

Motorcyclist Collisions and Casualties in Northern Ireland

1st January 2000- 31st December 2004

**PSNI Central Statistics Unit
Lisnasharragh**

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*** Statistics relate to riders only. Pillion passengers are excluded.**

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The Northern Ireland Road Safety Strategy¹ sets out casualty reduction targets for 2012. The targets include achieving a one third reduction in the number of people killed or seriously injured on Northern Ireland's roads compared to baseline figures for 1996-2000. Good progress is being made towards meeting this target, but concern has been raised about the increasing number of motorcyclist casualties in recent years.

The aim of this report is to help provide a clearer understanding of the patterns and circumstances of fatal and serious (KSI) motorcycle collisions in the period 1st January 2000 to 31st December 2004. This in turn may help to reduce the number of collisions involving motorcyclists through the development of appropriate road safety strategies.

There has been a marked increase in the number of motorcycles, scooters and mopeds licensed in Northern Ireland in the last decade, from 8,775 in 1994 to 26,818 in 2003. Not only are there more motorcycles on the roads, but there has also been a growth in motorcycles with an engine capacity of 500cc or more. The increase in motorcycle traffic is in turn reflected in an increase in the number of motorcyclist casualties in injury road traffic collisions. The focus of this report is on fatally and seriously injured casualties.

Motorcyclist KSIs are predominantly male (96.1%) and predominantly young people aged 17-24. This age group accounts for just over a third (33.6%) of KSI casualties, while those aged 25-34 account for a further 29.5% and those aged 35-44 for 20.0% of KSI casualties. It has been suggested by a representative from a leading insurance company that motorcycling is growing in popularity among females. It will be important to monitor the extent to which this is reflected in casualty statistics over the coming years so that advertising campaigns and road safety policies can be tailored accordingly.

Just over half of all fatally and seriously injured motorcyclist casualties are responsible for the collision. In these cases the most common causes of the collisions are excessive speed for the conditions, overtaking on off-side without care and inattention. In collisions where the rider was not responsible, the main causes are emerging from a minor road without care and turning right without care. There is clearly a need to make motorcyclist aware of the dangers of speeding and carelessness while at the same time raising awareness among other road users of the need to look out for and respect motorcyclists on the roads.

Over half of motorcyclist KSI casualties occur from Friday through to Sunday, which suggests that these journeys relate to leisure rather than work. There is also a clear seasonal pattern with most KSI motorcyclist casualties occurring in summer/early autumn when weather and lighting are more suitable for motorcyclists than during winter.

¹ Northern Ireland Road Safety Strategy 2002 –2012, Published by Department of the Environment 2002

INTRODUCTION

Each year a significant number of motorcyclists are killed or seriously injured on the roads in Northern Ireland. The Northern Ireland Road Safety Strategy has recognised the need to take action to reduce the fatal and serious injuries (KSIs) among motorcyclists and has identified them as a group of vulnerable road users. The Strategy points to the increase in the number of motorcyclists registered and the need to ensure that other road users are made aware of motorcyclists and their vulnerability, and that motorcyclists themselves are encouraged to ride safely.

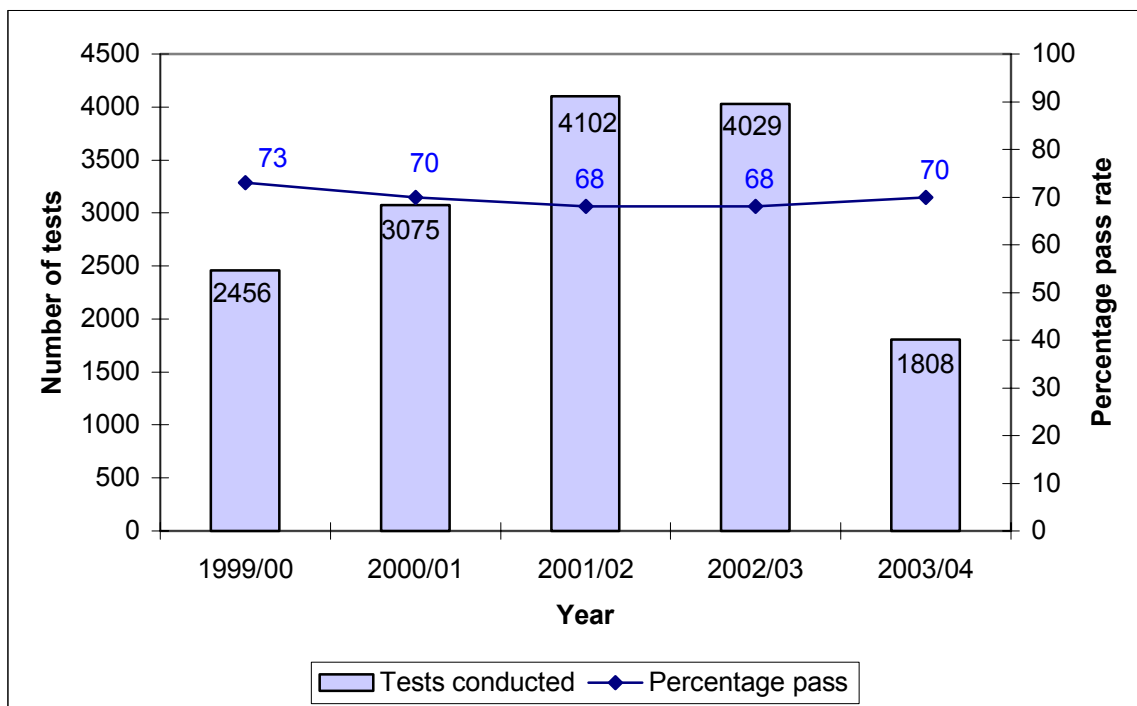
This report draws together some of the key statistics on fatal and serious injury collisions (KSIs) involving motorcyclists, based on data from 2000 to 2004. The first section provides some contextual information on motorcycling in Northern Ireland in recent years, while the main part of the report focuses on aspects of motorcyclist KSIs, including age and gender of casualties, type of motorcycles involved in fatal and serious collisions and time and place of collisions.

MOTORCYCLING & MOTORCYCLES IN NORTHERN IRELAND

Motorcyclists

Over the period 1999/00 to 2003/04 almost 15,500 motorcycle 'L' driving tests and just over 4,000 written theory tests were completed. Most of those who took the tests were males with only 9.5% of the practical tests and 11.0% of the written theory tests being completed by females. Throughout the 5 year period males have consistently had a higher pass rate in the practical tests, while females have tended to perform better in the theory test.

Figure 1: Motorcycle L Driving Tests Conducted & Pass Rate



Source: Driver and Vehicle Testing Agency.

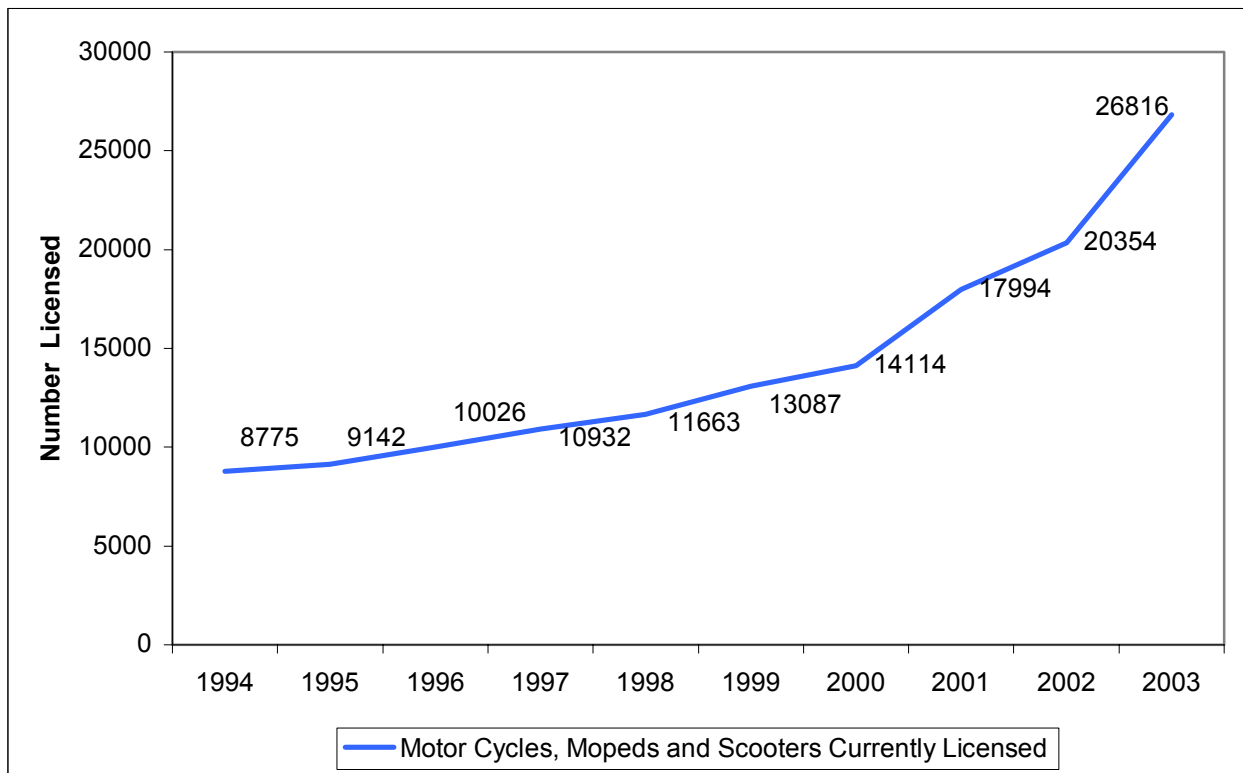
Definitive figures on the total number of motorcyclists in Northern Ireland are not available. However, it has been suggested that the number is likely to be in the range 25,000 to 27,000².

Motorcycles

Figures on the number of motorcycles, scooters and mopeds currently licensed show an increase over recent years. In the 10 years from 1994 to 2003 the total number licensed more than tripled from 8,775 to 26,816. (Figure 2)

² Crude estimates based on discussions with a leading insurance company

Figure 2: Motorcycles, Scooters and Mopeds Currently Licensed



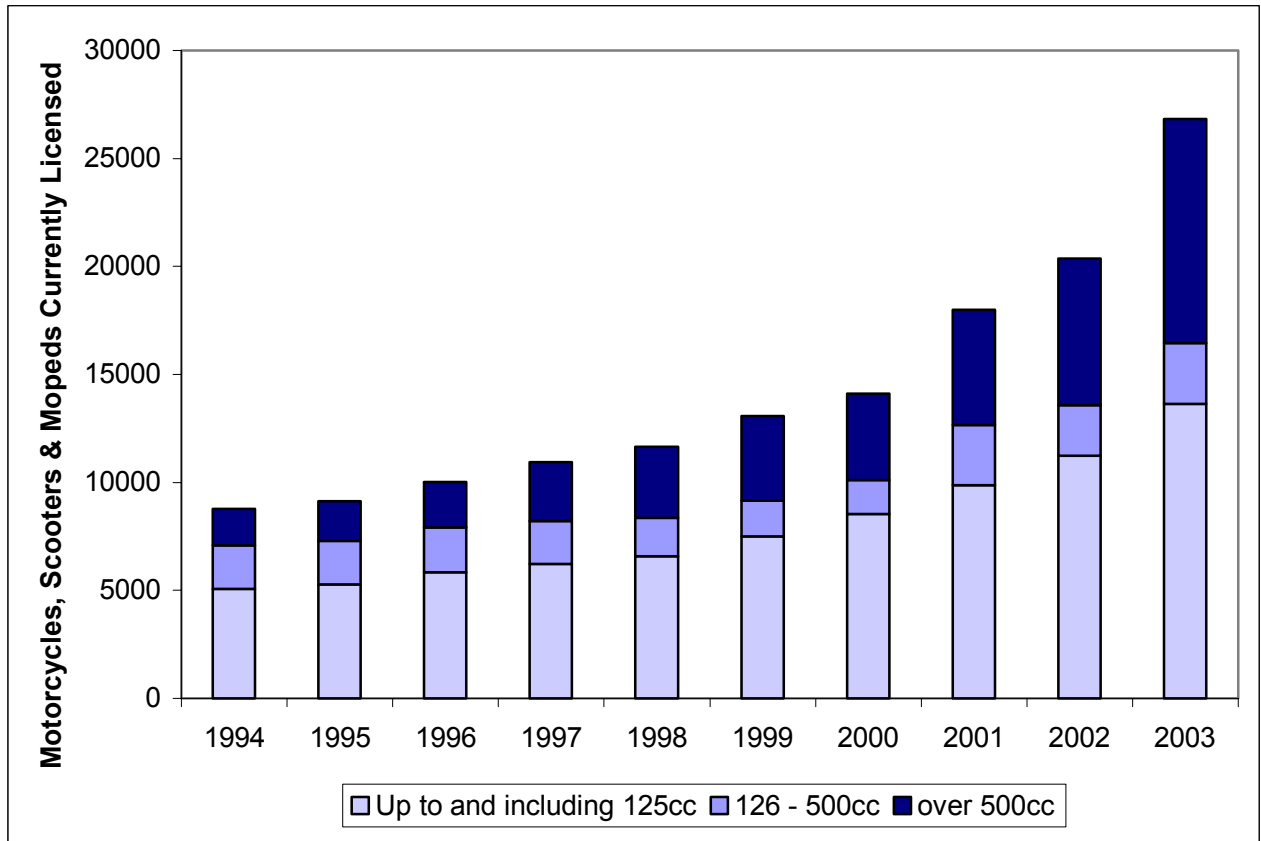
Source: Driver and Vehicle Licensing Agency (Vehicle Census)

There has been a significant increase in the number of motorcycles over 500cc licensed in Northern Ireland between 1994 and 2003, as shown overleaf (Figure 3). In 1994 there were 1,704 motorcycles in this category but by 2003 this had increased 6 fold and stood at 10,353. There were also increases in the number of motorcycles licensed in the two remaining categories, although these changes were less marked, particularly with regard to motorcycles from 126 to 500cc. The number in the category up to and including 125cc increased from 5,071 in 1994 to 13,634 in 2003.

Britain has experienced a somewhat similar increase in the number of larger capacity motorcycles licensed with almost a half of those licensed at the end of 2003 being 500cc and over (560,000), compared with only 200,000 (27.7%) in 1994³.

³ Based on statistics from the Driver and Vehicle Licensing Agency, contained within the DFT publication 'Transport Statistics Bulletin. Compendium of Motorcycling Statistics'

Figure 3: Motorcycles, Scooters & Mopeds Currently Licensed by Engine Capacity



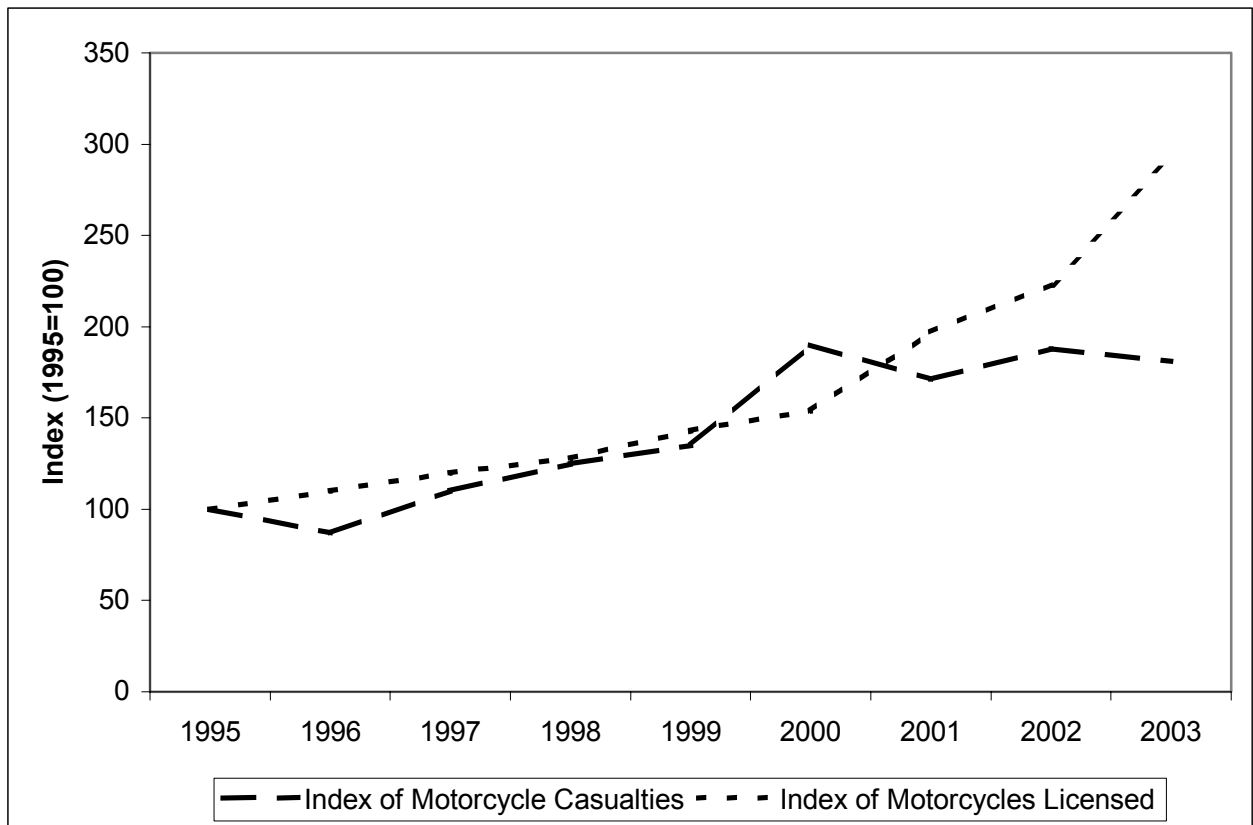
Source: Driver and Vehicle Licensing Agency (Vehicle Census)

* Up until 2001 mopeds were identified as a separate category and have been included in the category 'up to and including 125cc'. From 2001 to 2003 the figures for mopeds were distributed across engine size categories, according to the cc of the moped.

In spite of the increase in vehicles licensed, it is likely that motorcycles as a mode of transport account for only a small proportion of all journeys made by people in Northern Ireland. For example, the 2001 Census Of Population indicates that only one percent of workers in Northern Ireland use a motorcycle, scooter or moped to get to work. There is little information available on the extent to which motorcycles are used for leisure, shopping and other types of travel.

While motorcycles may not be used extensively for commuting to work, the increase in the number of motorcycles on the road is reflected in an increase in motorcyclist casualties in injury road traffic collisions (Figure 4). In 1994 there were 247 such casualties and by 2004 this had increased by 92.7% to 476 casualties. Figure 4 shows that as numbers of licensed motorcycles has increased, so too have the total number of casualties. This was the case up until 2002 - 2003, at which point the two lines diverged slightly.

Figure 4: Index of Motorcycle Casualties & Motorcycles Licensed. (1995=100)



The increasing number of motorcyclists involved in collisions has resulted in an emphasis on motorcyclists as a vulnerable group of road users in road safety policies and programmes. The following section summarises some of the main statistics in relation to fatally and seriously injured motorcyclist casualties in Northern Ireland from 2000 to 2004.

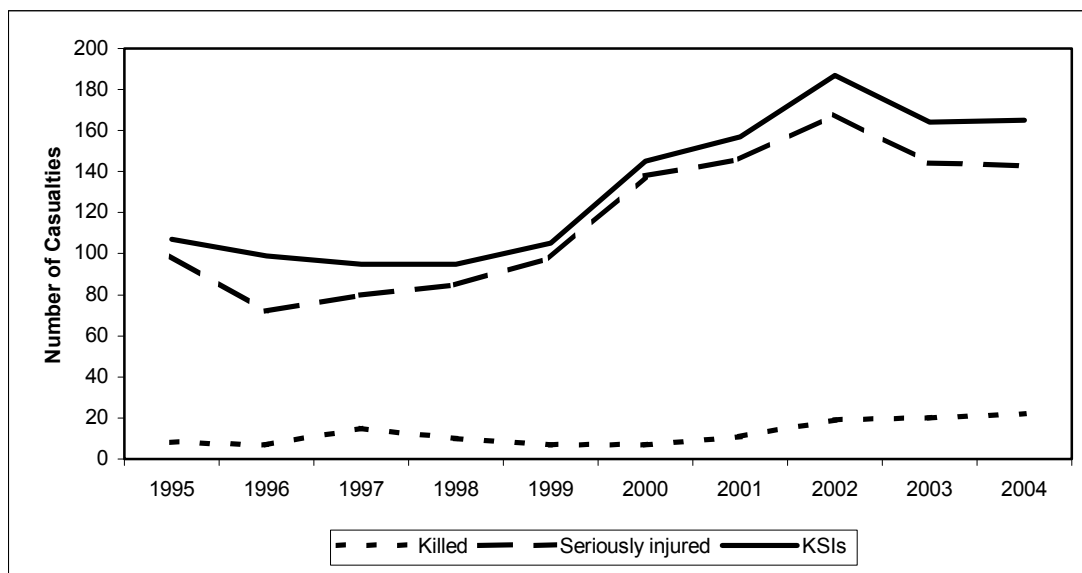
MOTORCYCLIST CASUALTIES IN INJURY ROAD TRAFFIC COLLISIONS

The Northern Ireland Road Safety Strategy has identified motorcyclists as a vulnerable group requiring specific attention within the context of meeting the target for reduction in fatal and serious injury casualties by the year 2012. This section of the report considers recent trends in motorcyclist fatalities and seriously injured casualties (KSIs), demographic details of casualties and main causes of collisions involving motorcyclists. The data relates mainly to the period 2000 – 2004.

Trends in Motorcyclist KSI Casualties

During the ten years from 1995 to 2004 there was an increase in both motorcyclist fatalities and serious injuries. The number of deaths per annum increased from 8 in 1995 to 22 in 2004, while serious injuries increased from 99 to reach a peak of 168 in 2002, before dropping to 143 in 2004 (Figure 5).

**Figure 5: Trends in Fatally and Seriously Injured Motorcyclist Casualties:
1995-2004**



While the increase in fatal and serious injuries among motorcyclists is of concern, it should be noted that this is occurring within the context of a growth in the number of licensed motorcycles. In 1995 there was 1 KSI casualty for every 85 motorcycles licensed, whereas in 2003 there was 1 KSI casualty for every 164 motorcycles licensed.

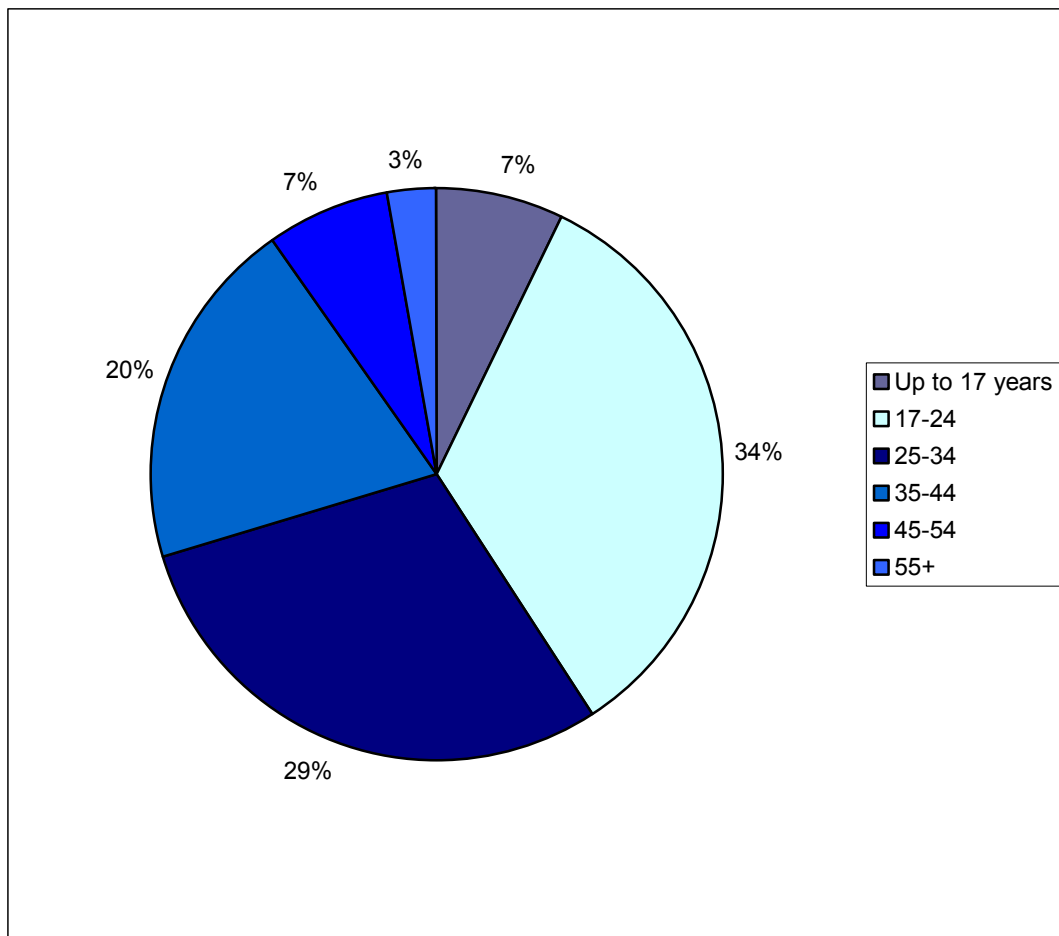
In 2003 the rate of KSI motorcyclist casualties per 100,000 population in Northern Ireland was lower than that recorded for GB (9.6 per 100,000 population in Northern Ireland compared to 12.5 per 100,000 population in GB).

Age & Gender of Motorcyclist KSIs

Motorcyclists KSIs are predominantly male (96.1%) and predominantly young people aged 17 - 24. This age group accounted for just over a third (33.6%) of KSI casualties, while those aged

25-34 years accounted for a further 29.5% and those aged 35-44 for 20.0% of KSI casualties (Figure 6).

Figure 6: Motorcyclist KSI Casualties By Age Band: 2000-2004

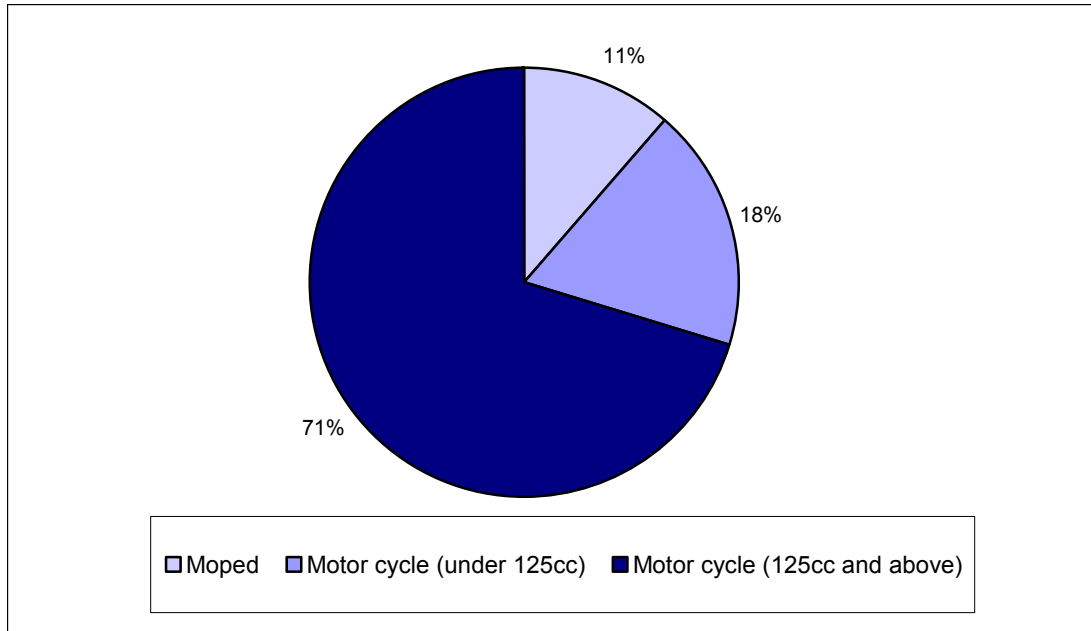


Type of Motorcycles Involved in KSI collisions

The majority (70.8%) of the 818 motorcyclist KSI casualties between 2000 and 2004 were riding motorcycles 125cc and above ⁴. A further 18% were riding motorcycles under 125cc and 11% were using mopeds. This has been a consistent pattern in each of the five years considered (Figure 7).

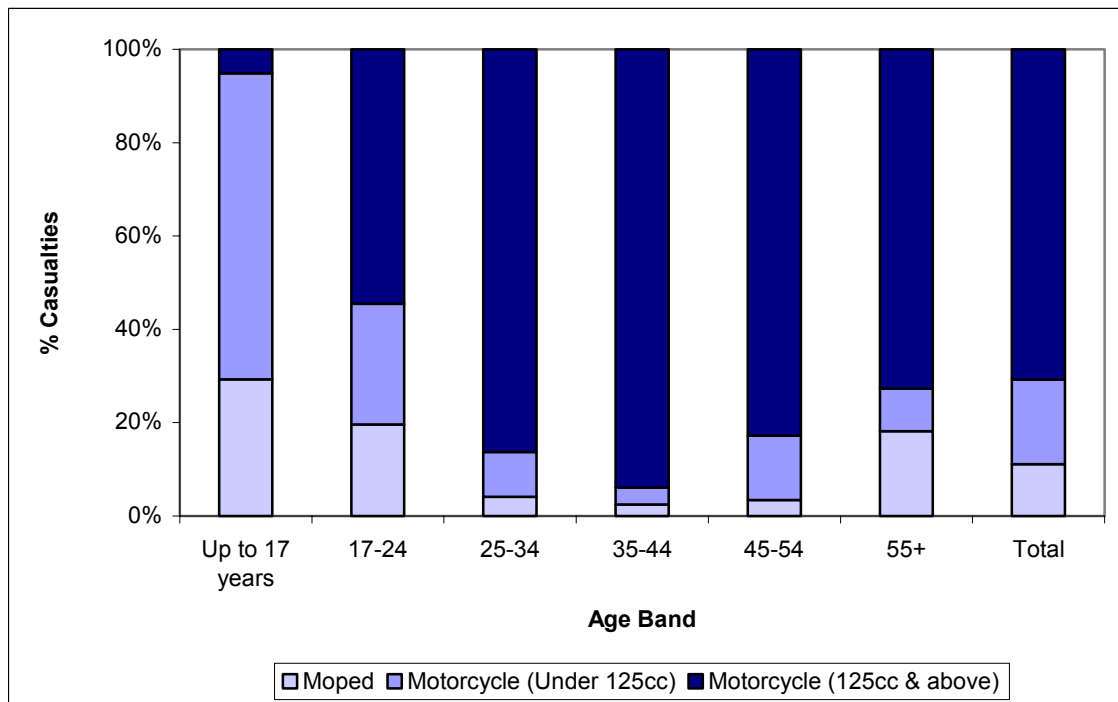
⁴ The PSNI Injury Road Traffic Collision report form does not currently differentiate between motorcycles above 125cc.

Figure 7: Motorcyclist KSI Casualties By Type of Vehicle: 2000-2004



On considering the type of motorcycle by age of casualty it is clear that casualties under 25 are over represented among moped casualties and casualties on motorcycles under 125cc. Those aged 25 or more are over represented among casualties on motorcycles of 125cc and above (except those aged 65+) (Figure 8).

Figure 8: Motorcyclist KSI Casualties By Age & Engine Size: 2000-2004



Causes of Motorcyclist KSI Casualties

In the period 2000 to 2004 818 motorcyclists sustained fatal or serious injuries in road traffic collisions. The 5 top causes of motorcyclist KSI casualties, irrespective of what party was responsible for the collision were:

- Excess speed having regard to conditions (126 KSI casualties)
- Emerging from a minor road without care (109 KSI casualties)
- Turning right without care (99 KSI casualties)
- Overtaking on offside without care (98 KSI casualties)
- Inattention (86 KSI casualties)

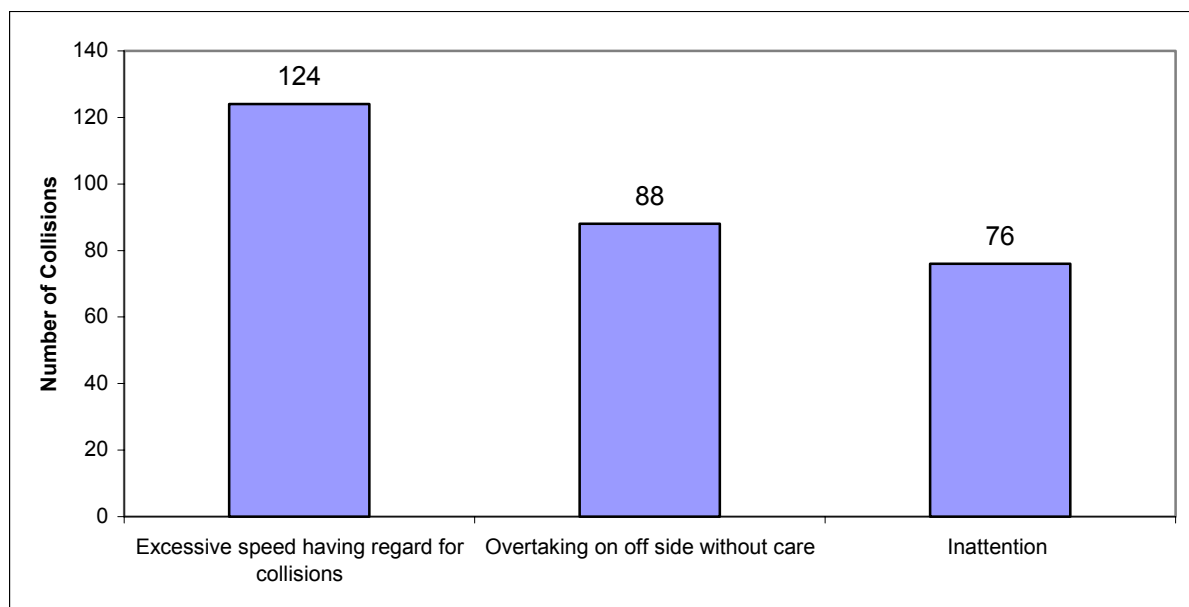
Together these 5 causes account for 63% of all KSI motorcyclist casualties in the period 2000-2004.

Causes of Motorcyclist KSI Collisions Where Motorcyclist is Responsible For Collision

Over half (52.6%) of all fatal and seriously injured motorcyclist casualties were responsible for the collision while the remaining 47.4% were not responsible. In the latter cases the main cause of the collision was other drivers/riders.

Focusing on fatal and serious collisions involving a motorcycle for which the rider was responsible reveals that over a quarter (26.7%) of these collisions were due to excessive speed, almost a fifth were due to overtaking on off side without care (18.9%) and 16.3% were due to inattention. Together these three causes accounted for 61.9% of fatal and serious collisions involving motorcycles for which the rider was responsible (Figure 9)

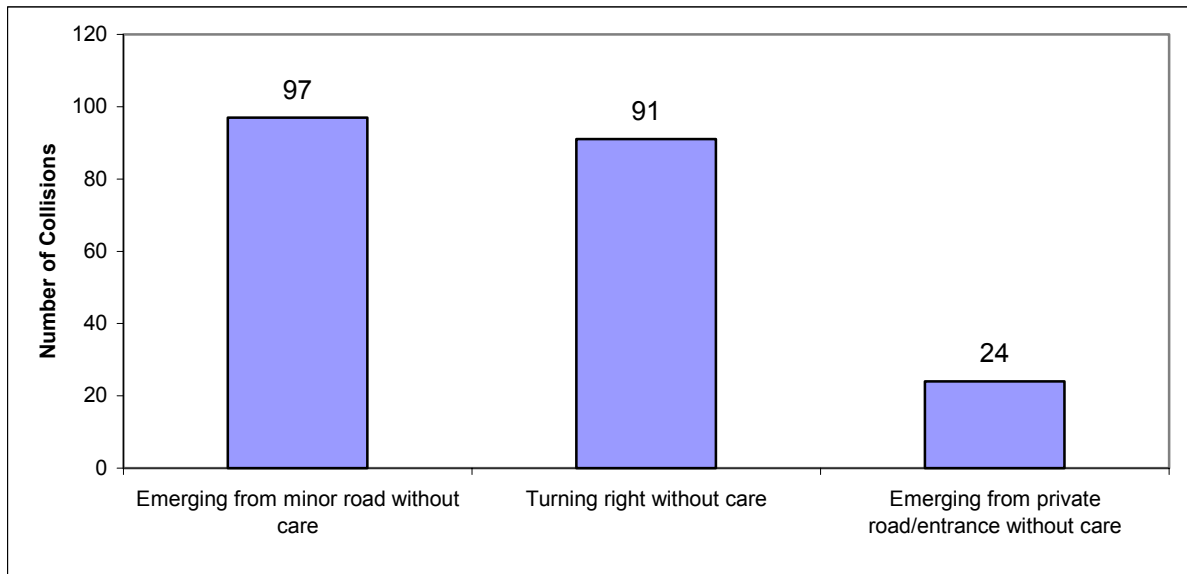
Figure 9: Top Three Causes of KSI Motor Cycle Collisions Where Rider Is Responsible For Collision: 2000-2004



Causes of Motorcyclist KSI Collisions Where Motorcyclist Is Not Responsible For Collision

With regard to fatal and serious collisions involving motorcyclists for which the rider was not responsible, the 2 main causes were emerging from minor road without care (23.8%) and turning right without care (22.4%) (Figure10).

Figure 10: Top Three Causes of KSI Motor Cycle Collisions Where Rider is Not Responsible For Collision: 2000-2004

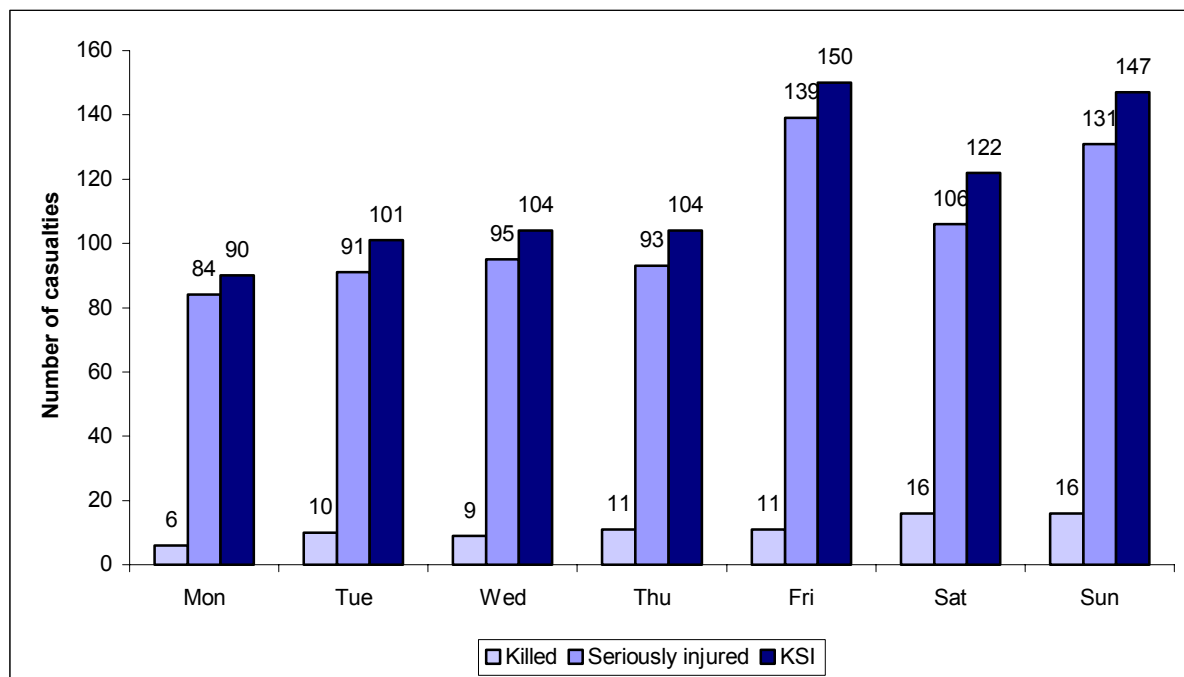


12% of the 818 KSI motorcyclist casualties resulted from single vehicle collisions. The main cause of KSI single vehicle motorcycle collisions was excessive speed having regard to conditions (29.7%), followed by driver/rider alcohol drugs (19.8%) and inattention (12.9%).

When Do Motorcyclist KSI Casualties Occur?

Over half (51.2%) of motorcyclist KSIs occur at the weekend (ie Friday, Saturday and Sunday) (Figure 11).

Figure 11: Motorcyclist Casualties By Day of Week



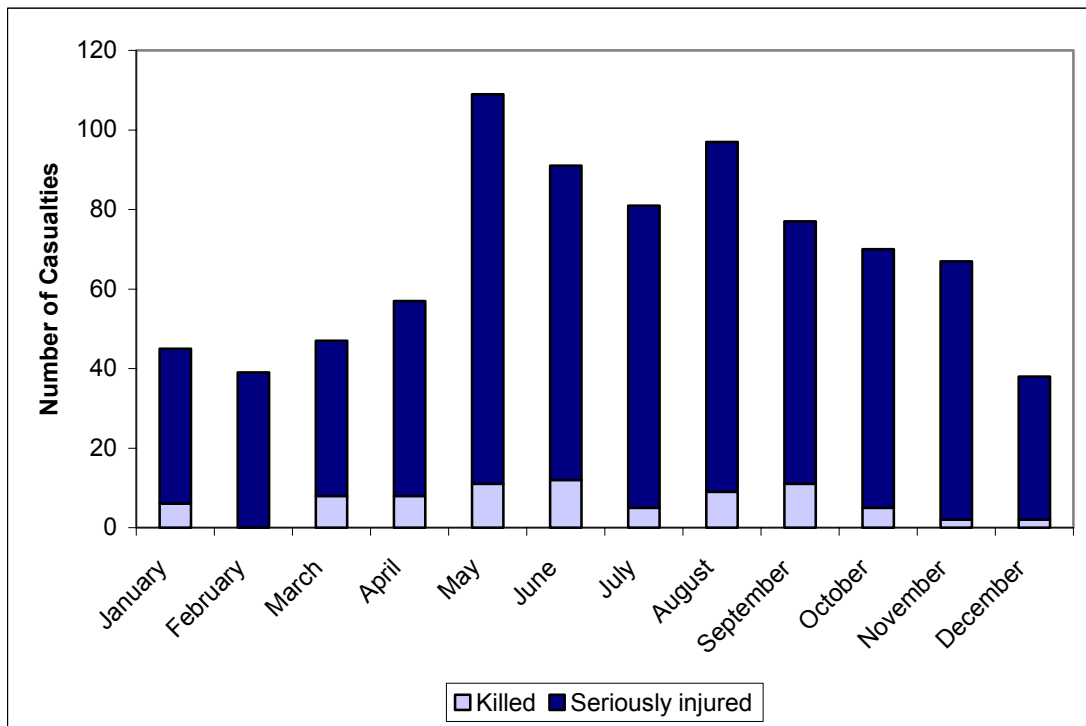
Throughout the entire week almost half (48.8%) of motorcyclist KSI casualties occur between 3pm and 9 pm with the peak time being from 3pm in the afternoon through to 6pm. 30.7% of motorcyclist KSI casualties occurred at this time. This was the peak period for KSI motorcyclist casualties every day except Monday, when the three hours from 6 until 9pm accounted for most casualties (32%) (Table 1).

Table 1 : Motorcyclist KSI Casualties By Time of Day and Day of Week

Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
0000 - 0259		1	2		2	6	1	12
0300 - 0559		1	1	2		3	5	12
0600 - 0859	10	16	19	12	21	4	6	88
0900 - 1159	5	12	7	8	11	12	18	73
1200 - 1459	12	10	8	8	32	34	40	144
1500 - 1759	23	26	37	38	54	28	45	251
1800 - 2059	29	18	24	23	16	22	16	148
2100 - 2359	11	17	6	13	14	13	16	90
Total	90	101	104	104	150	122	147	818

There is a clear seasonal pattern in the occurrence of motorcyclist KSIs with over two thirds (64.1%) of casualties occurring between May and October. These are the months during which motorcyclist are more likely to be on the roads due to better weather conditions. Almost one in eight of the KSI casualties occurred in May while in contrast one in 22 occurred in December (Figure 12).

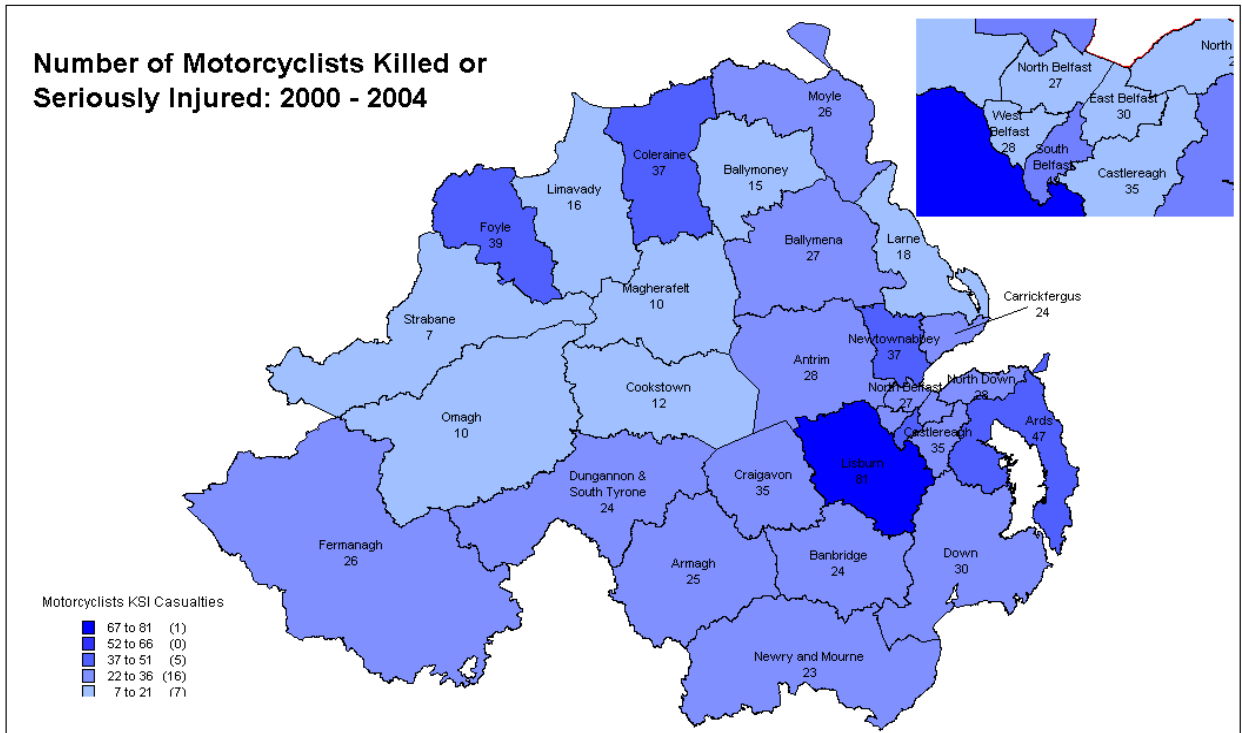
Figure 12: Motorcyclist KSI Casualties By Month: 2000-2004



Where Do Motorcyclist KSIs Occur?

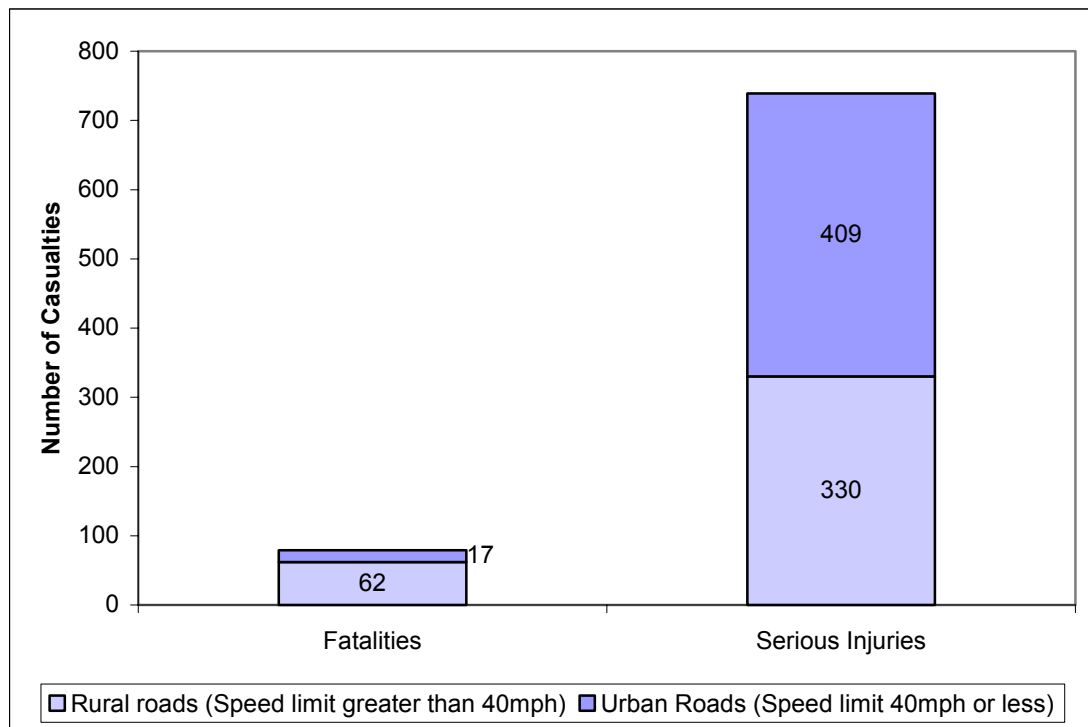
Lisburn DCU accounted for the largest proportion of motorcyclists KSIs (81, almost 10%), followed by South Belfast (49), Ards (47), Foyle (39) and Coleraine and Newtownabbey (37) (Figure 13).

Figure 13: Motorcyclist KSI Casualties By DCU: 2000 - 2004



When the distribution of KSI casualties by roads in built up areas (speed limit 40mph or less) and those in non-built up areas (roads with a speed limit over 40mph) is examined there is little difference. Just over half (52%) of motorcyclist KSI casualties occur on the former and 48% on the latter. However, narrowing the focus to consider fatalities shows that motorcyclist fatalities are more likely to occur on the faster rural roads. Almost four fifths (78%) of motorcyclist deaths between 2000 and 2004 took place on these roads (Figure 14).

Figure 14: Fatal & Seriously Injured Casualties By Type of Road: 2000-2004



KSI casualties aged less than 25 are more likely to occur on urban roads with a speed limit of 40mph or less. Three fifths (60%) of all young KSI casualties were on such roads. KSI casualties aged 25 or more were slightly more likely to occur on rural roads with a speed limit greater than 40mph. Just over half (53%) of fatal and serious casualties aged 25 or more resulted from collisions on rural roads.

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NI Travel Survey

NI 2001 Census of Population

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