Northern Ireland<sup>14</sup>, motorcyclists were asked: "How many collisions they had had while riding a motorcycle in the last three years". Nineteen of the 58 respondents that reported having a collision during that time period, indicated that this collision was as a result of their bike being hit by another vehicle when both were moving (2005:9).

Thirteen respondents reported having come off their bike while they were in motion, while 12 lost control of their vehicle due to a deposit on the road (e.g. oil, mud etc.). Nineteen of the 58 respondents reported that the collision they were involved in led to them or someone else sustaining a serious injury (i.e. a fracture or worse).

<sup>12</sup> <http://df.gov.uk/pgr/roadsafety/research/behavioural/fourteenthseminar/>

<sup>13</sup> ROWVs – Right of Way Violations

<sup>14</sup> [http://www.psni.police.uk/bikesafe\\_report.pdf](http://www.psni.police.uk/bikesafe_report.pdf)

### **1.3.6 Accident Causation – Coroner’s Inquests - identifying the issues.**

In Northern Ireland, Southern Ireland and Great Britain, analysis of motorcycle accidents (or crashes) is predominantly based on the reporting of the traffic police. The statistical analysis of these findings are gathered and presented as the annual result of road traffic accidents in the respective countries. Accident causation studies such as MAIDS (2004), The ‘Motorcycle Accident Cause Factors and Identification of Countermeasure’ carried out by Harry Hurt and his team in 1981 and the On The Spot study carried out on behalf of the Department for Transport (2008) are all extremely expensive and require enormous resources.

In order to overcome the problems of inaccurate or partial reporting by the police; comparative problems due to variations in national methodologies of reporting and the cost of accident causation studies such as the MAIDS study, there is an opportunity to identify the causation of fatalities through an examination of the findings from the Coroner’s inquest of specific deaths. These examinations include fatalities of motorcyclists and indeed any other road user.

As an example of the wealth of information available from these inquests, a Northern Ireland newspaper (Ards Peninsula Chronicle of 6<sup>th</sup> August 2009, page 7) reported the inquest of the death of a motorcyclist in 2008 and identifies probable cause for the outcome of the crash which highlights numerous issues such as the fact that the rider was not speeding, and that there was insufficient signage (i.e. there was no sign at that particular bend to indicate that it was a sharp curve and that caution was needed); insufficient experience (the rider had returned to motorcycling three years previously and had owned his present motorcycle for one year); inappropriate manoeuvring including braking and overtaking (he was following his more experienced friend who had overtaken a transit van and the rider then braked heavily when faced with an oncoming car). The conclusion of the inquest suggests that had the motorcyclist accelerated, he may well have survived.

The inquest provided statements from witnesses at the scene of the crash as well as expert witnesses such as pathologists, a forensic scientist specialising in motorcycle crashes, the victim’s own doctor and relatives of the victim.

The Coroner concluded that the deceased had been a 'fast but confident driver: and said he had taken a 'calculated risk'. The Coroner added "In doing so he was no different from many drivers. But it shows there is a high price to pay for even the most calculated risk. He was trying to keep up with a significantly more experienced rider."

These inquests are fact finding, unbiased examinations of specific fatalities. They could provide an in-depth cost effective analysis of motorcycle fatalities, allowing a better understanding of why these fatalities occur.

## 2. Methodology

Two approaches were used in the study. The first was a quantitative survey of motorcyclists in Northern Ireland, Southern Ireland and Great Britain (England, Scotland and Wales). Part of the reason for gathering data from these three areas was for comparative purposes to determine whether there is any evidence of differences in the results (or not) specifically regarding the response about crashes compared to near misses.

22.6% (n.58/257) from all three countries replied that they had crashed their motorcycles over the previous 24 months. 15.3% (n.13/85) of the respondents in Great Britain (GB) replied that they had crashed; 20.7% (n.17/82) in Northern Ireland; 31.1% (n.28/90) in the Rep. Of Ireland (*Pearson's Chi square .040; Cramer's V .039*).

Whereas 78.2% (n.201/257) from all three countries answered that they had experienced a near miss accident over the previous 12 months. Of these, 77.6% (n.66/85) of the respondents in G.B. replied that they had experienced a near miss; 85.4% (n.70/82) in Northern Ireland; 72.2% (n.65/90) in the Rep. Of Ireland (*Pearson's Chi square .112; Cramer's V .112*).

According to the Hurt report: main findings (1981) "The motorcycle riders involved in accidents are essentially without training; 92% were self-taught or learned from family or friends. Motorcycle rider training experience reduces accident involvement and is related to reduced injuries in the event of accidents". Therefore comparing the type or quality of training of motorcyclists (basic and advanced) with the responses about crashes may provide useful information. This discussion will be developed further on in the report.

The second approach was to conduct a focus group of three experienced advanced motorcycle trainers a road safety officer and two user group representatives. The focus group was conducted on the 27<sup>th</sup> September at Cavan in the Republic of Ireland. An interview was carried out separately on October 9<sup>th</sup> with the Northern Ireland Bikesafe Coordinator in Lisburn, Northern Ireland.

### 2.1 Survey

The questionnaire was developed using web based survey software, designed specifically for the internet (see annex one). The survey was divided into three sections. The first section requested information about the rider, including age, sex, location of residence, type of licence and testing/training. The second section asked questions about the motorcycle: category, type and make of motorcycle, mileage, years riding and seasons. Further questions were asked about brake or stability systems and whether the rider used GPS systems. The third section asked the respondent whether he/she had been involved in a collision either with another vehicle or a single vehicle crash, with or without injuries as well as whether the rider had had a "near miss accident".

The "near miss" questions gave a selection of 26 potential answers divided into four categories: skidding, loss of traction, loss of control and braking or swerving. A further question asked the respondent to comment on any other "near miss" experience

The analysis of the data from the survey was carried out using Chi Square analysis to test the significance of the relationship of the cross tabulated data and Cramer's V to test the strength of the relationships of the groups analysed. This method allows for a better understanding of thresholds and statistical analysis.

## 2.2 Focus Group<sup>15</sup>

Attending the focus group were

- Linda O’Loideion: Irish Motorcyclists Action Group, Road Safety Officer, Republic of Ireland
- Martin Reilly: Chief Regional Tester for RoSPA in the Republic of Ireland
- Marc O’Loideion: Irish Motorcyclists Action Group, Senior Training Officer, Republic of Ireland
- Trevor Baird: Write to Ride (previously General Secretary of the Motorcycle Action Group UK/Technical Officer Federation of European Motorcyclists Associations) Northern Ireland
- Noel Gibbons: County Mayo, Road Safety Officer, Republic of Ireland
- David McGuckin: Ballymena Rider Training, Instructor and IAM Observer, Northern Ireland
  
- Bill Holden: Bikesafe Coordinator, Northern Ireland (interviewed separately)

The topics for the focus group and interview were divided into five areas:

1. Comments on the findings of the survey
2. Training for motorcyclists and car drivers
3. Road infrastructure, design
4. Policy, regulation, legislation and enforcement
5. Advertising campaigns for safety and motorcycle manufacturer/magazine advertising

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<sup>15</sup> The transcriptions of the focus group and interview can be made available on request at [research@writetoride.co.uk](mailto:research@writetoride.co.uk)

### 3. Findings of Survey

Anecdotal evidence suggests that a motorcycle near miss is likely to occur in one of three ways:

- 1) Skidding or loss of traction or control due to the conditions of the road e.g. road debris or slippery surface;
- 2) Near loss of control of the motorcycle due to behavioural factors e.g. tiredness, going too fast for the conditions or even due to mechanical failure or a tyre puncture.
- 3) Swerving or heavy braking because the rider sees that a situation is developing fast and that he needs to take avoiding action e.g. another vehicle cutting across his/her path.

#### 3.1 Near Miss results

The total number of responses from motorcyclists for this survey was 257<sup>16</sup> divided into the countries of origin as follows:

**Table Five**

Northern Ireland	82	31.9%
Great Britain (England, Scotland and Wales)	85	33.1%
Republic Of Ireland	90	35%
<b>Total</b>	<b>257</b>	<b>100.0%</b>

##### 3.1.1 Profile of riders and their motorcycles

The majority of the respondents were male (86%) and the average age was 40 years, while the majority of riders answering the survey were aged between 31 and 50 (n.55/84 for GB; n.50/82 for Northern Ireland and n.64/90 for Southern Ireland), Northern Ireland had the highest proportion of riders aged between 17 and 30 (n.24) and GB had the highest proportion of riders between 51 and 70+ (n.21). (see annex five for breakdown of data by country).

99.6% of the respondents replied that they held a licence, of which 93.4% (n.240) held a full licence, 3.1% (n.8) were learners and 2.7% (n.7) held a restricted licence.

40.5% (n.100) replied that they had ridden their motorcycle without a break for less than 5 years, 29.6% (n.73) between 5 and 10 years compared to 34.4% (n.86) who had held their licence for less than 5 years and 19.6% (n.49) between 5 and 10 years.

**Table Six:**

Years riding without a break	Number	Percent	Years licence held	Number	Percent
1-2 yrs	53	21.5	1-2 yrs	51	20.4
3-4 yrs	47	19	3-4 yrs	35	14
5-7 yrs	42	17	5-7 yrs	30	12
8-10 yrs	31	12.6	8-10 yrs	19	7.6
11-15 yrs	20	8.1	11-15 yrs	20	8
16-20 yrs	14	5.7	16-20 yrs	20	8
21-30 yrs	18	7.3	21-30 yrs	33	13.2
>30 yrs	22	8.9	>30 yrs	42	16.8
Total	247	100	Total	250	100
No answer	10		No answer	7	

N.B. Several riders indicated that they had been riding prior to gaining a full licence (which would have included the period either as a learner and/or on a restricted licence).

<sup>16</sup> 3 responses were discounted: one because of the lack of information and two because the respondents were from France and Canada.



99.2% (n.255) of the respondents replied that they rode a motorcycle (one rode a moped and one rode a scooter). The following table highlights the category of motorcycles ridden by the respondents, which is representative of the motorcycle parc in the countries analysed i.e. the proportion of sports/supersports and naked/street bikes in circulation dominate the motorcycle markets in all three countries. These are compared to the number of respondents who answered that they had experienced a near miss over the last 12 months. In total 201 replied that they had experienced a near miss which is proportionately representative of the category of motorcycles listed in table seven. Section three provides more details of the type of near miss experiences.

**Table Seven: Category of motorcycle**

Category	Number	%	Near Miss (last 12 mths)	%
No Answer	6	2.3	4	2.0
Adventure/Touring	32	12.5	23	11.4
Chopper	1	0.4	1	0.5
Classic	6	2.3	2	1.0
Cruiser	21	8.2	18	9.0
Enduro	5	1.9	2	1.0
Naked/Street bike	55	21.4	46	22.9
Sport	55	21.4	42	20.9
Super Moto	1	0.4	0	0
Super Sport	29	11.3	26	12.9
Tourer	34	13.2	27	13.4
Trail/off road	1	0.4	1	0.5
Other	11	4.3	9	4.5
<b>Total</b>	<b>257</b>	<b>100</b>	<b>201</b>	<b>100</b>

The average age of the motorcycles was seven and a half years and the breakdown for all three countries was consistent, for example the proportion of motorcycles aged between one to 4 years was GB: 35.8% (n.29); Northern Ireland: 32.5% (n.26) and the Republic of Ireland: 36% (n.31) (see annex five for breakdown by country).

**Table Eight: Age of Motorcycle<sup>17</sup>**

	Number	Percent
1-2 yrs	43	17.4
3-4 yrs	43	17.4
5-7 yrs	62	25.1
8-10 yrs	50	20.2
11-15 yrs	27	10.9
16-20 yrs	9	3.6
21-30 yrs	5	2
>30 yrs	8	3.2
<b>Total</b>	<b>247</b>	<b>100</b>
No answer	10	

<sup>17</sup> Automatic Headlights On (AHO) or hardwiring of headlights for motorcycles in Europe was applied by all manufacturers in June, 2003, thus of the 247 that answered the question about the age of their motorcycles, 50.2% had motorcycles aged 6 years and under – which means that these motorcycles are considered to be hard wired i.e. in terms of collisions, this (headlights on) suggests that the motorcyclist should be visible to other road users.

From the responses, 27.5% (n.70) declared an annual mileage between 1 to 4,000 miles while 49.6% (n.126) declared that they had an annual mileage of between 4,001 and 10,000 and 22.9% (n.58) over 10,000.

**Table Nine: Annual Mileage**

	Number	Percent
1-1000	13	5.1
1001 to 4000	57	22.4
4001 to 6000	67	26.4
6001 to 10000	59	23.2
10001 to 15000	36	14.2
15001 to 25000	18	7.1
More than 25000	4	1.6
<b>Total</b>	<b>254</b>	<b>100</b>
No answer	3	

82.9% (n.213) of the respondents rode motorcycles with engine sizes between 401cc and 1200cc, only 3.5% (n.9) rode motorcycles (including mopeds and scooters) with engine sizes between 50 to 125cc and 3.9% (n.10) between 126cc and 400cc.

**Table Ten: Engine sizes of motorcycles**

Engine size	Number	Percent
No answer	2	0.8
50cc and below	1	0.4
51cc to 125cc	8	3.1
126cc to 400cc	10	3.9
401cc to 700cc	85	33.1
701cc to 1000cc	75	29.2
1001cc to 1200cc	53	20.6
1201cc to 1500cc	17	6.6
More than 1500cc	6	2.3
<b>Total</b>	<b>257</b>	<b>100</b>

The respondents were asked why they used their motorcycle and were given eight options (including sport and other). The *first* choice of the respondents indicates that 45.1% (n.116) used their motorcycle for personal leisure and 38.9% (n.100) used their motorcycles to commute to and from work.

**Table Eleven: Reason for using motorcycle: first choice**

	Number	Percent
No Answer	3	1.2
Personal Leisure	116	45.1
Commuting (between work and home)	100	38.9
Social (member of a club or group of friends)	17	6.6
Long distance travel	10	3.9
Professional (e.g. police, courier)	7	2.7
Work (Use during working hours)	4	1.6
<b>Total</b>	<b>257</b>	<b>100.0</b>

Using a Leichardt scale of 1 to 5 equal to never (1) rarely (2), sometimes (3), often (4) always (5), the respondents were asked how frequently they rode their motorcycles during the year.

**Table Twelve: Seasons**

	Spring	Summer	Autumn	Winter
1 (Never)	3 1.2%	4 1.6%	2 .8%	16 6.2%
2 (Rarely)	4 1.6%	1 .4%	6 2.3%	26 10.1%
3 (Sometimes)	24 9.3%	5 1.9%	24 9.3%	51 19.8%
4 (Often)	45 17.5%	19 7.4%	55 21.4%	38 14.8%
5 (Always)	181 70.4%	228 88.7%	169 65.8%	123 47.9%
No Answer			1 .4%	3 1.2%
Total	257 100.0	257 100.0	257 100.0	257 100.0

88.7% (n.228) always rode their motorcycles in Summer; 70.4% (n.181) in Spring; 65.8% (n.169) in Autumn and 47.9% (n.123) in Winter. The high proportion of winter riders supports the response regarding usage of their motorcycles – i.e. for commuting to and from work (38.9%).

The respondents were also asked the type of electronic equipment they used, either for the purpose of information such as Global Positioning systems (GPS) or whether their motorcycles were equipped with advanced systems such as ABS (braking systems) or ASC (Automatic Stability control). The purpose of these questions was not to infer that there is a linkage between the devices and crashes or near misses, also, there were not sufficient data to validate any such correlation. In the event, 27.2% (n.70) replied that they used GPS; 20.2% (n.52) used an ABS braking system and 3.5% (n.9) used an ASC system.

The profile of the typical riders who answered this survey suggests that they have had basic training, are experienced and ride most of the year.

### 3.1.2 Training and testing

89.5% (n.230) of the respondents replied that they had passed a practical test and 56.8% (n.146) replied that they had passed a theory test (see annex five for breakdown by country).

Overall, 23.7% (n.61/249) respondents replied that they had taken part in an advanced training course, GB: n.19, Northern Ireland: n.10 and the Republic of Ireland: n.32, while 38.9% (n.100/251) replied that they had taken part in an assessment course (e.g. Bikesafe). GB: n.29, Northern Ireland: n.37 and the Republic of Ireland: n.34.

There were two questions asked regarding crashes either with or without injuries (over a 24 month period) which were compared to participation in assessments or advanced training.

### 3.1.3. Crashes (with or without injuries)

The following data indicate that either method of voluntary advanced improvement has a similar outcome in terms of responses from the survey: of those who were asked if they had crashed (with no injury) 20% (n.20) of those who participated in an assessment replied that they had, compared to 19.7% (n.12) who had done an advanced training course; of those who were asked if they had crashed (with an injury) 15% (n.15) of those who participated in an assessment replied that they had crashed, compared to 16.4% (n.10) who had done an advanced training course.

**Table Thirteen: Crashes in last 24 months**

Assessment	Crash No Injury			Advanced Training	Crash no injury		
	Yes	No	Total		Yes	No	Total
Yes	20	80	100	Yes	12	49	61
	20.0%	80.0%	100.0%		19.7%	80.3%	100.0%
No	37	114	151	No	45	143	188
	24.5%	75.5%	100.0%		23.9%	76.1%	100.0%
Total	57	194	251	Total	57	192	249
	22.7%	77.3%	100.0%		22.9%	77.1%	100.0%

Assessment	Crash with injury			Advanced training	Crash with injury		
	Yes	No	Total		Yes	No	Total
Yes	15	85	100	Yes	10	51	61
	15.0%	85.0%	100.0%		16.4%	83.6%	100.0%
No	23	128	151	No	28	160	188
	15.2%	84.8%	100.0%		14.9%	85.1%	100.0%
Total	38	213	251	Total	38	211	249
	15.1%	84.9%	100.0%		15.3%	84.7%	100.0%

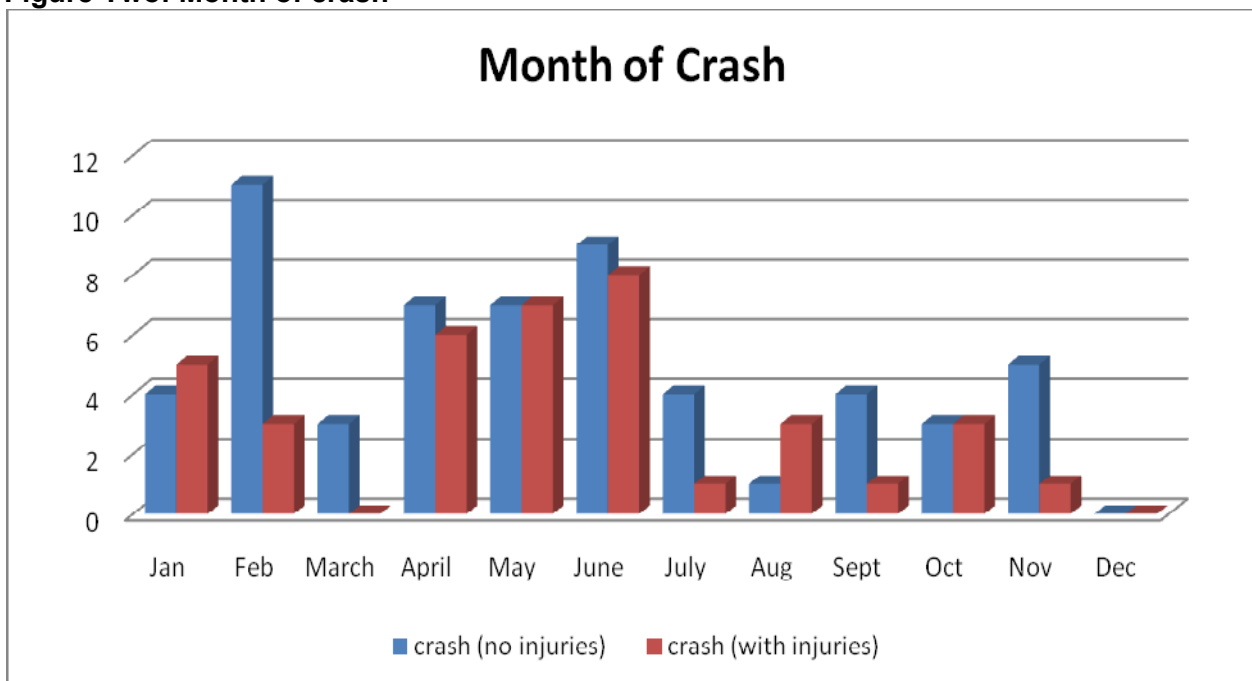
22.6% (n.58) of the respondents (including those that had not participated in advanced training or assessment), replied that they had crashed (with no injury) over the previous 24 month period; of those who replied (n.51 in total), 49% (n.25) had experienced a single vehicle crash and 51% (n.26) had experienced a crash with another vehicle (six did not answer).

However, of the 38 who replied that they had crashed with an injury, 62.9% (n.22) replied that they had experienced a crash with another vehicle compared to 37.1% (n.13) who had experienced a single vehicle crash (4 did not answer).

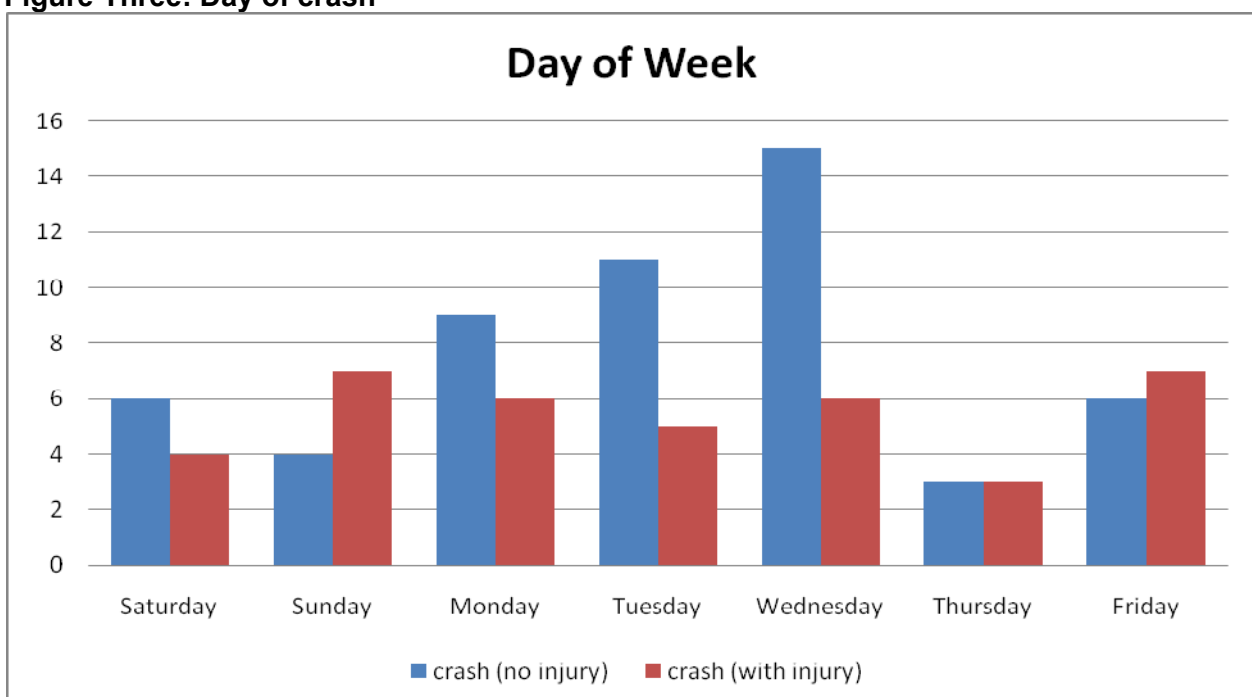
The responses highlighted that 82.1% (n.32) had received slight injuries and 15.4% (n.6) had received serious injuries (one person did not answer).

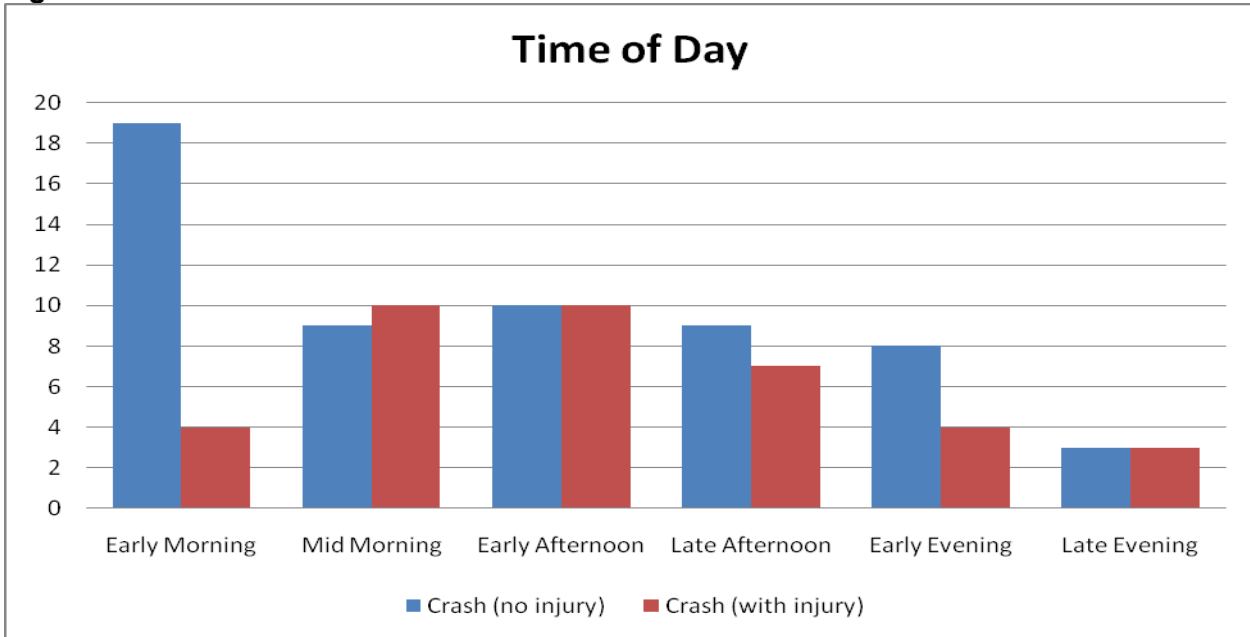
The respondents were also asked when the crash had occurred and the following three figures highlight the month, day and time of day relating to the type of crash (with or without injury). The difference between these types of crashes can be seen in all three figures: of those who had crashed with no injuries, there was a higher proportion in the month of February, on a Wednesday and in the early morning compared to those that had crashed and received injuries. These findings refer to responses from the three countries analysed, however, the responses from Southern Ireland made up the majority of these results (Month Feb: 7/11; Day Wednesday 8/15; Early morning 11/19).

**Figure Two: Month of crash**



**Figure Three: Day of crash**



**Figure Four: Time of crash**

## 3.2 Near Miss Accidents

As the main purpose of this survey was to enquire about near miss accidents (or crashes) inevitably, the majority of riders replying to the survey had experienced a near miss accident in fact 78.2% (201) answered this question affirmatively. The respondents were asked to report near miss accidents over the previous twelve months<sup>18</sup> and were given a total of 27 options which were divided into four sets of questions plus one open question – allowing the rider to comment.

- The first set of questions asked whether the motorcycle had skid due to road conditions
- The second asked whether the motorcyclist had lost his/her grip of the motorcycle due to external factors such as flying objects, other vehicles, but also due to physical and mental conditions and the condition of the motorcycle.
- The third set asked the motorcyclist whether he/she had almost lost control at specific places such as curves or exits and due to certain road conditions (i.e. banding or unsurfaced).
- The fourth set asked whether the motorcyclist had to brake and/or swerve because another vehicle or pedestrian had entered their space (i.e. cut in front or overtaking).
- Finally the respondents were given free rein to write their own comments about any near miss experience that had occurred to them.

### 3.2.1 Reasons for near miss accidents

75 riders indicated that their motorcycle skidded and of these 34.7% (n.26) indicated that this was due to “to slippery or loose road surface (e.g. paint or worn asphalt), loose gravel” while 28% (n.21) indicated that this was “due to oil spillage on the road”

**Table Fourteen: Near miss due to skidding**

Skid	Number	Percent
due to mud, wet leaves, animal manure	10	13.3
due to oil spillage on the road	21	28
due to road furniture (e.g. man hole/inspection cover)	11	14.7
<b>due to slippery or loose road surface (e.g. paint or worn asphalt), loose gravel</b>	<b>26</b>	<b>34.7</b>
due to water or ice	7	9.3
<b>Total responses</b>	<b>75</b>	<b>100</b>

53 riders replied that they had lost the grip of their motorcycle and 45.3% (n.24) of these stated that this was due to potholes or grooves in the road; in equal measure 17% (n.9) commented that their loss of grip was due to lack of focus and travelling too fast for the conditions.

**Table Fifteen: Near miss due to Loss of Grip**

Loss of Grip	Number	Percent
due to flying objects (e.g. insects, bird, paper)	1	1.9
due to mechanical failure	1	1.9
<b>due to potholes or grooves in the road</b>	<b>24</b>	<b>45.3</b>
due to shunting (vehicle from behind braking suddenly)	5	9.4
due to tiredness or inattention (lack of focus)	9	17
due to travelling too fast for the conditions	9	17
due to tyre puncture	4	7.5
<b>Total responses</b>	<b>53</b>	<b>100</b>

<sup>18</sup> N.B. 63% (n.195/201) of the respondents who replied to the month of the near miss, reported recent events (in April, May, June and July of 2009), 9.2% (n.18) did not remember and 6 did not answer the question.

Equally n.195 replied to the day of the near miss and 20.5% (n.40) did not remember while 17.4% (n.34) indicated that the event happened on a Sunday; 12.8% (n.25) on Saturday; 11.3% (n.22) on Friday; 12.8% (n.25) on Thursday; 9.7% (n.19) on Wednesday; 8.7% (n.17) on Tuesday and 6.7% (n.13) on Monday; 20.5% (n.40) did not remember.

Of the n.195 respondents, 26.2% (n.51) indicated that the event took place in the early afternoon; 19% (n.37) in the late afternoon 17.9% in the early evening; 14.4% (n.28) in the early morning; 12.3% (n.24) in mid morning; 3.6% (n.7) late evening; 0.5% (n.1) during the night and 6.2% (n.12) did not remember.

56 riders replied that they had nearly lost control of their motorcycle and of these, 32.1% (n.18) stated that this was due to road markings or over-banding), a further 30.4% (n.17) indicated that this occurred at a curve and a further 26.8% (n.15) indicated that this occurred at a junction.

**Table Sixteen: Near miss due to Near Loss of Control**

Near Loss of Control	Number	Percent
at a curve	17	30.4
at a junction	15	26.8
<b>due to road markings or over-banding (joint of repaired tarmac)</b>	<b>18</b>	<b>32.1</b>
exiting private property (e.g. house, petrol station, supermarket)	4	7.1
on an un-surfaced road	2	3.6
<b>Total responses</b>	<b>56</b>	<b>100</b>

165 of the 201 (82.1%) riders that replied to these questions answered that they had to either swerve and/or brake because of another vehicle or pedestrian entering into their space. In fact 40.6% (n.67) answered that they had to swerve and/or brake because another vehicle had entered their path from either a side road, private driveway or opposite direction. This was followed by 15.2% (n.25) who stated that the other vehicle had changed lanes on the motorway in front of them and 13.9% (n.23) indicated that the other vehicle had crossed over into the rider's lane and was coming towards them.

**Table Seventeen: Near miss due to Swerve or Brake**

Swerve or brake due to Other Vehicle or pedestrian	Number	Percent
changing lane on the motorway in front of you	25	15.2
coming towards you in your lane	23	13.9
cutting you off at a junction	20	12.1
cutting you off while performing a U turn	7	4.2
cyclist riding into your path	2	1.2
exiting from motorway, cutting in front of you	6	3.6
overtaking from behind	7	4.2
pedestrian(s) walking into your path	8	4.8
<b>turning into your path from a side road, private driveway or opposite direction</b>	<b>67</b>	<b>40.6</b>
<b>Total responses</b>	<b>165</b>	<b>100</b>

N.B. Several respondents answered two or more of the four options, indicating that they had experienced more than one "near miss".

To summarise, according to the respondents of the survey there were predominantly two main factors that caused near miss accidents.

The first factor was due to interaction with other vehicles whereby the driver of the other vehicle had entered the rider's space causing him/her to react by braking and or swerving (40.6%).

The second factor was due to the conditions of the road. In fact in tables fourteen, fifteen and sixteen, road conditions were the predominant factor:

Table 14: 45.3% (slippery or loose road surface or loose gravel);

Table 15: 34.7% (potholes and grooves);

Table 16: 32.1% (road markings or over-banding)

### 3.2.2 Other comments from Near Miss survey respondents

As mentioned previously, the respondents were asked to describe in their own words any other near miss experience. Of the 201 riders who replied that they had a near miss accident, 36.3% (n.73) answered this question. However, in five of the responses, the riders indicated that there was more



than one cause of their near miss experiences) therefore the total of the responses are n.78. The breakdown of these responses is as follows:

- 61.5% (n.48) considered the other vehicle (mainly car) as the cause of the near miss
- 9% (n.7) considered the near miss to be their own fault
- 7.7% (n.6) considered the conditions of the road as the cause of the near miss
- 3.8% (n.3) considered animals on the road as the cause of the near miss
- 3.8% (n.3) considered a pedestrian as the cause of the near miss
- 2.6% (n.2) considered another motorcycle(s) as the cause of the near miss
- 1.3% (n.1) considered a bicycle as the cause of the near miss
- 10.3% (n.8) gave "other" reasons or comments.

(See Annex 6.4 for details of each response).

The responses to this question supports the replies to previous questions by highlighting that the majority experienced a near miss due to the actions of other vehicles and due to road conditions, however 7.7% of the respondents also accepted that their own actions were the cause of the near miss. These (actions of other road users, road conditions and own fault) are not necessarily mutually exclusive, in that there is an opportunity to understand more fully what action could be taken preventatively to avoid or evade potential collisions and even crashes.

### 3.3 Focus Group

The focus group and the Bikesafe Coordinator Northern Ireland (interviewed separately) were given five topics to discuss. 1) Findings of the survey; 2) Training; 3) Road infrastructure, design; 4) Policy, regulation, legislation and enforcement; 4) Advertising campaigns.

#### 3.3.1 Comments on the findings of the survey

All agreed that the findings from the survey regarding near miss accidents were a reflection of what they all would have expect to see. Specific comments were made about road maintenance and collisions with other vehicles.

In particular inadequate repairs and road maintenance in general was considered to be an important factor for motorcycles. Over-banding was considered a cause of crashes due to loss of control. Comments were made about sub contractors not adhering to road maintenance regulations when repairing roads in Southern and Northern Ireland. Another comment referred to the IHIE guidelines in Great Britain for road engineers, but queried whether these guidelines were actually followed by contractors. Other factors including stone chippings (loose gravel) and slippery road surfaces due to paint on the road, were all considered a problem for motorcyclists and the cause of skidding and loss of grip.

*"As the result of a very serious coach accident in Kentstown (Rep. Of Ireland) where five young girls were killed two years ago, there is a huge emphasis on the whole area of risk assessments. There was an EU Directive on the width of road banding and a big emphasis on that now".*

*"The regulations are all there (U.K.), so like the overband where I came off, it was illegal, but it's all down to the contractor and again unfortunately, if anybody could be bothered to point it out – it's a bit like a pothole – then somebody acts on it".*

The response from the survey indicated that there was a large proportion of other road users entering the space of motorcyclists, coming from side roads and junctions causing them to brake and/or swerve. Four of the group identified a lack of appropriate training as the most important cause of crashes with other vehicles. Specific reference was made about inadequate training for car drivers to be aware of vulnerable road users i.e. motorcyclists and to look for them in order to identify and see them before manoeuvring. There were differing opinions about the actions of motorcyclists in a collision situation

and inappropriate speed for the conditions was mentioned, another comment identified a general lack of consideration of all road users for the rules of the road.

*“... it's not so much that we are invisible, it's just that people don't register the bike. They are looking for a car. I taught people whose main job is to drive articulated lorries that say that people have driven out and crashed into them and said that they didn't see them”.*

*“...what can be misleading is to look at a single causation factor, again there are usually other circumstances and actions by other road users that have a bearing on what happened”.*

*“The rules of the road are just like the rules of football. If you don't play by the same rules as the other person on the field, it's anarchy, but it's not the place for anarchy. So if everybody played by the rules, it would make life less stressful and the net result would be a safer environment”.*

### **3.3.2 Training for motorcyclists and car drivers**

The view of the participants was that there is a systemic failure on the part of the authorities in all three countries to provide adequate training and relevant testing for motorcyclists and car drivers. The respondents all identified specific inadequacies in the training and testing programmes for motorcyclists and car drivers as a major cause of casualties on the roads. The 2<sup>nd</sup> European Driving Licence Directive was discussed in detail and the differences in the interpretation of this directive between Southern Ireland and the UK in general were highlighted.

*“The 2DLD has been I think, fairly uniquely interpreted in the Republic so that it is not a “brake and swerve” but it is a brake test and at a later stage, an overtaking manoeuvre using the examiner's car. There is no off road section to the test at all and the slalom course has totally gone out. So even though the RSA did get EU approval for doing this, it's not brake and swerve, because the two elements are not tied together. So they are obeying the letters but not the spirit of the 2DLD”.*

*“The thing about the new bike test that has come into the north is the dramatic difference between countries. I didn't know the way it was down here, it's crazy, but in France it's completely different, in Germany, Sweden. Not all countries use speed measuring equipment and as Trevor said, the UK are gold-plating it. They tell us they have to do it because Europe tells them they have to do it and then most of Europe don't do it, except the UK. So technically we are not allowed to train people on these manoeuvres on the public road, which of course, we all do, because the difference between 30 mph and 31.8 mph (50 kph) is nothing”.*

*“One of the wry comments made by a police officer who was a trainer as well – at the demonstrations (for the introduction of the 2<sup>nd</sup> EU Directive in Northern Ireland) where we were having a go at it and we had to go around cones and all the off-road manoeuvres. He said, “that's a great test, it will certainly cut down on all the deaths of bikers riding around cones in the town”. It's absolutely irrelevant; the speed that you have to do to avoid a planned obstacle and the difference of what happens on the real road is dramatic”.*

*“In reality motorcyclists and car drivers need a system in place to fully prepare them to ride or drive on all types of today's roads in different conditions. The system that we have in place at present does not do that. Over the last 3 years 70% of collisions and just over 70% of road users' fatalities and serious injuries have happened in a rural environment. In stark contrast 70% – 80% of instruction, guidance and testing are carried out within an urban environment. The current scheme is not reflective of the types of driving that drivers and riders are engaged in post test.”*

*“I know that there is no CBT in Northern Ireland, but there needs to be a form of CBT here. There should be a scheme, a mandatory scheme in place to ensure that riders are not allowed out on the road without some form of accredited training. “*

Advanced training and assessments were also discussed. Although advanced training provides the necessary skills to understand hazard awareness and how to read the road, not many people do it, partly due to the cost, but also because there appears to be little interest. Assessments such as Bikesafe have become more popular throughout the UK and the Republic of Ireland.

*“..people don’t want to pay for advanced training on bikes or cars. It would be a very small percentage that do, I think that the sort of people that take the time to answer a questionnaire, are the people who care that bit more, so there would be a slightly higher percentage of respondents that would have been interested enough to take advanced training”.*

*“What we are doing is trying to increase the number of Bikesafe candidates that move across to advanced training. It’s probably one of the weaknesses that Bikesafe has had over the last number of years. There aren’t enough riders taking post test training either through the IAM or qualified trainers like David, and that has probably been down to the IAM not having enough observers to take people on”.*

*“...if you take the actual numbers of people who are doing advanced training as compared to the number of registered bikes out there, it is very, very small. The whole industry of trainers – the bike industry – are always struggling over this – how do we get people to do it. We even offered free training and people still won’t do it. One of the biggest problems I’ve had with my advanced training in the last seven or so years, my advanced training has gone to almost zero and I am a ROSPA diploma holder, the first in Ireland, I believe. I am an IAM senior observer for the Ballymena area, so I do it voluntarily as well as being paid – and we still can’t get people to do it”.*

*“You talk about voluntary rider training and paid rider training.... My feeling is that the people that turn up and the people that take rider training are likely to fill in questionnaires – so we’re preaching to the choir. They already have some element in their head that says this is a good idea. But it is the minority that feel that way and we are still not getting through to the majority on any level.”*

### **3.3.3 Road infrastructure, design**

The majority found that road infrastructure has an impact on motorcycle casualties and identified certain aspects of road infrastructure and design such as the camber on the road, crash barriers, the placement of signage at roundabouts and junctions, and also road paint creating slippery surfaces. The lack of coordination between the various government agencies and road authorities as well as insufficient budgets, were highlighted as contributors to poor road maintenance management. The importance of the responsibility of riders for their own safety was emphasised.

*“...we mustn’t forget that the overall primary responsibility of any motorist, whether it be a cyclist or motorcyclist, is their own responsibility for what they can see and what they can’t see and what they are going to or not, to react to.”*

*“The thing about the roads and actual infrastructure, - you were saying that people should be able to ride the roads, we should be teaching them how to ride the roads that we have. ...we’ve got to ride what we’ve got, drive what we’ve got. I agree with the fact that it’s skill more than road improvement, because it’s just bringing everybody down to that basic level of skill, where you don’t have to think anymore and if you are not thinking, something is going wrong”.*

### **3.3.4 Policy, regulations, legislation and enforcement**

Most felt that policies on road safety tend to concentrate on car drivers more than motorcyclists, pedestrians and cyclists and the group held the view that all road users need to be considered in any road strategy or road safety policy. The consensus of the group was that the type of enforcement used by the police needed to consider all situations and to use discretion, however some felt that changes in

policies and regulations as well as lack of funding for traffic police has meant that enforcement is now used to raise money through cameras and targets of tickets.

*“Legislation and enforcement - while there are people in an office, whether it’s in Europe or in a local county council, paid an annual salary, they will look at things to come up with more legislation, because that bit of legislation is done and they need to look at what to do next week. It’s a bit like health and safety, once that they have made everything as safe as they can, they think, how can I bring out more rules to justify my job”.*

*“... as far as enforcing those rules, I think everywhere, throughout Europe it is getting to be a problem that it is an awful lot about money, and they can’t afford to enforce it and..., on one side you don’t get so much the bike cops on the road stopping you, telling you off, telling you what you should be doing, because we can’t afford to have them out on the road anymore”.*

*“Being police, our main rule is enforcement, that’s why we’re here. Obviously, engineering and education play a key part in what we are doing. Enforcement only comes into play when Education and Engineering solutions have failed, or road users have failed to comply with them. Alternatively they have not taken on board the education or not taken heed of any of the engineering issues on a particular route...”* “So while the education package is there, it will only work, along with the enforcement or targeted enforcement of the particular offences that motorcyclists are committing, when it puts them into conflict with other road users and puts their own lives at risk.”

*“If the police officer feels that the best way of dealing with a particular offender is by issuing a fixed penalty ticket, or, for a more serious offence, taking the driver or rider to court for those offences, that’s the way it happens. In any case or in whatever set of circumstances it’s for the police officer to decide – “right, you’ve made a mistake”, I’m going to talk to you about it and give you a bit of advice and a warning or deal with it in another way.”*

### **3.3.5 Advertising campaigns for safety and motorcycle manufacturer/magazine advertising**

Two aspects of advertising were considered: road safety advertising campaigns and the influence that advertising by motorcycle manufacturers and motorcycle magazines have on attitude and behaviour.

The group was divided in their opinions about the success of hard hitting videos and advertisements shown on television. Some felt that the immediate effect was that viewers changed channels and that this form of advertising is not successful in reaching out to the targeted audience and that advertising of that nature needed to have a message that is factual, relevant and educational. The others felt that although the effect of the video might encourage people to switch off, the message still remains in their minds.

*“From the point of view of bikers sitting down looking at the ad in their sitting room or in the pub or where ever they happen to be, again it’s going to be down to them to take out of it what they need which is contained in the ad. If they want to change channels and just ignore it, again, it’s down to their own individual responsibility. They are responsible for their own actions”.*

*“But the powers that be don’t listen that much to us. In terms of road safety, we want to be pulling people in, not pushing them away, not we, but the authorities that make these campaigns, they push people away by alienating them...”.*

*“The PSNI did a road show around schools a few years back it was basically like a play based on a TV ad and they had all the school kids in and a guy came on at the end who was a paraplegic on a wheel chair and was hoisted up at the end a bit like Star Wars or Star Trek and he gave a what happened to him talk and why it shouldn’t have happened. The police officer at the time told me that “oh yes, yesterday they had it and three people fainted and they had to take them out. So was that actually working or was it scaring people away? Is that education?”*

*"I know particularly talking to young drivers, that whenever some of the Young Driver adverts come on the TV, they switch it off change channels when they hear the music. But again there are two ways of looking at that. A person could say it's not working because they switch it off, but the second thing is that they have identified the advert by the music and that has triggered something in their mind, but whether it has a long term effect or they do anything about it is another thing."*

All participants indicated that the advertising of performance motorcycles by manufacturers and magazines had a negative effect on rider attitude and behaviour and that this influence was an underlying cause of motorcycle crashes.

*"I think it has a massive, massive influence on rider attitude. For example at the NEC Bike Show (annual motorcycle show in Birmingham), where are the crowds of people standing? They are at the stands that have DVDs or videos showing bikers doing burn outs, donuts and wheelies on the public road. One example I saw featured a Swedish guy 'Ghost Rider'– who taunts the police and then runs off. Some people may argue that it is only entertainment, maybe in a Sports arena or secure area, but not on the public road."*

*"The loud music and the images of people doing things like that on motorbikes, I know that they probably can't do that themselves, but it won't stop them trying. They stand there in hundreds. It does attract people. In my mind, it has a very negative impact on road safety. I know for a fact that the motorcycling press have been brought to task a couple of times on some of the features that they have carried, and the way in which they show and test particular bikes in some of the features that they do."*

*"Ads in magazines... they are sexy because they are trying to sell bikes, that's it, we won't get them out of their mind set. They're not going to sell the R1 Yamaha because it does 100 miles to the gallon and stuff like that. I don't know what we can do with that because they are targeting the young and the person that reads that magazine. Although that the excuse the magazines give – that's what our readers want and that's why we are selling them. Not just the ads but the whole reporting about motorcycles and road tests and stuff like that. So there is a problem with ads and where they are placed and the young who is that person that we can't reach with road safety education".*

*"...Millions of pounds are spent on race bikes. There is more money spent on formula one racing and everybody watches that, but if people could afford a Ferrari as easy as they can afford an R1, then there would be an awful lot more sports cars on the road and there would be an awful lot more deaths on the road for cars and it wouldn't be so obvious the difference between bikes and cars. It's the fact that people can afford these and the born again bikers, they go out and get their new bikes with extra power and higher CCs so yes it's a 1300 but so is my son's car and my car is a 2 litre, but the difference in the amount of torque and power in the bike, they just have no idea. But because they see it all the time, they want that lifestyle, they want to be like their friends and heroes".*

## 4. Summary and Conclusions

Motorcycle accident causation has until now focused on post crash analysis and only recently researchers have commenced making enquiries into pre-crash experiences. This survey has aimed to analyse the major reasons for near miss accidents and has focused on skidding, loss of grip, loss of control and braking and swerving as a direct result of experiences due to road conditions or due to other vehicles entering the space of the motorcyclist.

Inevitably, the responses from the survey indicate that the riders reacted to situations which according to them, was mainly due to circumstances beyond their control. The objective of the focus group was on the other hand, to look behind these experiences to consider the underlying reasons for these incidents and ways in which to overcome or recognise them in order to reduce or prevent further incidents.

### 4.1 Survey

The average respondent to the survey was male, aged 40, who had completed a course of basic training and had ridden a motorcycle without a break for 10 years; between 4,000 to 6,000 miles per year. The respondents indicated that 45.1% used their motorcycle for personal leisure and 38.9% to commute to and from work.

The respondents were asked whether they had experienced accidents (or crashes) either with or without injuries over the previous 24 months. Overall, 22.6% (n.58) of all respondents, replied that they had crashed (with no injury); of those who replied (n.51 in total), 49% (n.25) had experienced a single vehicle crash and 51% (n.26) had experienced a crash with another vehicle (six did not answer).

However, of the 38 who replied that they had crashed with an injury, 62.9% (n.22) replied that they had experienced a crash with another vehicle compared to 37.1% (n.13) who had experienced a single vehicle crash (4 did not answer).

23.7% (n.61/249) respondents replied that they had taken part in an advanced training course while 38.9% (n.100/251) replied that they had taken part in an assessment course (e.g. Bikesafe). Of these, both groups indicated that c.20% had crashed in the previous 24 months but had not sustained an injury, while 15-16% had sustained an injury.

The “near miss” questions gave a selection of 26 potential answers divided into four categories: skidding, loss of traction, loss of control and braking or swerving. A further question asked the respondent to comment on any other “near miss” experience

From the findings from this survey, 75 riders indicated that their motorcycle skidded and of these 34.7% (n.26) indicated that this was due to “to slippery or loose road surface (e.g. paint or worn asphalt), loose gravel” while 28% (n.21) indicated that this was “due to oil spillage on the road”

53 riders replied that they had lost the grip of their motorcycle and 45.3% (n.24) of these stated that this was due to potholes or grooves in the road; in equal measure 17% (n.9) commented that their loss of grip was due to lack of focus and travelling too fast for the conditions.

56 riders replied that they had nearly lost control of their motorcycle and of these, 32.1% (n.18) stated that this was due to road markings or over-banding), a further 30.4% (n.17) indicated that this occurred at a curve and a further 26.8% (n.15) indicated that this occurred at a junction.

165 of the 201 (82.1%) riders that replied to these questions answered that they had to either swerve and/or brake because of another vehicle or pedestrian entering into their space. In fact 40.6% (n.67) answered that they had to swerve and/or brake because another vehicle had entered their path from either a side road, private driveway or opposite direction. This was followed by 15.2% (n.25) who stated

that the other vehicle had changed lanes on the motorway in front of them and 13.9% (n.23) indicated that the other vehicle had crossed over into the rider's lane and was coming towards them.

The respondents were then asked to describe in their own words any other near miss experience. Of the 201 riders who replied that they had a near miss accident, 36.3% (n.73) answered this question<sup>19</sup>. The responses to this question supports the replies to previous questions by highlighting that the majority experienced a near miss due to the actions of other vehicles or due to road conditions, however 7.7% of the respondents also accepted that their own actions were the cause of the near miss.

## 4.2 Focus Group and Interview

All agreed that the findings from the survey regarding near miss accidents were a reflection of what they all would have expected to see. Specific comments were made about road maintenance and collisions with other vehicles. In particular inadequate repairs and road maintenance in general was considered to be an important factor for motorcycles. Over-banding was considered a cause of crashes due to loss of control. Comments were made about sub contractors not adhering to road maintenance regulations when repairing roads in Southern and Northern Ireland. Another comment referred to the IHIE guidelines in Great Britain for road engineers, but queried whether these guidelines were actually followed by contractors.

Other factors including stone chippings (loose gravel) and slippery road surfaces due to paint on the road, were all considered a problem for motorcyclists and the cause of skidding and loss of grip.

The view of the participants was that there is a systemic failure on the part of the authorities in all three countries to provide adequate training and relevant testing for motorcyclists and car drivers. They all identified specific inadequacies in the training and testing programmes for motorcyclists and car drivers as a major cause of casualties on the roads.

The 2<sup>nd</sup> European Driving Licence Directive was discussed in detail and the differences in the interpretation of this directive between Southern Ireland and the UK in general were highlighted.

The consensus was that advanced training was only taken up by a minority of people, partly due to cost, but also because it appears that advanced training is not recognised as being important by drivers and riders.

The majority found that road infrastructure has an impact on motorcycle casualties and identified certain aspects of road infrastructure and design such as the camber on the road, crash barriers, the placement of signage at roundabouts and junctions, and also road paint creating slippery surfaces. The lack of coordination between the various government agencies and road authorities as well as insufficient budgets, were highlighted as contributors to poor road maintenance management. The importance of the responsibility of riders for their own safety was emphasised.

Most felt that policies on road safety tend to concentrate on car drivers more than motorcyclists, pedestrians and cyclists (vulnerable road users) and the group held the view that all road users need to be considered in any road strategy or road safety policy.

The consensus of the group was that the type of enforcement used by the police needed to consider all situations and to use discretion, however some felt that changes in policies and regulations as well as lack of funding for traffic police has meant that enforcement is now used to raise money through cameras and targets of tickets.

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<sup>19</sup> However, in five of the responses, the riders indicated that there was more than one cause of their near miss experiences) therefore the total of the responses are n.78.

The group was divided in their opinions about the success of hard hitting videos and advertisements shown on television. Some felt that the immediate effect was that viewers changed channels and that this form of advertising is not successful in reaching out to the targeted audience and that advertising of that nature needed to have a message that is factual, relevant and educational. The others felt that although the effect of the video might encourage people to switch off, the message still remains in their minds.

All participants indicated that the advertising of performance motorcycles by manufacturers and magazines had a negative effect on rider attitude and behaviour and that this influence was an underlying cause of motorcycle crashes.

In conclusion, "near miss" reporting offers authorities, road safety organisations, and researchers the opportunity to develop clearer and more meaningful strategies to reduce road casualties, through further research and even by developing a system of self-reporting.

Any motorcycle strategy aimed at improving road usage in general and at reducing road casualties, needs to have an holistic approach and include all stakeholders, such as experienced motorcyclists and trainers, because they are on the front line and have the knowledge of why motorcycle crashes happen in the first place. These active and experienced individuals within the motorcycling community and beyond are able to provide expert advice to the government in order to find solutions to reduce the number of motorcycle casualties.

The concept of Stakeholder collaboration is perhaps one of the more positive messages from the European Union, but also a priority of the International Transport Forum/OECD Workshop on motorcycle safety held in Norway in 2008: "Cooperation - Working together to achieve common objectives".



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## 1. Annexes

### 6.1 Annex one

#### Near Miss Accident Survey for riders of motorcycles (and derivatives: mopeds and scooters)

A near miss accident is a situation where you believe you could have crashed and/or been injured (but were able to keep control of your motorcycle)

#### About Yourself

1	<b>Age</b> (please indicate years only)			
2	<b>Sex</b>	Male		Female
3	<b>Name of country where you reside</b> (Please indicate which region or county)			
4	<b>Postcode where you reside</b> (the purpose of this question is to identify the area where you reside, e.g. north, south, urban or rural etc)			
5	Do you have a motorcycle licence?	Yes		No
6	If yes, which type of licence do you have?	Learner	Restricted (e.g. only able to ride up to 125cc)	Full (able to ride all engine size motorcycles)
7	When you obtained your licence, did you have to have to pass a practical test?	Yes		No
8	When you obtained your licence, did you have to pass a theoretical test?	Yes		No
9	How long have you had your licence? (Please indicate number of years)			
10	How long have you ridden your motorcycle without interruption until now? (Please indicate number of years)			
11	Have you ever participated in a voluntary advanced motorcycle training course e.g. IAM or ROSPA?	Yes		No
12	Have you ever participated in a voluntary assessment course e.g. Bike-Safe?			
13	Do you drive a car?	Yes		No
14	Have you ever participated in a voluntary advanced car training course?	Yes		No

#### About your motorcycle

(If you have more than one motorcycle, please describe the one you use most frequently)

15	Type of motorcycle?	Moped (50cc)			Scooter			Motorcycle	
16	Category of Motorcycle?	Sport	Super sport	Tourer	Naked/ Street bike	Classic	Trail/ off road	Enduro	Cruiser
		Chopper		Super moto		Adventure/ Touring		Other	
17	Make?	Choose from drop down menu							
18	Engine Size?	50 cc and below	51 to 125cc	126 to 400cc	401 to 700cc	701 to 1000cc		More than 1000cc	
19	Age of	Years				Months			

	motorcycle? (please indicate age in years, or months if less than one year)								
20	How many Kilometres/miles do you ride per year?	Less than 1000	1000 to 3000	3001 to 5000	5001 to 7000	7001 to 10000	10001 to 15000	More than 15000	
21	Why do you use your motorcycle? (if more than one reason, please indicate)	Commuting (between work and home)	Work (Use during working hours)	Personal Leisure	Long distance travel	Sport	Social (member of a club or group of friends)	Professional (e.g. police, courier)	Other
22	In which seasons do you ride?				Never	rarely	Some times	Often	Always
		Summer							
		Spring							
		Winter							
23	Does your motorcycle have ABS or link brake systems?	Yes			No				
		Yes			No				
24	Does your motorcycle have a traction control system (automatic stability control)?	Yes			No				
25	Do you use a GPS system?	Yes			No				

#### About accidents (crashes)

26	Have you had an accident <b>that did not cause you an injury</b> while riding your motorcycle in the last 24 months?	Yes		No	
a)	Was it a single vehicle accident?	Yes		No	
b)	Was it a collision with another vehicle?	Yes		No	
c)	When did this happen? Choose from drop down menu	Year	Month	Week day/weekend	Day or night
27	Have you had an accident <b>which caused you an injury</b> while riding your motorcycle in the last 24 months?	Yes		No	
a)	Was it a single vehicle accident?	Yes		No	
b)	Was it a collision with another vehicle?	Yes		No	
c)	Was the injury/injuries serious or slight?	Serious		Slight	
d)	When did this happen? Choose from drop down menu	Year	Month	Week day/weekend	Day or night
28	Have you been in a situation where you have nearly had an accident (a near miss accident) in the last <b>12 months</b>	Yes		No	

If yes to question 28, please indicate which of the following near miss accidents you were involved in during THE LAST 12 MONTHS. i.e. between the beginning of May 2008 and end of April, 2009, due to the following circumstances:

**N.B. A near miss accident is a situation where you believe you could have crashed and/or been injured (but were able to keep control of your motorcycle).**

Please indicate to the best of your ability, the type of near miss accident that occurred.

Only choose ONE answer from the following questions - i.e. your most memorable incident.

- 1 (Skid),  
2 (Loss of traction or grip),  
3 (Near loss of control) and  
4 (Swerve or brake due to other vehicle or pedestrian)**

**DO NOT ANSWER MORE THAN ONE QUESTION**

If you have had **more than** one type of near miss, please give details in the question "**Any other type of near miss accident**"

29	Type of Near Miss Accident:	Month	Week day or weekend	Day or night
	<b>When did this type of near miss accident occur?</b> Choose Only one from drop down menu (if you do not recall the exact month, day or time, please indicate "don't remember")			
<b>A)</b>	<b>Skid</b>			
i)	due to oil spillage on the road			
ii)	due to mud, wet leaves, animal manure			
iii)	due to water or ice			
vi)	due to slippery or loose road surface (e.g. paint or worn asphalt), loose gravel			
v)	due to road furniture (e.g. man hole/inspection cover)			
<b>B)</b>	<b>Loss of traction or grip</b>			
i)	At a curve			
ii)	At a junction			
iii)	Exiting private property (e.g. house, petrol station, supermarket)			
iv)	On an un-surfaced road			
v)	Due to road markings or over-banding (joint of repaired tarmac)			
<b>C)</b>	<b>Near loss of control</b>			
i)	due to shunting (vehicle from behind braking suddenly)			
ii)	due to tyre puncture			
iii)	due to mechanical failure			
vi)	due to travelling too fast for the conditions			
v)	due to potholes or grooves in the road			
vi)	due to flying objects (e.g. insects, bird, paper)			
vii)	due to tiredness or inattention (lack of focus)			
<b>D)</b>	<b>Swerve or brake due to other vehicle (or pedestrian)</b>			
i)	overtaking from behind			
ii)	coming towards you in your lane			
iii)	exiting from motorway, cutting in front of you			
vi)	changing lane on the motorway in front of you			
v)	turning into your path from a side road, private driveway or opposite direction			
vi)	cutting you off at a junction			
vii)	cutting you off while performing a U turn			
viii)	Cyclist riding into your path			
viii)	Pedestrian(s) walking into your path			
<b>E)</b>	<b>Any other type of Near Miss experience - please indicate:</b>			

30	Any comments about this survey:
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## 6.2. Annex two

**In Great Britain**, Compulsory Basic Training (CBT) was introduced on 1 December 1990 for all new provisional licence holders of both mopeds and motorcycles. All learner riders are required to complete CBT before riding on the road (with the exception of riders who have passed a full moped test since December 1990). Full car licence holders qualifying after 1 February 2001 must also complete a CBT course before riding a moped on the road. Since 1 February 2001 individuals wishing to ride motorcycle combinations and mopeds with more than two wheels can now take CBT on these types of machine. CBT is not a test, and there is no exam - it's a course of training that learner riders are required to complete satisfactorily.

### New European motorcycle test

In January 2009 the Driving Standards Agency (DSA) announced that the new motorcycle test would be split into two parts: Module 1 contains the specified manoeuvres element of the test including exercises designed to assess the rider's ability to control their machine safely, including avoidance and emergency stop exercises; and Module 2 includes an eyesight test and at least 30 minutes of on-road riding, assessing the rider's ability to safely interact with other road users. This took effect in April 2009. The decision to split the test in two is the result of changes to the practical driving test for motorcyclists introduced this year as a consequence of the European Second Driving Licence Directive - though the decision to deliver the new test in two parts and via multi-purpose test centres was taken by the Government, following two rounds of consultation.

Concerns have been expressed that there are too few test centres and that some test candidates are now required to travel long distances to reach their nearest test centre. Concerns have also been raised about the safety of riders taking the off-road test, particularly the 'swerve and stop' test.

The Transport Committee held an inquiry on October 14<sup>th</sup> 2009 into current motorcycle testing arrangements. In particular:

1. Has the DSA interpreted the EU Second Driving Licence Directive correctly and applied it appropriately?
2. Are the off-road motorcycle tests safe and appropriate?
3. Is the number of motorcycle test centres adequate and are the locations satisfactory?
4. What is the impact of the recent changes in motorcyclist testing?

Excerpt from British Motorcyclists Federation Press release, Saturday, 03 October 2009

*"In 2009 training schools are reporting downturns in business and income dropping by a third (According to the Motorcycle Industry Association, in November 2008 motorcycle registrations were down 16% on the previous November. In February 2009, they were down 25% on the previous February and by August, they were down 30.5% on last year with the smaller 'learner' classes being hit hardest).*

*The inadequate provision of the new Multi-Purpose Test Centres (MPTCs) now required for testing has also meant that even if they fail their test, some trainees literally face a 220 mile round trip for a Module One motorcycle test.*

*The DSA has implemented the swerve and brake manoeuvres as a swerve and then a controlled stop as one manoeuvre, however, the directive does not specify that these manoeuvres have to be tested as one manoeuvre, simply that an obstacle has to be avoided at 50kph and braking should be from 50kph. By combining braking and swerving the DSA have exceeded the EU Directive's requirements and made it a more difficult and hazardous manoeuvre, so much so that several learners have crashed trying to complete the sequence.*

*The DSA also introduced specific distances and dimensions for the manoeuvre whereas the directive does not specify any minimum elements, except for that of speed. But by sticking rigidly to a 50 kph speed requirement (31 mph UK equivalent) means that the braking test can no longer be carried out on UK roads as UK speed limits would be exceeded. A derogation allowing braking from 30 mph (48 kph) would have meant that many of the manoeuvres now requiring special areas could have been part of the on-road test. The motorcycle test now includes at least four low speed manoeuvres as opposed to the two mandated by the Directive.*

*Furthermore, DSA examiners make no allowances for low-powered machines struggling to reach the required speed in the distance specified, or for any adverse weather conditions. Manoeuvring areas are rigidly adhered to even though advice on riding and driving in adverse weather conditions recommends allowing a greater stopping distance. (NB: Prior to the new test, emergency braking tests conducted on UK roads had no specific stopping distance).*

*Finally, the provision of the Multipurpose Test Centres now required for this procedure is inadequate and many learners have to travel long distances to get to the centres”.*

The Select Committee inquiry can be viewed at:

<http://www.parliamentlive.tv/Main/Player.aspx?meetingId=4739>

**In Northern Ireland** (Northern Ireland has an autonomous authority for the licensing of vehicles as well as the testing and training car drivers, motorcyclists and commercial drivers). From 1 April 2003, learner motorcyclists have to pass the written theory test as well as the practical test to gain a full motorcycle licence even if they hold a full car licence. The learner motorcycle specification is an engine size of up to 125cc and a power output of 11kw (14.6bhp). Prior to this, there was no compulsory basic training. However, anyone who takes a theory and practical test to obtain either a full moped or A1 licence will continue to be exempt from the requirement to take a theory test as part of any future motorcycle test.

At age 17 or over, the learner rider will have two types of full motorcycle licence to aim for - the A1 light motorcycle licence or the standard category A motorcycle licence.

To gain a full A1 light motorcycle licence the rider must pass a theory test followed by a practical test on a vehicle over 75cc but not more than 120cc. A full A1 licence permits the rider to ride any motorcycle up to 125cc and a power output of up to 11kW (14.6 bhp) without 'L' plates, carry pillion passengers and use motorways.

To gain a full standard category A licence the rider must pass a theory test followed by a practical test on a motorcycle of over 120cc but not larger than 125cc and capable of at least 100kph. In practice the normal test vehicle will be a 125cc machine. A full standard category A licence permits the person to ride any motorcycle with a power output of up to 25kW (33bhp) and a power-to-weight ratio not exceeding 0.16kW/kg without 'L' plates, carry pillion passengers and use motorways. The rider is restricted to a motorcycle up to 25kW for two years (not counting any periods of disqualification). After two years the rider may ride any size motorcycle.

**In Southern Ireland** The driver theory test was introduced in Ireland in 2001 to precede the practical driving test. Motorists (and motorcyclists) in Ireland prior to this time were not legally required to do any form of test on their knowledge of either the rules of the road or motoring regulations on Irish roads before they applied for an Irish Learners Permit, or completed their full driving test<sup>20</sup>.

In 2006 a revised Test and New Category was Introduced. The changes include:

A revision of existing questions in the Driver Theory Test Question Bank, the introduction of a separate theory test for candidates seeking a licence for Motorcycles or Mopeds, and an increase from 750 to 1,250 in the number of questions in the Driver Theory Test Question Bank.

<sup>20</sup> <http://www.erneschoolofmotoring.com/theorytest.html>

From 1 December 2007<sup>21</sup> motorcyclists on a learner permit (provisional licence) have had to wear a yellow, florescent tabard (not a vest or jacket) with regulation sized L plates showing both back and front.. This applies to all learner permits\ provisional licences regardless of date of issue.

The requirement is that a person with a learner permit (provisional licence) for category A, A1, or M, shall not drive such a vehicle unless there are displayed on a yellow fluorescent tabard worn over the person's outside clothing, the letter 'L', not less than 15 centimetres high in red on a white ground in clearly visible vertical positions to the front and rear of the person's torso.

From 30 October 2007, there is a restriction in relation to making application for a driving test. From this date a person who is granted a learner permit for a vehicle in category A, A1, M, by a licensing authority and has not previously held, within the period of 5 years prior to the granting, such a permit in that category, is not entitled to make an application for a driving test within the period of 6 months from the day the permit comes into force. This provision also applies to categories W, B or EB.

In order to ride a motorcycle or moped in a public place a person must hold a current driving licence or a Learner Permit in Category M, A1 or A. Note also that carrying a pillion passenger with a provisional licence or learner's permit is now a penal offence.

The 'A' is Learner Permit from 18 years of age for motorcycles, with or without a sidecar, subject to a power limit before the Driving Test and for 2 years afterwards of 25Kw/34bhp. or a power to weight ratio of less than 0.16kW per kg) – the restriction continuing for two years after taking out a full licence in that category. However, at a cost, virtually any bike can have its power reduced to come within these limits. The Driving Test must be taken on a motorcycle over 125cc. This is the first-choice motorcycle licence.

The 'A1' Learner Permit is available from 16 years of age, but will restrict the holder to motorcycles of 50cc to 125cc and a 11Kw/14.5bhp limit. Even if passing the '125' Driving Test, an up-grade to a bike over 125cc will need an 'A' licence provisional, a second 'test' on a bike over 150cc, and endure all restrictions.

The 'M' Learner Permit is strictly for mopeds, or engine-assisted bicycles, under 50cc with a top speed of below 45kmp /28mph and is available from 16. The holders of a full 'B' licence, with additional insurance, can also drive mopeds. Note that both a Learner Permit and a provisional licence do not entitle the rider to carry a pillion passenger. Nor is he/she permitted to use motorways.

Any person wishing to obtain a third or subsequent provisional licence **must** have undergone a driving test within the previous two years. However, a person who is due to undergo a test and whose licence is expiring may obtain a 12 month provisional licence on production of their driving test appointment letter.

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<sup>21</sup> <http://www.msa-ireland.com/licenses.htm>

### 6.3. Annex three: Contributory factors attributed to motorcycle accidents in 2007 (GB) (Department of Transport Road Casualties 2008)

Contributory factor attributed to vehicle (Motorcycles)	Number	Percent
<b>1. Road environment contributed</b>	<b>2,491</b>	<b>12.25</b>
Poor or defective road surface	222	1.09
Deposit on road	552	2.71
Slippery road	1,317	6.47
Inadequate/masked signs or markings	40	0.20
Defective traffic signals	15	0.07
Traffic calming	36	0.18
Temporary road layout	28	0.14
Road layout	379	1.86
Animal/Object in carriageway	197	0.97
<b>2. Vehicle defects</b>	<b>229</b>	<b>1.13</b>
Defective tyres	69	0.34
Defective lights/indicators	43	0.21
Defective brakes	81	0.40
Defective steering/suspension	32	0.16
Defective mirrors	4	0.02
Overloaded vehicle	17	0.08
<b>3. Injudicious action</b>	<b>3,369</b>	<b>16.56</b>
Disobeyed traffic signal	123	0.60
Disobeyed Give Way or Stop sign	134	0.66
Disobeyed double white lines	59	0.29
Disobeyed pedestrian crossing	34	0.17
Illegal turn/direction	77	0.38
Exceeding speed limit	1,096	5.39
Going too fast for conditions	1,509	7.42
Following too close	751	3.69
Vehicle travelling along pavement	50	0.25
Cyclist entering road from pavement	6	0.03
<b>4. Driver/rider error or reaction</b>	<b>8,900</b>	<b>43.75</b>
Junction overshoot	208	1.02
Junction restart	76	0.37
Poor turn/manoeuvre	1,993	9.80
Failed/Misleading signal	114	0.56
Failed to look properly	3,062	15.05
Failed to judge other persons path/speed	2,407	11.83
Passing too close to cyclist etc	66	0.32
Sudden braking	1,206	5.93
Swerved	450	2.21
Loss of control	3,008	14.79
<b>5. Impairment or distraction</b>	<b>731</b>	<b>3.59</b>
Impaired by alcohol	457	2.25
Impaired by drugs	44	0.22
Fatigue	37	0.18



Defective eyesight	4	0.02
Illness or disability	21	0.10
No lights at night	50	0.25
Cyclist wearing dark clothing at night	18	0.09
Driver using mobile phone	0	0.00
Distraction in vehicle	20	0.10
Distraction outside vehicle	131	0.64
<b>6. Behaviour or inexperience</b>	<b>4,406</b>	<b>21.66</b>
Aggressive driving	621	3.05
Careless, reckless, in a hurry	2,122	10.43
Nervous, uncertain or panic	231	1.14
Driving too slow	5	0.02
Learner/Inexperienced driver	1,919	9.43
Inexperience of driving on left	32	0.16
Unfamiliar with model of vehicle	274	1.35
<b>7. Vision affected</b>	<b>991</b>	<b>4.87</b>
Vision affected by parked vehicle	426	2.09
Vision affected by vegetation	22	0.11
Vision affected by road layout	204	1.00
Vision affected by buildings etc	15	0.07
Dazzling headlights	22	0.11
Dazzling sun	143	0.70
Rain, sleet, snow or fog	140	0.69
Spray	14	0.07
Dirty windscreen/visor	23	0.11
Vehicle blind spot	41	0.20
<b>8. Pedestrian only (casualty or uninjured)</b>	<b>75</b>	<b>0.37</b>
Pedestrian masked when crossing	6	0.03
Pedestrian failed to look properly	26	0.13
Failed to judge vehicles path/speed	21	0.10
Wrong use of pedestrian crossing	0	0.00
Dangerous action in carriageway	5	0.02
Impaired by alcohol	12	0.06
Impaired by drugs	4	0.02
Careless, reckless or in a hurry	13	0.06
Pedestrian wearing dark clothing at night	1	0.00
Disability or illness	1	0.00
<b>9. Special codes (stolen or emergency vehicle, other etc)</b>	<b>470</b>	<b>2.31</b>
Stolen vehicle	138	0.68
Vehicle in course of crime	41	0.20
Emergency vehicle on call	11	0.05
Door opened carelessly	3	0.01
Other	292	1.44
<b>10. Vehicles with no contributory factor</b>	<b>7,225</b>	<b>35.52</b>
<b>Number of vehicles</b>	<b>20,342</b>	<b>100.00</b>

## 6.4 Annex four: Response by riders, using their own description of the near miss that they had experienced

NB: OV = Other Vehicle	
OV Own fault	<ul style="list-style-type: none"> <li>A car pulled out of a parking space in Maybole and almost hit me side on.</li> <li>Another car pulled out in front of me at a junction in Prestwick although I had right of way. This incident was partially my fault as a van in front of me (which turned right) obscured me from the drivers vision, in hindsight I should have maintained my braking distance from the van to make sure the driver saw me.</li> </ul>
Road OV	<ul style="list-style-type: none"> <li>A few, caused by cars and one truck (!) (40ft Scania) overtaking to close corners, meaning - I drive through a corner and I'm faced with two vehicles. Immediate reaction is to scrub off as much speed as possible and then either grass it or if that's impossible try for the middle.</li> <li>Gravel on corners had me off twice and have had a few moments since.</li> <li>I was overtaking a line of traffic and was at the driver's window of a jeep when he swung out and hit me (approx 50mph) as soon as he'd hit the bike he pulled back in, I managed to keep it upright and moving.</li> <li>Dublin City, long line of traffic opposite, guy pulled out and travelled on wrong side of the road towards me to turn right into a junction which I had just passed (Found this out from checking my mirrors after)</li> <li>There was wet leaves on the ground (double whammy)he didn't stop. He might have slowed down. I braked, lost the back, let go of brakes, regained grip... went up the middle between him and the line he'd come out of.</li> <li>Had to stop on a main road to wait for a car to finish a desperate 3 point turn, checked mirror, car coming at speed, had to pull in to extreme left, they passed me on the right just as the first car had got moving on the other side.</li> </ul>
OV	Always impatient car/van drivers occupying my braking space either by pulling out, or overtaking and pulling in, sometimes while alongside. Occurs very often.
OV	An old car driver pulled out on me when I was doing 25mph with lights on. Once over 70 a drivers license should be taken away with no exceptions
OV	Bus cut in front of me to stop at a bus stop ahead of me. It left me no space to get out of the gap and had I not altered my path I would have been crushed by it.
OV	Car driver changing lanes without indicating and nearly hitting bike.
OV	car driver skidded up the inside of me while i was waiting to go past a parked car,
OV	Car driver manoeuvring without signalling
OV	Car in front stopping without warning and no use of indicators.
OV	Car pulling on to the road from hard shoulder & also car pulling in sharp in front of me after over taking me
OV	Car pulling out
OV	cars swerving when overtaking them
OV	Changing lane into mine without driver checking to see if it was safe to proceed, she just changed lane.
OV	Cutting across my lane to pull into a parking space.
OV	Cutting in when roads merge, driving too close when overtaking, pulling out in front of me suddenly, reversing towards me up a narrow lane at speed- forced me into a hedge,
(Cyclist) OV	<ul style="list-style-type: none"> <li>Cyclists not taking any notice of highway code and jumping the red lights, riding into my path.</li> <li>Speeding car overtaking and cutting me up on the approach of a roundabout.</li> </ul>
OV	Dark, car parked half on and half on the road. I had a pillion and proceeded to overtake and hit a traffic island. 2 punctures and 2 broken rims. Thankfully remained upright.
OV	Deliberate swerving in front to prevent an overtake.
Other	Depends what you term 'near-miss'. I have to brake heavily to avoid pedestrians or other vehicles who aren't looking almost daily!
Road OV	<ul style="list-style-type: none"> <li>diesel on road,</li> <li>cars pulling out all the time drivers never looking</li> </ul>
Own fault	Dodgy overtaking on my part
OV	Driver doing u turn without looking; Driver pulling out of side road
OV	Driver of a car using a mobile turned across me
OV	Driver pulling out of junction into my path when only 20m away on a main road when I was riding at the legal limit. had to break sharply.
Animals	Farmers with animals on the road and no prior warning.

OV	Foreign tourist on single track road travelling far too fast around a tight, blind l/h bend went wide and forced me onto (fortunately!) grass verge.
Road	Had a big front wheel slide when i cornered, and mud was covering a manhole cover. Several near misses because of this same ongoing building work leaving debris on the road surface.
OV Pedestrian	<ul style="list-style-type: none"> <li>Had a lot more than one near miss, they usually involve a car or suv pulling out of a junction or cutting you off in a lane of traffic.</li> <li>Another frequent one is people crossing the road without looking, especially if they are crossing a stationary lane of traffic into a moving one (mine)</li> </ul>
OV	<ul style="list-style-type: none"> <li>had a near miss 5 years ago, elderly man couldn't wait and drove through red light.</li> <li>About same - was overtaking jeep and trailer and he decided to overtake as well. I over took a truck and he didn't pull back to let me in for a minute or so. Guy pulled across into me - I was alongside - in traffic. second guy did same within 3 minutes.</li> </ul>
OV	Hundreds of occasions where car drivers have pulled out of a side street and not seen me, despite the fact I've moved to the farthest point possible to make myself visible.
Road	I came off on a large oil slick when a bus engine exploded. The bus company paid up. Now that the mayor has freed London bus lanes for bikers life is much easier and safer. Local boroughs should now free all bus lanes.
OV	I get them nearly every day while at work mainly due to people trying to move lanes or pull out or overtake in silly places. It comes with the job of being a motorcycle instructor.
OV	I had exited from the A56 in Altrincham to Oldfield Road. It is initially obscured by a pub wall because the junction entrance is wide and acts like a funnel. As the view opened up I started to accelerate when a parked car on the left suddenly pulled away and initiated a U-turn without indicating. I slammed on the brakes and the ABS activated. It was not enough to slow me and I my front tyre made contact with the car but I managed to stay upright and neither me or the car sustained damage. The road is too wide in this area and despite road markings to stop people doing U-turns here it happens time and time again.
OV	I have had elderly motorists pull out on me at Junction not observing that I was there on many occasions
OV	I was on a 3 lane dual carriage way road with occasional breaks to access side roads, on the outside lane (lane 3). A car on the inside lane (lane 1) suddenly, and without warning / indication, swerved across all 3 lanes to get to the side road. I had to do a swerve and emergency brake to avoid her
OV	I was turning right at a junction, the lights were going red, and a filter light would then come on for me, there was a row of cars coming towards me to also turn right, a car was speeding to go straight coming towards me and trying to catch the lights, which would have been red by the time he went through, but I couldn't see him with the cars turning. I accelerated around, then saw him, hesitated, very nearly to my detriment, then just made it out of his way.
OV	Idiots pulling out on roundabouts without looking or even out of their driveways
Road	Just south of Glenarm Co Antrim N Ireland the road surface when wet has the friction coefficient of dieselised plastic
OV	Lady coming to complete stop in outside lane of carriageway so as to try and get into hard shoulder
OV	Lady in middle lane of 3 decides at last minute when lights were red to change to left lane where I was sitting stationary.
Own fault	Late braking
Other	Loads, car drivers and pedestrians I work in London....
Own fault	Many near misses I've had have all been due to lack of experience riding and controlling the bike.
OV	Most of my near misses are caused by other vehicle drivers not seeing me.
Other	Most of the ones in your list
Other	My accident occurred on a track day and was not road-riding related.
OV	My daily commute involves 55 miles of A roads (mainly dual carriageway) Whilst I have never had an accident on my commute, I have to take evasive action on a weekly basis when cars change lane without looking. You do however develop a 6th sense for this.
Other	My last serious life threatening accident was in 2001. I changed to a Classic bike as they get noticed more than modern bikes.
OV	Myopic twat in a car didn't see the red lights on his lane and careered into my lane at @50 mph, narrowly missing me.
OV (Motorcycle)	Nearly ran into back of another motorbike who stopped in front of me without warning
OV	Nearly T boned by a MPV running a red light whilst driver (Female) talking on handheld phone.
OV (Motorcycle)	Other motorcycle rider riding on the other side of the road over taking about 20 bikes in his club on a bend.
OV	other road users( cars ) not paying attention or indicating when changing lanes on motorway

OV	Overtaken by car on a motorway as I was overtaking another vehicle, yes, in the same lane.
Animal	Overtaking car on straight rural road with no run offs when pheasant ran out from off side. Just missed wheel, slight wobble and thankfully car did not swerve.
OV	passenger opening car door while care is waiting to make a right turn, car is lined up in the lane for right turns only, I was travelling in the other lane going straight only, was able to avoid collision by 2inch due to fast reaction and observation
Pedestrian	Pedestrian running out in the road. Car pulling in front of me immediately it over took me due to oncoming traffic. In any one working week I will have at least 1 near miss
Pedestrian	Pedestrian walked into my path
OV	Pulled out on roundabout without checking causing me to brake heavily
OV	Pulling out in front of me on roundabout
Other	Reason for accident, icy conditions bike dropped at 5mph. Count as an accident?
Own fault	Running wide, missing a junction, messing up an overtake (between cars) and just before corners
Other	Skid due to diesel spill. Numerous swerve / brake due to other vehicles. Probably once a week
Own fault	Stall and roll back on steep, gravelly slope.
Animal	swerve and braked to avoid dead animal on road
Other	The more I ride the more I avoid near misses. More experience on my part means that I can allow for the stupid mistakes / idiot moves on the part of other road users. I try to avoid them long before they reach the near miss category.
Own fault	Took a bend just under the 30mph speed limit on a road I knew well and the traffic was queuing much further back from the junction than usual - I rounded the bend and had to brake suddenly to avoid colliding with rear of car stopped in queue ahead of me.
OV	Twice, vehicles decided to change lanes without checking. Moving right into me. Both times massive damage was caused to side of car.
OV	Was overtaking two cars on a straight stretch of road when the car at the rear pulled out into my path
OV	Weekly, cars changing lanes in front of me without looking...pulling out of junctions etc not seeing me!
OV	Whilst I went to overtake two cars, car two then without warning, decided to overtake car one, forcing me to go wide narrowly avoiding a collision.
OV	<ul style="list-style-type: none"> <li>• Yes quite a few when cars have almost ran me over when changing lanes and they haven't seen me on the motorway. When cars pull out onto the road I've been travelling on from a side street because they ignore me. Car drivers try to intimidate me and try to push me over.</li> <li>• Car drivers ignore my signals and have to brake suddenly from behind and nearly hit the back of the bike. Shall I go on or do you have enough. I drive a car and am aware of the roads, other car drivers aren't or more importantly don't care!!!!</li> </ul>
Road	yes, skid on icy road by traffic light

## 6.5 Annex Five: Analysis of data by country (Profile of Motorcyclists)

### Age

Age of Rider	GB	Northern Ireland	Republic of Ireland	Total
17-21	1 9.1%	7 63.6%	3 27.3%	11 100.0%
22-30	7 17.5%	17 42.5%	16 40.0%	40 100.0%
31-40	30 35.3%	20 23.5%	35 41.2%	85 100.0%
41-50	25 29.8%	30 35.7%	29 34.5%	84 100.0%
51-60	17 58.6%	6 20.7%	6 20.7%	29 100.0%
61-70	3 50.0%	2 33.3%	1 16.7%	6 100.0%
More than 70	1 100.0%	0 .0%	0 .0%	1 100.0%
Total	84 32.8%	82 32.0%	90 35.2%	256 100.0%

*Pearson's Chi Square .013, Cramer's V .013 (one person did not answer)*

### Type of Licence held by country

	GB	Northern Ireland	Republic of Ireland	Total
N/A	1 50.0%	0 .0%	1 50.0%	2 100.0%
Full	82 34.2%	79 32.9%	79 32.9%	240 100.0%
Learner	0 .0%	0 .0%	8 100.0%	8 100.0%
Restricted	2 28.6%	3 42.9%	2 28.6%	7 100.0%
Total	85 33.1%	82 31.9%	90 35.0%	257 100.0%

*Pearson's Chi Square .011, Cramer's V .011 (2 did not answer)*

The Rep. Of Ireland had the highest proportion of riders who had held their licence for 10 years or less (56/250) while GB had the highest proportion of riders who held their licence for more than 10 years (50/250).

**Licence (years held)**

Years	GB	Nth Ireland	Rep of Ireland	Total
1 to 2 yrs	10 19.6%	20 39.2%	21 41.2%	51 100.0%
3 to 4 yrs	10 28.6%	13 37.1%	12 34.3%	35 100.0%
5 to 7 yrs	3 10.0%	12 40.0%	15 50.0%	30 100.0%
8 to 10 yrs	9 47.4%	2 10.5%	8 42.1%	19 100.0%
11 to 15 yrs	11 55.0%	5 25.0%	4 20.0%	20 100.0%
16 to 20 yrs	10 50.0%	3 15.0%	7 35.0%	20 100.0%
21 to 30 yrs	8 24.2%	15 45.5%	10 30.3%	33 100.0%
more than 30 yrs	21 50.0%	10 23.8%	11 26.2%	42 100.0%
<b>Total</b>	<b>82</b> <b>32.8%</b>	<b>80</b> <b>32.0%</b>	<b>88</b> <b>35.2%</b>	<b>250</b> <b>100.0%</b>

*Pearson's Chi Square: .003; Cramer's V: .003 (7 did not answer)*

**Length of time riding without a break by country**

Years	GB	Nth Ireland	Rep. Of Ireland	Total
1 to 2 yrs	12 22.6%	19 35.8%	22 41.5%	53 100.0%
3 to 4 yrs	12 25.5%	17 36.2%	18 38.3%	47 100.0%
5 to 7 yrs	7 16.7%	19 45.2%	16 38.1%	42 100.0%
8 to 10 yrs	11 35.5%	6 19.4%	14 45.2%	31 100.0%
11 to 15 yrs	10 50.0%	6 30.0%	4 20.0%	20 100.0%
16 to 20 yrs	8 57.1%	2 14.3%	4 28.6%	14 100.0%
21 to 30 yrs	7 38.9%	5 27.8%	6 33.3%	18 100.0%
more than 30 yrs	14 63.6%	3 13.6%	5 22.7%	22 100.0%
<b>Total</b>	<b>81</b> <b>32.8%</b>	<b>77</b> <b>31.2%</b>	<b>89</b> <b>36.0%</b>	<b>247</b> <b>100.0%</b>

*Pearson's Chi Square: .010; Cramer's V: .010 (10 did not answer)*

**Practical Test**

	GB	Nth Ireland	Rep of Ireland	Total
No answer	1	1	2	4
	25.0%	25.0%	50.0%	100.0%
No	1	9	13	23
	4.3%	39.1%	56.5%	100.0%
Yes	83	72	75	230
	36.1%	31.3%	32.6%	100.0%
<b>Total</b>	<b>85</b>	<b>82</b>	<b>90</b>	<b>257</b>
	<b>33.1%</b>	<b>31.9%</b>	<b>35.0%</b>	<b>100.0%</b>

Pearson's Chi Square: .032; Cramer's V: .032 (4 did not answer)

**Theory test**

	GB	Nth Ireland	Rep of Ireland	Total
No answer	1	2	2	5
	20.0%	40.0%	40.0%	100.0%
No	43	36	27	106
	40.6%	34.0%	25.5%	100.0%
Yes	41	44	61	146
	28.1%	30.1%	41.8%	100.0%
<b>Total</b>	<b>85</b>	<b>82</b>	<b>90</b>	<b>257</b>
	<b>33.1%</b>	<b>31.9%</b>	<b>35.0%</b>	<b>100.0%</b>

Pearson's Chi Square: .083; Cramer's V: .083 (5 did not answer)

**Age of motorcycle by country**

	Age of Bike								Total
	1 to 2 yrs	3 to 4 yrs	5 to 7 yrs	8 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	more than 25 yrs	
<b>GB</b>	15	14	20	14	5	4	3	6	81
	18.5%	17.3%	24.7%	17.3%	6.2%	4.9%	3.7%	7.4%	100.0%
<b>Nth Ireland</b>	15	11	21	15	14	3	1	0	80
	18.8%	13.8%	26.3%	18.8%	17.5%	3.8%	1.3%	.0%	100.0%
<b>Rep. Of Ireland</b>	13	18	21	21	8	2	1	2	86
	15.1%	20.9%	24.4%	24.4%	9.3%	2.3%	1.2%	2.3%	100.0%
<b>Total</b>	43	43	62	50	27	9	5	8	247
	17.4%	17.4%	25.1%	20.2%	10.9%	3.6%	2.0%	3.2%	100.0%

Pearson's Chi Square: .229; Cramer's V: .229 (10 did not answer)

**Annual Mileage by country**

Mileage	Countries			Total
	GB	Nth Ireland	Rep. of Ireland	
1-1000	5	5	3	13
	38.5%	38.5%	23.1%	100.0%
1001 to 4000	23	21	13	57
	40.4%	36.8%	22.8%	100.0%
4001 to 6000	17	28	22	67
	25.4%	41.8%	32.8%	100.0%
6001 to 10000	22	9	28	59
	37.3%	15.3%	47.5%	100.0%
10001 to 15000	8	15	13	36
	22.2%	41.7%	36.1%	100.0%
15001 to 25000	6	2	10	18
	33.3%	11.1%	55.6%	100.0%
More than 25000	3	0	1	4
	75.0%	.0%	25.0%	100.0%
Total	84	80	90	254
	33.1%	31.5%	35.4%	100.0%

*Pearson's Chi Square: .009; Cramer's V: .009 (3 did not answer)*

**Make of Motorcycle for Respondents**

Make	Number	Percent
Honda	57	22.2
Suzuki	47	18.3
Yamaha	42	16.3
BMW	35	13.6
Kawasaki	32	12.5
Triumph	13	5.1
Ducati	8	3.1
Harley Davidson	7	2.7
Aprilia	3	1.2
Other (including customised)	3	1.2
BSA	2	0.8
Cagiva	2	0.8
Baotian	1	0.4
Benelli	1	0.4
Keeway	1	0.4
Moto Guzzi	1	0.4
MZ	1	0.4
Sym	1	0.4
Total	257	100

The proportion of makes of motorcycles ridden by the respondents generally reflects the market for these makes in all three countries in terms of popularity and sales.