



RSA

Fatal Collisions 2008-2012

Alcohol as a Factor

1 June 2016

Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Table of Contents

Executive Summary		4
Section 1	Introduction	11
Section 1.1	Background to Report	11
Section 1.2	Number of Fatal Collisions and People Killed Under Review	12
Section 1.3	Person Deemed Culpable for the Collision	13
Section 1.4	Methodology	14
Section 2	All Drivers Alcohol Test Details	19
Section 2.1	All Drivers Record of Any Test for Alcohol	19
Section 2.2	All Drivers Methods of Testing and Location	20
Section 2.3	All Drivers – Circumstances for No Alcohol Testing	20
Section 2.4	Alcohol as a Contributory Factor in Collision	22
Section 3	Alcohol as Contributory Factor in Collision	24
Section 3.1	Collision Type, When and Where	24
Section 3.2	Time, Day, Week, Month of Collision	27
Section 3.3	County of Collision	33
Section 3.4	Road Type and Speed Limit	36
Section 3.5	Weather and Light Conditions	39
Section 3.6	Road Conditions	40
Section 4	Profile of Driver Alcohol as Contributory Factor	41
Section 4.1	Culpability of Driver	41
Section 4.2	Gender and Age of Driver	41
Section 4.3	Driver Pre-crash Behaviour	44
Section 5	Confirmed Presence of Alcohol in Drivers and Motorcyclist	54

Executive Summary

Background to Report

Over the time period 2008 to 2012, 983 fatal collisions occurred on Irish roads claiming the lives of 1,077 people. This report examines 867 of the fatal collisions which occurred during this time period specifically focusing on the role of alcohol as a contributory factor in a fatal collision.

The road collision database in Ireland is created using a form called a C(T)68 forwarded to the Road Safety Authority (RSA) from An Garda Síochána. The information provided in this form is based on preliminary information collected at the scene of a collision and does not constitute the findings of the final investigation. The RSA issues reports regularly using the data contained in this database as the best available representation of fatal and injury collisions.

However, this report is based on an analysis of the completed Garda investigation file where the full circumstances of the collisions are available. Access was granted by An Garda Síochána to the completed Investigation File produced for each collision. The file contains two main reports:

1. An Garda Síochána Investigation Report
2. Forensic Collision Investigation Report (FCI)

The RSA collected the data in the Garda National Traffic Bureau. This report provides an analysis of the data by collision, by vehicle and by contributory factor. Therefore, the figures and totals will change depending on the category.

Alcohol as a Contributory Factor in Fatal Collisions

In the period 2008 to 2012, alcohol was cited as a *contributory factor* in 330 (38%) of the 867 collisions for which files were available for analysis. This figure is based on both confirmed alcohol results for the driver, motorcyclist, pedestrian or cyclist and/or the attending Garda's opinion. In certain circumstances, it was not possible to test the suspected driver for alcohol for reasons such as the driver leaving the scene, difficulty in identifying the driver at the scene, medical consent for alcohol testing

being refused and refusing to provide a sample. In these circumstances the Garda's opinion at the scene, witness statements and in some instances admission by the driver of alcohol consumption indicated alcohol as a contributory factor for the collision.

In total 250 drivers (222 motor vehicle, 28 motorcyclists) had consumed alcohol prior to the collision. As a proportion of all 867 fatal collisions analysed, this indicates 29% involved at least one driver or motorcyclist with a record of alcohol consumption prior to the collision. This highlights the fact that a high level of drink driving is still evident in Ireland. All of these drivers were deemed culpable or part culpable for the collision through their behaviour on the road prior to the collision.

A further 9% of the 867 fatal collisions were caused by a pedestrian who had consumed alcohol. Of the 867 files available for analysis, 164 fatal collisions involved a pedestrian over the age of 17. Eighty one (49%) of these pedestrians were killed in circumstances where their alcohol consumption was deemed in full or part to have contributed to the collision.

To have a confirmed presence of alcohol, there must have been at least 20 mg or greater of alcohol in a blood or 27 mg or greater in a urine sample or a failed breathalyser test set at the prevailing legal limit at the time of the collision. At the time of the analysis a record of a toxicology report was available in the file for 198 (79%) of the 250 drivers. This does not imply that a record of a test was never available or toxicology never taken, just that at the time of analysis there was no copy for verification in the investigation report.

Of the 198 drivers with a confirmed presence of alcohol, 174 (70%) were over the prevailing legal limit at the time of the collision. This was determined by taking into account the change in alcohol limits for all drivers, novice and professional drivers (see methodology). As a portion of all 867 collisions analysed 174 (20%) collisions involved a driver over the legal limit at the time of the collision.

Confirmed Presence of Alcohol Drivers, Motorcyclists and Pedestrians

Half (50%) of all drivers (car, van, HGV, agricultural) and motorcyclists with a confirmed presence of alcohol had a blood alcohol level in excess of 201mg. This equates to over four times the current drink driving limit.

A quarter of drivers (26%) compared to 23% of motorcyclists had a blood alcohol level recorded in excess of 251 mg. This indicates that a quarter of drivers were five times over the current legal limit and a fifth of motorcyclists were five times over the current legal limit at the time of the collision.

The greatest proportion of those in the 16 to 24 and 25 to 34 age groups had in excess of 201 mg of alcohol in their system.

Forty seven percent of the drivers aged between 16 and 24 years and 57% of the drivers between 25 and 34 had in excess of 201mg.

Those in the 16 to 24 and 25 to 34 year age groups show consistently higher blood alcohol levels than older age groups. This is of particular note when the BAC level is recorded as 151 mgs and higher

Almost a third (31%) of the motorcyclists aged between 25 to 34 age group had a BAC of 201 to 250 mg.

A quarter (25%) of pedestrians had a BAC in excess of 201mg and a further 28% had a BAC in excess of 251mg. This highlights that over half (52%) of the pedestrians were on the road with a BAC in excess of 201mg.

The majority of all drivers, motorcyclists and pedestrians involved in fatal collisions with a confirmed blood alcohol record had a BAC of greater than 101mg.

Number of People Killed and injured in Alcohol Related Collision

Over the time period 2008 to 2012, 250 drivers (222 motorists, 28 motorcyclists) had a record of alcohol consumption prior to the collision. As a result of a collision with one of these 250 drivers, 286 people were killed and 69 were seriously injured.

Table 1. Number of People Killed or Seriously Injured by Driver/Motorcyclist

	Fatal	Serious	Minor
Driver	169	26	51
Motorcyclist	25	1	2
Passenger	83*	42	61
Pedestrian	8	-	-
Cyclist	1	-	-
Total	286	69	115

* 3 pillion passengers

Four cyclists and 76 pedestrians were killed where their own alcohol intake was a contributory factor in the collision.

Of the 84 motorcyclists killed over the 5 year period, 25 (30%) were killed in a collision where alcohol was a contributory factor.

Of the 196 passengers killed over the 5 year period, 83 (42%) were killed in a collision where alcohol was a contributory factor.

Of the 169 drivers who were killed, 155 (92%) were drivers who had consumed alcohol.

Of the 28 collisions where alcohol was the sole contributory factor, 30 people were killed (24 drivers, 3 motorcyclists, 3 passengers). Four were seriously injured.

Type, when and where are they on the road?

Half of the 330 collisions where alcohol was a factor involved a single vehicle and a quarter involved a pedestrian.

Of all vehicles involved in the 867 collisions analysed, 194 (24%) of the private car drivers, 22 (24%) of the van drivers, 28 (29%) of the motorcyclists and 5 (28%) of the tractor drivers had consumed alcohol prior to the collision.

Of the 250 collisions, 59% involving a driver and 50% involving a motorcyclist who had consumed alcohol occurred between 8pm and 4am. There was a peak in collisions for a driver between 2 and 3am and peak between 5 and 6 pm for motorcyclists.

Sunday followed by Saturday were the most frequent days of collisions. Fifty seven percent of the motorcyclists crashed on a Sunday compared to 29% of the drivers. A motorcyclist is more likely to crash on a Sunday, in particular between 5 and 6pm.

Overall, the pattern of collisions increase from 9pm on a Friday evening to 5 am on a Monday morning.

More drivers crashed in February, March and October compared to July and May for motorcyclists. This indicates a greater risk for motorcyclists in the summer months compared to winter months for other drivers.

The top four counties where alcohol was a factor in single vehicle or two vehicle collisions were Cork, Galway, Donegal and Cavan.

Almost half (48%) of all collisions occurred on a Regional road, and a further third (34%) on a National route.

Overall, the speed limits would suggest 19% of alcohol related collisions occurred in an urban area and 81% on a more rural environment.

The weather was recorded as dry and dark at the time of the majority of collisions.

Who was driving?

The majority of drivers who had consumed alcohol were male. Almost half (43%) of the drivers who had consumed alcohol were aged between 16 and 24 years.

Overall, three quarters (74%) of the drivers (motorcyclists included) who had consumed alcohol were aged between 16 and 34 years.

Almost half of the drivers of a private car who had consumed alcohol were aged between 16 and 24 years. By contrast the majority (57%) of motorcyclists who had consumed alcohol were aged between 25 and 34 years.

Those aged 16 to 24 years were more likely to have been in a single vehicle collision and a pedestrian or cyclist collision.

The majority of the drivers who had consumed alcohol were on the road for social purposes, however, 3 were driving for work at the time of the collision.

Drivers Insurance and Licence

Almost a third (31%) of the drivers who had consumed alcohol had no insurance and 16% had no record of a licence at the time of the collision.

Of the 165 recorded as having a licence and who had consumed alcohol, 75% held a full licence, 15% were on a Learners Permit and 7% were disqualified at the time of the collision.

Of the 25 on a Learner Permit, 12 were on a first permit (3 unaccompanied), 3 were on a second permit and two were recorded as expired. Six of the drivers had held their Permit for less than 6 months.

Two of the 123 drivers recorded as holding a full licence had a previous history of disqualification and two of the eleven drivers who were disqualified at the time of the collision had a history of disqualification. This indicates repeat offenders on the road.

How did the Crash Happen?

The main action indicated for the driver who had consumed alcohol was loss of control of the vehicle (66%) and a further 14% crossed to the wrong side of the road, in effect suggesting a loss of control of the vehicle. Other actions indicated included a failure to observe or stop/yield, improper overtaking and dangerous behaviour.

Of the 164 collisions where loss of control was cited, the majority (137) occurred in single vehicle collisions.

An examination of the single vehicle collisions with regard to pre-crash behaviour indicated they were primarily due to poor road use behaviour and not suicide as is often suggested. While a minor number may have a suggestion of suicidal intent, none were classified as such by the Coroner's office. All indications including the number of passengers on board, the behaviour observed prior to the collision and the type of action being performed at the time of collision would corroborate this verdict.

Twenty eight of the 250 collisions cited alcohol as the only contributory factor. An additional 3 had alcohol and a vehicle factor noted (2 with worn tyres).

A combination of speed, drugs, fatigue, distraction and dangerous behaviour were other pre-crash behaviours observed.

Seatbelt Use by Driver and Passengers in Alcohol Related Collision

Drivers: Overall, 196 drivers in the 867 collisions analysed were recorded as not wearing a seatbelt at the time of the collision, 111(57%) had consumed alcohol prior to the collision. Ninety six (86%) of the 111 drivers were killed, twenty five of whom were fully ejected and a further 7 were partially ejected.

Passengers: Of all 174 passengers in the 867 collisions recorded as not wearing a seatbelt 87 (50%) of these had consumed or were suspected of consuming alcohol. Forty four (51%) of the 87 were killed, 26 of whom were ejected.

These figures may indicate the consumption of alcohol by a driver or passenger has an impact on their decision to use a seatbelt.

Section 1.

Introduction

Section 1.1 Background to Report

Over the time period 2008 to 2012, 983 fatal collisions occurred on Irish roads claiming the lives of 1,077 people. The current report is an examination of the circumstances and factors contributing to these collisions. By better understanding how and why these collisions have occurred, the RSA can focus their interventions on the main contributing factors to fatal collisions in Ireland and reduce the number of people being killed on the roads.

A remit of the RSA is to report on road collisions occurring on Irish roads; as part of this work data is collated and analysed using the road collision database. This database is created using a form called a C(T)68 forwarded to the RSA from An Garda Síochána. The information provided in this form is based on preliminary information collected at the scene of a collision and thus does not constitute the findings of the final investigation. The RSA issues reports regularly using the data contained in this database as the best available representation of fatal and injury collisions.

This report is based on an analysis of the completed investigation file where the full circumstances of the collisions are available. Access was granted by An Garda Síochána to the completed Investigation File produced for each collision. The file contains two main reports:

1. An Garda Síochána Investigation Report
2. Forensic Collision Investigation Report (FCI)

The RSA collected data in the Garda National Traffic Bureau. Of the 983 fatal collisions which occurred in the time period under investigation, approximately 12% (116) were unavailable for analysis for reasons which included a continuing or ongoing investigation and the file held by An Garda Síochána Ombudsman Commission (GSOC). The final number of collisions analysed was 867.

An Garda Síochána Investigation Report:

This report is completed by the main investigating officer who attended the collision and provides a detailed breakdown of the collision scene, vehicles involved, details of each driver, passengers, testing for alcohol, the number and type of casualty and all relevant circumstances to the collision. Included in this report are all witness statements provided to An Garda Síochána around the factors observed prior to and post collision by those involved in the collision and those who may have witnessed the collision. Autopsy reports, results of alcohol tests, the Forensic Collision Investigation Report and the decision by the Coroner are also included. This file allows the investigating officer to determine the circumstances prior to the collision, the party whose actions were primarily responsible for causing the collision and the direction or request to the Director of Public Prosecutions for a prosecution of those involved.

Forensic Collision Investigation Report (FCI):

All fatal collisions are investigated by the regional Forensic Collision Investigation unit of An Garda Síochána. As part of this investigation a complete service check is performed on all vehicles involved to determine what or if any specific vehicle factors were present (e.g. faulty tyres, brakes, lights) which may have contributed either in full or part to the crash (PSV report). The PSV report is completed by Public Service Vehicle Inspector (a member of An Garda Síochána). This information is used in conjunction with a detailed forensic examination of the scene taking into account weather, lighting and road conditions or layout and the assessment of speed where possible. The result is an FCI Report containing information on each of the vehicles involved and a detailed description of how the crash occurred. This enables the decision to be made as to whether a specific party or vehicle is either culpable or part culpable for the collision.

Section 1.2 Number of Fatal Collisions and People Killed Under Review

This report will examine 867 of the fatal collisions which occurred from 2008 to 2012 (Table 1.1). These include:

Table 1.1 No of Collision files Examined

Single Vehicle	333
Two Vehicle	319
Cyclist	37
Pedestrian	178
Total	867

858 of the 867 collisions involved at least one driver. Of the other nine, seven were cyclist only and two 'pony and trap' only collisions. Details of 1,177 drivers (1,081 four wheeled motor vehicle and 96 motorcycle drivers) were available for analysis.

The number of people killed or injured for which details were available for analysis are as follows in Table 1.2:

Table 1.2 Killed and Injured Figures in Collisions Analysed

	Killed	Serious Injury	Minor Injury
Driver motor vehicle	450	69	154
Driver motorcycle	84	2	6
Passenger	196	94	143
Pedestrian	180	-	-
Cyclist	37	-	-
Total	947	165	303

Section 1.3 Person Deemed Culpable for the Collision

For each collision where possible or appropriate, the Investigation report produced by An Garda Síochána identifies the party whose actions most likely caused the collision. This results from a detailed analysis of all factors such as witness statements on the behaviours and actions of the driver, pedestrian or cyclist, and

alcohol toxicology results. It also includes conclusions drawn from the FCI report on precisely how the collision occurred and which vehicle was being driven by the person deemed to be responsible or part responsible for causing the collision. In some instances no responsibility by the driver, cyclist or pedestrian is determined due to the specific circumstances of the collision. This may be the case in hit and run collisions or those with unforeseen circumstances, such as an animal or unexpected object on the road. However, for the most part one party is deemed by their actions to have caused the fatal collision.

It is important that the details of those parties whose actions or behaviour caused the collision be highlighted as these are the behaviours that will need to be addressed through road safety interventions to modify such behaviour and be the focus of Garda enforcement efforts. Throughout the report there will be a section detailing the profile and actions of those who were deemed to be responsible or part responsible for the collision. For the remainder of the report they will be referred to as the culpable party. Of the 1,177 drivers of motorised vehicles where details are available, 705 were deemed to be culpable or part culpable for the collision. Three drivers were deemed not culpable due to unforeseen circumstances such as the presence of unexpected animals or objects on the road. A further three collisions were hit and run so no culpability could be determined.

Please note:

Where culpability is cited this is not judicial culpability. This report is focused on the pre-crash behaviour of the parties involved in the collision and not the result of a prosecution.

Section 1.4 Methodology

This report will focus on the role of *alcohol as a contributory factor* in a fatal collision for which a file is available for analysis. In total, 867 collisions were analysed. Due to the differing processes for the collection of a sample after a road traffic collision, not all documentation was available for review in the investigation file. However, the final Investigation Report uses all information available, including the results of toxicology

(which may not have been present in the file) to make a judgement on the use of alcohol by the driver(s) involved in the collision.

The figures cited in the subsequent analysis is based on both confirmed alcohol results for the driver, pedestrian or cyclist and the investigating Garda's opinion. In certain circumstances, it was not possible to test the suspected driver for alcohol for reasons such as the driver leaving the scene, difficulty in identifying the driver at the scene, medical consent for alcohol testing being refused at the hospital and the driver refusing to provide a sample. In these circumstances the Garda's opinion at the scene in combination with witness statements and in some instances admission by the driver of alcohol consumption indicated alcohol as a contributory factor for the collision.

Toxicology Sample

The period of this study covers 2008 to 2012. Over this period of time two amendments relevant to this analysis were made to the Road Traffic Act.

1. Under the Road Traffic Act 2011, it is mandatory for Gardaí to conduct a preliminary breath test where they believe a driver has consumed alcohol or at the scene of a crash where someone has been injured and requires medical attention. Prior to this time a Garda could form the opinion that no breath test was required.
2. Section 4 of the Road Traffic Act 2010, reduced the drink driving alcohol limits for all drivers. It differentiates between experienced drivers and new drivers – those with learner permits or who hold a driving licence for 2 years or less, or have no valid licence/permit. Lower alcohol limits apply to new drivers than those that apply to experienced drivers. The lower alcohol limits applying to new drivers also apply to drivers of buses, lorries, trailers, work vehicles, taxis and other public service vehicle drivers. The new offences are as follows:

50 milligrammes of alcohol per 100 millilitres of blood for experienced drivers.

20 milligrammes of alcohol per 100 millilitres of blood for novice and professional driver.

67 milligrammes of alcohol per 100 millilitres of urine for experienced drivers.

27 milligrammes of alcohol per 100 millilitres of urine for novice and professional driver.

22 microgrammes of alcohol per 100 millilitres of breath for an experienced driver.

9 microgrammes of alcohol per 100 millilitres of breath for novice and professional driver.

Testing at the Scene:

At the scene of an RTC a driver who is in a medically fit condition will be asked under the Road Traffic Act to:

- *(a) to provide, by exhaling into an apparatus for indicating the presence of alcohol in the breath, a specimen of his or her breath in the manner indicated by the member,*
- *(b) to accompany him or her to a place (including a vehicle) at or in the vicinity of the public place concerned and there to provide, by exhaling into such an apparatus, a specimen of his or her breath in the manner indicated by the member, or*
- *(c) where the member does not have such an apparatus with him or her, to remain at that place in his or her presence or in the presence of another member of the Garda Síochána (for a period that does not exceed one hour) until such an apparatus becomes available to him or her and then to provide, by exhaling into such an apparatus, a specimen of his or her breath in the manner indicated by the member.*

In certain circumstances a sample will not be requested by the attending Garda:

- *(6) A member of the Garda Síochána shall not make a requirement under subsection (2) of a person to whom paragraph (a) of subsection (1) applies if, in the opinion of the member, such requirement would be prejudicial to the health of the person.*
- *(7) A member of the Garda Síochána shall not make a requirement under subsection (2) of a person to whom paragraph (d) of subsection (1) applies if, in the opinion of the member or on the advice of a doctor*

or other medical personnel attending the scene of the event, such requirement would be prejudicial to the health of the person.

Testing at the Station or Hospital:

Where a driver fails the preliminary test at the scene, he/she is taken to the Garda station for an evidential test to be conducted (blood or urine).

In the event where the requirement of a sample would be prejudicial to the health of the driver or if the driver attends hospital, it is mandatory that a requirement to provide blood/urine sample is made in the hospital on every occasion that the driver of a vehicle involved in an 'event' attends hospital. The member making the requirement does not need to be the member attending the scene of the 'event' rather must be of the opinion that person is injured or claims to be injured as a result of the 'event'. A designated doctor or nurse must agree to take the sample. The medical doctor treating the driver may refuse such a test should they decide it would be prejudicial to the health of the person.

The Road Traffic Act states the driver must:

- (a) permit a designated doctor or designated nurse to take from the person a specimen of his or her blood, or

- (b) at the option of the person, to provide for the designated doctor or designated nurse a specimen of his or her urine,

Before making a requirement of a person under the Road Traffic Act, the member of the Garda Síochána concerned shall consult with a doctor treating the person, and if a doctor treating the person advises the member that such a requirement would be prejudicial to the health of the person the member shall not make such requirement.

The doctor or nurse must state in writing:

- *(i) that he or she is unwilling, on medical grounds, to take from the person or be provided by the person*

- *(ii) that the person is unable or unlikely within the period of time referred to in section 4 or 5, as the case may be, to comply with the requirement.*

New legislation in 2013 gave An Garda Síochána powers to require a sample from an unconscious driver. However, this is not relevant to the current data under review.

Analysis of Blood or Urine Samples:

Any sample of urine or blood is submitted to the Medical Bureau of Road Safety. The functions of the Bureau are laid down in the Road Traffic Acts 1968 –2010 and their regulations include:

- The receipt and analysis for intoxicants of specimens of blood and urine forwarded to the Bureau.
- The issue of certificates of analysis.

Post Mortem Testing

In the case of a fatality due to an RTC, the relevant Coroner's office direct a pathologist to perform a post mortem to determine the cause of death and the presence of an intoxicant such as alcohol and drugs under the Coroner's Act. Therefore, for drivers who have died the toxicology is usually performed post mortem. However, in some instances an ante-mortem toxicology is also available if a sample was taken upon arrival at the hospital.

Section 2.

All Drivers Alcohol Test Details

Details of 1,177 drivers (1,081 four wheeled motor vehicle and 96 motorcycle drivers) involved in collisions between 2008 and 2012 were available for analysis. Drivers *where possible* are tested for alcohol at the scene by a breathalyser. Due to reasons such as the unavailability of a breathalyser at the scene or the driver's medical condition, some testing may occur at either at the station or in hospital as per the Road Traffic Act. In the event of the driver's death, blood and urine alcohol testing is conducted post mortem as directed by the Coroner's Office.

Section 2.1 All Drivers Record of Any Test for Alcohol

Of the 1,177 drivers involved in a collision 758 (64.4%) had a record of a test for alcohol either at the scene or a subsequent location including a station, hospital or post mortem (Table 1).

Table 1. Number of All Drivers Tested for Alcohol by Any Method

	Fatal	Serious	Minor	No injury	Total
	N	N	N	N	N
Yes	367	25	83	282	758
No	7	43	64	96	210
NR*	160	2	13	34	209
Total	534	71	160	412	1177

NR* includes where there was no record of a test conducted by An Garda Síochána in the investigation file (n =40) and/or no results of an autopsy for a driver who died either at the scene or in hospital (n = 169).

Section 2.2 All Drivers Methods of Testing and Location

Of the 758 with a record of a test, almost half (48.2%) of alcohol testing was performed post mortem (Table 2). A further 169 drivers died but no autopsy was available in the investigation file at the time of the analysis to determine if alcohol was present.

Table 2. All Drivers Tested for Alcohol by Location and Method

	N	%
Post mortem blood or urine	365	48.2
Breath at scene	291	38.3
Breath at scene and hospital blood or urine test	4	
Breath at scene and station blood or urine test	4	
At hospital blood or urine*	87	11.5
At station breath, blood or urine*	15	2.0
Total	758	100.0

* All samples taken on behalf of and returned to the Medical Bureau of Road Safety as per Road Traffic Act

Section 2.3 All Drivers- Circumstances for No Alcohol Testing

Apart from the 534 drivers who were killed, an explanation was provided in the investigation file for 150 drivers who were not tested for alcohol consumption (breathalysed, blood or urine testing). The two main reasons provided were:

- The opinion of the attending Garda at the scene that the driver had not consumed alcohol prior to the collision. Of the 58 where it was stated no test was taken due to the opinion of the attending Garda, 85% of these were between the time period 2008 and June 2011 before the new legislation was enacted.
- The medical condition of the driver was deemed too serious at the scene or by medical staff at the hospital to provide a blood or urine sample (Table 3).

Section 2.4 Alcohol as a Contributory Factor in Collision

In the period 2008 to 2012, alcohol was cited as a *contributory factor* in 330 (38%) of the 867 collisions for which files were available for analysis. These collisions were classified as an alcohol related collision where the driver, pedestrian or cyclist had a record of alcohol consumption. This figure is based on confirmed alcohol results for the driver, pedestrian or cyclist and/or the attending Garda's opinion. In certain circumstances, it was not possible to test the suspected driver for alcohol for reasons explained previously such as the driver leaving the scene, difficulty in identifying the driver at the scene, medical consent for alcohol testing being refused and refusing to provide a sample. In these circumstances the Garda's opinion at the scene, witness statements and in some instances admission by the driver of alcohol consumption indicated alcohol as a contributory factor for the collision.

In total 250 drivers (222 motor vehicle, 28 motorcyclists) had consumed alcohol prior to the collision. As a proportion of all 867 fatal collisions analysed, this indicates 29% involved at least one driver or motorcyclist with a record of alcohol consumption prior to the collision. This highlights the fact that a high level of drink driving is still evident in Ireland. All of these drivers were deemed culpable or part culpable for the collision through their behaviour on the road prior to the collision.

A further 9% of the 867 fatal collisions were caused by a pedestrian who had consumed alcohol. Of the 867 files available for analysis, 164 fatal collisions involved a pedestrian over the age of 17. Eighty one (49%) of these pedestrians were killed in circumstances where their alcohol consumption was deemed in full or part to have contributed to the collision.

Overall there were 250 drivers who had a record in the investigation file of alcohol consumption prior to the collision. This was based on the results of toxicology testing and/or the witness statements of the parties involved in the collision. At the time of the analysis a record of a toxicology report was available in the file for 198 (79%) of the 250 drivers. This is referred to as a confirmed presence of alcohol. For the 52 remaining, this does not imply that a record of a test was never available or toxicology never taken, just that at the time of analysis there was no copy for verification in the investigation report. To have a confirmed presence of alcohol, there

must have been at least 20 mg or greater of alcohol in a blood or 27 mg in urine sample or a failed breathalyser test set at the prevailing legal limit at the time of the collision.

Of the 198 drivers with a confirmed presence of alcohol, 174 (70%) were over the prevailing legal limit at the time of the collision. This was determined by taking into account the change in alcohol limits for all drivers, novice and professional drivers (see methodology). As a proportion of all 867 collisions analysed 174 (20%) collisions involved a driver over the legal limit at the time of the collision.

Section 3.

Alcohol as Contributory Factor in Collision

All of the results in this section refer to any driver with a record of alcohol consumption prior to the collision (both drivers who died those who survived).

Section 3.1 Collision Type, When and Where

Half of all single vehicle collisions involved alcohol (Table 4). A quarter of the alcohol related collisions involved a pedestrian.

Table 4. Type of Collision where Alcohol a Factor

	N	%
Single vehicle	165	50.0
Two vehicle	76	23.0
Cyclist	5	1.5
Pedestrian	84	25.5
Total	330	100.0

These collisions were classified as an alcohol related collision where the driver, motorcyclist, pedestrian or cyclist had a record of alcohol consumption. Table 5. sets out the party with a record of alcohol consumption. There is an important difference between Table 4 and Table 5. Table 4 sets out the *profile of the collisions* where alcohol was a contributory factor such as if it involved a pedestrian or a single vehicle. Table 5 sets out the *party who had consumed* alcohol prior to the collision. It is important in terms of culpability for instance, to distinguish between whether a driver or pedestrian was the party who had consumed alcohol and whose subsequent road use behaviour contributed to the final outcome.

Table 5. Party Who Consumed Alcohol Prior to Collision

	N	%
Driver	217	65.8
Pedestrian	76	23.0
Motorcyclist	28	8.5
Driver and pedestrian*	5	1.5
Cyclist	4	1.2
Total	330	100.0

*Both the driver and the pedestrian had consumed alcohol

As set out in Table 5, in some instances, *only* the pedestrian (23%), cyclist (1.2%) or motorcyclist (8.5%) had consumed alcohol and in 5 (1.5%) both the pedestrian and the driver had a record of alcohol consumption prior to the collision. Overall, 81 (25%) pedestrians and 222 (67%) drivers had consumed alcohol prior to the collision.

As a proportion of all 867 fatal collisions analysed 250 (29%) involved at least one driver or motorcyclist with a record of alcohol consumption prior to the collision. This indicates the issue of drink driving is still evident in Ireland. As a proportion of all 867 collisions analysed 81 (9%) of the pedestrians were either fully or part culpable for the collision due to their alcohol consumption.

Table 6 sets out the type of vehicle driven by the party who had consumed alcohol. Of the 250 drivers, the majority (78%) were driving a private car and 28 (11%) were driving a motorcycle.

Table 6. Type of Vehicle by Driver who Consumed Alcohol

	N	%	Total	%
	Alcohol		Vehicles	
Private car	194	77.6	810	24.0
Motorcycle	28	11.2	96	29.2
Van	22	8.8	92	23.9
Agricultural	5	2.0	18	27.8
HGV	1	0.4	102	1.0
Total	250	100.0		

Table 6 also sets out the total number of each vehicle involved in the fatal collisions analysed. One hundred and ninety four (24%) of the 810 private car drivers had consumed alcohol prior to the collision. Similarly, 22 (24%) of the van drivers had also consumed alcohol prior to the collision.

However, a larger proportion of the motorcyclists and tractor drivers had consumed alcohol prior to the collision with 28 (29%) of the 96 motorcyclists and 5 (28%) of the 18 tractor drivers having done so.

Table 7 sets out the type of vehicle being driven by the party who had consumed alcohol by the type of collision they were involved in. The second highest group of drivers involved in a single vehicle collision were motorcyclists (10%). All but one of the pedestrians was hit by a driver of a private car. All of the drivers of an agricultural vehicle who had consumed alcohol prior to the collision did not involve another vehicle.

Table 7. Type of Vehicle Driven by Person who had Consumed Alcohol by Collision Type

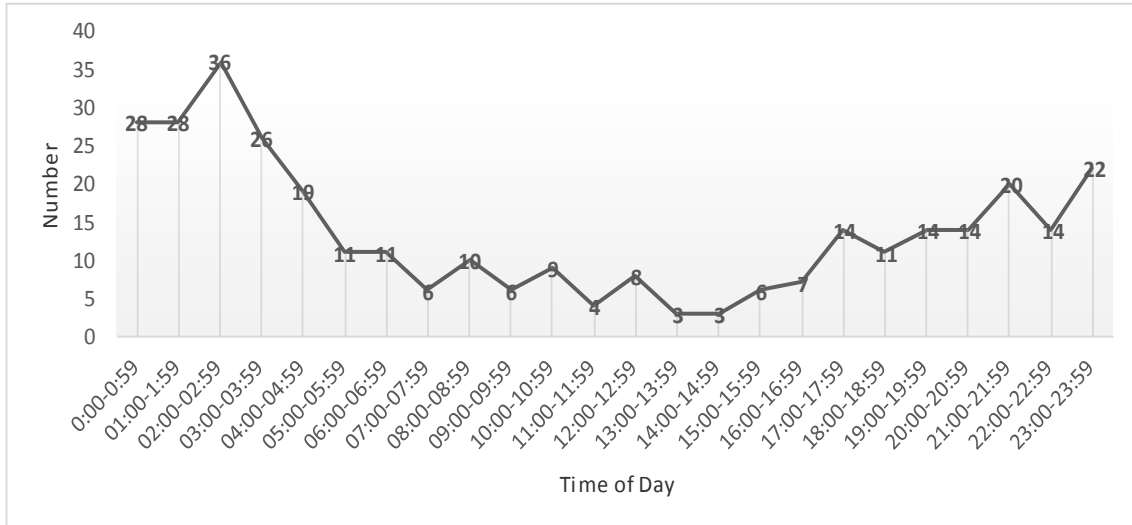
	Single vehicle		Two vehicle		Cyclist		Pedestrian	
	N	%	N	%	N	%	N	%
Private Car	130	78.8	56	73.7	1	100.0	7	87.5
Motorcycle	17	10.3	11	14.5	0	0.0	0	0.0
Van	13	7.9	8	10.5	0	0.0	1	12.5
Agricultural	5	3.0	0	0.0	0	0.0	0	0.0
HGV	0	0.0	1	1.3	0	0.0	0	0.0
Total	165	100.0	76	100.0	1	100.0	8	100.0

Section 3.2 Time, Day, Week, Month of Collision

All Alcohol related Collisions

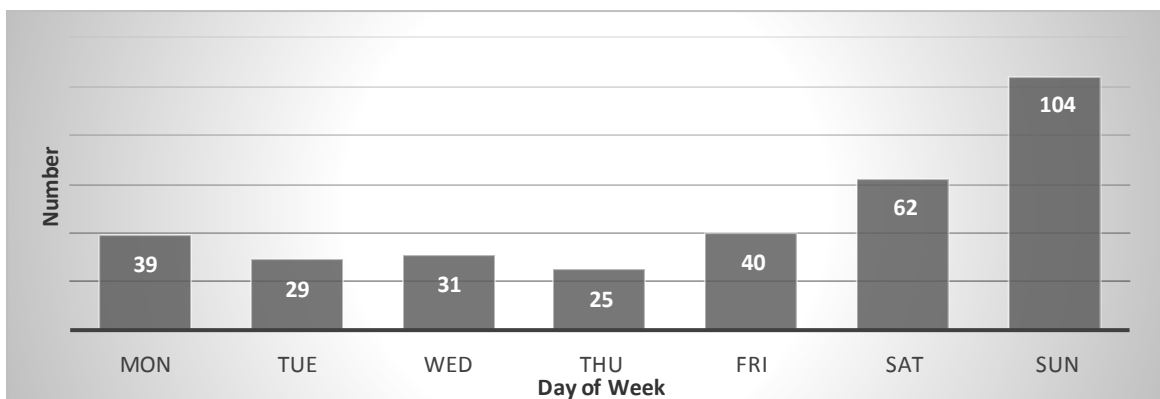
Overall, over half (58%) of the 330 alcohol related collisions occurred between 9pm and 5am with a particular peak between 2 and 3 am (Figure 1).

Figure 1. Time of Day all Alcohol Related Collisions



Almost a third (31.5%) of the alcohol related collisions occurred on a Sunday. When taken together almost two thirds (62.4%) occurred on the weekend days Friday, Saturday and Sunday (Figure 2). The number of collisions increased from 9pm on a Friday night until 6am on a Monday morning (Table 1, Appendix 1).

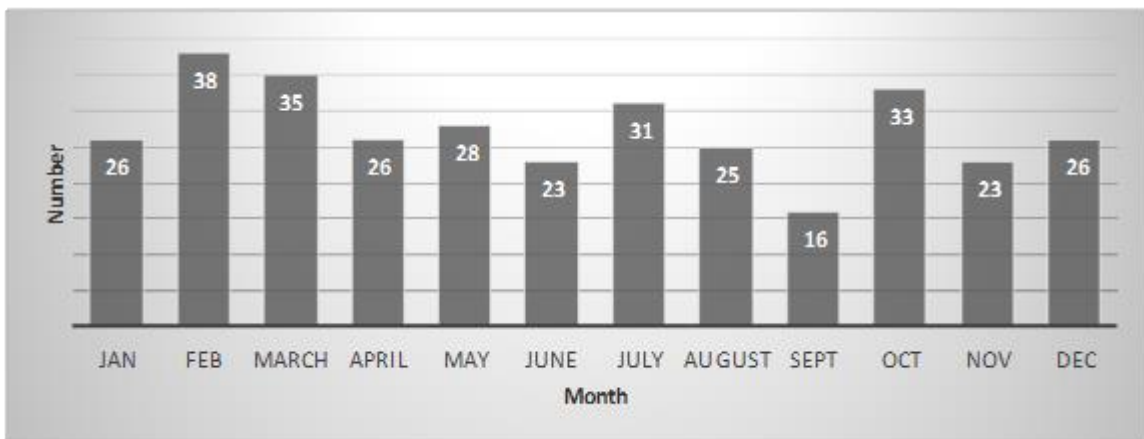
Figure 2. All Alcohol Related Collisions Day of Week



Interestingly, by comparison to other days of the week, there was a distribution of collisions across the whole day on Sunday rather than just late evening and early morning. However, 9% occurred between 8am and 11am indicating the presence of alcohol the morning after socialising. Early morning collisions could be seen on a Saturday and Sunday in particular.

Across the five years 2008 to 2012, the top three months when alcohol related collisions occurred were February (11.5%), March (10.6%) and October (10%). The lowest month was September (4.8%), see Figure 3.

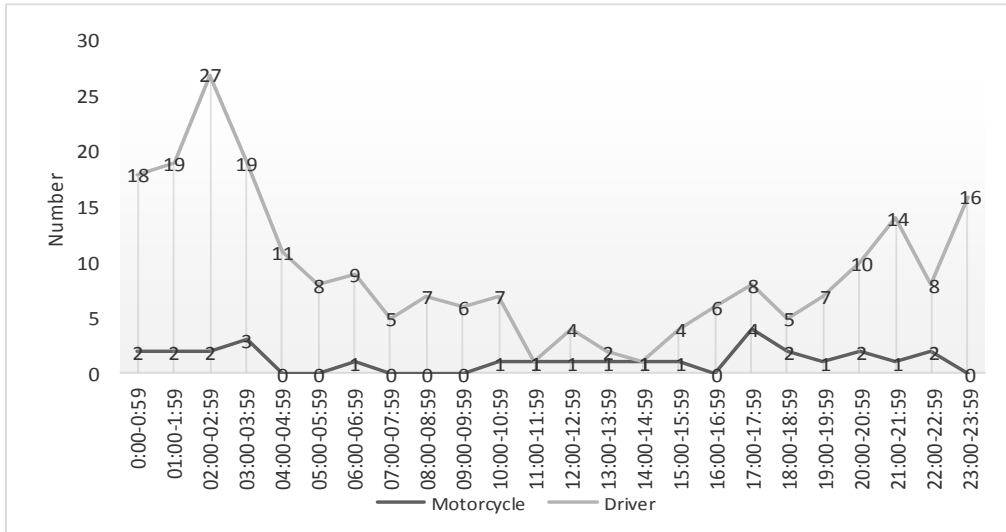
Figure 3. Month of All Alcohol Related Collisions



Drivers and Motorcyclists

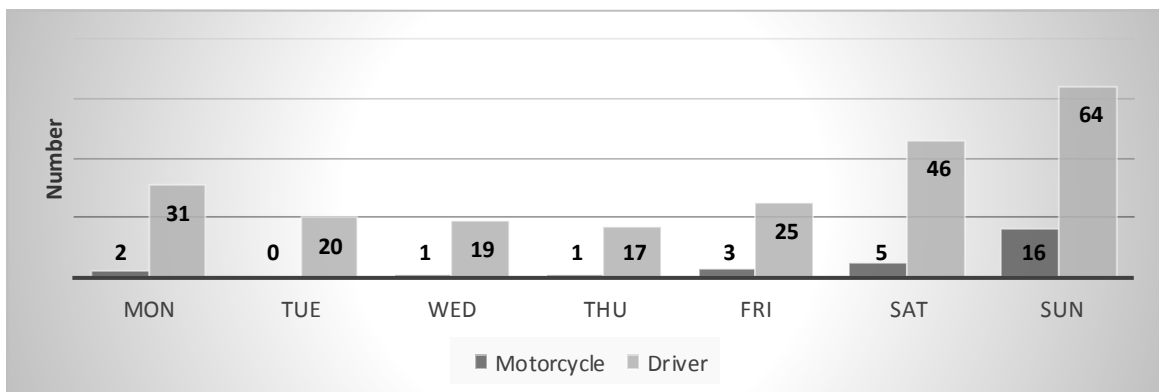
Of the 250 collisions (222 drivers and 28 motorcyclists), 59% of collisions involving a driver and 50% involving a motorcyclist occurred between 8pm and 4am. By contrast the largest peak in collisions for a driver who had consumed alcohol was between 2 and 3am (12.2%) whereas they peaked between 5 and 6 pm for motorcyclists (Figure 4).

Figure 4. Time of Day Alcohol Related Collision Driver and Motorcyclist



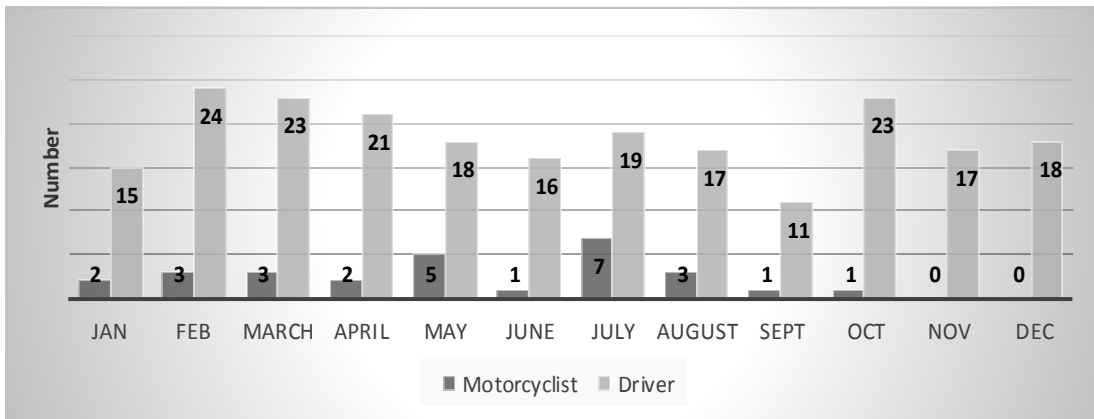
Fifty seven percent of the motorcyclists crashed on a Sunday compared to 29% of the drivers (Figure 5). More motorcyclist collisions occurred between 5 and 6pm on a Sunday than any other time of the day. Four of the 5 motorcyclist collisions which occurred on a Saturday occurred between 2 and 4 am.

Figure 5. Day of Week Alcohol related Collision Motorcyclist and Driver



There is a difference in the month of collisions between drivers and motorcyclists. More drivers crashed in February, March and October compared to July and May for motorcyclists (Figure 6).

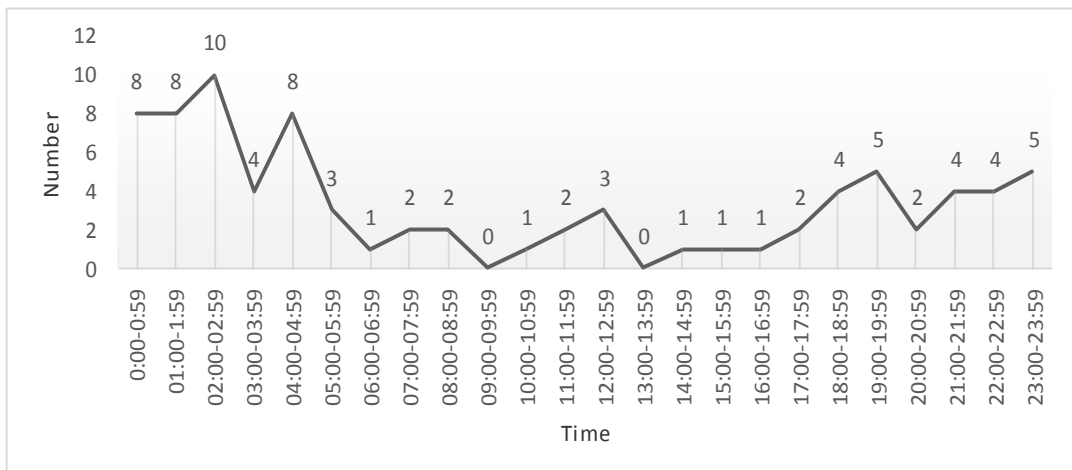
Figure 6. Month of Alcohol Related Collision Driver and Motorcyclist



Pedestrians

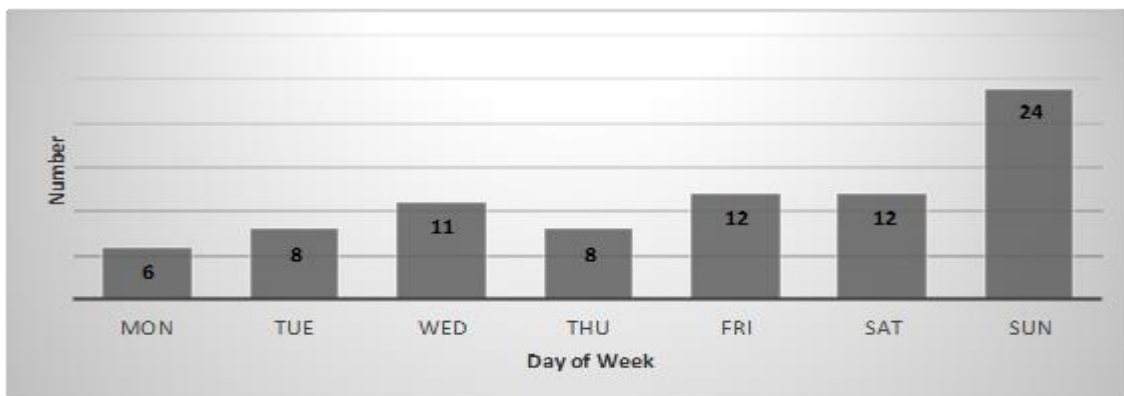
Of the 81 collisions where the pedestrian had consumed alcohol, over half (53%) were killed between 11pm and 6 am (Figure 7).

Figure 7. Time of Day Pedestrian Collision



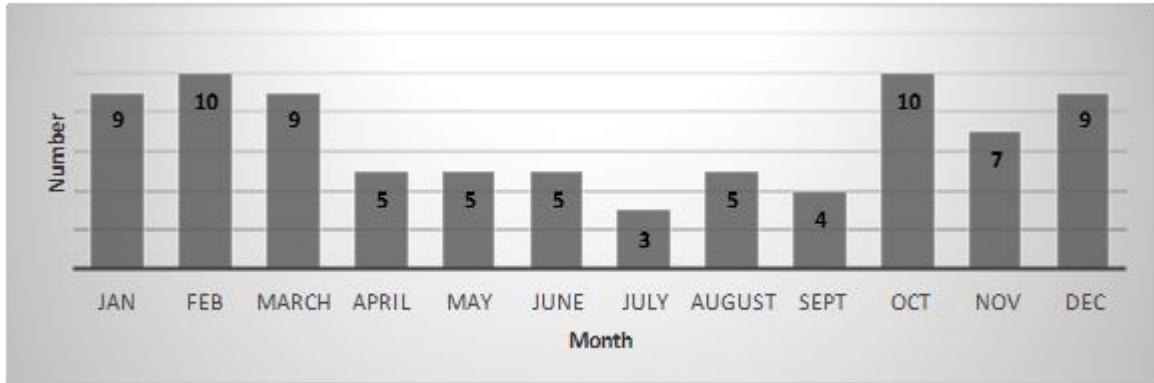
Most of the pedestrians (30%) who had consumed alcohol were killed on a Sunday (Figure 8). The number of pedestrians killed rose from 10 pm on a Friday night to 6 am on a Monday morning. While the number of fatal collisions involving a pedestrian who had consumed alcohol occurred throughout the day 4 of the 11 occurred between 9pm and midnight.

Figure 8. Day of Week Pedestrian Collision



The two months where most pedestrian were killed over the 5 years were February and October (Figure 9). In general, more pedestrian were killed over the winter months with 9 each occurring in December, January and March. From October to February 45 (56%) of the pedestrian were killed. This may be a reflection of the time of day as the majority occurred in the hours of darkness.

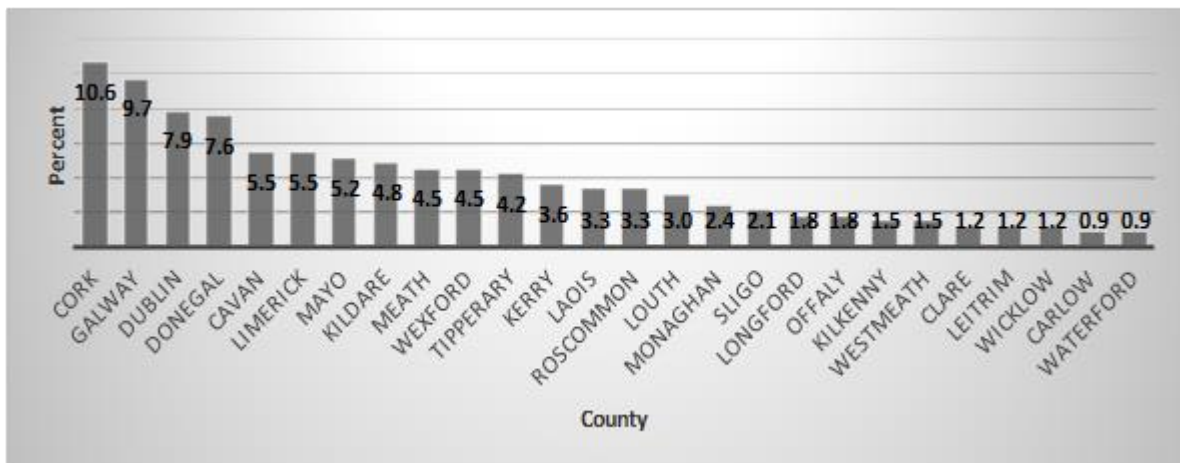
Figure 9. Month of Pedestrian Collision



Section 3.3 County of Collision

Of all 330 collisions the top two counties where alcohol was a contributory factor were Cork (11%) and Galway (8%). Four counties Cork, Galway, Dublin and Donegal accounted for over a third (36%) of all collisions where alcohol was a contributory factor (Figure 10). The county breakdown can be found in Table 2, Appendix 1.

Figure 10. County of Collision



Driver and Motorcyclist by County

Over two thirds (66%) of the 222 drivers involved in an alcohol related collision occurred in counties Cork (10.6%), Galway (9.7%), Dublin (7.9%) and Donegal (7.6%). By comparison, the 28 collisions involving a motorcyclist who had consumed alcohol were quite evenly distributed across the counties with several recording two each. However, Dublin and Limerick were the highest with 3 each. Table 3 in appendix 1 sets out the collision by county.

Pedestrian by County

Half (49%) of the 81 collisions where the pedestrian had consumed alcohol occurred in counties Dublin (15%), Galway (11%), Donegal (9%) Cork (7%) and Kildare (7%). Table 4 in appendix 1 sets out each county by number of pedestrians.

Type of Collision by County:

Single Vehicle: The top three counties where alcohol was a factor in single vehicle collisions were Cork (10%), Galway (10%) and Cavan (10%).

Two Vehicle: The top three counties where alcohol was a factor in a collision involving two or more vehicles were Cork (15%), Donegal (9%) and Galway.

Pedestrian Collision: The top three counties where alcohol was a factor in a pedestrian collision either by the pedestrian, driver or combination of both parties were Dublin (16%), Galway (11%) and Donegal (8.3%). See Table 8.

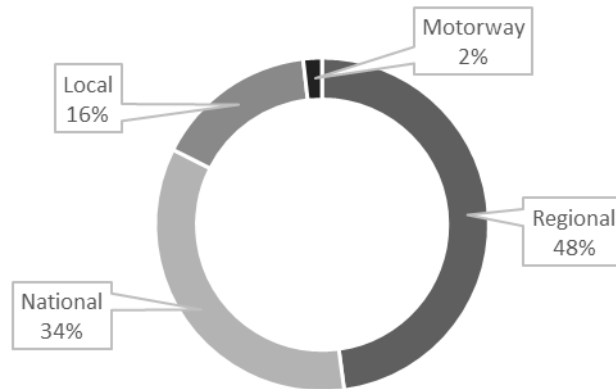
Table 8. Type of Alcohol Related Collision by County

	Single Vehicle		Two Vehicle		Pedestrian	
Cork	17	10.3	11	14.5	6	7.1
Galway	17	10.3	6	7.9	9	10.7
Cavan	12	7.3	3	3.9	3	3.6
Mayo	11	6.7	4	5.3	2	2.4
Donegal	10	6.1	7	9.2	7	8.3
Dublin	9	5.5	3	3.9	13	15.5
Limerick	9	5.5	5	6.6	4	4.8
Tipperary	9	5.5	4	5.3	1	1.2
Wexford	9	5.5	3	3.9	3	3.6
Meath	8	4.8	4	5.3	3	3.6
Laois	7	4.2	1	1.3	3	3.6
Kerry	6	3.6	3	3.9	3	3.6
Louth	6	3.6	1	1.3	3	3.6
Roscommon	6	3.6	1	1.3	4	4.8
Kildare	4	2.4	5	6.6	6	7.1
Clare	3	1.8	1	1.3	0	0.0
Kilkenny	3	1.8	0	0.0	2	2.4
Longford	3	1.8	2	2.6	1	1.2
Monaghan	3	1.8	3	3.9	2	2.4
Offaly	3	1.8	1	1.3	1	1.2
Westmeath	3	1.8	1	1.3	1	1.2
Leitrim	2	1.2	1	1.3	1	1.2
Wicklow	2	1.2	1	1.3	1	1.2
Carlow	1	0.6	1	1.3	1	1.2
Sligo	1	0.6	3	3.9	3	3.6
Waterford	1	0.6	1	1.3	1	1.2
Total	165	100.0	76	100.0	84	100.0

Section 3.4 Road Type and Speed Limit

Almost half (48%) of all collisions where alcohol was a contributory factor occurred on a Regional road, and a further third (34%) on a National route (Figure 11).

Figure 11. Road Type where All Alcohol Related Collision Occurred



For half of the collisions where alcohol was a contributory factor, the speed limit at the time was 80km (Table 9). However, 11% of the collisions on a regional and national road occurred in a 50 km zone indicating an urban environment. Forty percent of the roads classified as Local include urban areas reflecting the 50 km speed limit. Overall, the speed limits would suggest 19% of alcohol related collisions occurred in an urban area and 81% on a more rural environment.

Table 9. Speed Limit by Road Type All Alcohol Related Collisions

	Local		Motorway		National		Regional		Total	
120	0	0.0	5	83.3	0	0.0	0	0.0	5	1.5
100	0	0.0	1	16.7	99	86.8	1	0.6	101	30.6
80	25	48.1	0	0.0	1	0.9	136	86.1	162	49.1
60	2	3.8	0	0.0	1	0.9	3	1.9	6	1.8
50	21	40.4	0	0.0	12	10.5	17	10.8	50	15.2
30	4	7.7	0	0.0	1	0.9	1	0.6	6	1.8
Total	52	100.0	6	100.0	114	100.0	158	100.0	330	100.0

Table 10 sets out the type of collision which occurred in the specific speed zone. Almost two thirds (64%) of the single vehicle collisions where alcohol was a contributory factor occurred on an 80 km speed zone. By contrast, almost half (47%) of the collisions where alcohol was a contributory factor involving two or more vehicles occurred on a 100 km zone. Interestingly almost a third of collisions involving a pedestrian where either the pedestrian or driver had consumed alcohol occurred on a 100 km zone, followed by 28% on an 80 km zone. Overall, approximately 38% of the collisions involving a pedestrian occurred in an urban environment and 62% on a more rural environment (Table 10).

Figure 12. Weather at Time of All Alcohol Related Collisions

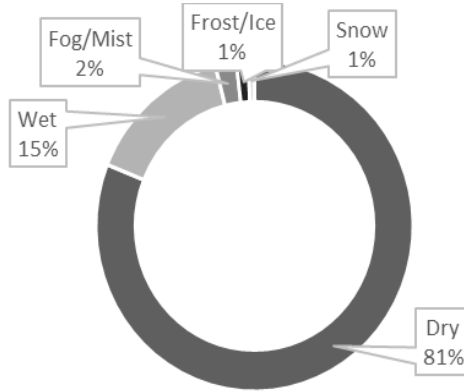


Table 11. Road Surface at Time of All Alcohol Related Collisions

	N	%
Dry	230	69.7
Wet	88	26.7
Frost/ice	8	2.4
Snow	1	0.3
NR	3	0.9
Total	330	100.0

It was dark at the time of three quarters (78%) of the collisions where alcohol was a contributory factor (Figure 13). This reflects both the time of day and the month of collisions where alcohol is a factor.

Section 4.

Profile of Driver Alcohol as Contributory Factor

The following section will examine the profile and behaviour of all 250 drivers (222 motorists and 28 motorcyclists) involved in a collision where alcohol was a contributory factor.

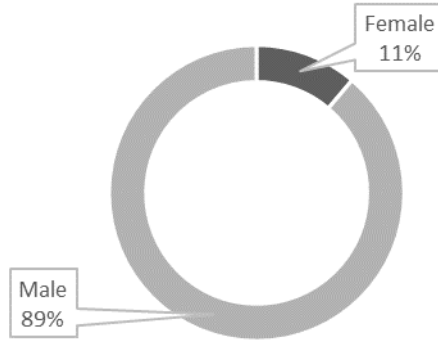
Section 4.1 Culpability of Driver

Of the 222 motorists who had consumed alcohol, 217 were deemed primarily to have caused the collision. A further 5 collisions involved a pedestrian who had also consumed alcohol. It was the opinion of the investigating Garda that the presence of alcohol these five drivers was deemed to have contributed to the outcome as it would have impacted their response time, observation and/or position on the road. All of the 28 motorcyclists who had consumed alcohol were deemed to be culpable for the collision.

Section 4.2 Gender and Age of Driver

The majority (89%) of drivers were male (Figure 14). Almost half (43%) of the drivers who had consumed alcohol were aged between 16 and 24 years (Table 12).

Figure 14. Gender of Driver in Alcohol Related Collision



Overall, three quarters (74%) of the drivers (motorcyclists included) who had consumed alcohol were aged between 16 and 34 years.

Table 12. Age and Gender of Driver in Alcohol Related Collision

	Female		Male	
	N	%	N	%
16-24	10	35.7	95	42.8
25-34	8	28.6	71	32.0
35-49	5	17.9	31	14.0
50-64	2	7.1	14	6.3
65+	3	10.7	9	4.1
NR	0	0.0	2	0.9
Total	28	100.0	222	100.0

All 28 of the female drivers who had consumed alcohol were driving a private car. Table 13 sets out the age band of the driver who had consumed alcohol by the vehicle driven. Almost half of the drivers of a private car were aged between 16 and 24 years. By contrast the majority (57%) of motorcyclists who had consumed alcohol were aged between 25 and 34 years.

Table 13. Age of Driver/Motorcyclist by Vehicle Driven

	Private car		Motorcycle		Van		Agricultural	
16-24	93	47.9	6	21.4	6	27.3	0	0.0
25-34	53	27.3	16	57.1	8	36.4	1	20.0
35-49	27	13.9	5	17.9	4	18.2	0	0.0
50-64	11	5.7	0	0.0	2	9.1	3	60.0
65+	9	4.6	0	0.0	2	9.1	1	20.0
NR	1	0.5	1	3.6	0	0.0	0	0.0
Total	194	100.0	28	100.0	22	100.0	5	100.0

- Age not included for the one HGV driver for confidentiality reasons

Table 14 sets out the age band of driver who had consumed alcohol by the type of collision they were involved in. Those aged 16 to 24 years were more likely to have been in a single vehicle collision and involved in a pedestrian or cyclist collision.

Table 14. Age-band of Driver in Alcohol Related Collision by Type of Collision

	Single vehicle		Two vehicle		Pedestrian		Cyclist	
	N	%	N	%	N	%	N	%
16-24	76	46.3	23	30.3	4	50.0	1	100.0
25-34	48	29.3	30	39.5	1	12.5	0	0.0
35-49	25	15.2	9	11.8	2	25.0	0	0.0
50-64	8	4.9	7	9.2	1	12.5	0	0.0
65+	7	4.3	5	6.6	0	0.0	0	0.0
NR	0	0.0	2	2.6	0	0.0	0	0.0
Total	164	100.0	76	100.0	8	100.0	1	100.0

Section 4.3 Driver Pre-Crash Behaviour

Section 4.3.1 Purpose of Trip for Driver who Consumed Alcohol

The majority of the drivers were on the road for social purposes, however, 3 were driving for work at the time of the collision (Table 15). This would reflect the majority of collision occurring between the hours of 9pm and 5am.

Table 15. Driver Trip Purpose Alcohol Related Collision

	N	%
Social	227	90.8
Commuting to/from work	3	1.2
For work	3	1.2
NR	17	6.8
Total	250	100

Section 4.3.2 Seatbelt Use by Driver in Alcohol Related Collision

Of the 250 drivers who had consumed alcohol prior to the collision, 217 (5 tractors excluded) were in a vehicle which would have required the use of a seatbelt.

Drivers: Overall, 196 drivers in the 867 collisions analysed were recorded as not wearing a seatbelt at the time of the collision, of this number 111(57%) had consumed alcohol prior to the collision. Ninety six (86%) of the 111 drivers were killed, twenty five of whom were fully ejected and a further 7 were partially ejected.

Passengers: Of all 174 passengers in the 867 collisions recorded as not wearing a seatbelt 87(50%) had consumed or were suspected of consuming alcohol. Forty four (51%) of the 87 were killed, 26 of whom were ejected.

These figures may indicate the consumption of alcohol by a driver or passenger has an impact on their decision to use a seatbelt.

Section 4.3.3 Insurance Held by Driver in Alcohol Related Collision

Where recorded, half of the drivers who had consumed alcohol (51%) had a record of insurance, however, almost a third (31%) had no insurance at the time of the collision (Table 16).

Table 16. Driver in Alcohol Related Collision Insurance

	N	%
Yes	127	50.8
No	77	30.8
NR	46	18.4
Total	250	100.0

Section 4.3.4 Driver Licence Status of Driver in Alcohol Related Collision

Two thirds (66%) of the drivers who had consumed alcohol had a record of a licence at the time of the collision (Table 17). However, 16% had no record of a licence at the time of the collision.

Table 17. Driver Licence Record

	N	%
Yes	165	66.0
No	41	16.4
NR	44	17.6
Total	250	100.0

Table 18 sets out the record of a licence by the type of vehicle. Some 126 (65%) of all private car drivers, 17 (61%) of motorcyclists, and 17 (77%) of van drivers who had consumed alcohol held a licence at the time of the collision.

Table 18. Licence Held by Vehicle

	Yes		No		Nr		Total
	N	%	N	%	N	%	
Private car	126	76.4	32	78.0	36	81.8	194
Motorcycle	17	10.3	6	14.6	5	11.4	28
Van	17	10.3	2	4.9	3	6.8	22
Agricultural	5	3.0	0	0.0	0	0.0	5
HGV	0	0.0	1	2.4	0	0.0	1
Total	165	100.0	41	100.0	44	100.0	250

Of the 165 recorded as having a licence and who had consumed alcohol, 123 (75%) held a full licence, 25 (15%) were on a Learners Permit and 11 (7%) were disqualified at the time of the collision (Table 19).

Table 19. Licence Status by Vehicle

	Full		Learner permit		Disqualified	
	N	%	N	%	N	%
Private car	90	73.2	22	88.0	9	81.8
Motorcycle	15	12.2	2	8.0	0	0.0
Van	13	10.6	1	4.0	2	18.2
Agricultural	5	4.1	0	0.0	0	0.0
HGV	0	0.0	0	0.0	0	0.0
Total	123	100.0	25	100.0	11	100.0

* no record of licence type for 4 car drivers, 1 motorcyclist and 1 van driver

Disqualified: Of the 126 private car drivers with a record of a licence, 9 (7%) were driving while disqualified. Of the 17 van drivers with a record of a licence, 2 (12%) were driving while disqualified. None of the motorcyclists were driving while disqualified.

A record of the length of time a Learner Permit was held was available for 11 of the 25 drivers. Six of the drivers had held their Permit for less than 6 months (Table 20).

Table 20. Time Learner Permit Held

TIME	N
1-3 months	1
5-6 months	5
6-12 months	1
13-15 months	2
21-24 months	2
TOTAL	11

In some files additional information was available on specific details of the licence such status of Learner Permit or a previous history of disqualification etc. Of the 25 on a Learner Permit, 12 were on a first permit (3 unaccompanied), 3 were on a second permit and two were recorded as expired.

Two of the 123 drivers recorded as holding a full licence had a previous history of disqualification, 1 had a combination of live and expired penalty points at the time of the collision. A further 1 was driving on a licence that was not recognised in Ireland and 1 did not cover the category of vehicle being driven (motorcycle).

Two of the eleven drivers who were disqualified at the time of the collision had a history of disqualification. One had two previous periods and the other had three previous periods of disqualification recorded. These are clearly repeat offenders.

Section 4.3.5 Age and Condition of the Vehicle Driven

Over a third (38%) of the 250 vehicles driven by a person who had consumed alcohol were aged between 10-14 years and a quarter (26%) were between 5-9 years (Table 21).

Table 21. Age of Vehicle

	N	%
<1	2	0.8
1-4	27	10.8
5-9	65	26.0
10-14	94	37.6
15-19	25	10.0
20-24	6	2.4
NR	31	12.4
TOTAL	250	100

PSV reports were analysed for the condition or roadworthiness of the vehicle. Overall, three quarters (78%) were deemed to be in a good roadworthy condition. However, 29 (12%) ranged from being dangerously defective to poor condition. Specifically, 7 (2.5%) were driving a dangerously defective vehicle. A further 18 (7%) were rated as mechanically serviceable apart from the tyres and on apart from brakes. These 19 vehicles had tyres or brakes as possible contributory factors to the collision (Table 22).

Table 22. Condition of Vehicle as Per PSV Report

	N	%
Serviceable/roadworthy condition	195	78.0
Serviceable/mechanically serviceable apart from tyres	18	7.2
Not road worthy	11	4.4
Dangerously defective	7	2.8
Defective	5	2.0
Poor/fair pre-crash condition	4	1.6
Serviceable apart from brake	1	0.4
Too damaged	1	0.4
NR	8	3.2
Total	250	100.0

Vehicle Factors as Contributory to Collision

Thirty seven (15%) of the 250 vehicles driven by the party who had consumed alcohol had defective or worn tyres as an underlying contributory factor (Table 23).

Table 23. Vehicle factors Present

	N	%
Tyres	37	14.8
Brakes	5	2.0
Other	5	2.0
Steering	1	0.4
Suspension	1	0.4
None	201	80.4
Total	250	100.0

Section 4.3.6 Driver Main Manoeuvre and Action

The primary manoeuvre being performed at the time of the collision is classified as driving forward (90%), see Table 24.

Table 24. Driver Main Manoeuvre

	N	%
Driving forward	226	90.4
Attempting to overtake	16	6.4
Exiting/entering	5	2.0
Parked / stationary	1	0.4
Turning right	1	0.4
NR	1	0.4
Total	250	100

The main action indicated for the driver who had consumed alcohol was loss of control of the vehicle (66%) and a further 14% crossed to the wrong side of the road, in effect suggesting a loss of control of the vehicle (Table 25).

Table 25. Main Action by Driver who Consumed Alcohol

	N	%
Lost control	164	65.6
Went to wrong side of road	35	14.0
Other	13	5.2
Failed to observe	11	4.4
Failed to stop or yield	8	3.2
Improper overtaking	6	2.4
Exceeded safe speed	5	2.0
Taking avoidance action	4	1.6
None	2	0.8
Drove through traffic signal	1	0.4
NR	1	0.4
Total	250	100

Of the 164 collisions where loss of control was cited, the majority (137) occurred in single vehicle collisions.

Section 4.3.7 All Contributory Factors

Alcohol Only Collisions

Twenty eight (11%) of the 250 collisions cited alcohol as the sole contributory factor. An additional 3 had alcohol and a vehicle factor noted (2 with worn tyres and 1 with other).

Of these 28 collisions, 20 involved a single vehicle only and 8 involved two vehicles. The largest proportion occurred on a Regional road (64%), a quarter (22%) on a National road and 14% on a Local road.

It is interesting to note that two thirds (68%) occurred on an 80km speed zone (Table 26). The majority occurred when it was dark (69%) and dry (76%). However, almost a third (31%) occurred on a wet surface.

Table 26. Speed Limit in Alcohol Only Collision

	N	%
100	6	21.4
80	19	67.8
50	3	10.7
Total	28	100

Other Contributory Factors:

In 301 of the 330 alcohol related collisions, other behavioural contributory factors in combination with alcohol include speed, drugs, dark clothing, dangerous behaviour, fatigue and distraction.

Section 5.

Confirmed Presence of Alcohol in Drivers and Motorcyclist

Section 5.1 Confirmed Presence of Alcohol in Driver by Vehicle

Overall there were 250 drivers who had a record in the investigation file of alcohol consumption prior to the collision. This was based on the results of toxicology testing and/or the witness statements of the parties involved in the collision. At the time of the analysis a record of a toxicology report was available in the file for 198 (79%) of the 250 drivers. This is referred to as a confirmed presence of alcohol. This does not imply that a record of a test was never available or toxicology never taken, just that at the time of analysis there was no copy for verification in the investigation report. To have a confirmed presence of alcohol, there must have been at least 20 mg or greater of alcohol in a blood or urine sample or a failed breathalyser test set at the prevailing legal limit at the time of the collision.

Table 27 sets out the number of drivers and motorcyclists involved in the fatal collision who had a confirmed presence of alcohol of at least 20 mg or greater in blood or 27mg or greater in urine or a failed breathalyser test.

Almost a fifth (19%) of all private car and van drivers and almost a quarter (24%) of motorcyclists analysed had a confirmed presence of alcohol prior to the collision. Five (28%) of those driving an agricultural vehicle had also consumed alcohol prior to the collision (Table 27).

Table 27. Driver and Motorcyclists with Confirmed Presence of Alcohol, 2008-2012

	Total	Total Vehicle
Private car	151	810
Van	18	92
HGV	1	102
Agricultural	5	18
Motorcycle	23	96
Total	198	

Section 5.2 Confirmed Level of Alcohol in Private Car/Van Drivers and Motorcyclists

A half (50%) of all drivers (car, van, HGV, agricultural) and motorcyclists with a confirmed presence of alcohol had a blood alcohol level in excess of 201mg (Table 28). This equates to over four times the current drink driving limit. However, a quarter of drivers (26%) compared to 23% of motorcyclists had a blood alcohol level recorded in excess of 251 mg. This indicates that a quarter of drivers were five times over the current legal limit and a fifth of motorcyclists were five times over the current legal limit at the time of the collision. In the absence of a blood alcohol result, 13 drivers had a urine alcohol result with 31% of the drivers having a urine alcohol level of 151 – 200 mg and another 31% a urine alcohol level in excess of 251 mg.

Table 28. Level of Alcohol in Blood or Urine of Private Car and Van Drivers

N	DRIVER		MOTORCYCLIST		TOTAL	
	N	%	N	%	N	%
BLOOD						
21-50	16	10.6	1	4.5	17	9.8
51-80	7	4.6	1	4.5	8	4.6
81-100	7	4.6	2	9.1	9	5.2
101-150	20	13.2	4	18.2	24	13.9
151-200	25	16.6	4	18.2	29	16.8
201-250	37	24.5	5	22.7	42	24.3
251+	39	25.8	5	22.7	44	25.4
TOTAL	151	100.0	22	100.0	173	100.0
URINE						
21-50	2	15.4	1	100.0	3	21.4
101-150	1	7.7	0	0.0	1	7.1
151-200	4	30.8	0	0.0	4	28.6
201-250	2	15.4	0	0.0	2	14.3
251+	4	30.8	0	0.0	4	28.6
TOTAL	13	100.0	1	100.0	14	100.0
BREATH						
FAILED	11		0		11	
TOTAL	175		23		198	100

The average Blood Alcohol Level in private car, van, agricultural drivers and motorcyclists are set out below:

	<i>Mean</i>	<i>Min</i>	<i>Max</i>
<i>Private Car</i>	193	21	381
<i>Van</i>	208	21	362
<i>Agricultural</i>	156	21	256
<i>Motorcycle</i>	183	29	317

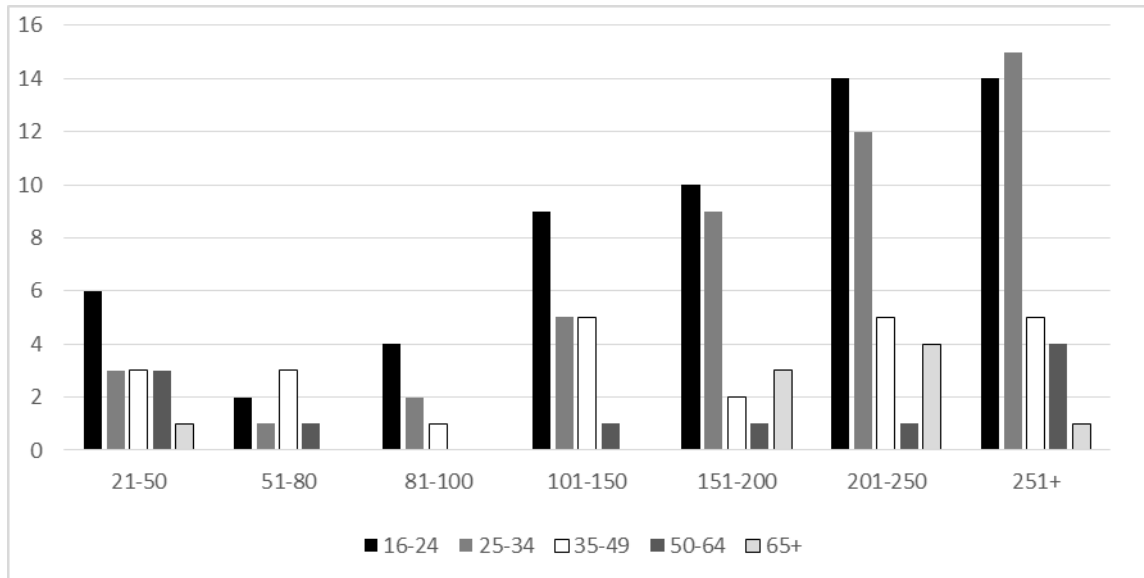
Table 29 sets out the available BAC in drivers by the age group. In total 151 drivers had a record of a BAC. However, age was not available for one driver. As noted in Table 29, the greatest proportion of those in the 16 to 24 and 25 to 34 age groups had in excess of 201 mg of alcohol in their system. Forty seven percent of the drivers aged between 16 and 24 years and 57% of the drivers between 25 and 34 had in excess of 201mg.

Table 29. Age of Drivers by BAC Level

	16-24		25-34		35-49		50-64		65+	
	N	%	N	%	N	%	N	%	N	%
21-50	6	10.2	3	6.4	3	12.5	3	27.3	1	11.1
51-80	2	3.4	1	2.1	3	12.5	1	9.1	0	0.0
81-100	4	6.8	2	4.3	1	4.2	0	0.0	0	0.0
101-150	9	15.3	5	10.6	5	20.8	1	9.1	0	0.0
151-200	10	16.9	9	19.1	2	8.3	1	9.1	3	33.3
201-250	14	23.7	12	25.5	5	20.8	1	9.1	4	44.4
251+	14	23.7	15	31.9	5	20.8	4	36.4	1	11.1
TOTAL	59	100.0	47	100.0	24	100.0	11	100.0	9	100.0

As can be seen in Figure 15, those in the 16 to 24 and 25 to 34 year age groups show consistently higher blood alcohol levels than older age groups. This is of particular note when the BAC level is recorded as 151 mgs and higher.

Figure 15. Blood Alcohol of Drivers by Age Group



Of the 22 motorcyclists with a recorded BAC, the most frequent age band was the 25 to 34 age group with 31% of this group having a BAC of 201 to 250 mg (Table 30).

account the change in alcohol limits for all drivers, novice and professional drivers (see methodology). As a portion of all 867 collisions analysed 174 (20%) collisions involved a driver over the legal limit at the time of the collision.

Table 31 sets out the 174 drivers who had a confirmed presence of alcohol over the 5 year period analysed. Seventeen percent of private car and 15% of van drivers analysed had a confirmed presence of alcohol over the legal limit in enforcement at the time prior to the collision.

Table 31. Driver and Motorcyclists with Confirmed Presence of Alcohol over Legal Limit

	Total	Total vehicle
Private car	136	810
Van	14	92
HGV	1	102
Agricultural	3	18
Motorcycle	20	96
Total	174	

Section 5.4 Level of Alcohol in Pedestrians

There was a confirmed presence of alcohol in the file for 67 of the 81 pedestrians who had consumed alcohol prior to the collision. Table 32 sets out the blood and urine toxicology results. The average level of alcohol was 199.6 ranging from 23 to 396 mg. A quarter (25%) of pedestrians had a BAC in excess of 201mg and a further 28% had a BAC in excess of 251mg. A further 2 had a urine reading in excess of 251 mg. All but one were male. This highlights that over half (52%) of the pedestrians were on the road with a BAC in excess of 201mg.

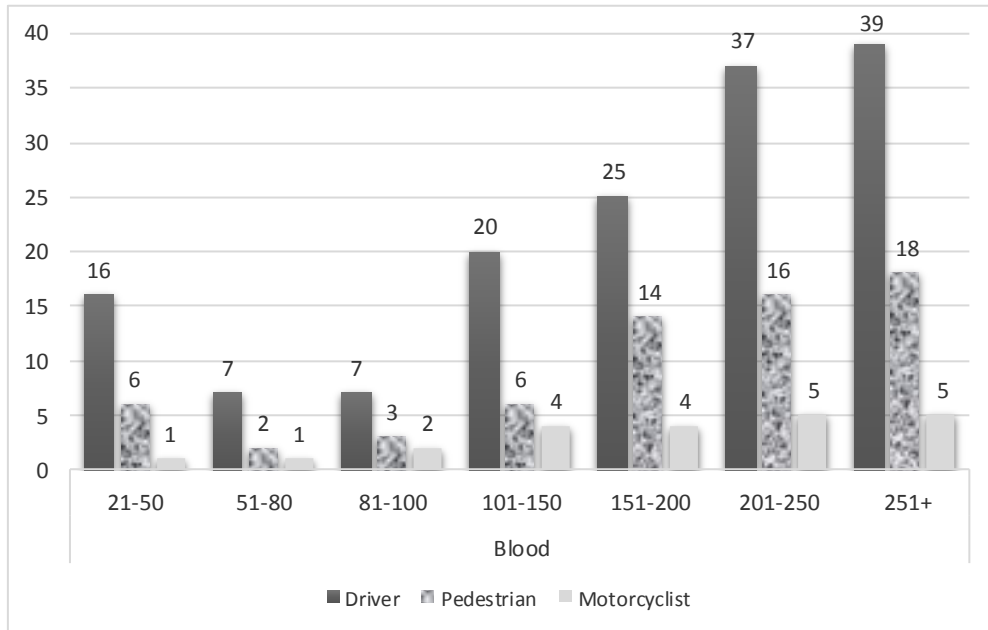
Table 32. Level of Alcohol in Blood or Urine of Pedestrians

	N	%
Blood		
21-50	6	9.2
51-80	2	3.1
81-100	3	4.6
101-150	6	9.2
151-200	14	21.5
201-250	16	24.6
251+	18	27.7
Total	65	100.0
Urine		
250+	2	100
Total	2	100

Section 5.5 Blood Alcohol Level by Road User Type

Figure 16 illustrates the level of alcohol in the blood of all drivers, motorcyclists and pedestrians where available. As can be seen the majority of road users involved in the fatal collision with a confirmed blood alcohol record had a BAC of greater than 101mg.

Figure 16. Blood Alcohol Level by Road User



Section 6.

Summary of Driver Behaviour in Alcohol Related Collision

In total 250 drivers motorcyclists drivers (222 private car and 28) had a record of alcohol consumption either through confirmed results of toxicology or Garda opinion based on witness statements and or admission of alcohol consumption.

When and where are they on the road?

Of the 250 collisions, 59% involving a driver and 50% involving a motorcyclist occurred between 8pm and 4am. There was a peak in collisions for a driver between 2 and 3am and peak between 5 and 6 pm for motorcyclists.

Sunday and Saturday were the most frequent days of collisions. Fifty seven percent of the motorcyclists crashed on a Sunday compared to 29% of the drivers. A motorcyclist is more likely to crash between 5 and 6 pm on a Sunday. Overall, the pattern of collisions increase from 9pm on a Friday evening to 5 am on a Monday morning.

More drivers crashed in February, March and October compared to July and May for motorcyclists. This indicates a greater risk for motorcyclists in the summer months compared to winter months for other drivers.

The top three counties where alcohol was a factor in single vehicle or two vehicle collisions were Cork, Galway, Donegal and Cavan.

Almost half (48%) of all collisions of these collisions occurred on a Regional road, and a further third (34%) on a National route.

For half of the collisions the speed limit at the time was 80km. However, 11% of the collisions on a regional and national road occurred in a 50 km zone indicating an urban environment. Overall, the speed limits would suggest 19% of alcohol related collisions occurred in an urban area and 81% on a more rural environment.

Almost two thirds (64%) of the single vehicle collisions where alcohol was a contributory factor occurred on an 80 km speed zone. By contrast, almost half (47%) of the collisions where alcohol was a contributory factor involving two or more vehicles occurred on a 100 km zone.

The weather was recorded as dry and dark at the time of the majority of collisions.

Who was driving?

The majority of drivers were male. Almost half (43%) of the drivers who had consumed alcohol were aged between 16 and 24 years. Overall, three quarters (74%) of the drivers (motorcyclists included) who had consumed alcohol were aged between 16 and 34 years.

All 28 of the female drivers who had consumed alcohol were driving a private car. Table 13 sets out the age band of the driver who had consumed alcohol by the vehicle driven. Almost half of the drivers of a private car were aged between 16 and 24 years. By contrast the majority (57%) of motorcyclists who had consumed alcohol were aged between 25 and 34 years. Those aged 16 to 24 years were more likely to have been in a single vehicle collision and involved in a pedestrian or cyclist collision.

The majority of the drivers were on the road for social purposes, however, 3 were driving for work at the time of the collision. Almost a third (31%) had no insurance and 16% had no record of a licence at the time of the collision.

Of the 165 recorded as having a licence, 75% held a full licence, 15% were on a Learners Permit and 7% were disqualified at the time of the collision. Of the 25 on a Learner Permit, 12 were on a first permit (3 unaccompanied), 3 were on a second permit and two were recorded as expired. Six of the drivers had held their Permit for less than 6 months.

Two of the 123 drivers recorded as holding a full licence had a previous history of disqualification, 1 had a combination of live and expired penalty points at the time of the collision. A further 1 was driving on a licence that was not recognised in Ireland and 1 did not cover the category of vehicle being driven (motorcycle).

Two of the eleven drivers who were disqualified at the time of the collision had a history of disqualification. One had two previous periods and the other had three previous periods of disqualification recorded. These are clearly repeat offenders.

Age and Condition of the Vehicle they were driving:

Over a third 250 vehicles were aged between 10-14 years and a quarter were between 5-9 years. Twelve percent ranged from being dangerously defective to poor condition. Specifically, 2.5% were driving a dangerously defective vehicle. A further 7% were rated as mechanically serviceable apart from the tyres and on apart from brakes.

How did the Crash Happen?

The main action indicated for the driver who had consumed alcohol was loss of control of the vehicle (66%) and a further 14% crossed to the wrong side of the road, in effect suggesting a loss of control of the vehicle. Other actions indicated included a failure to observe or stop/yield, improper overtaking and dangerous behaviour.

Of the 164 collisions where loss of control was cited, the majority (137) occurred in single vehicle collisions. An examination of the single vehicle collisions with regard to pre-crash behaviour indicated they were primarily due to poor road use behaviour and not suicide as is often suggested. While a minor number may have a suggestion of suicidal intent, none were classified as such by the Coroner's office. All indications including the number of passengers on board, the behaviour observed prior to the collision and the type of action being performed at the time of collision would corroborate this verdict.

Twenty eight of the 250 collisions cited alcohol as the only contributory factor. An additional 3 had alcohol and a vehicle factor noted (2 with worn tyres and 1 with Other). A combination of speed, fatigue, distraction and drugs were other pre-crash behaviours observed. Of these 29 collisions, 20 involved a single vehicle only and 9 involved two vehicles.

Level of alcohol in the drivers:

A confirmed presence of alcohol was available on file for 198 drivers and motorcyclists. Almost a fifth (19%) of all private car and van drivers and almost a quarter (24%) of motorcyclists analysed had a confirmed presence of alcohol prior to the collision. Five (28%) of those driving an agricultural vehicle had also consumed alcohol prior to the collision

A half (50%) of all drivers (car, van, HGV, agricultural) and motorcyclists with a confirmed presence of alcohol had a blood alcohol level in excess of 201mg. This equates to over four times the current legal limit. However, a quarter of drivers (26%) compared to 23% of motorcyclists had a blood alcohol level recorded in excess of 251 mg. This means a quarter of the drivers and a fifth of motorcyclists were five times the current legal limit at the time of the collision. In the absence of a blood alcohol result, 13 drivers had a urine alcohol result with 31% of the drivers having a urine alcohol level of 151 – 200 mg and another 31% a urine alcohol level in excess of 251 mg.

The greatest proportion of those in the 16 to 24 and 25 to 34 age groups had in excess of 201 mg of alcohol in their system. Forty seven percent of the drivers aged between 16 and 24 years and 57% of the drivers between 25 and 34 had in excess of 201mg.

Of the 22 motorcyclists with a recorded BAC, the most frequent age band was the 25 to 34 age group with 31% of this group having a BAC of 201 to 250 mg.

Seventeen percent of private car and 15% of van drivers analysed had a confirmed presence of alcohol over the legal limit in enforcement at the time prior to the collision.

A confirmed level of alcohol was present in the file for 198 (79%) of the 250 drivers. Of this number 174 (70%) were over the prevailing legal limit at the time of the collision. This was determined by taking into account the change in alcohol limits for all drivers, novice and professional drivers (see methodology).

As a portion of all 867 collisions analysed 174 (20%) collisions involved a driver over the legal limit at the time of the collision.

Section 7.

Number of People Killed and Injured in Alcohol Related Collision

Over the time period 2008 to 2012, 250 drivers (222 motorists, 28 motorcyclists) had a record of alcohol consumption prior to the collision. As a result of a collision with one of these 250 drivers, 286 people were killed and 69 were seriously injured (Table 33).

Table 33. Number of People Killed or Seriously Injured by Driver/Motorcyclist

	Fatal	Serious	Minor
Driver	169	26	51
Motorcyclist	25	1	2
Passenger	83*	42	61
Pedestrian	8	-	-
Cyclist	1	-	-
Total	286	69	115

* 3 passengers were pillion passengers

Four cyclists and 76 pedestrians were killed where their own alcohol intake was the contributory factor in the collision.

Of the 169 drivers who were killed, 155 (92%) were drivers who had consumed alcohol.

Single Vehicle: Of 286 people, 178 were killed in a single vehicle collision. Forty nine passengers were travelling in the car with someone who had consumed alcohol and were subsequently killed (Table 34).

Table 34. Number of People Killed or Injured in Single Vehicle Collision

	Fatal	Serious	Minor
Driver	129	6	23
Passenger	49	18	42
Total	178	24	65

Of the 867 files available for analysis, 164 fatal collisions involved a pedestrian over the age of 17. Eighty one (49%) of these pedestrians were killed in circumstances where their alcohol consumption was deemed in full or part to have contributed to the collision.

Of the 84 motorcyclists killed over the 5 year period, 25(30%) were killed in a collision where alcohol was a contributory factor.

Of the 196 passengers killed over the 5 year period, 83(42%) were killed in a collision where alcohol was a contributory factor.

Alcohol Only Collisions:

Of the 28 collisions where alcohol was the sole contributory factor, 30 people were killed (24 drivers, 3 motorcyclists, 3 passengers). Four were seriously injured.

Age of Those who Died:

Where age was known, the majority of people 217 (63%) killed as a result of an alcohol related collision were aged between 17 and 34 years with 122(35%) aged between 17 and 24 years (Table 35).

Table 35. Age of Drivers, Passengers, Pedestrians and Cyclists Killed.

	DRIVER	PASSENGER	PEDESTRIAN	CYCLIST	TOTAL
	N	N	N	N	N
10-16	0	7	0	1	8
17-24	71	38	12	1	122
25-34	64	17	14	0	95
35-49	26	7	21	0	54
50-65	15	5	19	1	40
65+	12	0	14	1	27
TOTAL	188	74	80	4	346

Appendix

Table 1. Time of Day All Alcohol Related Collisions by Day of Week (Number)

	MON	TUE	WED	THUR	FRI	SAT	SUN	TOTAL
0:00-0:59	7	3	2	1	3	3	9	28
01:00-1:59	4	1	2	2	3	5	11	28
02:00-02:59	4	4	3	1	1	8	15	36
03:00-03:59	3	1	1	3	1	7	10	26
04:00-04:59	2	1	0	2	0	7	7	19
05:00-05:59	5	1	0	0	0	1	4	11
06:00-06:59	0	0	1	0	1	4	5	11
07:00-07:59	1	0	3	1	0	0	1	6
08:00-08:59	0	1	2	0	1	3	3	10
09:00-09:59	1	0	0	1	0	2	2	6
10:00-10:59	0	0	0	1	4	0	4	9
11:00-11:59	0	0	0	1	2	0	1	4
12:00-12:59	0	1	0	1	3	2	1	8
13:00-13:59	0	0	0	0	0	0	3	3
14:00-14:59	0	0	1	0	0	1	1	3
15:00-15:59	1	1	1	1	0	1	1	6
16:00-16:59	0	2	1	2	1	1	0	7
17:00-17:59	1	0	3	2	2	1	5	14
18:00-18:59	3	3	0	1	1	0	3	11
19:00-19:59	3	0	3	1	2	0	5	14
20:00-20:59	0	3	0	1	3	3	4	14
21:00-21:59	1	3	2	1	4	8	1	20
22:00-22:59	2	1	2	0	5	0	4	14
23:00-23:59	1	3	4	2	3	5	4	22
TOTAL	39	29	31	25	40	62	104	330

Table 2. County of All Alcohol Related Collision by County

	N	%
CORK	35	10.6
GALWAY	32	9.7
DUBLIN	26	7.9
DONEGAL	25	7.6
CAVAN	18	5.5
LIMERICK	18	5.5
MAYO	17	5.2
KILDARE	16	4.8
MEATH	15	4.5
WEXFORD	15	4.5
TIPPERARY	14	4.2
KERRY	12	3.6
LAOIS	11	3.3
ROSCOMMON	11	3.3
LOUTH	10	3.0
MONAGHAN	8	2.4
SLIGO	7	2.1
LONGFORD	6	1.8
OFFALY	6	1.8
KILKENNY	5	1.5
WESTMEATH	5	1.5
CLARE	4	1.2
LEITRIM	4	1.2
WICKLOW	4	1.2
CARLOW	3	0.9
WATERFORD	3	0.9
TOTAL	330	100.0

Table 3. Driver and Motorcyclist Collision by County

	DRIVER		MOTORCYCLE	
	N	%	N	%
CORK	26	11.7	2	7.1
GALWAY	21	9.5	2	7.1
DONEGAL	17	7.7	0	0.0
CAVAN	16	7.2	1	3.6
MAYO	13	5.9	2	7.1
WEXFORD	13	5.9	0	0.0
DUBLIN	11	5.0	3	10.7
LIMERICK	11	5.0	3	10.7
MEATH	11	5.0	1	3.6
TIPPERARY	11	5.0	2	7.1
KERRY	9	4.1	0	0.0
KILDARE	9	4.1	2	7.1
LAOIS	9	4.1	0	0.0
ROSCOMMON	7	3.2	0	0.0
LONGFORD	5	2.3	0	0.0
LOUTH	5	2.3	2	7.1
CLARE	4	1.8	0	0.0
MONAGHAN	4	1.8	2	7.1
WICKLOW	4	1.8	0	0.0
KILKENNY	3	1.4	0	0.0
WATERFORD	3	1.4	0	0.0
WESTMEATH	3	1.4	1	3.6
LEITRIM	2	0.9	1	3.6
OFFALY	2	0.9	1	3.6
SLIGO	2	0.9	2	7.1
CARLOW	1	0.5	1	3.6
TOTAL	222	100.0	28	100.0

Table 4. Pedestrian Collision by County

	N	%
DUBLIN	12	14.8
GALWAY	9	11.1
DONEGAL	7	8.6
CORK	6	7.4
KILDARE	6	7.4
LIMERICK	4	4.9
ROSCOMMON	4	4.9
KERRY	3	3.7
LAOIS	3	3.7
LOUTH	3	3.7
MEATH	3	3.7
SLIGO	3	3.7
WEXFORD	3	3.7
KILKENNY	2	2.5
MAYO	2	2.5
MONAGHAN	2	2.5
CARLOW	1	1.2
CAVAN	1	1.2
LEITRIM	1	1.2
LONGFORD	1	1.2
OFFALY	1	1.2
TIPPERARY	1	1.2
WATERFORD	1	1.2
WESTMEATH	1	1.2
WICKLOW	1	1.2
CLARE	0	0.0
TOTAL	81	100.0

Working To Save Lives

Údarás Um Shábháilteacht Ar Bhóithre Road Safety Authority

Páirc Ghnó Ghleann na Muaidhe, Cnoc an tSabhaircín, Bóthar Bhaile Átha Cliath, Béal an Átha, Co. Mhaigh Eo
Moy Valley Business Park, Primrose Hill, Dublin Road, Ballina, Co. Mayo
local: 1890 50 60 80 fax: (096) 25 252 email: info@rsa.ie website: www.rsa.ie

