NORTH EAST
Regional Road Safety Resource

Project Report: 7

Regional Overview of Elderly Driver (60+) Collisions 2005 – 2007

Produced November 2008
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Introduction

This report has been produced by the North East Regional Resource as an overview of injury collisions that involved a driver aged 60 years or over (Elderly Drivers) in the NE region 2005 -2007. The data used to produce this report is based on the project database of Stats 19 provided by Cleveland, Durham and Northumbria police forces.

The main purpose of the report is to identify areas where Elderly Drivers may be particularly at risk or vulnerable to a road traffic collision.

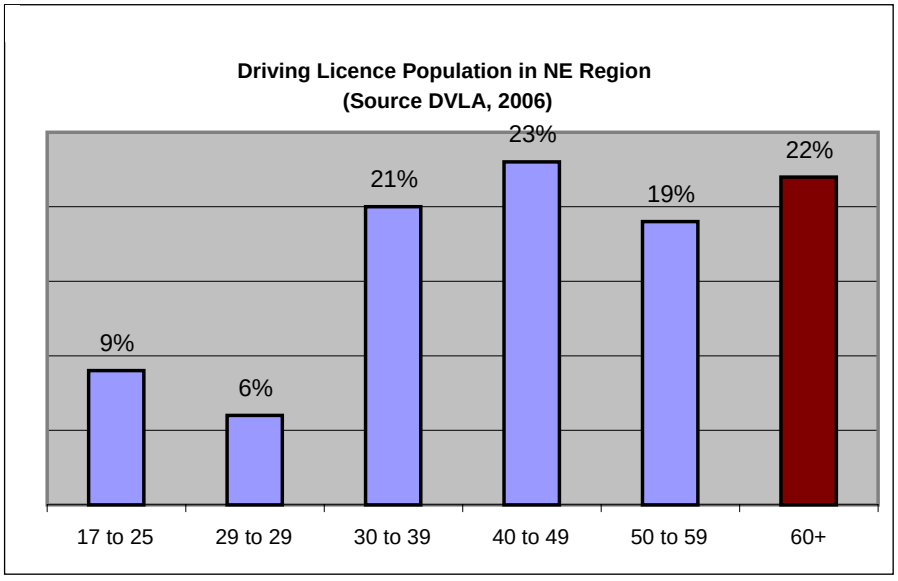
Profile of Elderly Driver Collisions 2005 – 2007

According to the office of National Statistics, the UK population is ageing, with the average age of the population up by 2 years since 1997. Also, the same proportion (1 in 5) of the population is at retirement age as that below the age of 16 years.

The average age of the UK population is on the increase and so too is the level of elderly people who hold a driving licence. The Department for Transport's (DfT) 'National Transport Survey 2007' shows that the proportion of people aged 60+ who hold a driving licence has steadily increased in the past 10 years. Licence holding in males aged 60-69 is up 4% and aged 70+ is up 10%. Female licence holders are showing an even greater increase; with licence holding in females aged 60-69 up 18% and 70+ up 15% over the past 10 years.

In the North East region 22% of the driving population are aged 60+.

Figure 1: Driving Licence Population in the North East Region



Collisions involving an elderly driver account for 14% of the total collisions for the North East region or in real terms 3,161 collisions. This figure is slightly less for those collisions involving killed or serious injury (KSI) at 13% (388 collisions). In terms of driving licence population these collision figures/proportions are relatively low in comparison to other age groups; in particular the age group deemed 'Young

Drivers', which although only make up 9% of the driving population account for 31% of regional KSI figures.

Despite licence holding in elderly females being on the increase, it is still elderly male drivers who are involved in the most collisions (77%).

Severity

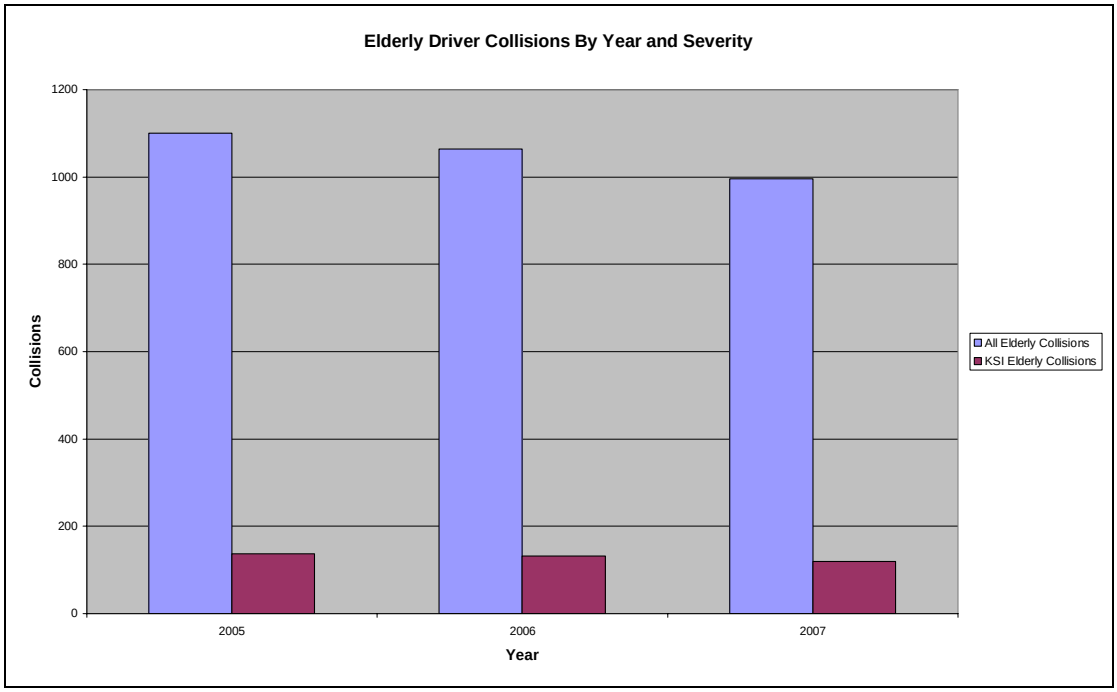
Elderly driver collisions show a fairly consistent split when broke down by collision severity. No matter what the severity they make up between 13-16% of the total regional collisions for that particular severity.

Figure 2: Elderly Driver Collisions by Severity 2005-2007

Severity	2005	2006	2007	Total	% of Regional Total
Fatal	15	18	12	45	16
Serious	122	114	107	343	13
Slight	964	932	877	2773	15
Total	**1101**	**1064**	**996**	**3161**	**14**

The table above would seem to suggest that elderly driver collisions are on a downward trend with the total collisions dropping on average by 5% per annum; however this reduction is slightly less than the regional trend for all collisions. KSI collisions are dropping on average 6.5% per annum and this is a higher reduction than the trend for all regional KSI collisions of around 2.5%.

Figure 3: Elderly Driver Collisions/KSI Collisions 2005-2007



Casualties

Like all collisions in the region, elderly driver collisions can sometimes result in more than one casualty. These casualties can be split by severity but also by class or road user type and even by age. 57% of casualties are either 'Vehicle Driver' or 'Motorcycle Rider' and 31% are classed as a 'Vehicle Passenger'.

Figure 4: All Casualties Resulting From Collisions Involving Elderly Drivers 2005-2007

Casualty Class	Fatal	Serious	Slight	Total
Vehicle Driver	19	149	2365	2533
Vehicle Passenger	13	82	1371	1466
Motorcycle rider	6	61	130	197
Cyclist	4	37	179	220
Pedestrian	8	71	307	386
Other	0	0	0	0
Total	**50**	**400**	**4352**	**4802**

Some of these casualties are the Elderly Driver themselves who have been injured, 49% of those casualties classified as a 'Driver/Rider' were elderly. However, in terms of KSI 'Driver/Rider' casualties this figure is higher at 57%.

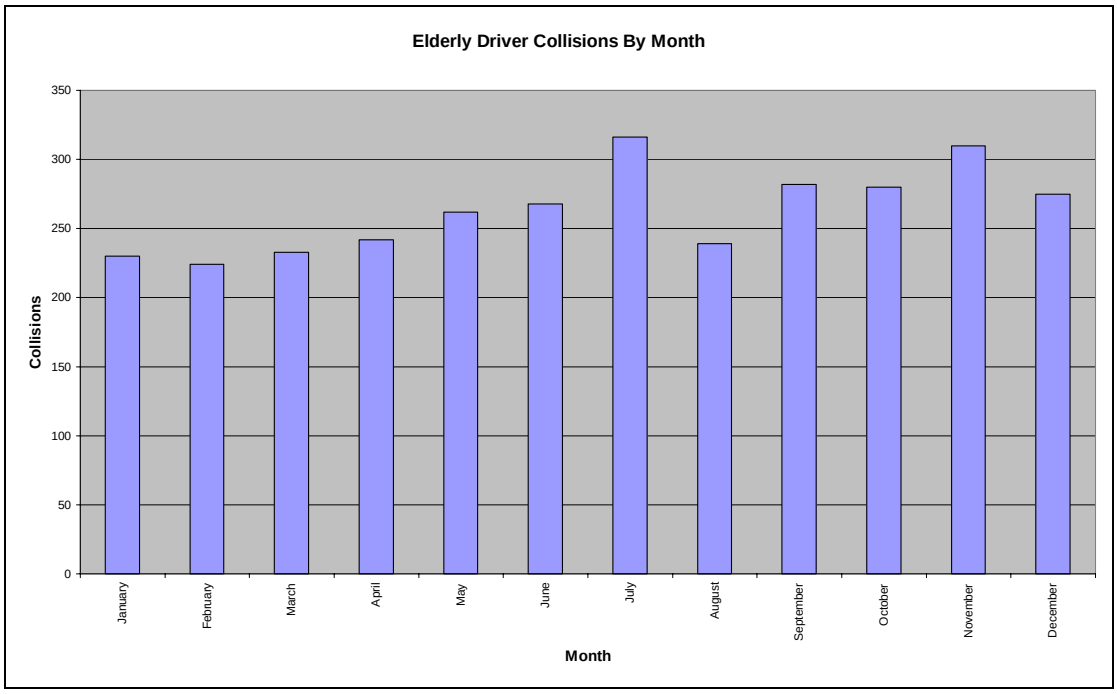
Figure 5: Driver Casualties Resulting From Collisions Involving Elderly Drivers 2005-2007

Age	Fatal	Serious	Slight	Total
Not Elderly Driver	6	114	1392	1512
Elderly Driver	23	133	1282	1438

Month, Day & Time

Elderly driver collisions are pretty constant throughout the year, with small peaks in July and November, and lows in August and the early months of the year. This trend is mirrored when looking at all regional collisions.

Figure 5: Elderly Driver Collisions by Month 2005-2007



When elderly driver collisions are broken down by day the trend tends to follow the regional pattern. Collisions peak on Friday (when traffic flows tend to be highest) and dip on a Sunday (when traffic flows tend to be lowest).

In real terms Saturdays have the highest number of KSI elderly driver collisions and this is different to the regional trend which shows Fridays as highest. Looking at the daily splits, weekends have the highest proportion of KSI elderly driver collisions. This is in line with the regional pattern for all KSI collisions.

Figure 6: Elderly Driver Collisions by Day 2005-2007

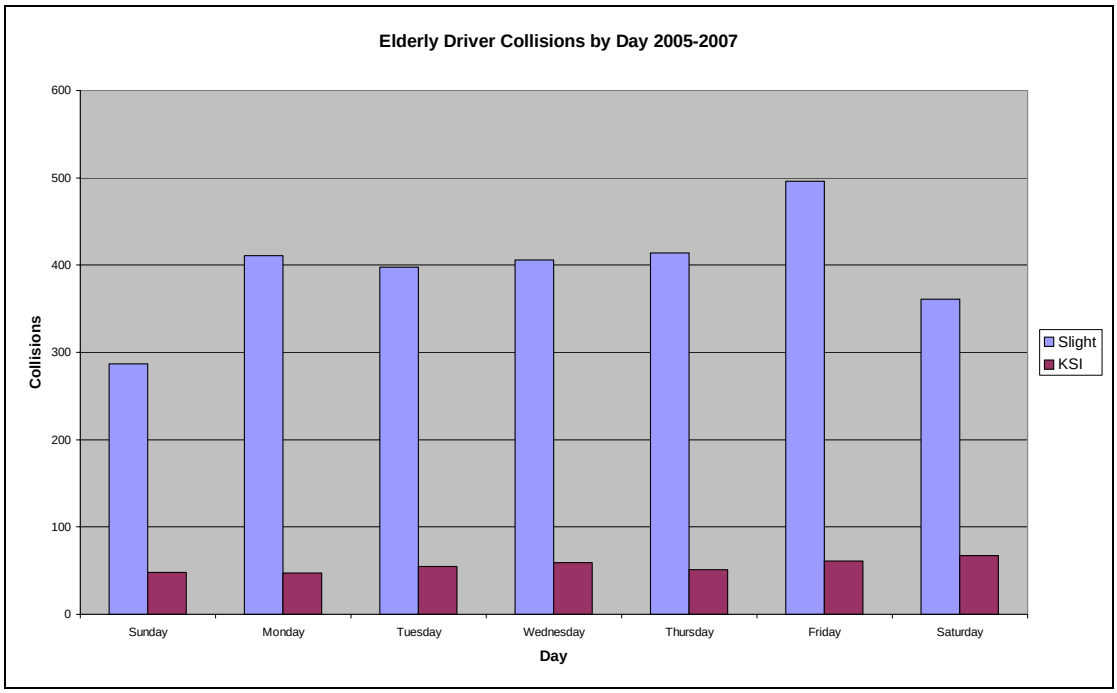
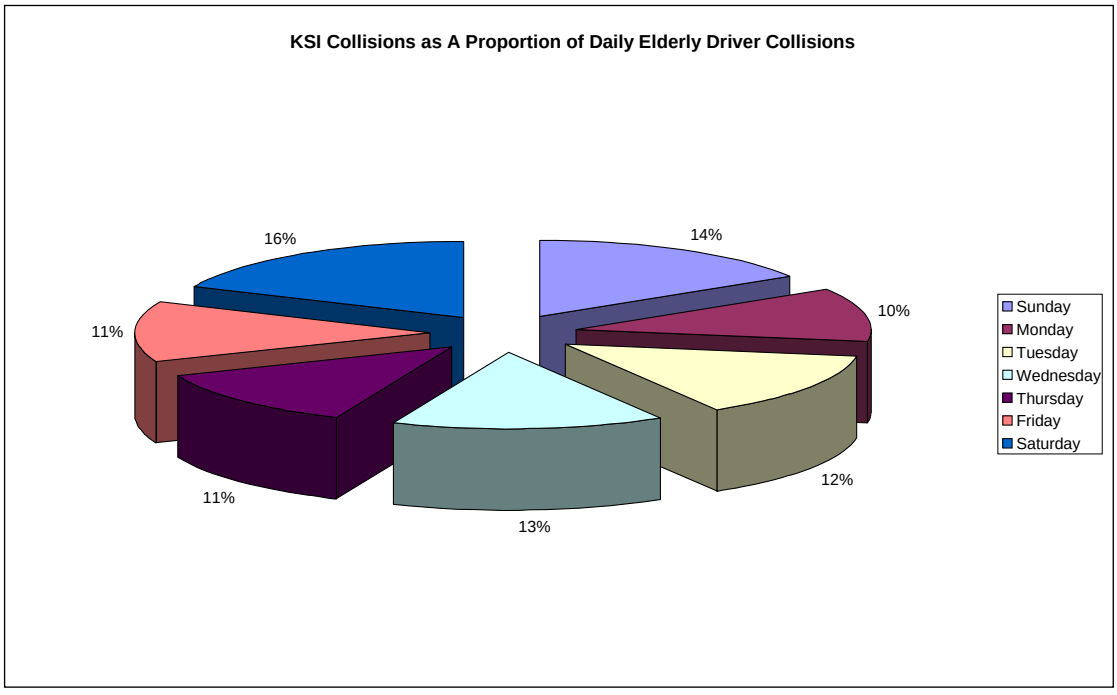
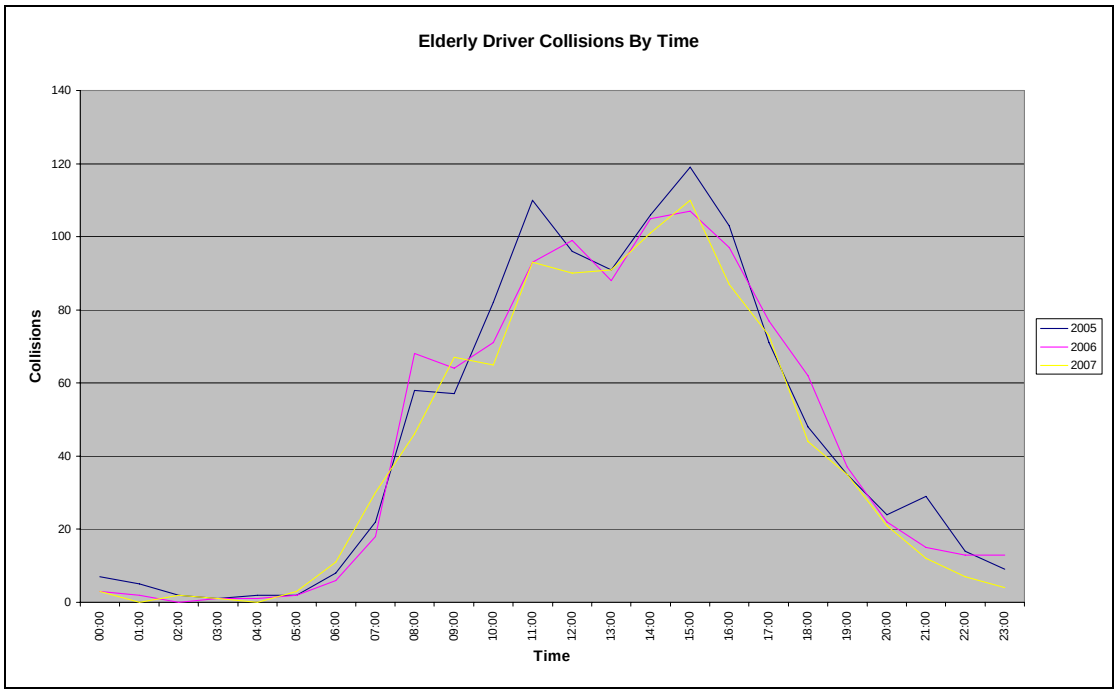


Figure 7: KSI Elderly Driver Collisions Proportions per Day 2005-2007



The time at which elderly driver collisions occur differs slightly from the regional pattern of all collisions. They do not show definite peaks at commuting times (i.e. 8am and 5pm), instead they tend to peak between these times at 10am-4pm when about 63% of elderly driver collisions occur.

Figure 8: Elderly Driver Collisions by Time of Day 2005-2007



In April 2006 many local authorities in England adopted the revised bus pass scheme in which elderly people (60+) were allowed to travel for free at non-peak times (after 9:30am). The national data available would suggest that elderly people are making good use of the scheme. According to the DfT document 'Transport Statistics Great Britain 2007' concessionary fare reimbursement to local authorities was up 36% in 'English metropolitan areas' and up 105% in 'England: Other areas' in 2006/07 compared to the previous year. The 'National Travel Survey: 2007 Interview Data' also prepared by the DfT, shows that the take up rate for the concessionary scheme rose 7% in 2006 and a further 5% in 2007, the largest increases in the last six years.

Figure 9: National Take-Up Rate of Concessionary Fare Scheme

	% Men/Women Aged 60+ Taking up Concessionary Fare Scheme					
Year	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
All Areas	52	56	56	56	63	68

However, the increased bus use seems to be having little (or no) effect on elderly driver collisions in the north east region. In 2005, 85% of elderly driver collisions occurred after 9:30am (the time at which the concessionary bus scheme starts), in 2006 this figure remained at 85%, and in 2007 this figured dipped very slightly to 84%. Looking at elderly bus passenger casualties as an indicator is presently inconclusive as there is not enough data available to identify any meaningful patterns or trends, although there was a 12% increase in elderly bus passenger casualties in 2007.

Local Authority Split

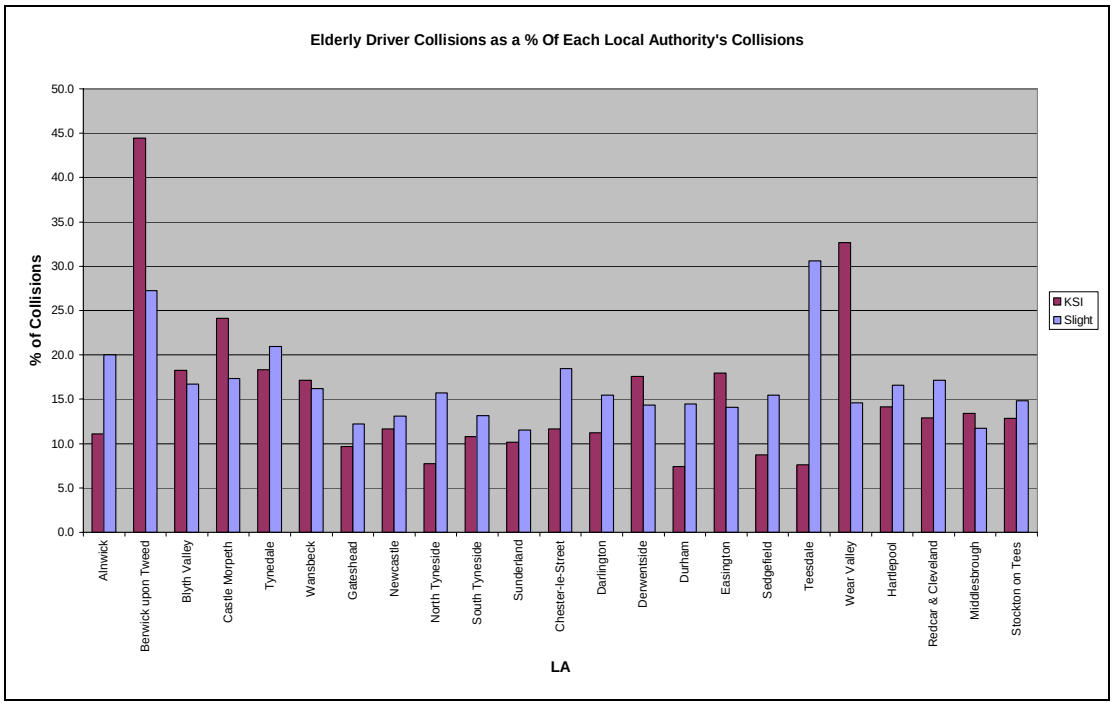
When elderly driver collisions are broken down by local authority area it becomes immediately noticeable that Newcastle has the highest levels with about 12% of the regions elderly collisions in 2005-2007. Gateshead, North Tyneside and Sunderland are also showing higher levels in comparison to the rest of the local authorities.

Figure 10: Elderly Driver Collisions by Local Authority Area 2005-2007

Local Authority	Total Elderly Driver Collisions	Proportion of Regions Elderly Driver Collisions
Newcastle	382	12.1%
Sunderland	266	8.4%
North Tyneside	253	8.0%
Gateshead	251	7.9%
Stockton on Tees	168	5.3%
Tynedale	149	4.7%
Darlington	143	4.5%
South Tyneside	134	4.2%
Redcar & Cleveland	134	4.2%
Middlesbrough	127	4.0%
Blyth Valley	125	4.0%
Easington	106	3.4%
Durham	102	3.2%
Castle Morpeth	101	3.2%
Sedgefield	98	3.1%
Wear Valley	98	3.1%
Hartlepool	98	3.1%
Derwentside	95	3.0%
Wansbeck	82	2.6%
Berwick upon Tweed	71	2.2%
Chester-le-Street	65	2.1%
Alnwick	57	1.8%
Teesdale	56	1.8%
Total	**3161**	**100%**

However, when analysing elderly drivers as a proportion of a local authority's total collisions a very different picture appears. In the rural areas of Northumberland and Durham for example the proportion of KSI collisions that elderly drivers are involved in is high and in several cases higher than that of the slight proportion. It should be noted that several local authority areas have comparatively low collision numbers and this tends to exaggerate the percentage figures. Urban areas tend to show lower proportions of KSI collisions, for example, although Newcastle has the highest number of KSI elderly driver collisions in the region its KSI proportion in terms of all Newcastle KSI collisions is one of the lowest.

Figure 11: Elderly Driver Collisions as a Proportion of Each Local Authority's Collisions 2005-2007



An added consideration when splitting elderly driver collisions by local authority area is population levels. The population of elderly people differs from area to area, with Sunderland having the most elderly residents and Teesdale having the least. Population figures are published by the Office of National Statistics.

Given that regionally, a high percentage of collisions occur within 5km of a driver's home address it is fair to expect those areas with high elderly residents to have higher elderly driver collision levels. Looking at the rate of collisions per thousand elderly residents the below table is observed showing a very different outlook to the one above.

Figure 12: Rate of Elderly Driver Collisions per Thousand Elderly Residents 2005-2007

Local Authority	Elderly Driver Collisions	Elderly Driver Collisions per Thousand Elderly Residents
Tynedale	149	10.21
Berwick upon Tweed	71	8.99
Teesdale	56	8.75
Castle Morpeth	101	7.89
Blyth Valley	125	7.49
Newcastle	382	7.18
Wear Valley	98	6.76
Alnwick	57	6.71
Darlington	143	6.53
North Tyneside	253	5.79
Wansbeck	82	5.77
Gateshead	251	5.77
Durham	102	5.73
Chester-le-Street	65	5.51
Hartlepool	98	5.08
Easington	106	5
Sedgefield	98	4.97
Derwentside	95	4.77
Middlesbrough	127	4.72
Stockton on Tees	168	4.6
Sunderland	266	4.49
Redcar & Cleveland	134	4.14
South Tyneside	134	3.84
Total	**3161**	

Light Conditions

85% of elderly driver collisions occur in daylight conditions. However, the chance of an elderly driver collision being a KSI is slightly higher when it occurs in darkness.

Figure 13: Elderly Driver Collisions by Light Conditions 2005-2007

Visibility	Fatal	Serious	Slight	Total	% of Elderly Collisions
Daylight	36	280	2357	**2673**	85
Darkness	9	63	416	**488**	15

Figure 14: KSI/Slight Proportions by Light Conditions 2005-2007

Visibility	KSI	Slight
Daylight	12%	88%
Darkness	15%	85%

There is a 15% chance that if an elderly driver has a collision in darkness the severity of that collision will be KSI, compared to a 12% chance if the collision took place in daylight.

Road Class & Type

47% of elderly driver collisions occur on A Class roads. This is rather significant as only 11.5% of the regions roads are A Class, indicating that other factors such as traffic density increase the likelihood of a collision. B Class roads are also showing a higher proportion of elderly driver collisions compared to the regions road network.

Figure 15: Elderly Driver Collisions by Road Class 2005-2007

Road Class	Proportion of Road Type in NE Region	Fatal	Serious	Slight	Total	% of Collisions
A(M)	0.4%	0	6	40	**46**	2%
A	11.5%	32	153	1293	**1478**	47%
B	8.1%	3	50	433	**486**	15%
C	17%	5	49	466	**520**	16%
Unclassified	63%	5	85	541	**631**	20%
Total		**45**	**343**	**2773**	**3161**	

67% of elderly driver collisions occur at a junction, this figure is slightly up on the regional trend of 62%. The majority of these collisions are at junctions classified as 'T or Staggered' in particular KSI collisions.

Figure 16: All Elderly Driver Junction Collisions by Type 2005-2007

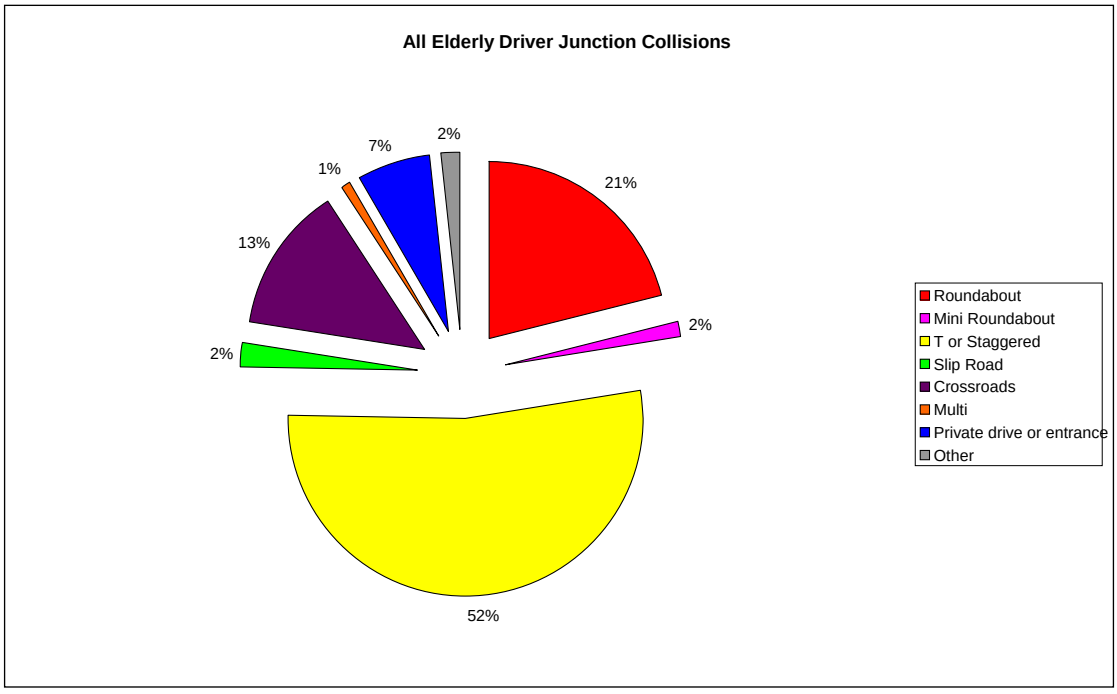
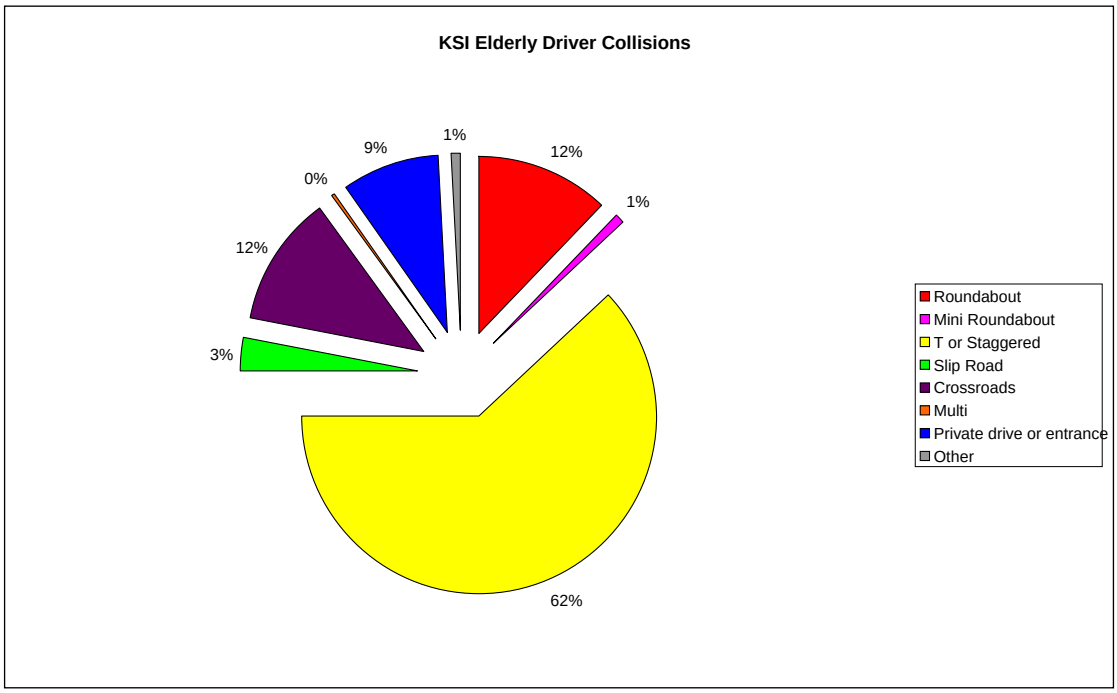


Figure 17: KSI Elderly Driver Junction Collisions 2005-2007



Contributory Factors

Police officers attending road traffic collisions are required to record contributory factors to help assess the reasons behind the collisions. In the North East region officers recorded contributory factors for 93% of elderly driver collisions 2005-2007.

Analysis of contributory factors, for those elderly driver collisions that have been coded, shows that 'Driver/rider error' was recorded as 'Very likely' in 49.5% of collisions.

Figure 18: Contributory Factors Recorded As 'Very Likely' In Elderly Driver Collisions 2005-2007

Contributory Factors	Elderly Driver Collisions
Driver/Rider Error	49.5%
Behaviour/Inexperience	10.4%
Injudicious Action	10.3%
Pedestrian	9.5%
Road Environment	6.7%
Vision Affected By	5.8%
Impairment/Distraction	5.6%
Other	1.5%
Vehicle Defects	0.7%

Each of the above contributory factors can be broken down into sub-sections, which can be used to further analyse why a collision occurred. The top 5 individual contributory factors used in elderly driver collisions are:

- Failed to look properly (Driver/Rider)
- Failed to judge other persons path or speed
- Careless/Reckless/In a hurry (Driver/Rider)
- Poor turn or manoeuvre
- Failed to look properly (Pedestrian)

Headline Notes

- The national trend for drivers' licence holding amongst elderly drivers shows a steady increase year on year.

- Elderly drivers account for 22% of licence holders in the north east region but only 14% of collisions in the region involve at least one driver aged 60+. The majority of these drivers are male.

- Elderly driver collisions do NOT peak in line with commuting times and 63% of their collisions occur between 10am and 4pm.

- As yet the change to the concessionary bus fare scheme in 2006 does not seem to have had any effect on elderly driver collisions.

- Newcastle has the highest proportion of the regions elderly driver collisions with Tyne & Wear as a whole accounting for 41% of the total. However, when elderly populations are considered higher collisions rates are shown in other areas like Tynedale.

- Elderly driver collisions occur most on roads with high traffic flows with 47% on A Class roads (which only make up 11.5% of the regions road network).

- Driver/Rider error is coded the most for elderly driver collisions, with 'failing to look properly' as the most popular code used by police officers.