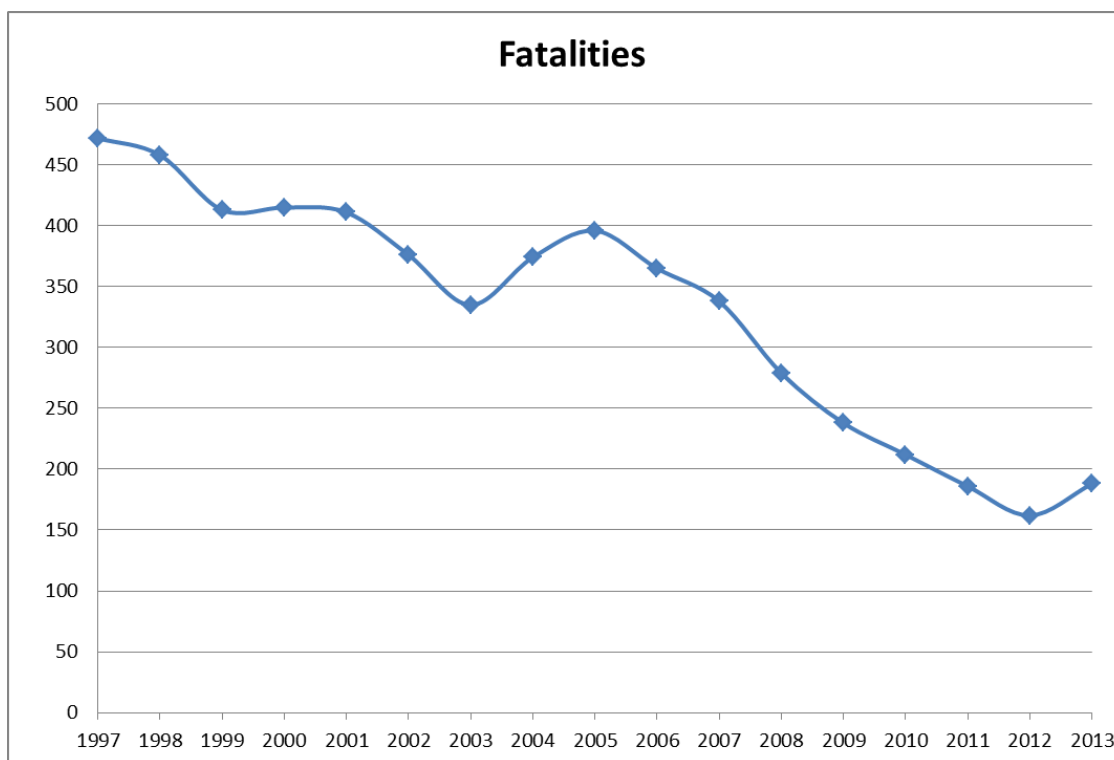


A review of 2013 fatal collision statistics December 31st 2013

The following report summarises the main trends that have emerged in 2013. This has been prepared by the Road Safety Authority following analysis of the fatality reports provided to the RSA by An Garda Síochána. Note that the information contained in this report is provisional and subject to change until the 2013 Collision Database is formally signed off by the RSA.

As of 31st December 2013, there have been **181 fatal collisions**, which have resulted in **190 fatalities** on Irish roads. This represents **29 more collisions**, and **28 more deaths** compared to the same period in 2012. 2013 has seen an increase in year-on-year fatalities for the first time since 2005, exceeding the number of fatalities in 2012 (162), and by a narrow margin, the number of fatalities in 2011 (186).



In this report, an analysis has been conducted of the following variables to help understand the increasing trend in fatality rates:

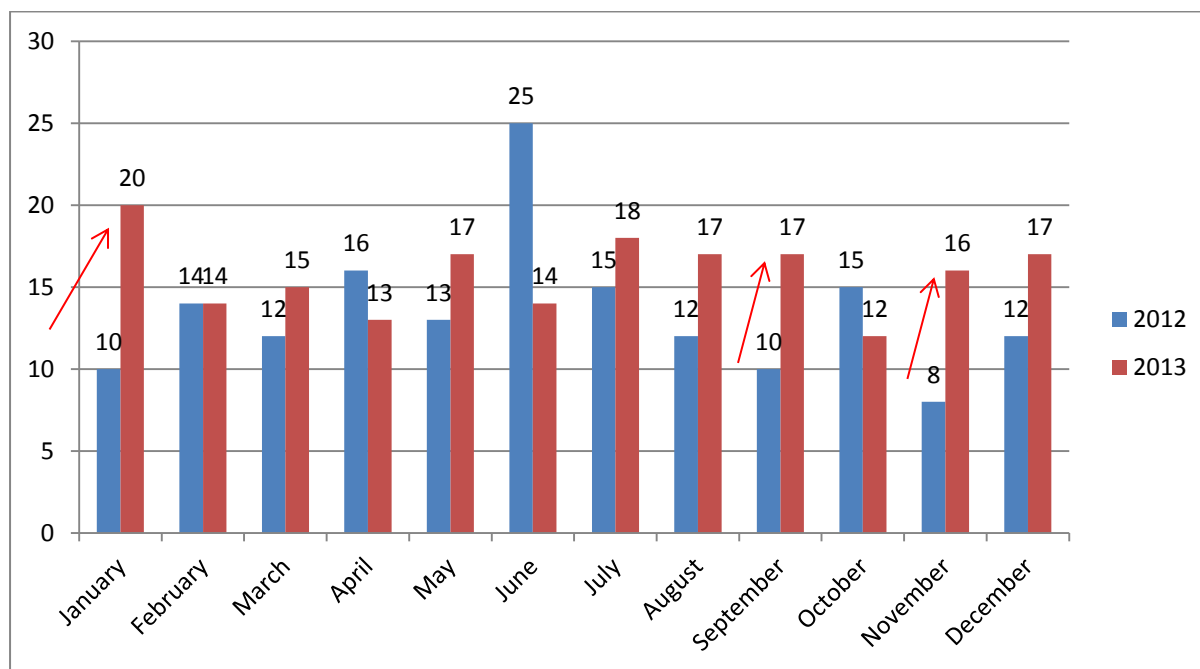
1. Month of year
2. Road user type
3. Time of day
4. Age group
5. Day of week
6. Region
7. Speeding
8. Seatbelt wearing rates

Upon finalisation of the 2012 and 2013 collision databases, a more detailed review of the contributory factors will be possible.

1. Month of Year

The table below shows the monthly trend in fatalities for 2012 and 2013. Note that these figures are provisional.

Based on a review of the monthly trends, it is clear that **January, September and November 2013** stand out as months with the highest increase in fatalities versus the same period in 2012 (100% in increase in January and November, and 70% increase in September). In other months, smaller increases or declines in fatalities were evident.



In order to understand which factors may have contributed to increased fatality figures in January, September and November 2013, a review of the Garda collision reports was conducted. This will aid understanding in the overall increases in fatalities for the full year 2013 versus 2012.

In **January**, the following differences were noted in relation to fatal collisions in January 2013 compared to fatal collisions in January 2012:

- 2 motor cyclist fatalities in January 2013, but none in January 2012
- 11 multi-vehicle collisions in January 2013, compared to none in January 2012
- 3 collisions in Speed Zones in January 2013, compared to just one in January 2012
- 16 collisions in speed limit areas of 80km/h and above in January 2013, compared to 7 in January 2012
- Weather was mentioned as a factor in 3 collisions in January 2013, but was not mentioned as a factor in any of the collisions in January 2012

While we cannot control for variation in weather above, these trends highlight a number of interesting observations.

Firstly, **an increase in motor cyclist fatalities** which became increasingly evident as 2013 progressed, secondly, the higher collision rate in designated speed zones and thirdly a higher rate of multi-vehicle collisions.

The following differences were noted in relation to fatal collisions in **September 2013** compared to fatal collisions in September 2012 :

- 7 fatalities on roads with speed limits of 60km/h or less in September 2013, compared to 2 in September 2012
- 10 car user fatalities in September 2013, compared to 6 in September 2012

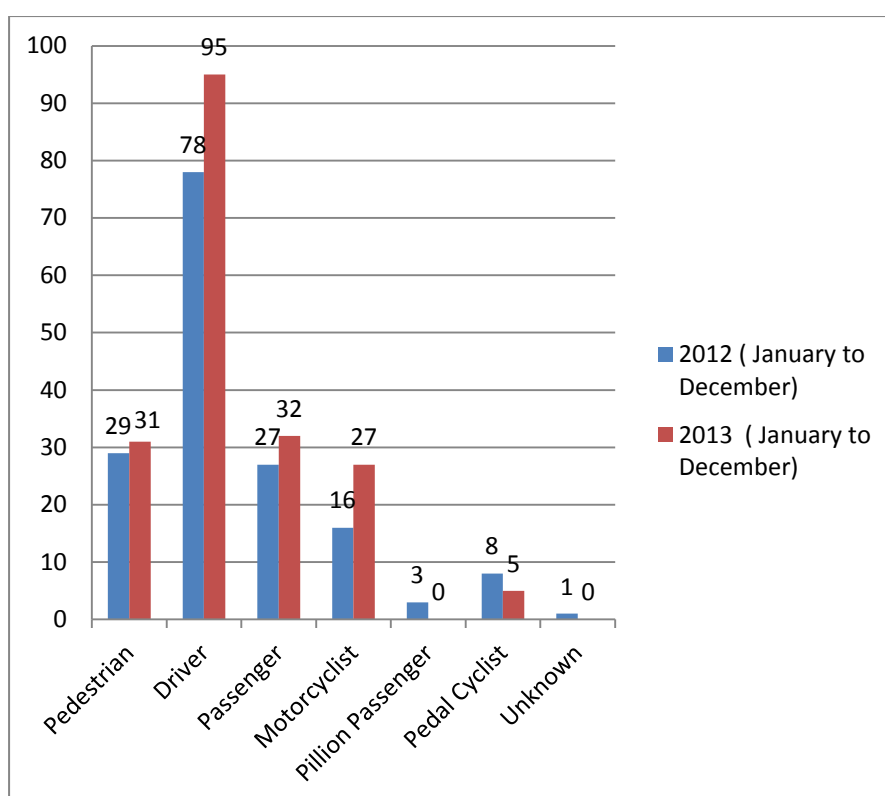
The following differences were noted in relation to fatal collisions in **November 2013** compared to fatal collisions in November 2012:

- 11 car user fatalities in November 2013, compared to 6 in November 2012
- Twice as many pedestrian fatalities in November 2013 versus November 2012 (4 versus 2 in 2012)
- A significant number of single vehicle car collisions in November 2013 (9) compared to November 2012 (3)
- 3 fatalities involving collisions with a roadside structures (wall, road sign or a pole) in 2013, but none in November 2012
- 3 cases where no seatbelt was worn in November 2013, compared to one in November 2012

2. Road User Type

Driver and passenger fatalities represent over two thirds (67%) of fatalities in 2013, while vulnerable road users (pedestrians, motorcyclists and pedal cyclists) represent the remaining third. Of the vulnerable road users, there were almost as many motorcyclists as pedestrians killed in 2013, a trend not previously observed, as pedestrian fatalities have typically been significantly higher than motorcyclist fatalities to date.

There have been some changes in the profile of road user fatalities in 2013 compared to 2012, as shown in the graph below.

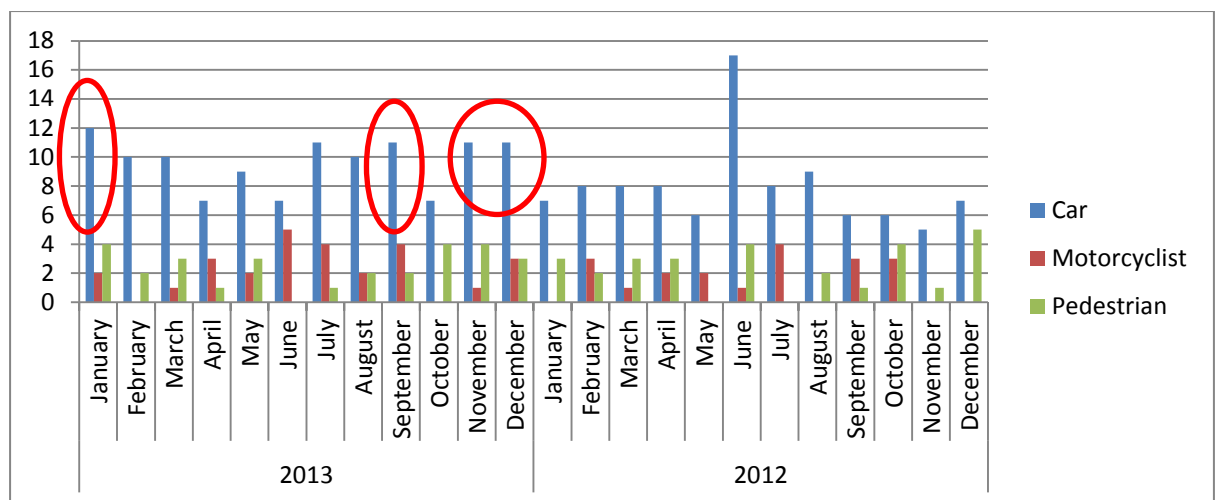


Of most significance is the increase in driver and passenger fatalities (up from 78 to 95 and from 27 to 32 respectively) and the increase in motor cyclist fatalities (up from 16 to 27). There has been a slight increase in the number of pedestrian fatalities (+2), but a decline in fatalities among pedal cyclists (-3).

On finalisation of the 2012 and 2013 collision databases, a more detailed review of the contributory factors in these collisions will be conducted by the RSA.

A review of the monthly trends in fatalities among **car users, motorcyclists and pedestrians** is shown below. With the exception of April and June, this highlights a consistently higher number of car user fatalities throughout 2013 compared to 2012, with January 2013 and the latter months of September through to December 2013 emerging as more dangerous months for car users compared to 2012.

The increase to date in motorcyclist fatalities was driven by a greater number of fatalities in January, June, August, September and December compared to the same period in 2012. The increase over the summer months may be due to the exceptionally good weather experienced in 2013.



Profile of pedestrian fatalities

Given the high number of pedestrian fatalities noted in 2013 (31), a review of the Garda collision reports was conducted. This review has revealed the following trends:

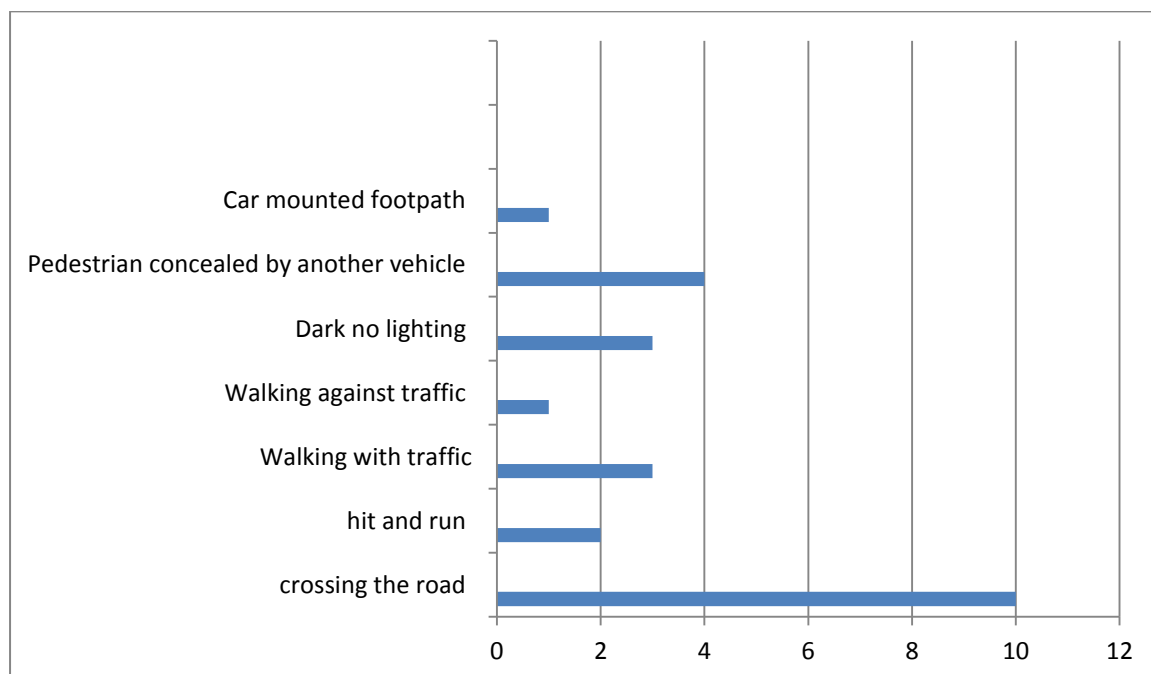
Age Profile: Where the age of pedestrian was known, it is evident that there is a higher rate of fatalities among middle aged and older age groups, as shown below:

Age	No. of pedestrians killed (2013)
<10	1
10-20	3
21-30	0
31-40	6
41-50	3
51-60	5
61-70	6
71-81	5

Gender: There were 15 male pedestrians killed, and 13 female pedestrians killed. (Note: gender was not recorded in three cases.)

Situation: A review of situational factors in the fatality was also conducted.

These can be summarised as below. Note that more than one factor can apply to a given incident.



In 10 cases, a pedestrian was killed while crossing the road. Three of these fatalities occurred when the pedestrian was crossing at a pedestrian crossing. In two cases, the Garda report stated that the pedestrian 'stepped out into the road'. These have been grouped with 'crossing the road'.

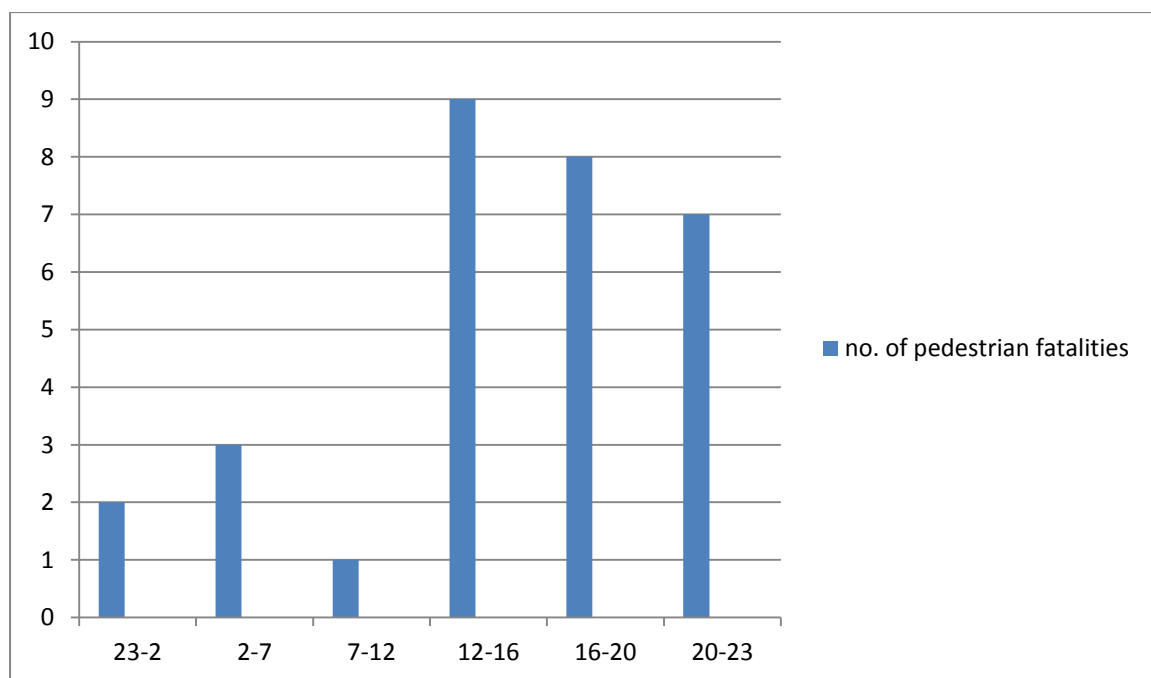
Vehicle involved: In the majority of cases, a car was involved in the pedestrian fatality (23 fatalities). HGV's were involved in 2 fatalities, Vans also in 2 fatalities. There was 1 fatality involving a motorcycle, 1 involving a bus and 1 involving a tele-porter.

Road Type: The greater majority of pedestrian fatalities occurred on high-speed roads, with a total of 14 fatalities on roads with an 80km/h or 100km/h speed limit. Also, a significant number occurred on roads with a 50km/h speed limit (8).

Speed limit (km/h)	No. of pedestrians killed (2013)
30	3
50	8
60	2
80	7
100	7
120	1

Time of day: Over half of the fatal collisions (18) occurred during hours of darkness.

The chart below shows that pedestrian fatalities are most likely to occur in the afternoon and evening, i.e. from 12-16 hours (9 fatalities), 16-20 hours (8 fatalities) and from 20-23 hours (7 fatalities)



In summary, a review of pedestrian fatalities in 2013 shows that:

- More men than women were killed
- Those aged 30+ were more likely to be killed, but the age profile is quite high, with a significant proportion of fatalities among those aged 50-81
- Crossing the road emerges as the most dangerous situational factor
- Higher incidence of fatalities in the hours of darkness
- Walking with traffic is a dangerous pedestrian behaviour which has resulted in 3 fatal collisions in 2013

What this means for the RSA:

- Communications on pedestrian safety are particularly relevant for older age groups
- Increasing the use of high-visibility vests remains critical
- There is a need for re-enforcement of key road safety messages such as: how to cross the road safely as a pedestrian, and it is safer to walk against traffic flow.

Profile of Driver Fatalities

There was a **22% increase in driver fatalities in 2013** (up from 78 in 2012 to 95 in 2013).

A review of the Garda collision information shows that the greater majority of these fatalities were among men (80%). The age profile of the drivers killed is shown below and indicates that exactly half of driver fatalities (50%) were among those aged 16-35. Younger drivers are the most vulnerable.

Age Group	No. of Fatalities	% of all Fatalities
16-25	25	26%
26-34	23	24%
36-45	9	9%
46-55	8	8%
56-65	10	11%
66-75	7	7%
76+	13	14%

Of the driver fatalities, the vast majority involved car users, with a minority of fatal collisions involving other vehicle types, such as tractors, quad bikes, HGV's or Vans.

Over half of the driver fatalities (54%) were single vehicle collisions, with the remainder (46%) involving at least one other vehicle.

16 of the 95 drivers (17%) were not wearing a seatbelt.

The greater majority of driver fatalities occurred on roads with a speed limit of 80km/h or 100 km/h as shown below.

Speed limit (km/h)	No. of drivers killed (2013)
30	-
50	13
60	3
80	44
100	31
120	4

A more detailed review of the collision database will be required to gain an understanding as to the causation factors of these fatalities, and this will be conducted in 2014.

Profile of motorcyclist fatalities in 2013

Given the increase in motorcyclist fatalities noted in 2013, a review of the collision information provided by An Garda Síochána was conducted. This review has revealed the following trends:

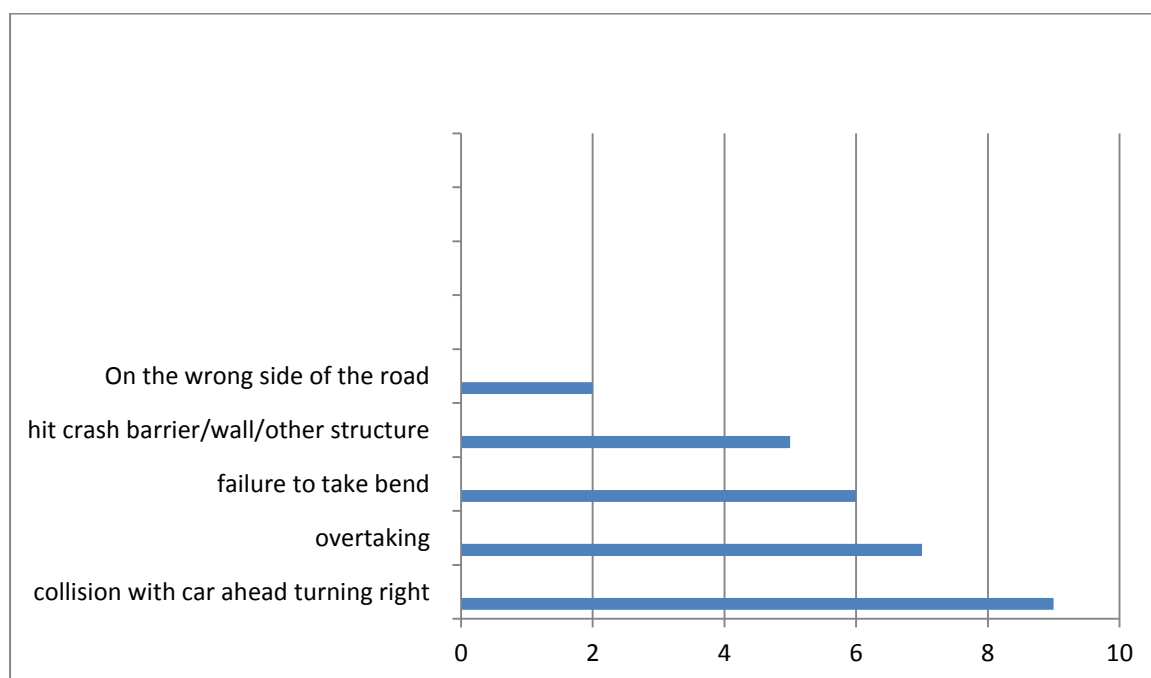
Age Profile: Motorcyclist fatalities are highest among those aged 20-30 and 31-40:

Age	No. of motorcyclists killed (2013)
<20	1
20-30	9
31-40	6
41-50	5
51-60	4
61-70	2

Gender: 26 of the 27 motorcyclists who were killed in 2013 were male.

Situation: A review of situational factors in the fatality was also conducted.

These can be summarised as below. Note that more than one factor can apply to a given incident.

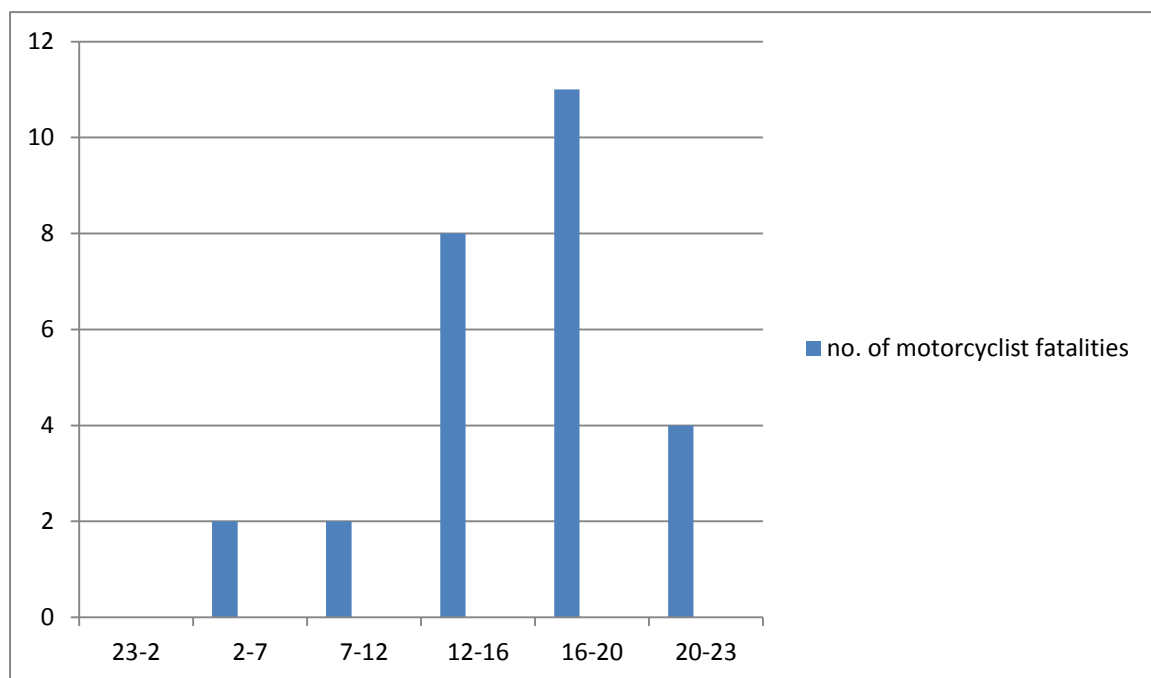


A collision with a **car ahead turning right** is the main causation factor, leading to 9 fatalities. Note that in 4 of these collisions, the motorcycle was travelling in the **same direction** as the car ahead turning right, while in 5 collisions the motorcycle was travelling in the **opposite direction** to an on-

coming car turning right. In a number of cases, the motorcyclist was also overtaking before the collision with the car turning right.

Time of day: A third of collisions (9) occurred during hours of darkness.

The chart below shows that motorcyclist fatalities are most likely to occur in the afternoon and early evening, i.e. from 12-16 hours (8 fatalities) and from 16-20 hours (11 fatalities)



Vehicle involved: 7 of the 27 collisions were single vehicle collisions. Of the multi-vehicle collisions, the motorcyclist was most likely to collide with a car (14). In a minority of cases, another vehicle type was involved: HGV (3), van (2), or tractor (1).

Road Type: The greater majority of motorcyclist fatalities occurred either on roads with an 80km/h speed limit (10) or a 100km/h speed limit (10).

Speed limit (km/h)	No. of motorcyclists killed (2013)
30	1
50	3
60	1
80	10
100	10
120	2

What this means for the RSA:

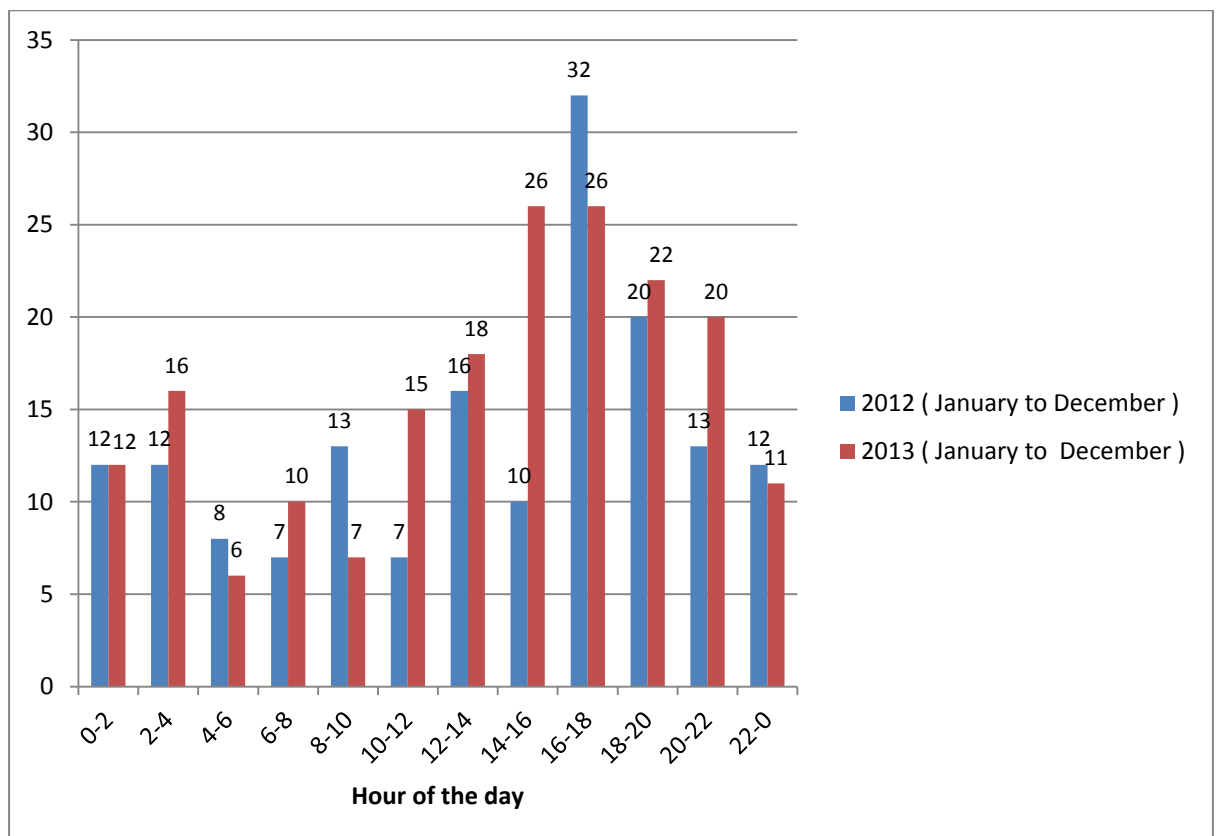
- Motorcyclist awareness and education campaigns are critical to highlight the importance of:
 - Good observation by motorists when turning right
 - Vigilance among motorists for motorcyclists at all times
 - Public awareness that motorcyclists are vulnerable and collisions may be more severe
 - Good observation by motorcyclists generally
 - Extreme caution by motorcyclists when overtaking
 - Extreme caution by motorcyclists when taking bends, in particular reducing speed

3. Time of day

The below chart shows the distribution of fatalities by hour of day for January –December 2012 and January – December 2013.

The key differences of note are:

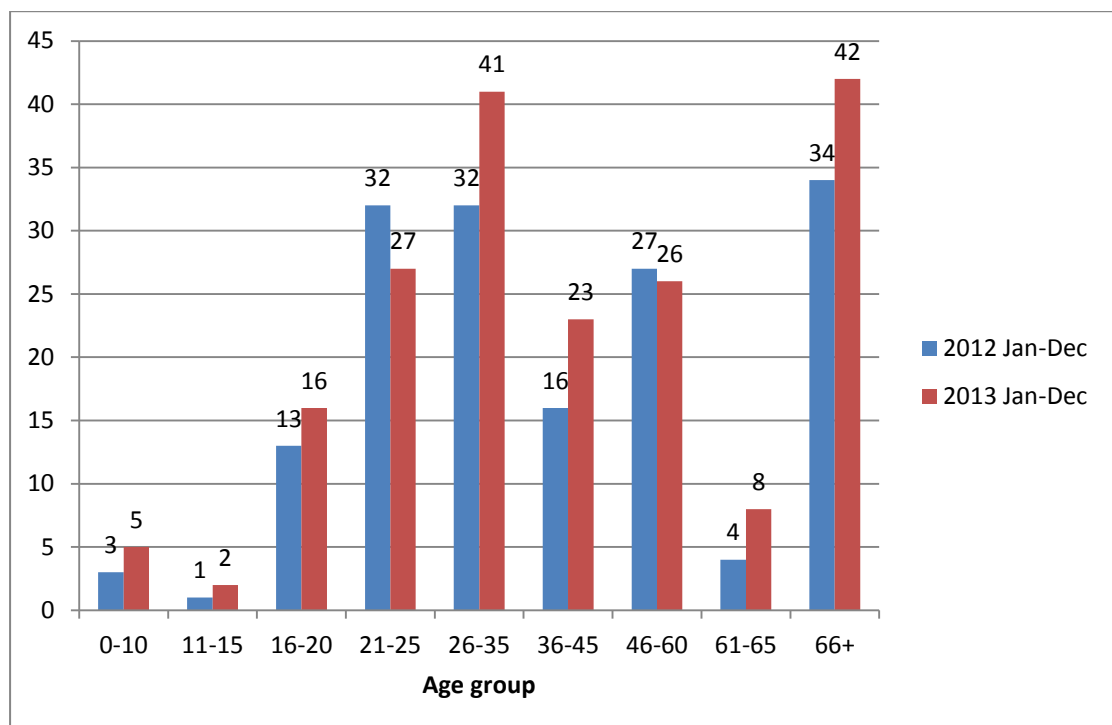
- Over two and a half times as many fatalities occurred between 1400 hrs and 1600 hrs in 2013 compared to the same period last year
- A notable increase in the number of fatalities occurring between 2am and 4am, 10am – 12pm, and 20 – 22 hours.



4. **Age Profile (All Fatalities)**

In 2013, the greatest number of fatalities on our roads were among those aged 16-25 (43), followed by those in the 26-35 year age group (41) and those aged 66+ (42).

While there was a slight decline in fatalities among those aged 16-24 (-2), there were notable increases in fatalities among the older age groups, namely those aged 26-35 (+9), the 36-45 age group (+7) and those aged 66+ (+8).

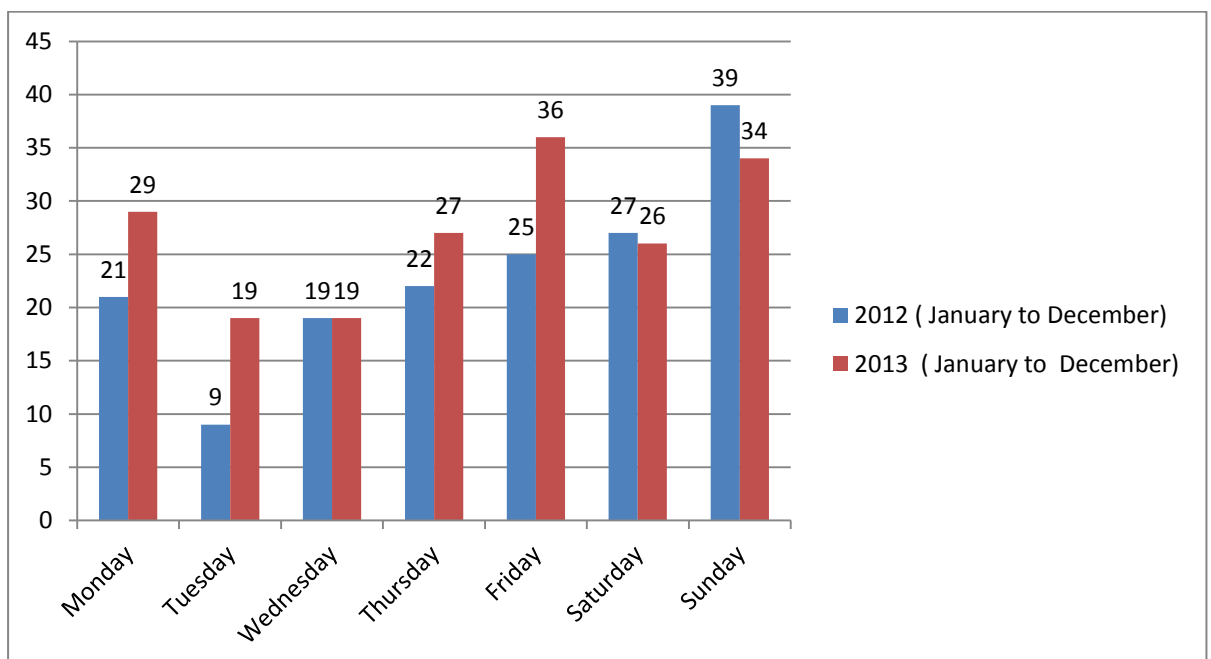


5. Day of week

The below chart shows the distribution of fatalities by day of week for January – December 2013 and the same period in 2012.

The key differences of note are:

- Twice as many fatalities occurred on a Tuesday compared to the same period last year
- A notable increase in the number of fatalities occurring on Thursdays, Mondays and on Fridays compared to 2012.
- Friday now replaces Sunday as the day on which fatal collisions are most likely to occur.



6. Regional Differences

The greatest increase in fatalities since 2012 is evident in the Eastern Region, but increases are evident throughout the regions, with the exception of the Western Region where a significant decline has occurred (-9).

Regions to date 2012 & 2013			
Region	2012	2013	
Dublin	12	19	7
Eastern	30	43	13
South Eastern	21	27	6
Southern	33	39	6
Western	36	27	-9
Northern	30	35	5
TOTAL	162	189	27

It is difficult to discern what factors may be driving the increases in each of these three regions.

7. Speeding

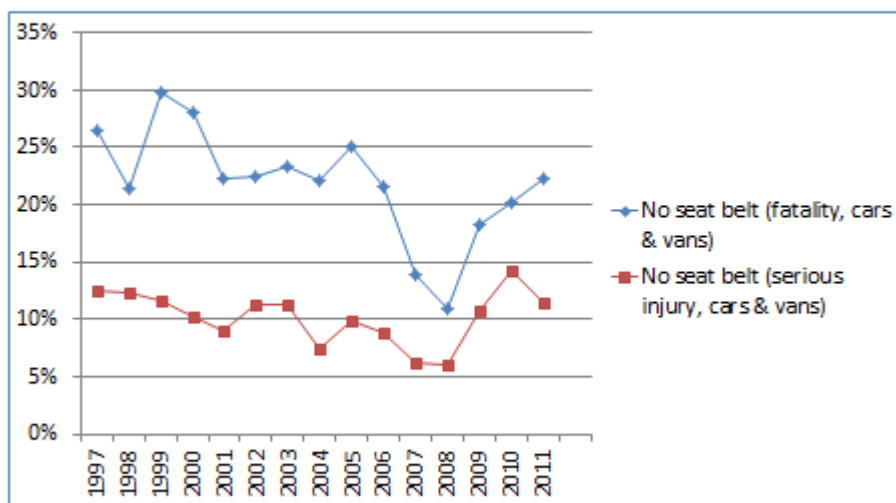
Of all fatalities and serious injuries recorded between 1997 and 2011, speed was a contributory factor in 22% of fatalities and in 19% of serious injuries.

The most recent RSA Free-Speed Surveys (an observational survey) indicates that speeding rates on rural roads, where most accidents occur, declined from a high of 22% in 2009, to 15.7% in 2011, but increased to 19.8% in 2012.

8. Seatbelt wearing rates

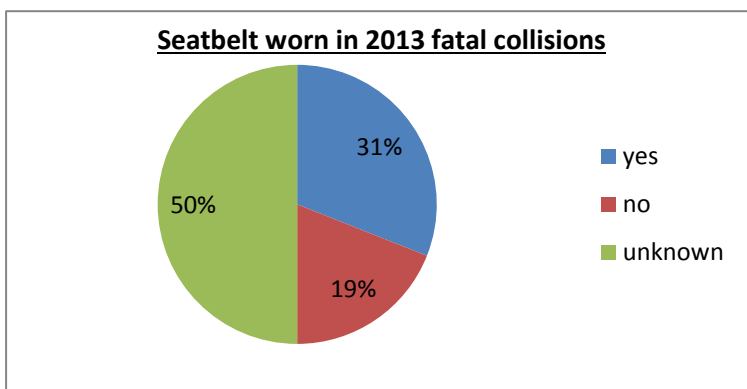
Recent seatbelt observational studies conducted by the RSA show improved seatbelt compliance. While this points to improved public behaviour, ‘no seatbelt’ as a factor in fatal and serious injury collisions is on the increase (see chart below). This highlights the devastating impact of non-compliance if a collision occurs, and suggests that more emphasis on seatbelt wearing is required.

Proportion of fatalities and serious injuries where no seatbelt was a contributory factor



Source: Collision Database 1997-2011

A review of the **2013 fatal collisions** among car/van fatal collisions indicates that in the case of 19% of these collisions, a seatbelt was not worn. This suggests that 21 fatalities may have been prevented had a seatbelt been worn. This is currently below the full year figure of 22% for 2011 (above). Note that in a significant proportion of collisions, it was not possible for the Garda at the scene to record whether or not a seatbelt was worn, as indicated below:



Conclusions

In summary, this report indicates that there have been changes in trends in fatal collisions for Jan-December 2013 compared to Jan-December 2012. The main points for consideration are:

- Greater number of car user fatalities
- Greater number of motorcyclist fatalities
- Significant number of pedestrian fatalities, particularly among those aged 50+
- Increased incidence of fatal collisions during the week and on Fridays
- Greater number of multi-vehicle collisions in both January and September 2013, the months where the greatest increase in collisions was recorded 2013 versus 2012, but also a greater number of single vehicle collisions in November 2013 versus November 2012
- Subtle differences in time of day of fatal collision occurrence
- Increase in fatal collisions in all regions except for the Western region
- High incidence of 'no seatbelt' as a factor in fatal collisions