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Why is this issue important?

Although there has been a long term national decline in road casualties, numbers in 2014 were beginning to show a reversal of this downward trend and there was an increase in casualties of all severities for the first time since 1997.[1] Central government has indicated that it wishes to see the casualty reduction momentum generated over previous decades continuing up to 2020 and beyond.

Quite apart from the personal trauma suffered by the individuals involved and their families and friends, the wider social impact and economic cost of road collisions upon communities is enormous.

The Road Traffic Act 1988 places a statutory duty upon local highway authorities in Great Britain to promote road safety. For Brighton & Hove City Council this duty involves us in the study and analysis of road traffic collisions and taking preventative actions, in the form of both physical and educational measures, to reduce the future risk of collisions occurring on our roads.

The Health and Social Care Act 2012[2] took a significant step towards the delivery of public health services through local authorities and set out a legal framework for local government to achieve this. Local authorities are expected to embed their new public health duties into all of their service activities, tailoring local solutions to local problems and using all opportunities to improve health and reduce inequalities.

Key outcomes

Road casualties are one of the wider determinants of health and prevention within the Public Health Outcome Framework. The indicator is based upon ***the number of killed and seriously injured casualties on England's roads*** as recorded by the police (Stats19) per 100,000 resident population.

Road safety initiatives also contribute to the following Public Health Outcomes Framework indicators:

Wider determinants of health:

- ***children in poverty;***
- ***school readiness;***
- ***first time entrants to the youth justice system;***
- ***killed and seriously injured casualties on England's roads;***
- ***reoffending levels;***
- ***utilisation of outdoor space for exercise/health needs***

Health improvement:

- ***hospital admissions caused by unintentional and deliberate injuries in children and young people aged 0-14 and 15-24 years;***
- ***alcohol-related admissions to hospital***

Health protection:

- ***Fraction of mortality attributed to particulate air pollution***

Healthcare, public health and preventing premature mortality:

- ***Mortality from causes considered preventable***

The Department for Transport's suggested local performance indicators for road casualty reduction in England are based on the number of killed and seriously injured (KSI) casualties, including rates per million population and per billion vehicle miles travelled. KSI casualties and all casualties (including slight injuries) occurring in Brighton & Hove (regardless of home postcode) are currently the main measures used to assess performance. Locally we adopt the KSI measure to prioritise road user groups.

Impact in Brighton & Hove

Over each of the past five years, an average of five people have lost their lives and 150 people have suffered serious injury, whilst travelling on roads in Brighton & Hove.[3] Nearly 1,000 more people each year have required medical treatment following a road traffic collision.

In the three year period from 2012-2014 the figure for the number of people killed or seriously injured in Brighton & Hove is 55.5 per 100,000 residents compared with 47.9 per 100,000 in the South East and 39.3 per 100,000 for England.[3] These data

[1] Department for Transport (2015), Reported road casualties in Great Britain: main results 2014

[2] http://www.legislation.gov.uk/ukpga/2012/7/contents/enacted

[3] Public Health England. Public Health Outcomes Framework Data Tool. Available at http://www.phoutcomes.info/

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comparisons need to bear in mind that the city is a densely populated and compact urban area which attracts a high number of visitors. Visitors made an estimated 11.4 million trips to Brighton & Hove in 2014.[4]

In its 'Strategic Framework for Road Safety', updated in October 2013, the Department for Transport advocated the use of 'central and lower' casualty projections, taking into account numerous complex factors affecting casualty reduction. In 2011 all the Sussex highway authorities (including Brighton & Hove City Council) agreed to use these projections as a guide against which to judge performance. Since 2011 the city has seen a year on year decline in fatal casualties but serious casualties have remained higher than the 'central projections' and higher than the 2005-09 average.

Police recorded data. In 2014 there were a total of 987 road casualties recorded by the police, including two fatalities and 156 seriously injured casualties (158 KSI casualties in total) against the 2005-09 annual average of eight fatalities and 150 serious injuries. It is important to remember that not all road collisions are reported to the police so road casualty statistics therefore do not reflect all of those that actually take place. The Department for Transport notes that police statistics may also underestimate the level of severity of casualties since the extent of the injury is not always clear at the scene of the collision.[5]

According to police data only 67% of road casualties from collisions which occurred on the city's roads between 2010 and 2014 are Brighton & Hove residents.

Table 1 shows the number of police recorded road casualties by road user group and severity.

Table 1: Number of all casualties in Brighton & Hove by road user group and severity, 2014

	Fatal	Serious	Slight	Total
Car (incl. taxi)	1	35	361	**397**
Cycles	0	46	153	**199**
Pedestrian	1	43	127	**171**
Powered two-wheel vehicles	0	25	68	**93**
Bus/coach	0	3	92	**95**
Van/HGV	0	3	25	**28**
Other	0	1	3	**4**
TOTAL	**2**	**156**	**829**	**987**

A&E data: In 2014/15 there were 757 Brighton & Hove residents attending A&E who were identified as casualties in road collisions.

Car occupants attending A&E are most commonly diagnosed a sprain (41% for drivers; 48% front seat passengers), whereas motorcyclists most often have a sprain (28%) or closed fracture (25%) (Table 2).

For pedal cyclists closed fractures are most common (26%) and for pedestrians, contusion (i.e. bruising) (24%) or closed fracture (18%) is diagnosed most often.[6]

[4] Tourism South East. The Economic Impact of Tourism Brighton & Hove. 2014

[5] Department for Transport (2013), Reported Road Casualties in Great Britain: guide to the statistics and data sources https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259012/rrcgb-quality-statement.pdf

[6] The type of road user is only supplied (injury mechanism field) for 429 of the 757 Brighton & Hove residents attending as a result of a road collision.

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Table 2: Primary diagnosis for road casualty attendees at A&E, June 2014 to March 2015 (Brighton & Hove residents only)

	Driver	Front pass.	Rear pass.	Motorcyclist	Pedal cyclist	Pedestrian	ALL
No.	**170**	**63**	**28**	**40**	**71**	**55**	**429**
Abrasion	3%	2%	7%	10%	10%	4%	**5%**
Admitted	2%	2%	7%	10%	4%	0%	**3%**
Closed fracture	1%	2%	4%	25%	26%	18%	**10%**
Contusion	9%	9%	4%	15%	10%	24%	**11%**
Laceration	2%	0%	4%	0%	11%	2%	**3%**
Minor head injury	2%	2%	11%	0%	6%	4%	**3%**
Musculoskeletal pain	15%	10%	4%	3%	0%	8%	**9%**
Sprain	41%	48%	29%	28%	13%	12%	**31%**
Unspecified joint injury	2%	0%	0%	0%	1%	8%	**2%**
Other diagnosis	23%	28%	32%	10%	19%	22%	**22%**

Local approaches: The Safer Roads Strategy was approved by the Environment, Transport and Sustainability Committee in July 2014. This will continue to be delivered through four established and recognised road safety business functions:

Education: encompassing road user education, training & publicity interventions;

Engineering: the use of collision investigation and physical measures to prevent and reduce collisions;

Enforcement: collaborative and targeted actions on key behavioural problems;

Encouragement: engagement & support to key partners and stakeholders via Sussex Safer Roads Partnership.

Priority road users: The agencies in Sussex Safer Roads Partnership, which includes Brighton & Hove City Council, have agreed priorities. The partnership has identified young drivers, driving for work, non-motorised road users (pedestrians and cyclists) and powered two wheeler riders as priorities for road casualty reduction initiatives because they account for the greatest proportion of injuries and deaths.

Pedal cyclists: In 2014 there were 199 collisions involving a pedal cycle recorded by the police. There were no fatalities, 46 seriously injured and 153 slightly injured casualties.

Analysis of contributory factors to the collision found that in 50% of collisions 'failed to look properly' was the main contributory factor, whereas failed to judge another person's path contributed to 22% of collisions and a poor turn or manoeuvre contributed to a further 22%.

In a small snapshot survey of 24 pedal cyclist casualties at A&E, about a third of cyclists saw themselves as being at fault. All but three lived in the city.

Department for Transport figures shows a 3.8% rise in cycle traffic nationally in 2014, and a 27% rise since 2007. Casualties nationally have risen 31% in the same time period.

Locally, cycling has increased in the city,[7,8] but it is difficult to compare the change in casualties per mile cycled with any degree of confidence.

Pedestrians: In 2014 there were one fatal, 43 serious and 127 slight casualties recorded by the police. 'Pedestrian failure to look' was the top contributory factor in 54% of collisions, 'vehicle failure to look' in 19% and 'pedestrian careless, reckless, in a hurry' in 19% of cases.

Public opinion of road safety: The autumn 2014 City Tracker survey showed nearly six in ten (58%) respondents were satisfied with road safety in their immediate neighbourhood, while one in five (21%) said they were dissatisfied.[9]

[7] Brighton & Hove City Council. Census 2011 bulletin: Transport. Available at http://www.bhconnected.org.uk/sites/bhconnected/files/2011%20Census%20Briefing%20-%20Transport.pdf

[8] http://activepeople.sportengland.org/

[9] Brighton & Hove Connected. City Tracker Survey. 2014. Available at http://www.bhconnected.org.uk/content/surveys

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The costs involved: The Department for Transport estimated the overall average cost[10] of one fatal road casualty was £1,836,054 while that of a serious casualty was £206,321 and a slight casualty was £15,905 (at 2014 values). So even with the relatively low number of fatalities in 2014 at two, about £3.7m would have been saved had they been prevented. The respective figure for the 156 seriously injured casualties recorded (not accounting for those who are not recorded on police systems) is over £32m. If slight injury casualties are included, the total cost of road casualties in the city in 2014 is estimated at over £49m.[11] In addition to the costs related to casualties, there are costs of dealing with accidents, e.g. relating to police, insurance/administrative and damage to property.

Where we are doing well?

Education, training and publicity: Road safety education, training and publicity needs to be properly structured and targeted to maximise cost-effectiveness. The council therefore adopts a data-led approach, firstly identifying the most vulnerable road user groups and then creating bespoke packages, resources and materials to deal with identified road safety issues.

The council's delivery of road safety education, training and publicity services:

- develops and shares resources aimed at improving road safety education amongst infant, primary and secondary school-aged children
- develops and delivers improved walking, cycling and scooter training courses to school aged children
- develops training and cycle maintenance programmes specifically targeting the 25-44 age group which represents the largest proportion of cycle casualties;
- supports awareness training courses for low-level motoring offenders, organised by the Sussex Safer Roads Partnership, instead of issuing fixed penalty notices
- develops road safety publicity messages to support campaigns aimed at specific road user groups/ casualty factors in conjunction with SSRP partners.

Enforcement: The partnership supports bi-annual police enforcement campaigns against drink and drug driving.

Road engineering/infrastructure: The following are examples of initiatives undertaken recently to reduce road collisions and casualties:

20 mph speed limits: These have been implemented in three phases, the first in 2013, the second in 2014 and the third in 2015. The effectiveness of this initiative is being monitored. At the time of writing, early indicative data for the first phase implementation (central area of the city) suggest good progress in reducing average speeds and a reduction in killed and seriously injured casualties compared to the average of the previous three years.

Introduction of Lewes Road/Vogue Gyratory cycle and bus lanes: A report is to be published in early 2016 on second year of monitoring. The first year (pre-Gyratory phase) showed good progress on increases in the number of cycle and bus journeys, improvements in journey times, reductions in traffic and limited impacts on side roads.

Safer routes to school scheme: This rolling programme of casualty-led engineering works is designed to improve walking and cycling journeys to and from schools. In 2015-16, 23 measures around two school expansions and the new Bilingual school development are being built.

Crossing request scheme: This programme of pedestrian crossing facility upgrades and installations is led by public requests and assessed via prioritisation criteria.

Cycle infrastructure improvements: During 2015/16, cycle facilities linked to South Downs National Park cycle access have been built on Ditchling Road and on Drove Road, Woodingdean.

[10] Lost output, health & medical costs and human costs are included in this calculation of the cost of casualties

[11] Department for Transport. A valuation of road accidents and casualties in Great Britain in 2014. 2015. Available at: https://www.gov.uk/government/statistical-data-sets/ras60-average-value-of-preventing-road-accidents [Accessed November 2015]

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Local inequalities

There are links between road casualties and deprivation. Of the 5,089 casualties occurring in Brighton & Hove in the five years from 2010 and 2014 (police-recorded data), 64% had a home postcode in the 30% most deprived areas in the country (This same relationship with deprivation was observed when just looking at city residents).

Police data over this same period also found that 57% of casualties were male and 43% female.

Ethnicity is not consistently recorded by the police. 2014/15 data from A&E found that 72% (513/717) of Brighton & Hove residents attending as a result of a road traffic collision were White British, 14% were an ethnicity other than White British, but there was no ethnicity data available for 15% of attendees.

The city centre and key arterial routes into the city, such as London Road and Lewes Road, feature prominently as locations for many collisions and this has resulted in a concentration of safety improvement schemes on these routes.

Predicted future need

Estimates of road traffic levels show a decline in the years leading up to 2013, but an increase since then up to September 2015, with the year ending September 2015 having increased by 2.2% on the previous year.[12] This is likely to partly reflect changes in the UK economy.[12~~12~~] The economic recession may have played a part in reducing casualties nationally in the past[11 ~~1~~] and as recovery takes place this may have a negative effect on casualty numbers.

Cycling in Brighton & Hove is likely to increase as universities continue to expand and as health and sustainability become more of a concern. Changes to infrastructure such as segregated cycle lanes at key junctions, pre-green signal phasing, etc. and greater availability of adult cycle training will be needed to address ongoing casualty issues.

Nationally, and locally, public sector services are undergoing a period of austerity with the resources available to the police (both road and neighbourhood police), council and fire & rescue services diminishing for road safety, as well as for their other functions. This may have potential implications for enforcement, education/training and emergency response. More collaboration with external road safety training providers and charities (e.g. the Institute of Advanced Motorists, the Royal Society for the Prevention of Accidents and Brake, the road safety charity) may open up new ways to approach education and training work.

There will be a need to monitor closely a possible trade-off between any reduction in prevention work against a potential increase in reactive work (for example by the health, police, and social care services) in response to collisions taking place. This includes taking cost-effectiveness arguments into account from a holistic perspective.

What we don't know

Prevalence of drug driving: The cost of roadside swab testing kits means these are only used where breath tests and field impairment tests have been inconclusive but officers at the scene believe impairment is evident through other behaviour. This means the true extent of drug driving is unclear, though preliminary figures suggest it may account for as much as a third of all impaired driving.

Understanding more about cycle collisions: Many cycle collisions do not come to the attention of the police. Further work to collect information from cyclists attending A&E would help to understand and respond to the circumstances surrounding cycle collisions.

Ethnicity: Both police and A&E data need to record ethnicity information more consistently before any conclusions or policy decisions can be made.

Deprivation and road casualties: Further analysis of deprivation and casualties to local residents by road user group may provide useful information for the targeting of prevention work.

Key evidence and policy

The Brighton & Hove Safer Roads Strategy 2014 supports the core principles and key themes of the national policy document. It presents a long-term

[12] Department for Transport. Provisional Road Traffic Estimates for Great Britain, October 2014 to September 2015. 2015

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road safety vision, consistent with the 'Safe System' concept that acknowledges that people will always make mistakes and may be involved in road traffic collisions, but that the road traffic system should be forgiving and those collisions should not result in death or serious injury.

Recommended future local priorities

Education:

- Further action is needed to reduce 'failed to look' collisions affecting vulnerable road users via the Share the Roads and other campaigns.
- Council officer participation should continue in Sussex Safer Roads Partnership working groups creating Sussex wide education, training and publicity campaigns relevant to priority groups (non-motorised road users, young drivers, driving for work and powered two wheeler users) and to support police (Association of Chief Police Officers) and Fire & Rescue (Chief Fire Officer's Association) national and local priorities.

Engineering/road infrastructure:

- Road safety engineering input is more useful at the inception of new schemes rather than as a response to audit.
- In terms of pedestrians, a review of the North Street /Clock Tower area and the Old Steine/St Peter's Church area (as part of the wider Valley Gardens scheme) to optimise safety around these problem junctions is desirable. The road safety technician will continue to be involved in the planning of any schemes in these locations.

Enforcement:

- Work with Police and Crime Commissioner to support funding and in-kind support (e.g. premises) for roads policing in the city.

Encouragement:

- Working with the Sussex Safer Roads Partnership, there should be ongoing coverage in the city of fixed and mobile cameras to maximise casualty reduction benefits through the roll out of variable speed cameras.

Overarching:

The following projects address more than one of the above approaches and continue to be needed:

- Safer Routes to School programme focusing on casualties
- Monitoring and evaluation of 20mph schemes phases 1-3
- Local transport plan, incorporating road safety objectives and best practice.
- The City Council's continued support for Sussex Safer Roads Partnership is also important. The partnership provides a wide range of resources for road safety education, training and publicity as well as speed camera enforcement in the city, as well as an opportunity to co-ordinate with other Sussex local authorities, Sussex Police, Fire & Rescue and Highways England.

Key links to other sections

- Physical activity and active travel (adults and older people)
- Physical activity and active travel (children and young people)
- Crime and anti-social behaviour

Further information

Brighton & Hove Safer Roads Strategy 2014-2020, Brighton & Hove City Council, July 2014

Sussex Safer Roads Partnership website describes the partnership's work and includes detailed data, maps, etc.
http://www.sussexsaferroads.gov.uk/page/data

Reported Road Casualties in Great Britain: Main Results 2014 (Department for Transport, June 2015)
https://www.gov.uk/government/statistics/reported-road-casualties-in-great-britain-main-results-2014

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