Unintentional Injury Needs Assessment for Adults and Children in Kent

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Abbreviations

C&C	Canterbury and Coastal Clinical Commissioning Group
CAPIC	Collaboration for Accident Prevention and Injury Control
CCG	Clinical Commissioning Group
DGS	Dartford, Gravesham and Swanley Clinical Commissioning Group
HSE	Health and Safety Executive
HHSRS	Housing Health and Safety Rating System
HIA	Home Improvement Agency
KCC	Kent County Council
KFRS	Kent Fire and Rescue
KSI	Killed and Seriously Injured
NICE	National Institute of Health and Care Excellence
PHE	Public Health England
PHOF	Public Health Outcomes Framework
RoSPA	Royal Society of Accident Prevention
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
SCK	South Kent Coast Clinical Commissioning Group
T&M	Tonbridge and Malling

1. Executive Summary

Injuries can have a devastating impact on individuals, families and communities. Every year, around 14,000 people in the UK die, and over 700,000 are seriously hurt by unintentional injuries[1]. These account for 13% of all emergency hospital admissions and 5% of all hospital admissions, and cost an estimated £150 billion per year[5].

In Kent there were over 18,500 hospital admissions due to unintentional injuries in 2012/13. There were also 771 deaths in Kent in the three years to 2012/13, equivalent to 257 per year.

In order to reduce injuries and their associated impacts, local agencies need to understand which injuries are most widespread across their communities and who is most at risk. Such information is crucial to ensuring appropriate injury prevention initiatives are implemented where they are needed most. The identification of effective interventions or services in reducing unintentional injuries is also essential. This needs assessment aims to present this information, and therefore guide the commissioning of accident prevention services.

This is the first time that a needs assessment for unintentional injuries in adults and children has been developed in Kent. As such, this needs assessment pulls together data from a range of sources, provides an overview of the extent of injuries in Kent and identifies particular areas, or groups of people at higher risk. This needs assessment is a starting point in identifying priorities for commissioners of accident prevention services.

This needs assessment includes all unintentional injuries for both adults and children. Deliberate injuries, such as self-harming or violence to others is not within the scope of this needs assessment. Whilst falls in older people is an important public health issue, this topic has been addressed by previous needs assessments, and so is not within the scope of this needs assessment. There is, however, some overlap between this needs assessment and deliberate injury, or falls in older people. Where indicators include these injuries, this will be indicated.

At-risk groups

Children and young people are at relatively greater risk of unintentional injury, particularly on the roads (young people) and at home (under 5s) and boys are at greater risk than girls. People from areas of greater deprivation are more likely to experience unintentional injuries.

Unintentional Injuries in Kent - overall

In 2012/13 there were 18,516 hospital admissions for unintentional injuries in Kent, of which 6,765 were due to falls in older people. In the three years to 2012/13 there

were 771 deaths from unintentional injuries in Kent. Compared with the England average, Kent had significantly fewer deaths per 100,000, but significantly more hospital admissions for unintentional injuries. Kent had significantly lower rates of hospital admissions for unintentional injuries in children in 2012/13. Amongst all ages up to 65, males in Kent experienced more hospital admissions (60%) than females for unintentional injury.

Unintentional Injuries in Kent – injuries on the roads

Data on injuries caused by transport and vehicles comes from a number of sources, which are calculated using different methodologies and therefore describe slightly different aspects of road injuries. This needs assessment uses data from the Kent County Council (KCC) department of Highways and Transportation, which leads on road injury prevention, and hospital admissions data relating to road transport injuries.

The number of people killed or seriously injured (KSI) has been reducing in Kent, as in England, for many years. The KCC department of Highways and Transportation uses the number of KSIs as the main indicator of road casualties, and assesses current performance against a baseline of the 5-year average 2005-2009. In 2012, the number of KSI in Kent was 25% below that in 2005-2009. This is a greater reduction than for England, (17%) and the South East region (13%) over the same time period[2]. The overall KSI rate in Kent is lower than that for England and the South East region as a whole. Kent had similar or better than England average rates of deaths and hospital admissions for road and transport related injuries in 2012/13.

Kent County Council and partners have a target to reduce the number of all people killed or seriously injured by 33%, and the number of children killed or seriously injured by 40% by 2020 against a baseline of the 2004-08 average. Progress to achieving these is good, with a 29% and 32% reduction respectively made by 2012/13.

There has also been a downward trend in the rate of hospital admissions for land transport injury in Kent between 2006/07 and 2012/13. Over this time period, West Kent CCG has had the highest rate of all CCGs in Kent. Although this rate is not significantly worse than the England average, it is notably higher than that of other CCG areas in Kent.

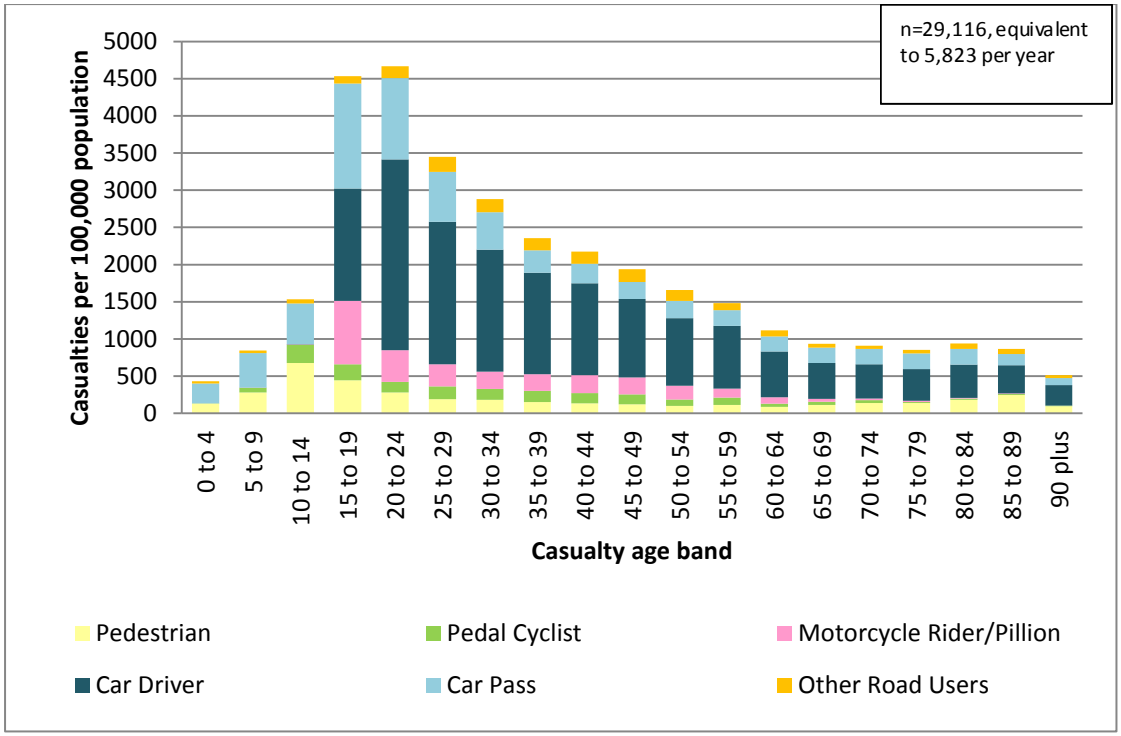
The districts of Kent with the greatest absolute numbers and rates of collisions and KSIs per 1,000 population in 2012 and over recent years are Maidstone, Ashford, Swale, Thanet and Tonbridge and Malling. Analysis of the home residency of drivers involved in KSI collisions across all Kent suggest that of the drivers involved in KSI injuries in Kent, more live in these same districts than in other parts of Kent.

Analysis of injuries by road user group pedestrians, cyclists, motorcyclists and young car occupants as being particularly at risk of being injured in a collision. Actions to reduce injury in pedestrians and cyclists in particular must be prioritised because

they are more likely to be seriously injured or killed in a collision. In addition, cycling and walking needs to be seen as a safe activity if it is to be successfully promoted as a way of increasing exercise and reducing death and disability from chronic diseases such as obesity, cardiovascular disease, stroke and cancer. The death and serious injury rate is decreasing more slowly in pedestrians and cyclists than among other road user groups.

Young people aged 15 to 24 had the highest rates of collision-related injuries in Kent in the five years to 2012. Those aged 25 to 29 also had comparatively high rates. Those aged under 20 are less likely to be car drivers, and more likely to be involved in a collision as a pedestrian or cyclist making them particularly vulnerable to injury.

All Kent casualties per 100,000 population by age group and road user group – 2008-2012



Car driver casualties peaked in 21-year old drivers in 2012, (compared to 18-year old drivers in 2011). Car passenger casualties peaked at a slightly younger age (17-18), and 29% of occupant casualties were aged 17-24[18].

Unintentional injuries in the home and other settings

Unintentional injuries in the home are more common than road injuries - in 2010/11 5,000 people in the UK died as the result of an accident at home (including falls in older people), compared with 1,901 on the road.[3]

Compared to England, Kent had significantly lower (i.e. better) rates of hospital admissions for:

- Serious head injuries (all ages)
- Injuries resulting from exposure to smoke, fire and flames
- Injuries resulting from falls in children under five years.

However, Kent also had significantly higher (i.e. worse) than England average rate of admissions for burns.

Admissions for unintentional poisonings were not significantly different to the England average.

Within Kent some CCG areas had significantly more admissions than England, for specific injury types, as shown in the table below, namely:

- Burn injury admissions were significantly higher in DGS; Swale; Thanet; and W Kent CCG areas.
- Admissions for unintentional poisonings were significantly higher in C&C; DGS; and Thanet CCGs.
- W Kent CCG experienced significantly more admissions for falls among children aged under 5 than the England average.

These issues are described in more detail below the table.

Hospital admission rates and number (Kent only) for selected unintentional injuries – England, Kent and Kent CCGs.

		England	Kent	Ashford	C&C	DGS	SKC	Swale	Thanet	W Kent	Annual number of events in Kent
hospital admissions due to a serious head injury [a]	2010/11 - 2012/13	62.2	55.11	46.32	43.14	55.77	55.21	66.77	72.64	55.82	934
hospital admissions due to burn injuries [a]	2010/11 - 2012/13	19.4	25.17	22.98	22.08	30.48	21.82	24.83	27.10	25.40	349
hospital admissions due to exposure to smoke, fire and flames injuries [a]	2010/11 - 2012/13	4.1	2.08	1.40	1.05	2.02	2.63	1.77	3.35	2.42	35
hospital admissions due to unintentional poisoning injuries [a]	2012/13	48.8	51.93	24.20	69.36	78.36	43.36	59.07	69.86	33.22	775
children (under5) hospital admissions due to fall injuries and those on/from a different height [b]	2010/11 - 2012/13	54.77	49.63	38.75	42.78	53.05	35.92	55.64	52.40	56.21	436

[a] Directly age-standardised rate per 100,000 population
[b] (crude rate per 10,000 population)

Source: Secondary Uses Service (NHS) for Kent data, and Injury Profiles for England data. England rate = latest available year (2010/11)

In the three years to 2012/13, there were 1,048 admissions for burns, equivalent to 349 a year. The rate of hospital admissions for burns in Kent has remained fairly constant between since 2006/07–2008/09. Within Kent however, Swale has seen considerable reductions in that time period and as a result now has similar rate to England. Ashford has seen an increase in the rate of admissions over this time period. DGS had the highest rate of admissions for burns in Kent, with 214 admissions for burns in the three years to 2012/13, an average of 71 per year.

In Kent, those people admitted for burns are overwhelmingly aged under five, with more boys injured by burns than girls. In the three years to 2012/13 there were 393 children aged under five admitted to hospital for burns. This represents over a third of all admissions for burns. Across nearly all ages, more males were admitted than females.

In 2012/13 there were 775 hospital admissions for unintentional poisonings in Kent. Children aged under five had the most admissions, with 323 admissions between 2010/11 and 2012/13, equivalent to an average of 108 admissions per year (15% of all admissions for unintentional poisonings). Females aged 15-19 also experienced a high number of admissions for unintentional poisonings – twice that of males of the same age group. There were 140 hospital admissions for unintentional poisonings in females aged 15-19 in the three years to 2012/13 (an average of 47 per year) and 64 in males of the same age (average of 21 per year). This measure includes poisonings due to alcohol and illegal drugs, which may explain some of the admissions among young people.

West Kent CCG experienced significantly more hospital admissions for falls among children aged under five than the England average – 56.21 admissions per 10,000 population in 2010/11–2012/13, compared to 54.77 in England, and 49.63 in Kent. During this time period there were 473 of these admissions in West Kent. The admissions rate has reduced since 2006/07-2008/09 in all CCGs except DGS where it has increased.

Unintentional injuries in the workplace

Employers, self-employed people, and those in control of work premises have a duty to report deaths, accidents and near-misses in the workplace to the Health and Safety Executive (HSE) through the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) system. Workplace health and safety legislation is enforced by both the HSE and local authorities. Data from this reporting system has a number of limitations, and as a result, detailed analysis of local data is not included in this needs assessment. Further work is required to identify issues relating to workplace injuries in Kent compared to England, and to identify particular at-risk groups.

Injury prevention services in Kent

Unintentional injuries on the roads

Kent County Council's department of Highways and Transportation and other partner agencies including Kent Fire and Rescue and Kent Police perform a number of functions to prevent injuries occurring on Kent roads. Collision and injury data is collected, analysed and used to guide a range of prevention activities, which can be largely categorised as Engineering, Education and Enforcement activities.

Unintentional injuries in the home

A number of agencies carry out activities to prevent injuries in the home in Kent. District authorities have a statutory duty to reduce hazards in private sector homes.

Most districts focus on providing services in the private rental sector, as the group with greatest need for housing improvement. Services are provided for the whole population, including young adults, families and older people.

District authorities also commission Home Improvement Agencies to deliver interventions which reduce the risk of injuries in the home. These largely target older people at risk of falls, but may also be provided for other vulnerable residents, depending on each local authority policy. Further work is required to identify the unmet need for private sector housing services across Kent, and whether there are any particular groups of the population who are not accessing services they need in order to reduce their risk of injury in the home.

The Health Visiting service uses routine visits to all families with young children to discuss safety in and outside of the home.

Kent Fire and Rescue (KFRS) provides a range of home safety services including Home Safety Visits, providing and fitting smoke alarms, and providing advice and fire safety equipment to vulnerable people. KFRS also offer training and advice to professionals working with vulnerable people to help them identify individuals at risk of fires at home[4].

Unintentional injuries in the workplace

The prevention of unintentional injuries at work is the responsibility of employers, and self-employed individuals, and is supported by the Health and Safety Executive (HSE) and the Environmental Health Teams in Kent County and district councils. KCC monitors injuries and accidents in KCC premises including schools, care homes and council office buildings in order to prevent injuries. Links have recently been made between Public Health and the Health and Safety department within KCC to consider further developing KCC's role in the prevention of unintentional injures beyond the KCC workforce.

Evidence of what works in unintentional injury prevention

Unintentional injuries comprise a wide and diverse range of injuries, and may be experienced by a range of age-groups in many settings. Evidence about what works to reduce these injuries is therefore varied, depending on the type of injury, setting, and age group of the target population.

The Royal Society for the Prevention of Accidents, supported by Public Health England, has published a series of factsheets and case studies on accident prevention across themes of home safety, road safety, leisure safety and safety education.

In November 2010 NICE published guidance on the prevention of unintentional injuries among under-15s; the prevention of unintentional injuries among under-15s in the home (PH30); and the prevention of unintentional road injuries among under-15s.

For specific unintentional injuries, the Collaboration for Accident Prevention and Injury Control (CAPIC) provides a searchable database of systematic reviews on injury prevention.

Key points from these sources are summarised in the main body of this needs assessment.

2. Recommendations

Unintentional injuries on the roads

- The relationship between the Public Health and Highways and Transportation departments within KCC should be extended to further develop the public health approach to road safety currently being taken. This could include utilising Public Health experience and expertise in behaviour change to support programmes aiming to change behaviour among drivers and other road users.
- Public Health should work with the department of Highways and Transportation to support their data analysis, ensuring that road safety activities target the areas and groups most at risk. Currently these are:
    - Young drivers and young passengers
    - Pedestrians aged 10-24
    - Cyclists (the death and serious injury rate is decreasing more slowly in pedestrians and cyclists than among other road user groups)
    - Motorcyclists
    - Residents of, and people who drive in Maidstone, Swale, Thanet, Ashford, and Tonbridge and Malling
- Public Health and the department of Highways and Transportation should identify a core set of measures to be routinely updated to monitor road safety issues, which meet the requirements of both departments.
- NICE guidance on reducing injuries in under 15s on the roads should be implemented, in particular:
    - Reducing speed in streets that are primarily residential or where pedestrian or cyclist movements are high, and where local circumstances suggest this would be effective in reducing risk of injury, and would increase uptake of walking and cycling, in line with the KCC policy on 20mph schemes.
    - Consider opportunities to develop a range of engineering measures to provide safer routes commonly used by children and young people, including routes to schools and other destinations.

Unintentional injuries in the home and other settings

- Detailed mapping of the provision of home safety services in Kent should be carried out. This should identify which population groups currently access these in each area, and whether any gaps in service provision exist relative to need, particularly for families of young children.
- All families of young children should be able to receive advice (and equipment if unable to provide their own) to reduce the risk of unintentional injuries, particularly burns, poisonings and falls in under-5s, particularly in C&C, DGS, Thanet and West Kent CCG areas.

- Services which engage with families with young children (especially district housing services, and health visitors) should ensure that home safety is discussed with parents particularly in C&C, DGS, Thanet and West Kent CCG areas.
- NICE guidance on reducing injuries in under 15s at home should be implemented, in particular:
    - Implementing a county-wide programme of home safety assessment, supply and installation of home safety equipment in line with NICE guidance.
- Further research should be carried out into the causes of unintentional poisonings in young females in order to better understand the peak in this age group, and then to implement appropriate prevention measures.

Unintentional injuries in the workplace

- Public Health and Health and Safety departments of KCC should work together with the HSE and local authority Environmental Health teams to analyse RIDDOR or other data to identify groups of people, workplace types or geographical areas with higher need for workplace injury prevention in Kent, and to ensure that inspections and other injury prevention work is guided by analysis of local data.
- Given the use of the highway as a workplace for many people, the use of driving at work policies should be monitored.

3. Introduction

Injuries can have a devastating impact on individuals, families and communities. Every year, around 14,000 people in the UK die, and over 700,000 are seriously hurt by unintentional injuries[5]. These account for 13% of all emergency hospital admissions, and 5% of all hospital admissions, and cost an estimated £150 billion per year [5].RoSPA estimate that over a lifetime, one third of the population will have their lives diminished by an accident [5]. Most accidents are truly preventable, entirely removing the associated suffering and need for health and social care services.

In order to reduce injuries and their associated impacts, local agencies need to understand which injuries are most widespread across their communities and who is most at risk. Such information is crucial to ensuring appropriate injury prevention initiatives are implemented where they are needed most. The identification of effective interventions or services in reducing unintentional injuries is also essential. This needs assessment aims to present this information, and therefore guide the commissioning of accident prevention services.

Injuries can occur in many settings, including on the roads, at home, in leisure activities, and in workplaces. This needs assessment attempts to provide an overview of the extent of injuries from all settings, and identify any areas where there may be gaps in injury prevention activities, relative to needs.

This is the first time that a needs assessment has been developed for unintentional injuries in adults and children in Kent. As such, this needs assessment acts as a starting point to identify priorities for commissioners of accident prevention services.

Definitions and Scope

The term ‘unintentional injuries’ has largely been used in this needs assessment, rather than the term ‘accidents’. The Royal Society for the Prevention of Accidents (RoSPA) and other experts in this field consider the term ‘unintentional Injuries’ to be a better description of the issue, since ‘accidents’ may imply that nothing can be done to prevent them from happening. However, in this needs assessment, both terms are used with the same meaning, to acknowledge that many people are more familiar with the terms ‘accidents’ and ‘accident prevention’.

This needs assessment includes all unintentional injuries for both adults and children. Deliberate injuries, such as self-harming or violence to others is not within the scope of this needs assessment. The focus of this needs assessment is the prevention of unintentional injuries, and therefore treatment of these is outside its scope. However, in order to illustrate the whole pathway of unintentional injuries, the links with some aspects of their treatment i.e. trauma services and neuro-rehabilitation services are made. Whilst falls in older people is an important public health issue, this topic has been addressed by previous needs assessments[6], and is therefore not within the scope of this needs assessment, although there will be some

overlap between the respective needs assessments. Where indicator measures include falls among older people, or deliberate harm this will be indicated.

Stakeholder involvement

This needs assessment was developed with considerable input from a number of stakeholders (listed on p3). A draft needs assessment was circulated to all stakeholders for comments, which contributed to the development of this final version.

3.1 Groups at higher risk of unintentional injuries

Age

Accidents in the home are the most common cause of death in children over one year of age. Nationally, accidents at home occur most frequently among those aged over 65 and under five. This is important because unintentional injuries in the home are more common than road injuries - in 2010/11 5,000 people in the UK died as the result of an accident at home, compared with 1,901 on the road.[7] Children aged under five carry a disproportionate burden of injuries from falls and fires, suffering nearly 45% of all severe burns and scalds[8].

Young people aged 15-24 are the group most likely to be injured on the roads[7]. Nationally, this age group are four times more likely to die from a road accident than from drug, alcohol or other substance poisoning combined[9].

Young people aged between 10 and 24 also experience the greatest number of injuries sustained from leisure activities[10].

Gender

Over the age of 65, more women than men die as the result of an accident in the home (largely falls). In childhood however, more boys have accidents in the home than girls [11].

Deprivation

Nationally, children and young people from lower socio-economic groups are more likely to experience unintentional injuries than those from more affluent groups[12]. Children of parents who have never worked or who are long-term unemployed are 13 times more likely to die from an unintentional injury than children of parents employed in managerial or professional occupations. This social gradient is particularly steep for accidents caused by cycling and walking, or by household fires - a child with a long-term unemployed parent living in a disadvantaged area is 37 times more likely to die from exposure to smoke or flames than a child of a parent with a high earning managerial profession**Error! Bookmark not defined.**.

Poor housing and overcrowded conditions lead to increased numbers of accidents.[13] This may be partly because residents are unable to carry out repairs and regular maintenance, or install safety equipment.

Among young people aged under 15, the likelihood of dying as the occupant of a car is 5.5 times higher if their parents are unemployed than if they have managerial or professional jobs. This ratio exceeds 20 among pedestrians and cyclists. Similarly, more than one quarter of child pedestrian injuries happen in the most deprived tenth of wards (Greyling et al. 2002). People from lower socioeconomic groups are more likely, for example, to live in neighbourhoods with on-street parking, high-speed traffic, overcrowded conditions and few or no off-street play areas.

Evidence suggests that the relatively greater exposure to danger is the most important factor in explaining these differences in death rates and not differences in behaviour (Edwards et al. 2006).

Other risk factors

Other risk factors relate to:

- The environment (e.g. living in poor-quality housing, or living in a house which opens onto a road). Most fatalities (almost 60 per cent) occur on rural roads - considerably higher than the 42 per cent of traffic which is found on these roads[14].
- Behaviours (e.g. risk-taking, leisure activities).
- Personal attributes (age, physical ability and medical conditions).
- Transport patterns. Motorcycle users, per mile ridden, are roughly 35 times more likely to be killed in a road traffic accident than car occupants. Pedestrians and pedal cyclists, per mile walked or cycled respectively, are roughly 11 times more likely to be killed in a road accident than car occupants[15].

4. Unintentional Injuries in Kent

Data sources

In March 2012, the Association of Public Health Observatories (APHO), now part of Public Health England, produced Injury Profiles for each local authority in England[16]. These profiles consisted of over 40 injury-related indicators for both adults and children, and provided comparisons with national averages, indicating where local areas' rates differed from national averages (statistically significantly better, worse or no different). This needs assessment updates those indicators which fall within the scope of this needs assessment, using locally collated data to provide an up-to-date profile for Kent. Where England average rates are provided for comparison, England data is for the latest available period (i.e up to 2010/11).

All road and traffic related injuries are required to be reported to the police. However, not all accidents will be reported or require hospitalisation and so there will always be some under-reporting of unintentional injuries. The more serious the injury, however, the greater the likelihood that the individual will report the injury or seek healthcare, and so for serious injuries, data will be far more complete. These are the injury types which should be prioritised for prevention work since they are those most likely to lead to death or disability, have the greatest impact on individuals, families and society, and are the most costly to treat.

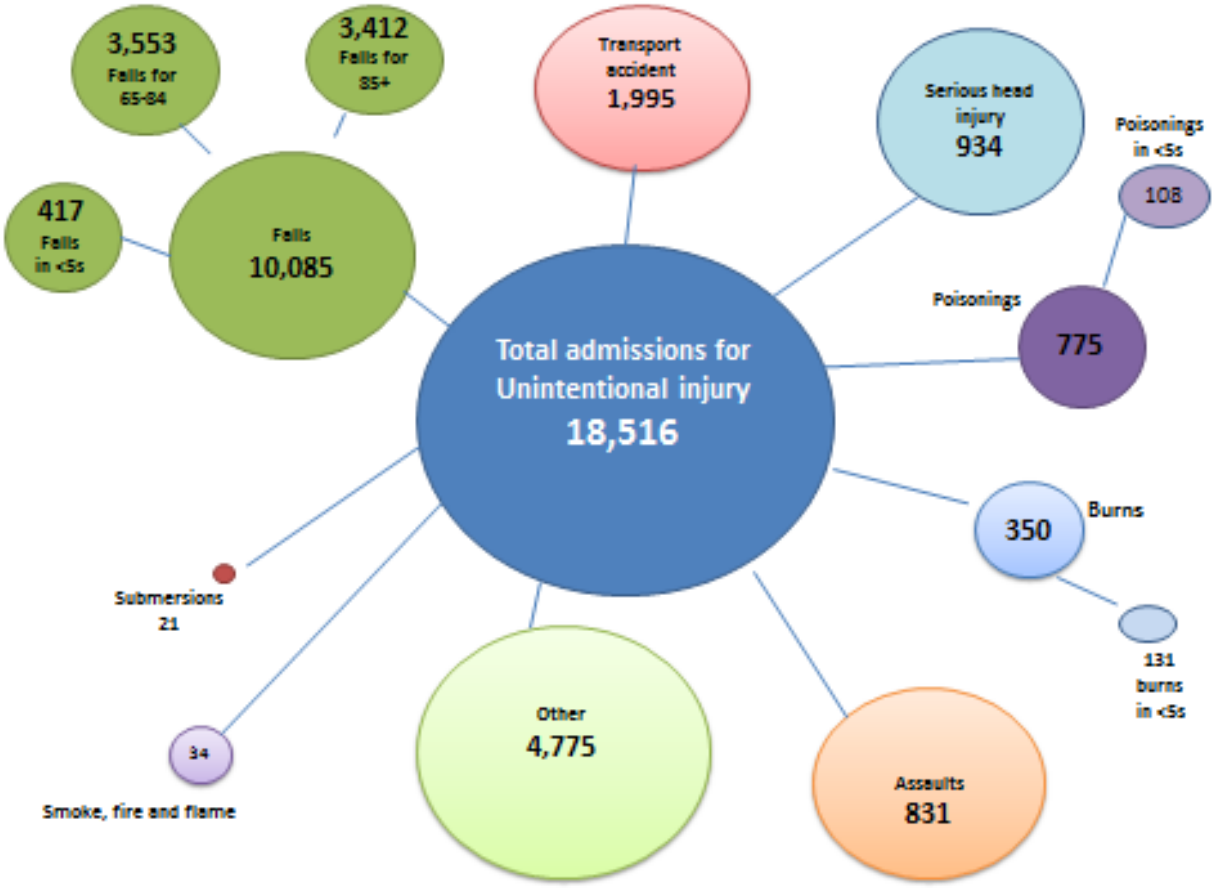
4.1 Unintentional injuries – overview

Figure **1** provides an overview of the main types of unintentional injury resulting in a hospital admission in Kent in 2012/13. Since some injuries fall into more than one category (e.g. transport injury and serious head injury) the sum of individual injury types is greater than the total number of injury admissions.

Key points from this are that:

- Falls were the main cause of unintentional injuries, resulting in over 10,000 admissions in 2012/13. 6,965 (38%) of all admissions were for falls in people aged over 65. There were 417 hospital admissions for falls in under-fives.
- Nearly 2,000 admissions were due to transport injuries.
- There were 775 admissions for unintentional poisonings

Figure 1: Summary diagram of hospital admissions for unintentional injuries in 2012/13 (not to scale).



Source: Secondary Uses Service (NHS)

Table **1** shows the extent of hospital admissions for all unintentional injuries in Kent in, or up to, 2012/13. This shows that Kent had significantly fewer deaths but significantly more hospital admissions for unintentional injuries per 100,000 population than the England average in 2012/13, although this figure includes injuries caused by assault and falls among older people, to enable comparison with England data. Of the 18,516 hospital admissions, 6,965 (38%) were due to falls in over 65s and 831(5%) were due to assault. Kent also experienced significantly lower rates of hospital stays over 3 days and of admissions in children in 2012/13.

These issues are discussed in more detail below table 2.

Table 1: Number and rates of deaths and hospital admissions in Kent and England, 2012/13

Measure	Year	England	Kent	Annual number of events in Kent *
Deaths from unintentional injury†	2010/11-2012/13	**15.2**	**11.63**	**257**
Years of life lost due to unintentional injury (directly age standardisesd rate per 10,000)	2010/11-2012/13	**35.0**	**24.56**	
hospital admissions due to unintentional injury †	2012/13	**1007.7**	**1,056.76**	**18,516**
hospital stays over three days due to unintentional injury†	2012/13	**326.3**	**213.56**	**5,090**
child (<18) admissions due to injury (crude rate per 10,000 population)	2012/13	**124.3**	**92.37**	**2,955**
child (<5) admissions due to injury (crude rate per 10,000 population)	2012/13	**143.2**	**119.27**	**1,065**
child (5-17) admissions due to injury (crude rate per 10,000 population)	2012/13	**116.3**	**87.24**	**1,890**

Source: Secondary Uses Service (NHS) for Kent data, and Injury Profiles for England data. England rate = latest available year (2010/11)

Key:

significantly worse than England average
significantly better than England average
similar to England average

* Where data is available in 3-year aggregates, the average for a single year has been calculated.
† directly age-standardised rate per 100,000 population

Deaths from unintentional injury

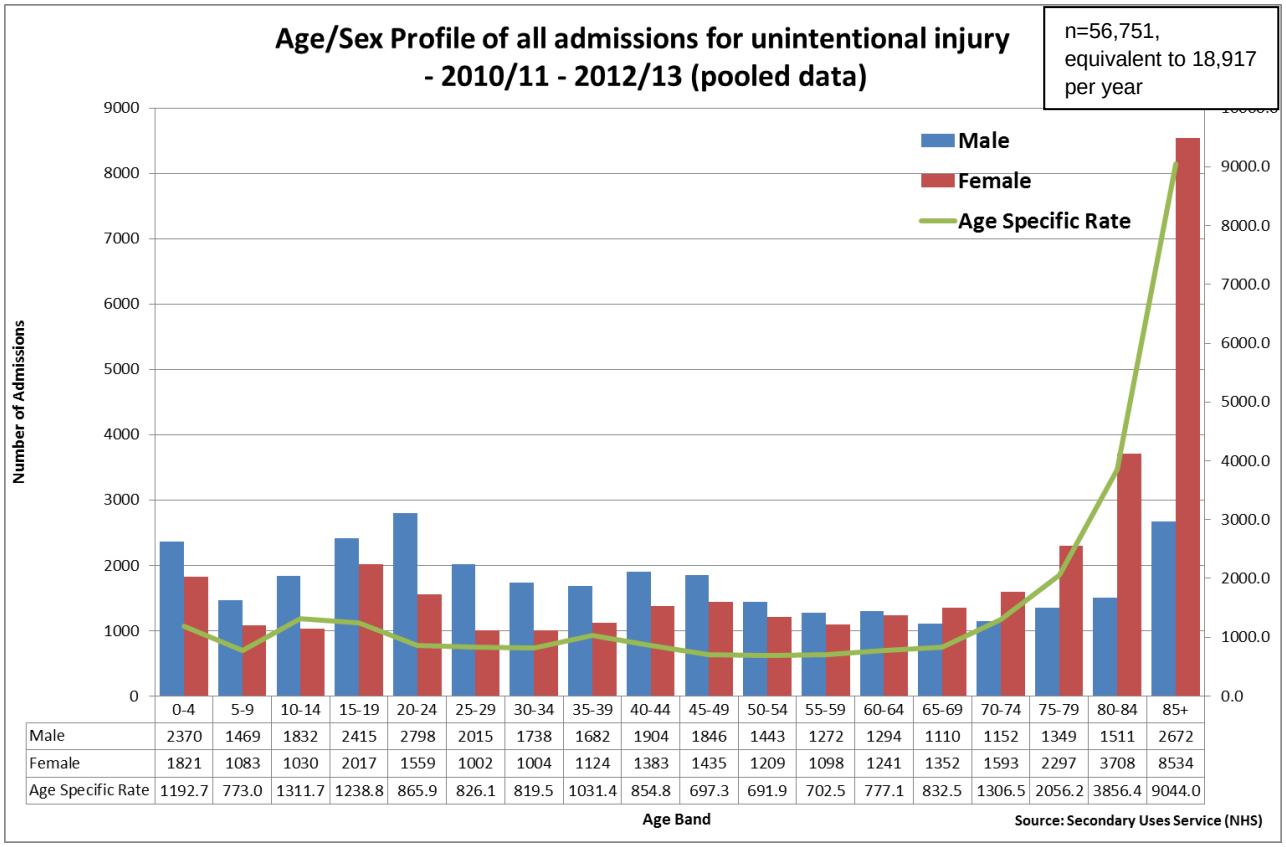
All CCGs in Kent had lower or similar to England average rates of death from unintentional injury in the three years to 2012/13.

Hospital admissions for unintentional injuries

As

Figure **2** shows, females aged over 85 had the most hospital admissions for unintentional injuries in the three years to 2012. Of the 11,206 unintentional injury admissions for all people aged over 85 in 2010/11-2012/13, 3,412 (30%) of them were for falls and therefore outside the scope of this needs assessment, but covered by other needs assessments and work programmes in Kent. For all ages up to 65, males experienced more admissions for injuries than females.

Figure 2: Age and sex profile of the number (bars) and rate (line) of all admissions for unintentional injury in Kent - 2010/11 - 2012/13 (pooled data)



	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Male	2370	1469	1832	2415	2798	2015	1738	1682	1904	1846	1443	1272	1294	1110	1152	1349	1511	2672
Female	1821	1083	1030	2017	1559	1002	1004	1124	1383	1435	1209	1098	1241	1352	1593	2297	3708	8534
Age Specific Rate	1192.7	773.0	1311.7	1238.8	865.9	826.1	819.5	1031.4	854.8	697.3	691.9	702.5	777.1	832.5	1306.5	2056.2	3856.4	9044.0

Source: Secondary Uses Service (NHS)

There is no clear trend of increasing or decreasing admission rates for unintentional injuries in Kent. However, Ashford has seen a clear decrease between 2006/07 and 2012/13, from 1,003.41 admissions per 100,000 population to 828.92. In contrast, DGS has seen an increase from 1,007.87 to 1,197.97 admissions per 100,000 population over the same period.

Hospital admissions for unintentional injuries in children under 18

All CCGs in Kent had lower or similar to England average rates of admissions for unintentional injuries in children aged under 18, 5-17, and under five.

4.2 Unintentional injuries on the roads

Kent is one of the largest counties in the UK with an extensive road network of over 5,640 miles. Kent is also Britain's principle gateway for goods and travel to continental Europe. Kent roads accommodate 8,886 million motor vehicle miles each year; the second highest out of 205 highway authority areas[17]. These factors mean that whilst the number of transport-related injuries per distance travelled are relatively good when compared to other areas, thousands of people are killed or injured (from slight to serious injuries) on Kent's roads each year.

Data sources

Data on injuries caused by transport and vehicles comes from a number of sources, which are calculated using different methodology and therefore describe slightly different aspects. The main sources are:

- Hospital admissions data – describes injuries which resulted in a hospital admission. These are presented by the CCG in which the injured individual lives.
- KCC data – describes injuries reported to police. It is mandatory for drivers to report all collisions which result in an injury of any severity (recorded as fatal, serious or slight). These injuries are usually presented by the district authority in which the collision occurred. Data tend to presented by single years.
- Public Health Outcomes Framework – same source data as that of KCC data, but presented as rolling 3-year averages, and alongside comparisons with England data (significantly better, worse or no different to). Data is presented by district in which the collision occurred.

Each of these data sources is used in this needs assessment, as most appropriate.

Collisions injury data, collected by Kent Police, is processed by Kent County Council department of highways and transportation. Data from this source is therefore likely to be nearly complete for serious and fatal injuries, although there is under-reporting of slight injuries. The number of slight injuries far exceeds the number of serious and fatal injuries (see below). Since fatal and serious injuries are those which have the greatest impact on the individual, their families, and society, these are the main focus of data within this needs assessment, in line with KCC's department of Highways and Transportation's own analysis[18]. However, analysis of the number of

all injuries, or the number of collisions provides additional information, and can also be useful.

Overview

In 2012 there were 5,755 injuries of which 524 (9%) were serious or fatal.

In 2012, 524 people in Kent were killed or seriously injured (KSI) on Kent's roads. As Table 2 shows, over the three year period 2010-2012, the rate of deaths or serious injuries in Kent was significantly better than the England and South East region averages (PHOF indicator). Sevenoaks was the only district to have a significantly worse admissions rate than the England average.

Table 2: Rate of deaths and serious injuries in England, South East England, Kent, and Kent CCGs in 2010-2012. KSI per 100,000 population

	KSI per 100,000
England	40.5
South East	46.2
Kent	36.1
Ashford	45.0
Canterbury	36.5
Dartford	42.7
Dover	30.4
Gravesham	21.6
Maidstone	37.9
Sevenoaks	48.5
Shepway	33.6
Swale	32.0
Thanet	29.0
Tonbridge and Malling	40.5
Tunbridge Wells	35.0

Source: Dept for Transport, published in Public Health Outcomes Framework.

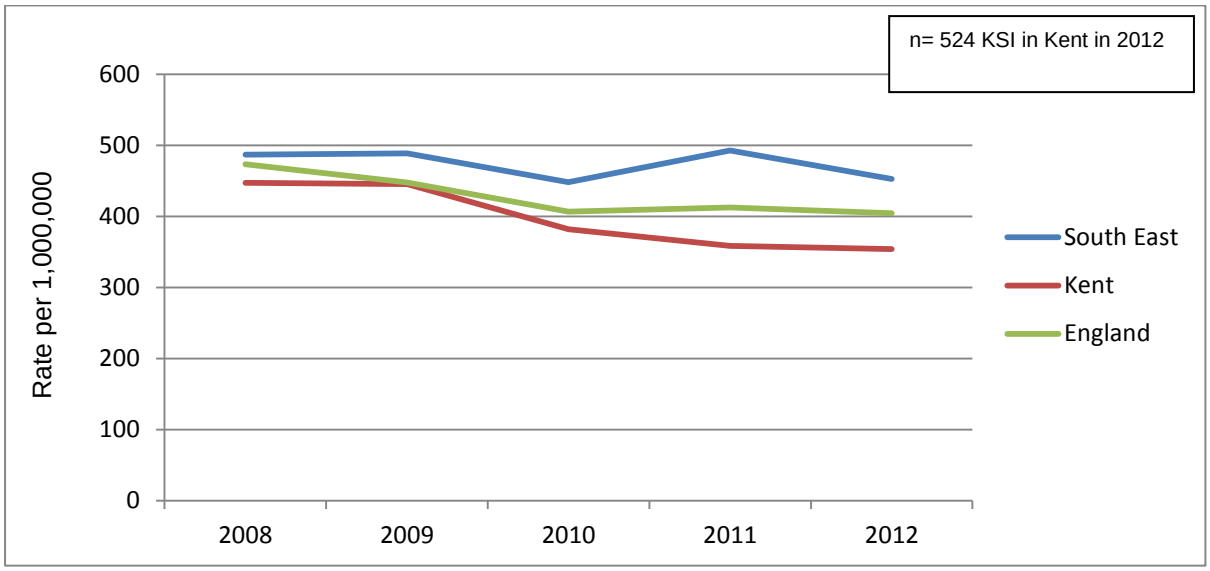
Key:

significantly worse than England average
significantly better than England average
similar to England average

The total number of people killed or seriously injured (KSI) per year has been reducing in Kent, as in England, for many years.

Figure **3** below shows the reducing trend in the rate of people killed or seriously injured between 2008 and 2012. Compared to a baseline of 2005-2009, Kent has seen a reduction of 25% up to 2012. This is a greater reduction than for England, (17%) and the South East region (13%) over the same time period[19].

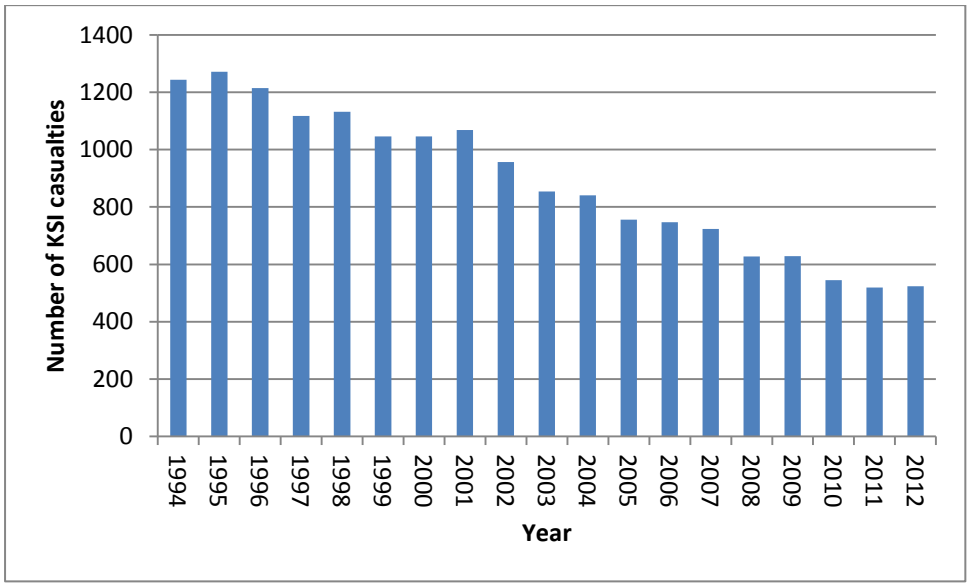
Figure 3: Time trend of rate of killed or seriously injured (KSI) per 1,000,000 population in Kent, South East and England.



Source: KCC, Department for Transport

Figure 4 shows the downward trend in actual numbers of individuals killed or seriously injured in Kent. There has clearly been a marked reduction since 1994.

Figure 4 Number of people killed or seriously injured in Kent – 1994 to 2012



Source: KCC

Targets

Kent County Council and partners have two targets related to the reduction of transport injuries and deaths:

- to reduce the number of all people killed and seriously injured by 33%, to 495 individuals, and
- to reduce the number of children killed or seriously injured by 40%, to 39 individuals.

by 2020, against a baseline of the 2004-08 average.

As Table 3 below illustrates, there has been good progress towards this target to date.

Table 3: Progress towards Kent targets for reducing deaths and serious injuries

Target	2004-08 baseline	Target reduction by 2020		2012	
		number	%	number	% change
Total KSI	739	495	33%	524	-29%
Child KSI	65	39	40%	44	-32%

Table **4** below shows locally collated data on hospital admissions for road and transport related issues. This data describes only those injuries which were serious enough to require admission to hospital, or resulted in a death. They do not represent the full extent of transport related injuries, but are useful in guiding activities to prevent the most serious injuries and deaths. This table shows that Kent had a similar rate of deaths from land transport injures to the England average rate in the three-year period to 2012/13. For the remaining measures - years of life lost due to land transport injury; and hospital admissions due to land transport injury, Kent performed significantly better than the England average.

Table 4: Measures of unintentional injury resulting from vehicles and transport in Kent and England. Directly age-standardised rate per 100,000 and number.

	Year	England	Kent	Annual number of events in Kent‡
deaths from land transport injury	2010/11 - 2012/13	3.7	2.75	45.3
years of life lost due to land transport injury	2010/11 - 2012/13	14.25	8.37	
hospital admissions due to land transport injury	2012/13	96.3	85.46	429

Source: Secondary Uses Service (NHS) for Kent data,and Injury Profiles for England data. England rate = latest available year (2010/11)

Key:

significantly worse than England average
significantly better than England average
similar to England average

Within Kent most CCG areas experienced similar or better than England rates of deaths or hospital admissions due to transport-related injuries, as

‡ Where data is available in 3-year aggregates, the average for a single year has been calculated.

Table **5** below shows.

Table 5: Measures of unintentional injury resulting from vehicles and transport in England, Kent and CCGs in Kent. Directly age-standardised rate per 100,000 and number (Kent only).

	deaths from land transport injury,	years of life lost due to land transport injury	hospital admissions due to land transport injury[§]
Year	**2010/11 - 2012/13**	**2010/11 – 2012/13**	**2012/13**
England	3.7	14.25	96.3
Kent	2.75	8.37	85.46
Ashford	3.16	9.35	98.88
C&C	3.3	9.56	56.66
DGS	2.22	6.3	84.72
S C Kent	2.74	8.32	75.38
Swale	3.08	8.36	73.44
Thanet	1.86	4.7	81.54
W Kent	2.86	10	104.99
Total number events in Kent[**]	136	132	1,286

Source: Secondary Uses Service (NHS) for Kent data, and Injury Profiles for England data. England rate = latest available year (2010/11)

Key:

significantly worse than England average
significantly better than England average
similar to England average

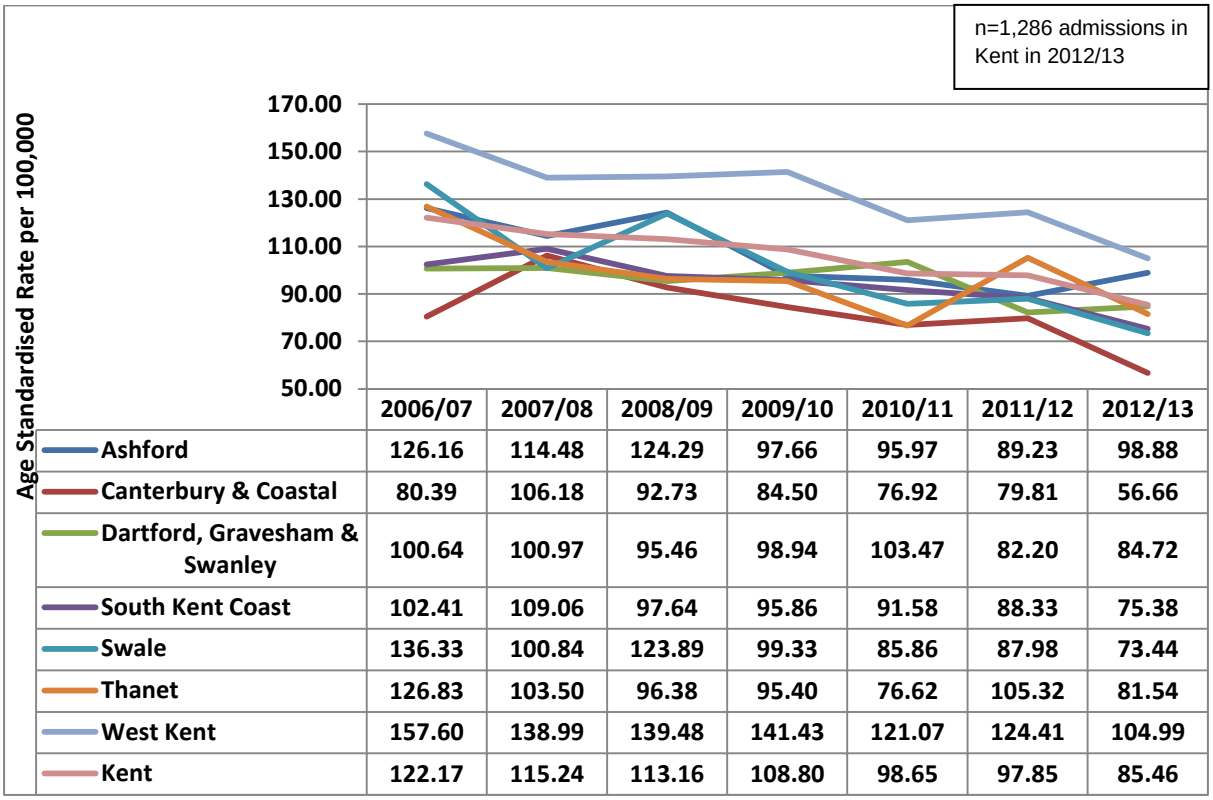
Time trends

[§] Land transport injury includes admissions due to motor vehicle traffic collisions injury plus injuries arising from non-motor and non-traffic incidents. Therefore, it will also include cyclist collisions with pedestrians and off-road motor vehicle collisions

[**] Where data is available in 3-year aggregates, the average for a single year has been calculated.

Figure **5** below shows that there has been a downward trend in the rate of hospital admissions for land transport injury among residents of Kent and residents in each CCG between 2006/07 and 2012/13. Over this time period, West Kent had the highest rate in Kent. Although this rate is not significantly worse than the England average, it is notably higher than that of other CCG areas in Kent.

Figure 5: Trends in Unintentional Injury Admissions for Land Transport Injuries for Kent CCGs - 2006/07 to 2012/13



	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Ashford	126.16	114.48	124.29	97.66	95.97	89.23	98.88
Canterbury & Coastal	80.39	106.18	92.73	84.50	76.92	79.81	56.66
Dartford, Gravesham & Swanley	100.64	100.97	95.46	98.94	103.47	82.20	84.72
South Kent Coast	102.41	109.06	97.64	95.86	91.58	88.33	75.38
Swale	136.33	100.84	123.89	99.33	85.86	87.98	73.44
Thanet	126.83	103.50	96.38	95.40	76.62	105.32	81.54
West Kent	157.60	138.99	139.48	141.43	121.07	124.41	104.99
Kent	122.17	115.24	113.16	108.80	98.65	97.85	85.46

Source: Secondary Uses Service (NHS)

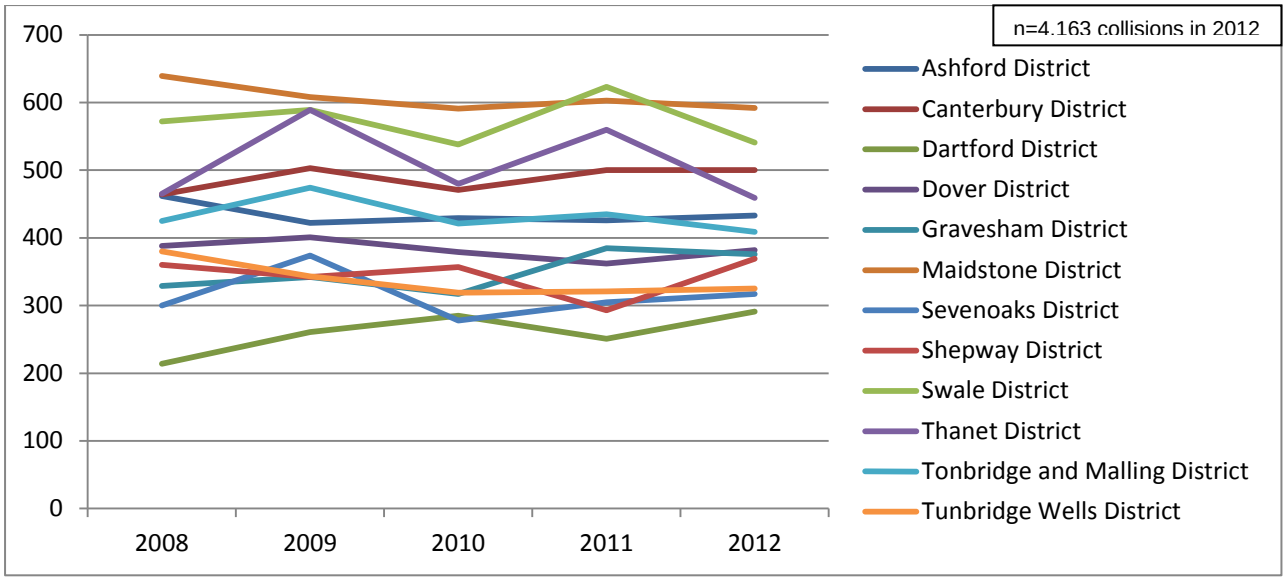
KCC carries out considerable amounts of data analysis to identify areas where crashes occur more frequently, and groups of people who are more likely to either cause, or be injured in a collision. This information then guides a range of prevention activities, detailed in section 6.1: Evidence of what works in reducing unintentional injuries on the roads.

Locations of transport injuries

KCC analysis routinely identifies areas of the county with higher incidences of collision injuries.

Figure **6** shows that since 2008, the districts with the highest actual number of collisions resulting in any injury, including slight injuries, have been Maidstone, Swale and Thanet. Dartford had the lowest actual number of collisions.

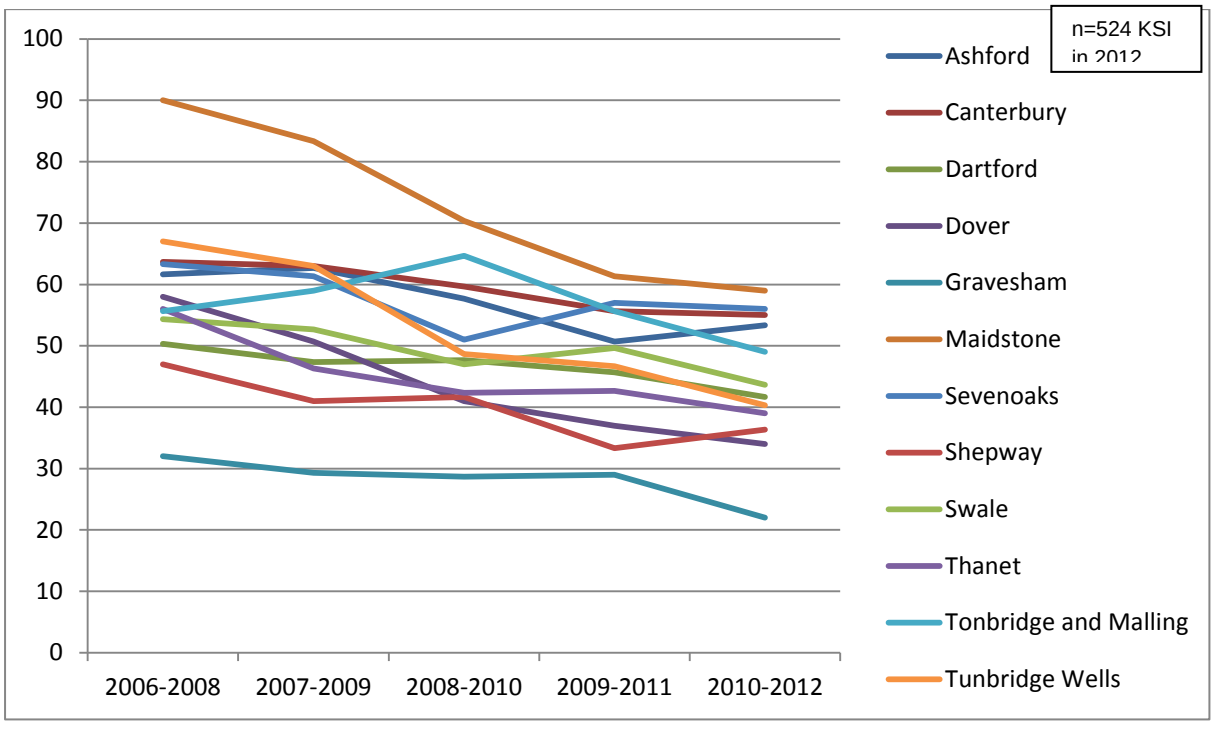
Figure 6: Number of collisions in Kent by district – 2008-2012



Source: Kent County Council

Maidstone district had the highest absolute number of deaths and serious injuries in the three years to 2013, as shown in figure 7, but has seen a large reduction since 2006-08. Canterbury, Maidstone and Sevenoaks also had relatively high numbers of KSIs.

Figure 7: Number of deaths and serious injuries on Kent roads by district. Three-year rolling averages 2006-08 to 2010-12

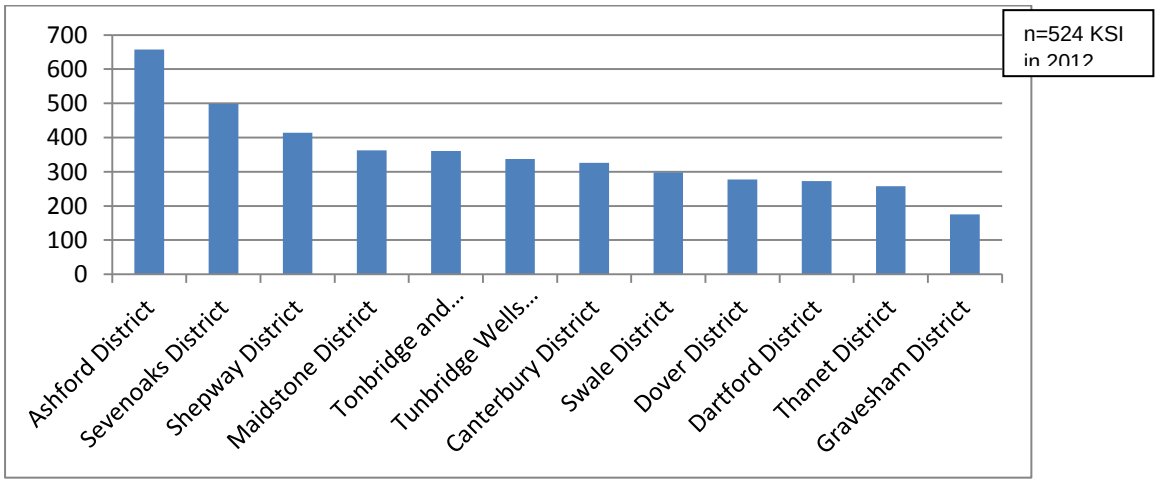


Source: KCC

However, it is possible that the high number of injuries in these districts may be explained by their relatively higher populations.

Figure **8** shows the crude rates of KSIs in each district in Kent in 2012. This shows that the areas with the greatest rates of deaths and serious injuries were Ashford, Sevenoaks, Shepway, Maidstone, and Tonbridge and Malling.

Figure 8: Crude rate of people killed or seriously injured per 1,000 population, by district of collision in Kent, 2012



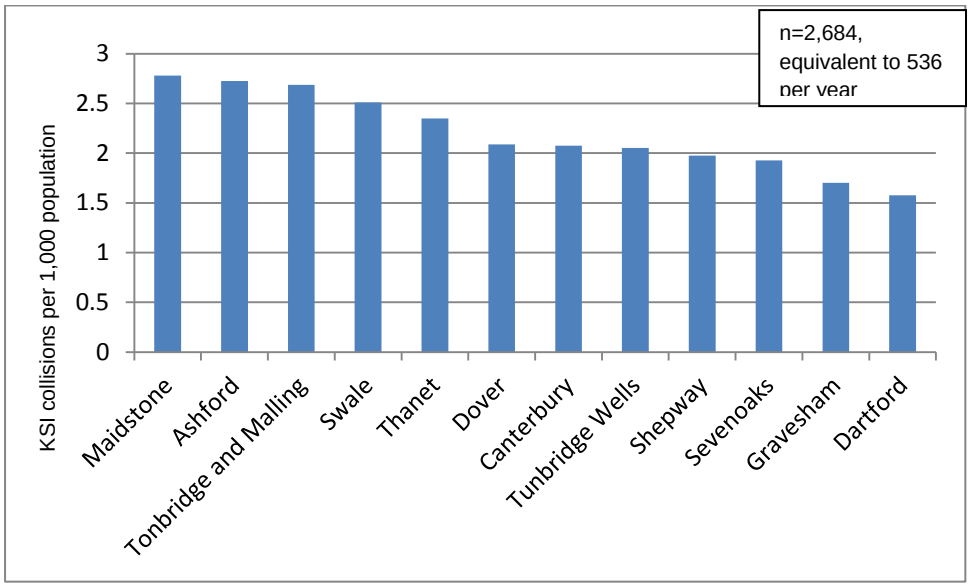
Source: KCC data

It is important to note that this data describes the number of injuries or crashes in an area, per resident population. However, since some areas have higher traffic flow, and relatively low resident populations, rates of injuries might be artificially high because the at-risk resident population is not an accurate measure of exposure to transport. This is likely to affect employment centres and sparsely populated rural areas which have high numbers of visitors or through traffic. For example, Ashford district is largely rural, but has a relatively high traffic flow. This may therefore partly explain higher rates in some districts.

Kent County Council's department of Transport and Highways has analysed collisions data to identify the district in which drivers involved in KSI collisions in Kent actually live, rather than where the collision occurred (

Figure **9**) in the 5 year period to 2012. This shows that Maidstone had the most drivers involved in KSI collisions, followed by Ashford and Tonbridge and Malling. Dartford had the fewest drivers involved in KSI collisions. This suggests that educational and behaviour change campaigns which target drivers should target drivers from these areas, however since the difference between high and low areas is fairly small, all areas should receive such campaigns (see later).

Figure 9: Number of drivers involved in KSI collisions per 1,000 population, by district of residence – 2008-2012



Source: KCC

In summary, the areas of Kent with the greatest numbers and rates of collisions and KSIs per 1,000 population in 2012 and over recent years are Maidstone, Ashford, Swale, Thanet and Tonbridge and Malling. Analysis of the home residency of drivers involved in KSI collisions across all Kent suggest that of the drivers involved in KSI injuries in Kent, more live in these same districts than in other parts of Kent.

District profiles

KCC produces detailed road safety profiles for each district authority (District Road Safety Profiles) to inform local accident prevention work. This identifies those wards with higher rates of personal injury collisions, and includes a gap analysis, to identify key areas or issues which are not currently being addressed by prevention activities. These are available from the Kent Community Safety Portal[20].

Road transport injuries by road user

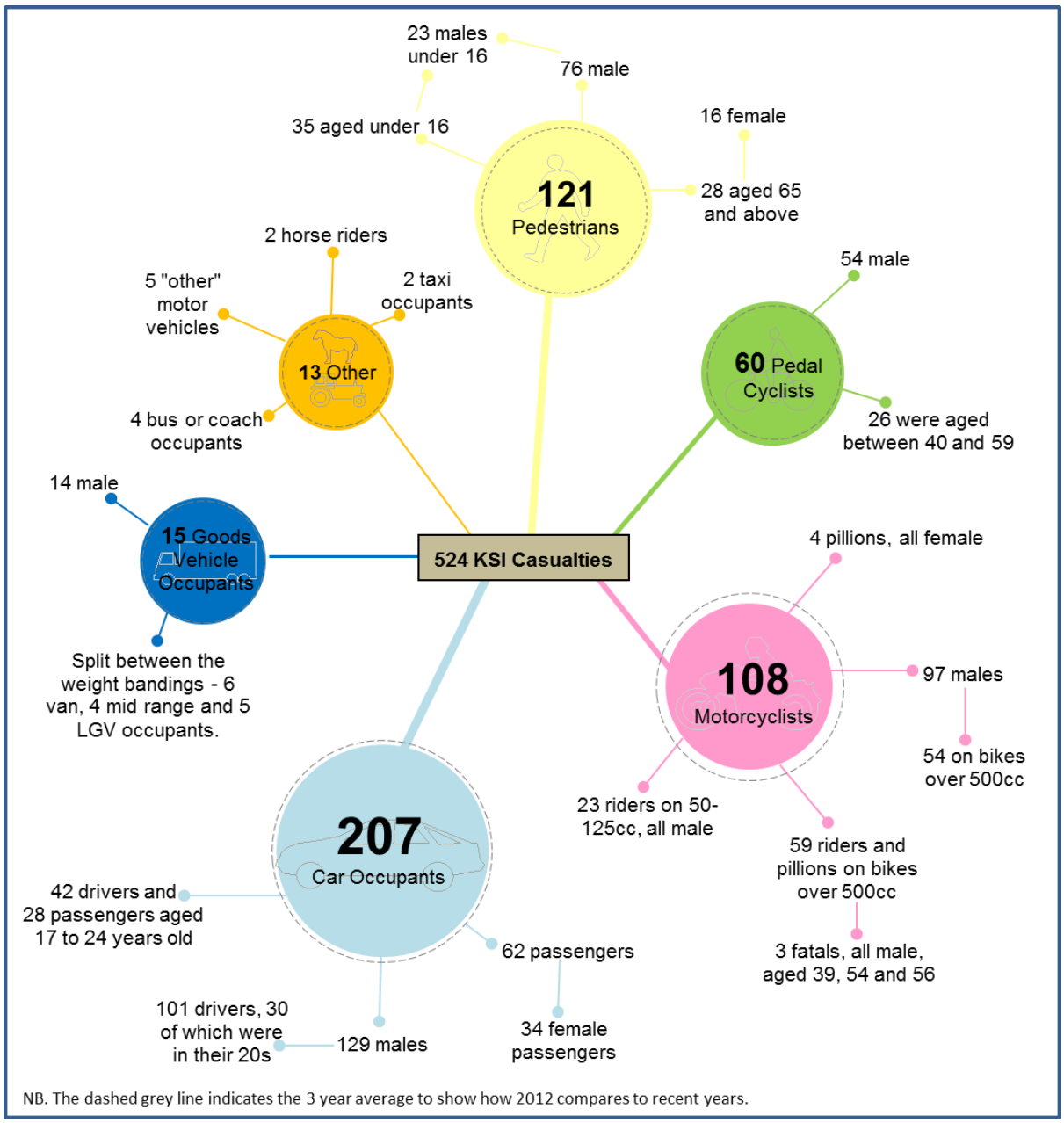
Analysis of injuries by road user identifies those groups who are more likely to be injured in a collision. Figure 10 summarises key information about the type of road user receiving a fatal or serious injury in Kent in 2012. In particular:

- Of 524 KSIs in 2012, 207 (40%) were car occupants, and 70 of these were young people aged 17-24.
- Of the 524 KSIs, 121 were pedestrians and a further 60 were pedal cyclists. This means that 181 (35%) of all those killed or seriously injured in 2012 were vulnerable road users. In their report on road casualties in Great Britain in 2012, the Department for Transport state that pedestrians and pedal cyclists,

per mile walked or cycled respectively, are roughly 11 times more likely to be killed in a road accident than a car occupant[15].

- 108 of 524 KSIs (21%) were motorcyclists and 90% of these were male.

Figure 10: Summary diagram of fatal and serious injuries on Kent roads in 2012.



Source: Kent County Council

Appendix 1 presents maps showing the locations of KSI collisions in Kent involving cars, pedestrians, cyclists, and young people aged 17-24.

Vulnerable road users – pedestrians and cyclists

As Table 6 shows, the number of pedestrians and cyclists who were injured (including slight injuries) in a collision in Kent decreased between 2011 and 2012, by

16% and 37% respectively. However, the number of pedestrians and cyclists who were killed or seriously injured increased between 2011 and 2012 by 27 (29%) and 9 (18%) respectively. A measure of the number of people who cycled on major roads in Kent showed that there was a slight decrease over this same period[21], although the longer-term trend in cycling on major roads from 2000 to 2012 does not show a clear pattern of increase or decrease, and has much year-on-year fluctuation. The number of deaths or serious injuries to pedestrians and cyclists in 2012 was however, still below the 2004-2008 baseline.

Table 6: Casualties on Kent's roads by user group - 2011 and 2012

	Severity	**2011**	**2012**	**Difference 2011-2012 (%)**
All road users	KSI injuries	519	524	5
	Total injuries	5706	5755	49
Pedestrians	KSI injuries	94	121	27
	Total injuries	639	623	-16
Cyclists	KSI injuries	51	60	9
	Total injuries	365	328	-37
Motorcyclists	KSI injuries	147	108	-39
	Total injuries	569	491	-78
Car users	KSI injuries	208	207	-1
	Total injuries	3798	3949	151

Source: Kent County Council

Actions to reduce injury to pedestrians and cyclists must be prioritised because these road users are more likely to be seriously injured or killed in a collision than car users. The death and serious injury rate overall is decreasing more slowly in pedestrians and cyclists than among other road user groups.

Local analysis suggests that 80% of cycle crashes in Kent occur in areas where the speed limit is 30 mph. It is possible that reducing the speed limit in some of these areas may reduce the severity of injury resulting from a collision, even if the actual number of collisions does not reduce.

Cycling and walking need to be seen as safe activities if they are to be successfully promoted as ways of increasing exercise and reducing death and disability from chronic diseases such as coronary heart disease, stroke and cancer.

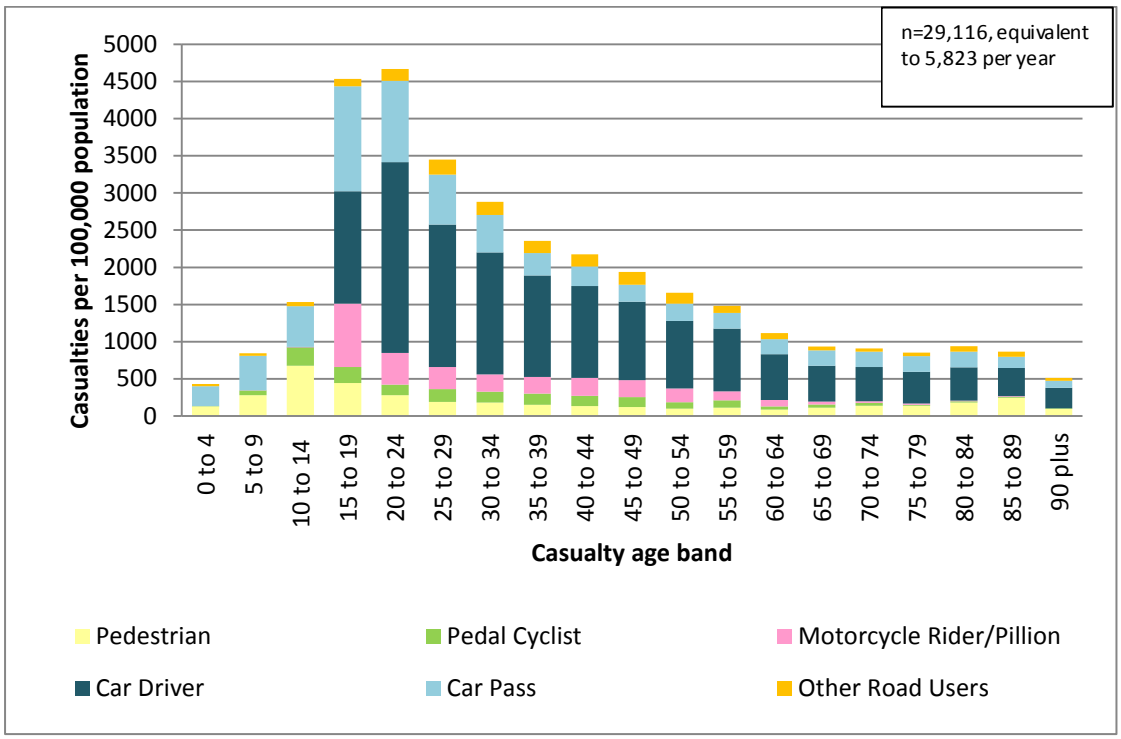
Further details of pedestrian and cyclist injuries are provided within the Kent County Council annual review of road casualties[18]. This report shows that pedestrian casualties occur most frequently in young people, peaking in12 year olds[18].

Vulnerable road users – age groups

Figure 11 below shows that young people aged 15 to 24 had the highest rates of collision-related injuries in Kent in the five years to 2012. Those aged 25 to 29 also had comparatively high rates. Those aged under 20 are less likely to be car drivers,

and more likely to be involved in a collision as a pedestrian or cyclist making them particularly vulnerable to injury.

Figure 11: All Kent casualties per 100,000 population by age group and road user group – 2008-2012



Source: Kent County Council

Figure 11 also shows that pedestrian injuries occur most commonly among 10-14 year olds.

Analysis of car occupant casualties by age shows that car driver casualties were highest in 21 year old drivers in 2012, and 18 year old drivers in 2011. Car passenger casualties were highest in slightly younger age groups – 29% of occupant casualties were aged 17-24[18]. Local analysis indicates that young car occupants were largely in cars being driven by other young drivers - in 2012 65% of car passenger casualties injured in a car being driven by a 17 to 24 year old were also aged between 17 and 24[15].

Causes of collisions

Nationally, 95% of all road collisions involve some driver behaviour and in 76% of collisions, the driver is solely to blame[22].

In Kent in 2012, 22 of 524 deaths or serious injuries on the road were a result of a drink drive collision. Of all injuries (including slight) on Kent's roads in 2012, 3% were due to drink driving. This is better than the average for Great Britain, where 5% of all injures on the road were due to drink driving[23].

Current data recording systems do not allow for accurate analysis of the extent to which driving under the influence of drugs contributes to collisions.

4.3 Unintentional injuries in the workplace

Employers, self-employed people, and those in control of work premises have a duty to report deaths, accidents and near-misses in the workplace to the Health and Safety Executive (HSE) through the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) system. The HSE manages this reporting system, but workplace health & safety legislation is enforced by Local Authorities as well as the HSE – the split depends on the type of workplace as defined in the Health & Safety (Enforcing Authority) Regulations 1998.

The number of deaths, injuries and near misses reported via RIDDOR is available via a statistical tool on the HSE website, however, data from this reporting system has a number of limitations:

- Not all injuries are reported. A 2007 report by the University of Liverpool found that only 32% of reportable injuries were reported via RIDDOR, but that this was lower (13%) among self-employed individuals. Under-reporting also varies by industry-type, injury type, and other variables.
- The reporting system underwent a number of changes in 2011, to improve reporting. However, as a result, data on injuries is currently only available only up to 2010/11.
- Data is presented as actual numbers not rates. This means that meaningful comparisons cannot be made between groups. Calculation of rates may form part of subsequent unintentional injury needs assessment refreshes.

Given the limitations of the RIDDOR system, detailed analysis of local data is not included in this needs assessment. However, provisional interpretation of available data shows that:

- In 2010/11, there were 2,968 injuries reported via RIDDOR in Kent, although as described above this is likely to be a considerable under-reporting.
- Between 2001/02 and 2010/11 most age groups showed a trend of decreasing incidents.
- Males experienced considerably more incidents than females.
- People aged 25-54 experienced more incidents than other age groups.

It is also important to consider that for many people, the roads are a workplace and road safety is therefore an important part of reducing workplace unintentional injuries. The Kent Driving Business Safely programme states that in 2010-2012, 1 in 4 collisions on Kent's roads involved a business driver[29].

4.4 Unintentional injuries in the home and other settings

Unintentional injuries in the home are more common than road injuries - in 2010/11 5,000 people in the UK died as the result of an accident at home, compared with 1,901 on the road.[24] Local data on injuries is largely from hospital admissions data. It is therefore not always possible to identify those injuries which arose at home rather than elsewhere. This section groups injuries which are likely to have occurred at home or in leisure activities, including burns, head injuries, unintentional poisonings and falls in young children.

Table 7 shows how Kent performs against a number of indicators relating to hospital admissions for unintentional injuries which may have occurred in a range of settings including the home, leisure activities, travel or work. Not all unintentional injuries result in hospital admissions, and so the data in table 8 reflects only those most serious injuries which require hospital admission. This shows that, compared to England, Kent had significantly lower (i.e. better) rates of hospital admissions for:

- Serious head injuries (all ages)
- Injuries resulting from exposure to smoke, fire and flames
- Injuries resulting from falls in children under five years.

However, Kent also had significantly higher (i.e. worse) than England average rate of admissions for burns.

Admissions for unintentional poisonings were not significantly different to the England average.

Within Kent some CCG areas had significantly more admissions than England, for specific injury types, namely:

- Burn injury admissions were significantly higher in DGS; Swale; Thanet; and W Kent CCG areas.
- Admissions for unintentional poisonings were significantly higher in C&C; DGS; and Thanet CCGs.
- W Kent CCG experienced significantly more admissions for falls among children aged under five than the England average.

These issues are described in more detail below the table.

Table 7: Hospital admission rates and number (Kent only) for selected unintentional injuries – England, Kent and Kent CCGs.

		England	Kent	Ashford	C&C	DGS	SKC	Swale	Thanet	W Kent	Annual number of events in Kent[††]
hospital admissions due to a serious head injury [a]	2010/11 - 2012/13	62.2	55.11	46.32	43.14	55.77	55.21	66.77	72.64	55.82	934
hospital admissions due to burn injuries [a]	2010/11 - 2012/13	19.4	25.17	22.98	22.08	30.48	21.82	24.83	27.10	25.40	349
hospital admissions due to exposure to smoke, fire and flames injuries [a]	2010/11 - 2012/13	4.1	2.08	1.40	1.05	2.02	2.63	1.77	3.35	2.42	35
hospital admissions due to unintentional poisoning injuries [a]	2012/13	48.8	51.93	24.20	69.36	78.36	43.36	59.07	69.86	33.22	775
children (under5) hospital admissions due to fall injuries and those on/from a different height [b]	2010/11 - 2012/13	54.77	49.63	38.75	42.78	53.05	35.92	55.64	52.40	56.21	436

[a] Directly age-standardised rate per 100,000 population
[b] (crude rate per 10,000 population)

Source: Secondary Uses Service (NHS) for Kent data, and Injury Profiles for England data. England rate = latest available year (2010/11)

Burns

The rate of hospital admissions for burns in Kent has remained fairly constant between 2006/07 and 2008/09. Within Kent however, Swale has seen considerable reductions in that time period (from over 40 admissions per 100,000 in 2006/07-2008/09 to under 25 per 100,000 in 2010/11-2012/13), and as a result now has a similar rate to England. Ashford has seen an increase in the rate of admissions over this time period, from 15.14 admissions per 100,000 in 2006/07-2008/09 to 22.98 in 2010/11-2012/13. DGS, Thanet and W Kent have significantly higher rates of admissions for burns than the England average, as

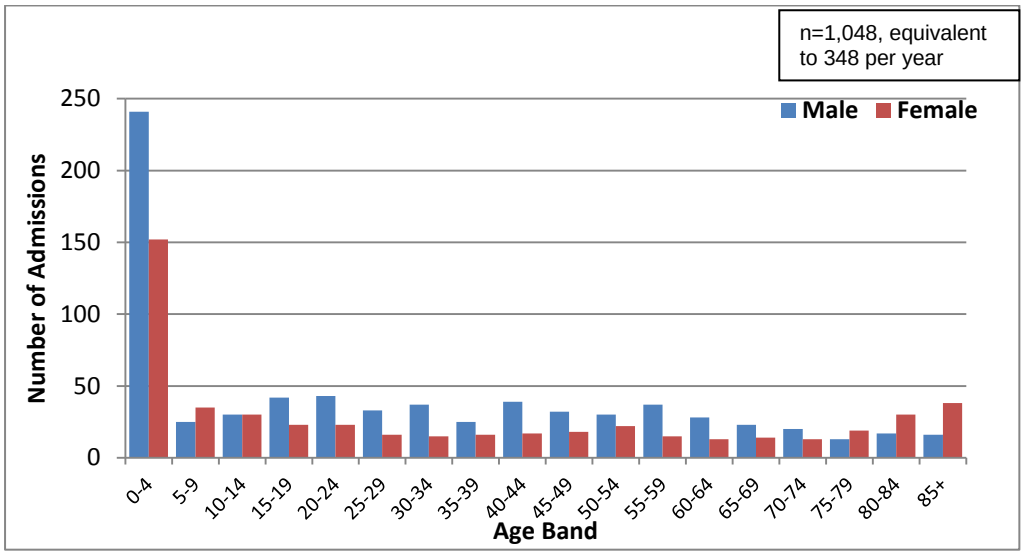
[††] Where data is available in 3-year aggregates, the average for a single year has been calculated.

Table **7** shows.

DGS had the highest rate of admissions for burns in Kent, with 30.48 admissions per 100,000, compared to 19.4 in England. This equates to 214 admissions for burns in the three years to 2012/13, an average of 71 per year.

Figure 12 shows that in Kent, those people admitted for burns are overwhelmingly aged under five, with more boys injured by burns than girls. In the three years to 2012/13 there were 393 children aged under five admitted to hospital for burns. This represents over a third of all admissions for burns. Across nearly all ages, more males were admitted than females.

Figure 12: Age and sex profile of all admissions for unintentional burns injuries in Kent - 2010/11 - 2012/13 (pooled data)



Source: Secondary Uses Service (NHS)

In order to reduce burns in Kent, therefore, prevention activities clearly need to target families with young children, and particularly those in DGS, Thanet, and W Kent where rates are particularly high. Services should also address issues in Ashford in order to halt the steady increase observed there.

Unintentional poisonings

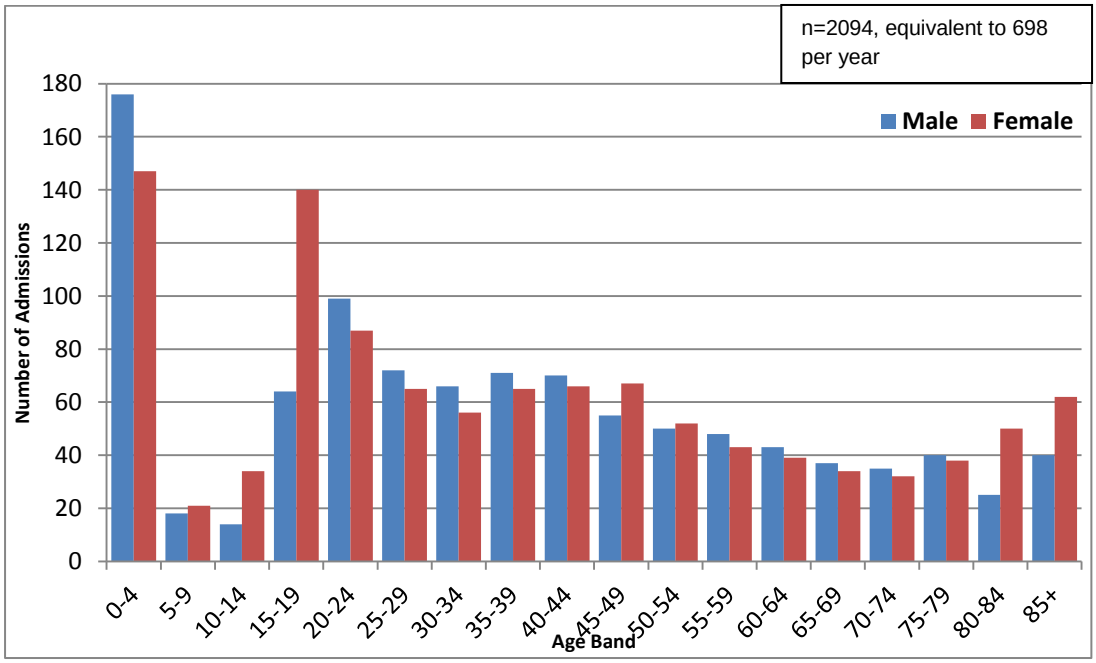
In 2012/13 there were 775 hospital admissions for unintentional poisonings in Kent.

The group with the most admissions were children aged under five, with 323 admissions between 2010/11 and 2012/13, equivalent to an average of 108 admissions per year (15% of all admissions for unintentional poisonings). Whilst it is possible that children under five may be more likely to be admitted into hospital for

unintentional poisoning than those from other groups, this age group should still be targeted for prevention activities.

Females aged 15-19 also experienced a high number of admissions for unintentional poisonings – twice that of males of the same age group. There were 140 hospital admissions for unintentional poisonings in females aged 15-19 in the three years to 2012/13 (an average of 47 per year) and 64 in males of the same age (average of 21 per year). This measure includes poisonings due to alcohol and illegal drugs, which may explain some of the admissions among young people. Further work is required to understand the reasons for high unintentional poisonings among young females.

Figure 13: Age and sex profile of all admissions for unintentional poisonings in Kent – 2010/11-2012/13 (pooled data)



Source: Secondary Uses Service (NHS)

Services which engage with families with young children (e.g. district housing services, and health visitors) should ensure, or continue to ensure that home safety is discussed with parents. All CCG areas, especially DGS, C&C and Thanet should ensure that services to reduce accidents among under fives in the home are commissioned. A consistent service is required across Kent, in line with NICE guidance[34].

Falls and injuries on/from a different height among the under fives

These injuries include those resulting from a child falling on a single level, or from a height, such as falling off a bed, from playground equipment or while being carried. Whilst Kent as a whole had significantly fewer of these admissions than the England average, West Kent CCG had significantly more admissions in the three years to 2012/13 (

Table **7**), with 56.21 admissions per 10,000, compared to a Kent average of 49.63, and an England average of 54.77. In the three years to 2012/13 there were 473 hospital admissions for residents of West Kent CCG, equivalent to 158 per year.

All CCG areas, except DGS, have seen a reduction in the rate of admissions for falls in under fives since the period 2006/07-2008/09. The admissions rate in DGS increased from 47.96 admissions per 10,000 population in 2006/07-2008/09 to 53.05 in 2010/11- 2012/13. This CCG now has the third highest rate in Kent.

Swale has seen a particularly large reduction, from 99.48 admissions per 10,000 population in 2007/08-2009/10 to 55.64 in 2010/11- 2012/13. The admissions rate for Swale is now marginally below that of West Kent (

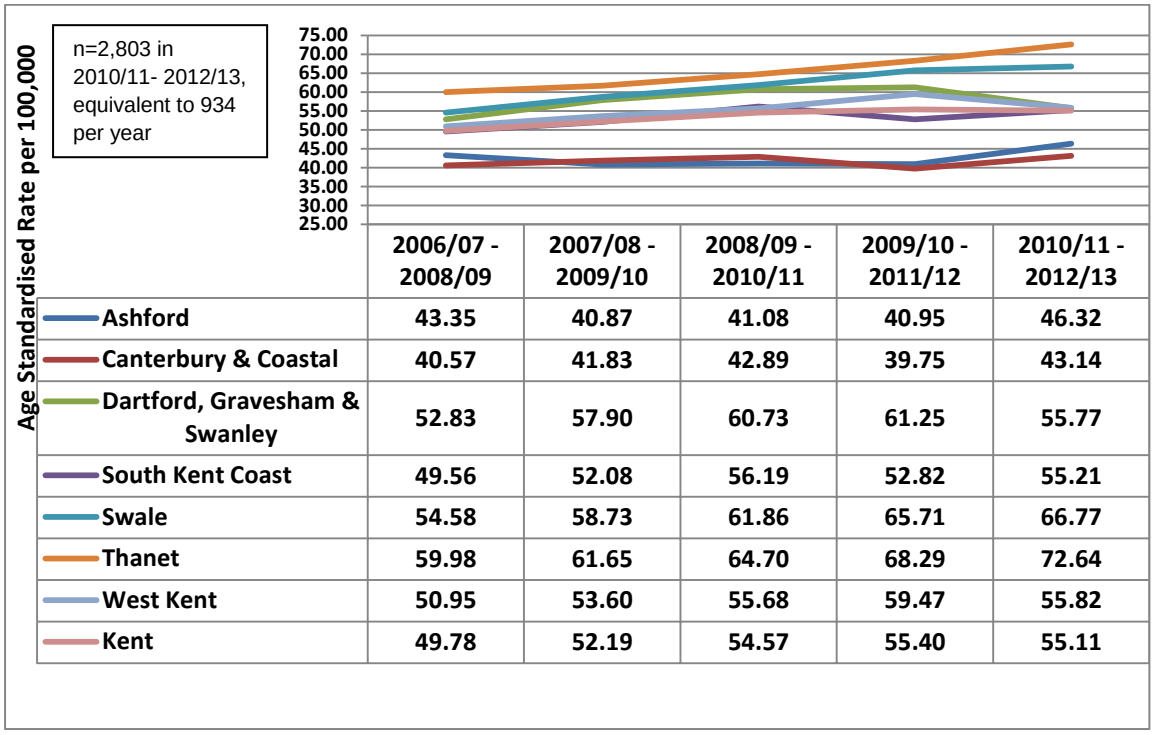
Table **7**), having had much higher admissions rates than all other CCGs in Kent since 2006/07-2008/09.

Serious head injuries

Although Kent had a significantly lower rate of admissions for head injuries than the England average in 2012/13, the actual number of these admissions was high compared to other injury types in Kent. There was an average of 934 of these admissions per year between 2010/11 and 2012/13. There has also been an overall trend of increasing rates in Kent, as

Figure **14** below shows. This increase is most marked in Thanet and Swale, where the rates of admissions are notably higher than in other CCG areas.

Figure 14: Trends in unintentional injury admissions for serious head injuries in Kent CCGs, three year averages - 2006/07-2008/09 through to 2010/11-2012/13



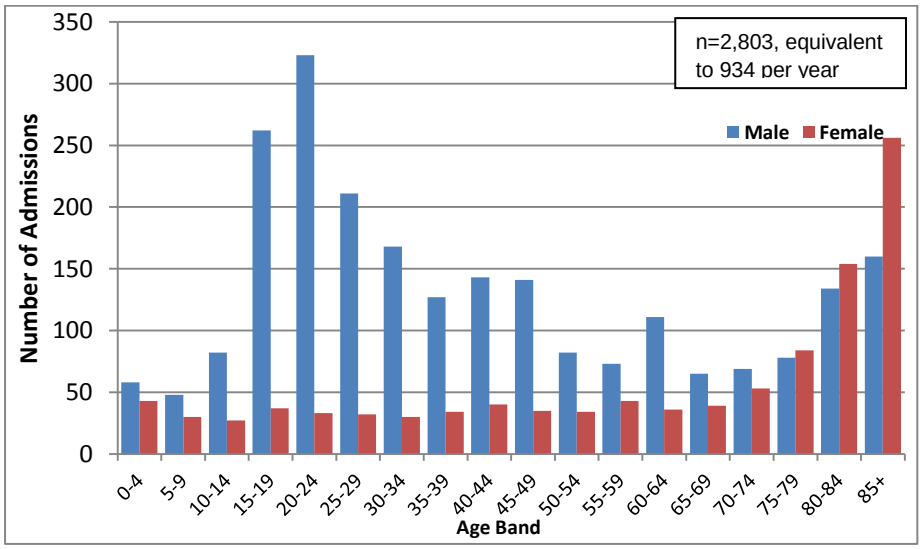
	2006/07 - 2008/09	2007/08 - 2009/10	2008/09 - 2010/11	2009/10 - 2011/12	2010/11 - 2012/13
Ashford	43.35	40.87	41.08	40.95	46.32
Canterbury & Coastal	40.57	41.83	42.89	39.75	43.14
Dartford, Gravesham & Swanley	52.83	57.90	60.73	61.25	55.77
South Kent Coast	49.56	52.08	56.19	52.82	55.21
Swale	54.58	58.73	61.86	65.71	66.77
Thanet	59.98	61.65	64.70	68.29	72.64
West Kent	50.95	53.60	55.68	59.47	55.82
Kent	49.78	52.19	54.57	55.40	55.11

Source: Secondary Uses Service (NHS)

The age and sex profile of individuals admitted to hospital for these injuries (

Figure **15**) shows that males, particularly young males, are at greater risk of these injuries. Further investigation is needed to identify the causes of these injuries in order to understand why young males are at particularly high risk.

Figure 15: Age and sex profile of all admissions for unintentional serious head injury - 2010/11 - 2012/13 (pooled data)



Source: Secondary Uses Service (NHS)

Injuries from smoke, fire and flames

Kent had a lower rate of admissions due to smoke, fire or flame injuries than the England average, and there were an average of just 35 admissions per year in Kent in the three years to 2012/13. There has been a strong downward trend in the number of these admissions between 2006/07-208/09 and 2010/11-2012/13.

Alcohol attributable injuries

The best available estimates of the extent to which alcohol contributes to injuries is available from the National Injury Profiles, although these include intentional as well as unintentional injuries, and the latest data available is from 2010/11. Overall, Kent had significantly fewer hospital admissions for alcohol attributable injuries per 100,000 population than England. Thanet was the only district within Kent to have a significantly higher rate of admissions for alcohol attributable injuries in 2010/11. A strategy to reduce the harm caused by alcohol misuse in Kent has been produced, and will address the wider issues of alcohol-related harms.

5. Services in Kent

5.1 Unintentional injuries on the roads

A number of organisations within Kent carry out road safety and injury prevention activities.

Kent County Council and Partners

Kent County Council's department of Highways and Transportation performs a number of functions to prevent injuries occurring on Kent roads. These are summarised below, however, full details are available in a number of recent reports and documents, in particular:

- Draft Road Casualty Reduction Strategy for Kent 2014-2020 – strategy document and partner presentations:

http://www.kent.gov.uk/roads_and_transport/road_safety/crash_and_casualty_data/road_casualty_reduction_strate.aspx

- Road Casualties in Kent – Annual Review 2012:

https://shareweb.kent.gov.uk/Documents/roads-and-transport/road-safety/Review%20of%20personal%20injury%20crashes%20occurring%20on%20Kent%20%20Roads%20i.pdf

In addition, the KCC department of Highways and Transportation provide detailed information for district councils so that they can opt to deliver or commission road safety activities.

Injury data analysis

Any collision where an individual is injured must be reported to the police, who record detailed information about the collision and the individuals involved. This data is then processed by KCC dept of highways and transportation. Detailed data analysis is then performed to identify areas where crashes occur more frequently, and groups of people who are more likely to either cause, or be injured by a collision.

This information then guides a range of prevention activities. These are described in detail in other KCC documents including those referenced above. In summary, preventing road and transport accidents falls under three main activities – Engineering, Education and Enforcement.

Engineering

This describes the activities undertaken to design or improve the road systems to make them safer through; for example

- signing & Lining
- surfacing

- speed limits
- safety Cameras
- pedestrian Crossings
- traffic Calming
- junction realignments
- traffic Signals
- roundabouts
- road space reallocation
- filtered permeability

Kent County Council has developed a policy on the use of 20mph limits and zones[25]. This states that KCC will seek to implement 20mph schemes when there are clear road safety or public health benefits. There is also national guidance on the implementation of 20 mph schemes, summarised in the policy documentation[25].

Education, Training and Publicity (ETP)

Activities are strongly steered by analysis of traffic collision data. In Kent this indicates that education, training and publicity should be targeted towards young drivers and their passengers, drivers aged 25-50, motorcyclists and scooter riders and child pedestrians and cyclists. Target groups are those who are both more likely to cause a collision, and more likely to be harmed by a collision. A number of campaigns have been delivered in Kent, targeting specific groups e.g. Bikeability and Small Steps[26]. These campaigns are evaluated, to assess the extent to which subjects recalled the campaigns.

Enforcement

Enforcing traffic legislation (including speed limits, seatbelt wearing, not using mobile phones or driving with other distractions) is carried out by Kent police and the Kent and Medway Safety Camera Partnership. This partnership (whose partners include Kent Police and KCC) is responsible for the operation of safety cameras within Kent and includes the detection of speed, mobile phone, seat belt and red light offences.

Speed Watch is an initiative in which local residents volunteer to monitor the speed of passing vehicles in areas with 30 or 40 mph limits. Registered keepers of vehicles repeatedly or excessively speeding are then sent warning letters and advice by Kent Police. There are currently more than 60 schemes in place in Kent[27].

Partnership prorammes

A number of partnership programmes to reduce injuries on the roads are in place in Kent. For example, the Kent and Medway Road Casualty Reduction Partnership (CaRe) is a collaboration between KCC, Medway Council, The Highways Agency, Kent Fire and Rescue and Kent Police. This partnership has a number of working groups focussing on the high priority groups of young drivers and car occupants, motorcyclists, cyclists and business drivers.

Kent Fire and Rescue Service and Kent Police deliver a programme entitled Youth Engagement Around Road Safety (YEARS). This programme aims to cut the number of young people killed or seriously injured on the roads, reduce motoring offences and increase awareness of the dangers of driving under the influence of drink or drugs. The programme targets young people with motoring offences, those with motoring-related activity of concern and those identified as risk takers. To date, four pilot groups have been run at local fire stations by KFRS and Kent Police.

In addition, Licence to Kill (L2K) is a multi-agency project that uses a film and live theatre experience to explore the circumstances and consequences of a road traffic collision. Currently, approximately 6,000 Kent and Medway 16-17 year olds see the performance each year.

5.2 Unintentional injuries in the home

Services to prevent unintentional injuries in the home are provided by a number of agencies in Kent, as outlined below.

District authorities
Each district authority has a statutory duty to reduce hazards in private sector homes. This duty extends to all tenure types, including the private rental sector, owner occupied homes and houses of multiple occupancy (HMOs), although the type of support provided or enforcement activities vary by tenure type. Most districts focus on providing services in the private rental sector, as the group with the greatest need for housing improvement. Services are provided for the whole population, including young adults, families and older people.

District authorities respond to concerns raised by members of the public about housing safety and inspect these homes to identify any hazards, and to carry out a risk assessment based on which groups of the population the hazard is most likely to affect. For example, low windows with no window lock are a particular hazard for young children, and stairs with no handrail are a particular hazard to elderly people.

District authorities can then enforce landlords to remove hazards in the home or alternatively may provide grants or loans to those who own their own home and who cannot afford to maintain it in a safe condition. Disabled Facilities Grants are also provided to enable disabled people to adapt their homes. Work identified may then be organised by Home Improvement Agencies (see below).

The exact provision of services varies by district authority. Because the district authorities' work is reactive, responding to concerns raised by members of the public, it is possible that those individuals who are living in the most hazardous homes may not be receiving these services. For example an individual may not

contact their district council if they are not aware of their rights, not aware of the service provided by district councils, or do not feel able to make a complaint for fear of being evicted by their landlord. Further work is required to identify the extent of hazardous homes in Kent.

Home Improvement Agencies

Across Kent, Home Improvement Agencies provide services to reduce the risk of injuries in the home. These largely target older people at risk of falls, but may also be provided for other vulnerable residents, or all residents, depending on each local authority policy. This service is provided in all district authorities in Kent. However, further work is required to identify the extent to which this is provided in practice, relative to need, as identified in this needs assessment.

Health Visiting Service

Health visitors provide a universal service to all families in Kent, as well as additional support to those families with greater need. The universal service includes at least four routine visits. At each of these visits (10-14 days after having a baby, 3-4 months, 12 months and 2 years) the health visitor discusses risks for accidents, as appropriate for the child's developmental stage. Each visit requires the health visitor to complete paperwork, which includes documenting the safety advice provided. Leaflets are also provided for the family. At the one and two year contact, home safety, safety when outside, and safety when travelling in cars is also discussed. Safety is also promoted opportunistically. In addition, safeguarding and child protection work includes elements of child safety.

Fire prevention

Kent Fire and Rescue provides a range of home safety services including[28]:

- **Home Safety Visits:** between April 2009 and March 2013 KFRS completed 49,195 Home Safety Visits with 73,781 smoke alarms fitted;
- **Visits to the most vulnerable people by a specialist team**: between October 2010 and March 2013 KFRS completed 5,994 home safety visits (equivalent to 2,397 per year), offering advice and providing free fire safety equipment. In addition, KFRS offer training and advice to professionals working with vulnerable people to help them identify individuals at risk of fires at home.
- **Arson prevention**: between February 2011 and March 2013, KFRS worked with 768 fire-setters;
- **School visits**: between April 2009 and March 2013 KFRS completed 4,489 school visits, seeing 273,135 students;

The Kent Fire and Rescue strategy for 2013-17 'Focus on your Safety: A Strategy for helping people in Kent and Medway to stay safe', details the KFRS approach to preventing fires in the home and outside, road traffic accidents, flooding and incidents involving water. This strategy is based on analysis of data collected from

incidents, and used to guide prevention activities. This strategy highlights the following as key issues for KFRS:

- **An ageing population**: Increasing numbers of older people means more people are living with mobility problems and disabilities, which puts them at greater risk of injury from fire.
- **Mental health issues**: KFRS is the lead fire service on a national project to raise the awareness of fire risks in the homes of people with dementia, and provide effective prevention advice for families and carers. KFRS also provides training for a range of staff who work in individuals' homes, to enable them to give advice.
- **Deprivation:** The risk of fire increases with deprivation. KFRS is working with local housing authorities to address the issue of poor quality housing, particularly in the private sector. As described earlier, further work is required to identify the extent of poor quality housing in Kent.
- **Domestic abuse**: KFRS works with the community and partner agencies to help those at risk from arson as a form of domestic abuse.

Safety equipment provision

Across Kent, there is some provision of safety equipment (e.g. stair gates and home safety packs) from Children's Centres or charities e.g. NSPCC for low income families with young children. However, this is not consistently provided across Kent. Given the high rate of burns admissions and unintentional poisonings among under 5s in each CCG area in Kent, safety advice and equipment should be provided in all areas, in line with NICE guidance.

5.3 Unintentional injuries in the workplace

The prevention of unintentional injuries at work is the responsibility of employers, and self-employed individuals, and is supported by the Health and Safety Executive (HSE). The HSE carries out inspection visits, largely guided by national policy, however, where data suggests that numbers of injuries are higher in particular industries or areas, this can be used to guide visits and prevention work.

KCC is a large employer and provider of workplaces in Kent. As such it has a department for monitoring and preventing injuries and accidents in KCC premises including schools, care homes and council office buildings. Links have recently been made between public health and the Health and Safety department within KCC to further develop KCC's role in the prevention of unintentional injures beyond the KCC workforce.

A number of organisations in Kent (including KCC, Kent and Medway Safety Camera Partnership, Kent Police, KFRS) work in partnership to provide a 'Driving Business Safely' programme which aims to highlight to companies and self-employed individuals, the responsibilities they have to their staff whilst driving in a work related capacity and for those behind the wheel to take responsibility for the way they behave on the road[29].

6. Evidence of what works in unintentional injury prevention

Unintentional injuries comprise a wide and diverse range of injuries, and may be experienced by a range of age-groups in many settings. Evidence about what works to reduce these injuries is therefore varied, depending on the type of injury, setting, and age group of the target population.

The Royal Society for the Prevention of Accidents (RoSPA), supported by Public Health England, has published a series of factsheets and case studies on accident prevention across themes of home safety, road safety, leisure safety and safety education [30].

In November 2010 NICE published guidance on the prevention of unintentional injuries among under-15s; the prevention of unintentional injuries among under-15s in the home (PH30); and the prevention of unintentional road injuries among under-15s.

For specific unintentional injuries, the Collaboration for Accident Prevention and Injury Control (CAPIC) provides a searchable database of systematic reviews on injury prevention.

The key messages from the evidence base are summarised below.

6.1 Unintentional injuries on the roads

The joint Department of Health and Department of Transport document: Transport and Health Resource: Delivering Healthy Local Transport Plans highlights the importance of including measures to reduce road traffic injuries in Local Transport Plans. It also describes the importance of safer roads in encouraging people to use them for walking and cycling, and highlights the impact of 20mph limits in reducing cycling and pedestrian casualties[31]. A number of sources recommend the use of 20 mph limits or zones as part of a collection of measures to reduce casualties, particularly among cyclists and pedestrians. The KCC policy on 20 mph schemes states that they will be implemented where there are clear road safety or public health benefits.

RoSPA provides extensive resources on the prevention of traffic injuries for a wide range of audiences[32]. The RoSPA handbook for accident prevention[5] particularly emphasises the use of 20 mph zones with traffic calming techniques as a way of protecting the most vulnerable road users whilst encouraging people to walk or cycle.

The NICE public health guidance on preventing unintentional injuries on the roads among under-15s is particularly relevant here[33]. Whilst the focus of the guidance is

the under-15s, the recommendations will improve road safety for all ages. The guidance provides a number of recommendations, summarised here:

Health advocacy and engagement

- Directors of public health and other health professionals with responsibility for preventing or treating injuries should
    - support and promote changes to the road environment as part of a broader strategy to prevent injuries and the risk of injuries,
    - support coordinated working between health professionals and local highways authorities to promote changes to the road environment.

Needs assessment and planning

- Local highways authorities should work with other partners to introduce engineering measures to reduce speed as part of a broad strategy to prevent injuries and the risk of injuries
    - developed after considering data on risk of injury (such as traffic speed and volume) and injuries (including levels of casualties, their age, the groups involved and where they occur)
    - designed and constructed in line with current good practice
    - designed taking into account all road users (not just car users), including vulnerable road users (such as pedestrians, cyclists and those with impaired mobility)
    - developed using effective processes of community engagement
    - implemented based on local priorities for modifying the transport infrastructure
    - evaluated for their effect in terms of reducing the risk of injury and reducing the number of actual injuries
    - evaluated for any unintended consequences, such as the impact on the number of people walking or cycling or on injury rates in neighbouring streets

Measures to reduce speed

- Introduce engineering measures to reduce speed in streets which are primarily residential or where pedestrian and cyclist movements are high. These measures could include:
    - speed reduction features (for example, traffic-calming measures on single streets, or 20 mph zones across wider areas)
    - changes to the speed limit with signing only (20 mph limits) where current average speeds are low enough, in line with Department for Transport guidelines
- Implement city or town-wide 20 mph limits and zones on appropriate roads. Use factors such as traffic volume, speed and function to determine which roads are appropriate.

- Consider changes to speed limits and appropriate engineering measures on rural roads where the risk of injury is relatively high, in line with Department for Transport guidelines.

Popular routes

- Consider opportunities to develop engineering measures to provide safer routes commonly used by children and young people, including to school and other destinations (such as parks, colleges and recreational sites). This should be done as part of the development of a broad package of measures to address travel, for instance when developing school travel plans.
- Include school governors and head teachers in discussions about changes relating to school travel.

Road safety activities in Kent have also been evaluated, but due to the multi-factorial nature of collisions, directly attributing a reduction in collision rate to any specific intervention is not possible.

6.2 Unintentional injuries in the home

NICE guidance on the prevention of unintentional injuries among under-15s in the home[34] made a number of recommendations:

- Prioritising households at greater risk
- Working in partnership
- Co-ordinated delivery
- Follow-up on home safety assessments and interventions
- Integrating home safety into other home visits

In summary, these recommendations largely suggest that at-risk households should be provided with a home safety assessment, followed by the supply and installation of home safety equipment, in a co-ordinated, sensitive and appropriate manner. Full details are provided within the guidance[34] as well as links to home safety assessment tools. The actions are intended for many organisations, including those who may be able to identify households likely to be at-risk, such as health professionals who visit homes of under 15s, the Fire and Rescue Service, and the local authority leads for home safety and housing.

The Royal Society for the Prevention of Accidents, supported by Public Health England, recently published a series of factsheets and case studies on accident prevention across themes of home safety, road safety, leisure safety and safety education.

For home safety, RoSPA[35] states that a combination of factors are required to reduce injuries. These should address

- the environment (e.g. planning and design, fireguards and safety gates);
- education;
- empowerment; and
- enforcement (e.g. legislation around product safety and safe dwellings)

Safe at Home is an example of an initiative which meets many of the recommendations from NICE. This scheme provided and installed home safety equipment to particular families, trained staff to carry out home safety assessments and provided home safety education to families in participating areas of England. Evaluation of the Safe at Home scheme by the University of Nottingham found that 91% of beneficiaries felt that their home was safer. The evaluation remit did not include an assessment of the programme's effectiveness on injury reduction although both international experts and experts within the evaluation team were of the view that, if continued in the long term, the national programme showed potential to reduce injuries. The economic evaluation of the programme found that the cost of equipment provision for each child aged 0-5 years in receipt of the scheme was £95.99 per head. The authors concluded that this compared very favourably with the estimated cost for the treatment of a non-fatal home injury to a child aged 0-4 years of £10,600 based on 2010 estimates[36].

6.3 Unintentional injuries in the workplace

The Health and Safety Executive website provides a range of guidance on the prevention of unintentional injuries within the workplace, by both injury type and industry type[37]. RoSPA also provides a range of advice and guidance on reducing injuries in the workplace[38].

6.4 Unintentional injuries in other settings

RoSPA provides resources on reducing unintentional injury in a range of settings including leisure activities (such as safe play and water safety), in schools and colleges.

7. Gaps in service provision

7.1 Unintentional injuries on the roads

KCC road safety district profiles include a gap analysis, to identify key areas or issues for each district which are not currently being addressed by prevention activities. These gap analyses are updated annually to reflect changes in need and service provision and are available from the Kent Community Safety Portal [20].

7.2 Unintentional injuries in the home

Each district has a statutory duty to reduce hazards in private sector homes, as described in section 5.2. However, since this work is reactive, it is possible that across Kent services may not consistently reach those groups most in need. Further work is required to identify the unmet need for private sector housing services across Kent, and whether there are any particular groups of the population who are not accessing services they need in order to reduce their risk of injury in the home.

Home Improvement Agencies also carry out home safety work, however the target audience for these varies with each local authority policy. There may be some vulnerable groups therefore who are not eligible to receive this support in their district. Most CCG areas had at least one measure of home injuries which were significantly worse than the England average. These areas should ensure that services are available to support vulnerable residents, particularly families with young children, in ensuring that their homes meet safety standards.

Across Kent, there is some provision of safety equipment e.g. stair gates and home safety packs for low income families with young children. However, this is not consistently provided across Kent. Given the high rate of burns admissions and unintentional poisonings among under fives in each CCG area in Kent, safety advice and equipment should be provided in all areas, in line with NICE guidance.

7.3 Unintentional injuries in the workplace

Further detailed analysis using RIDDOR and the Labour Force Survey is needed to identify whether any gaps exist in the provision of injury prevention work in workplaces in Kent, relative to local need.

8. Estimate of impact of prevention activities

In producing public health guidance on injury prevention, NICE carried out a thorough and systematic review of evidence[39]. This report details the strength of evidence to suggest that interventions are likely to be effective, and cost effective. However, it is not possible to extrapolate from these findings what the likely impact would be of implementing any given intervention in Kent, in terms of a reduction in the number of people being injured or killed

A cost benefit analysis of road safety engineering schemes, including 20mph zones, found that these often give first year rates of return of about 100% - i.e. the costs are recovered by the value of saving death and injury in 12 months [40].

A similar high rate of return is also provided by road safety enforcement programmes, including safety cameras. Research using 'before and after' data has shown that these cameras reduce collisions by around 40%. Similar benefits can be attributed to speed management programmes undertaken by local Police Forces [40].

Benefits for education, training and publicity interventions are much more difficult to predict. Changes in road risk are linked to a large number of variables (including traffic flow, speed, vehicle design, population changes, mode of travel changes, etc) and the vast majority cannot be controlled or allowed for.

9. Pathway of major unintentional injuries

This needs assessment covers the prevention of unintentional injuries, and not their treatment. However, for completeness, this section briefly describes how these injuries relate to trauma and neurorehabilitation pathways.

Neurorehabilitation

Neurorehabilitation services in Kent are commissioned by NHS England and may also be commissioned by CCGs. NHS England commissions these services for patients who have highly complex needs and require highly specialised and trained staff. Services are delivered in units which have access to these staff and other supporting services which patients require. Not all neuro-rehabilitation patients have experienced an injury – other patients may have experienced a stroke, or degenerative diseases such as motor-neurone disease, or multiple sclerosis (MS). To date, there has been no local analysis carried out to identify the proportion of patients who require neurorehabilitation as a result of an unintentional injury. This analysis would be useful for demonstrating the impact of accident prevention work.

South East London, Kent and Medway Trauma Network

The South East London, Kent and Medway Trauma Network links a major trauma centre at King's College Hospital, London with trauma units at A&E departments in Kent and Medway. The network aims to provide an effective way of organising the care needs of individuals in need of trauma services. The King's College Hospital site provides a full range of equipment, specialist treatment and the expertise of orthopaedic, neurosurgery and radiology teams 24 hours a day, 7 days a week. The local trauma units are able to stabilise patients prior to rapid transfer to the major trauma centre if necessary, or treat those trauma patients who do not need to transfer. Staff in local units can liaise directly with King's trauma consultants if required, and ambulance and air ambulance staff are also able to work with the trauma network to ensure that patients are taken to the most appropriate site.

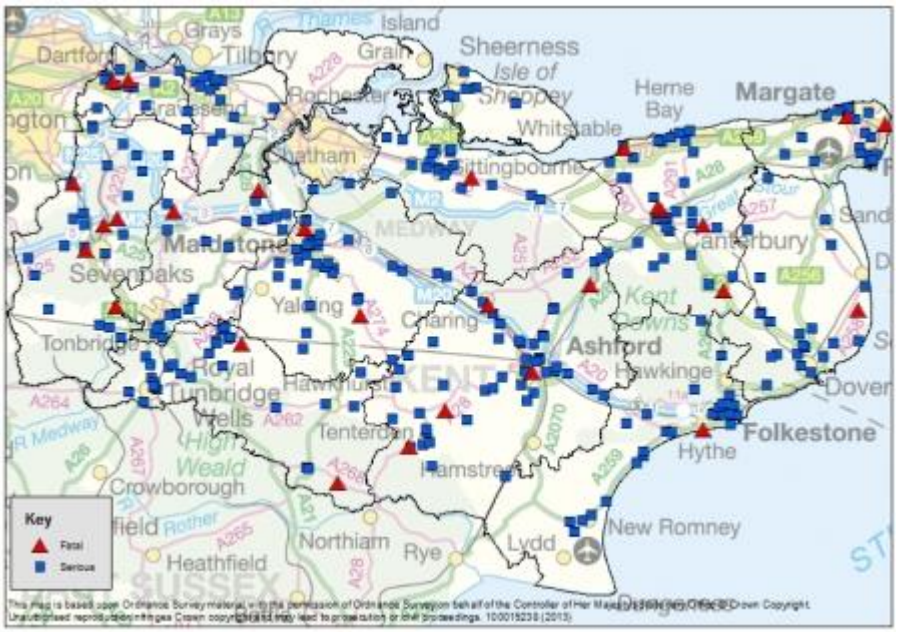
Major traumas are serious injuries. The aim of injury prevention is to reduce the number of injuries, including serious injuries, and ultimately reduce the number of people requiring major trauma services.

Ambulance Services

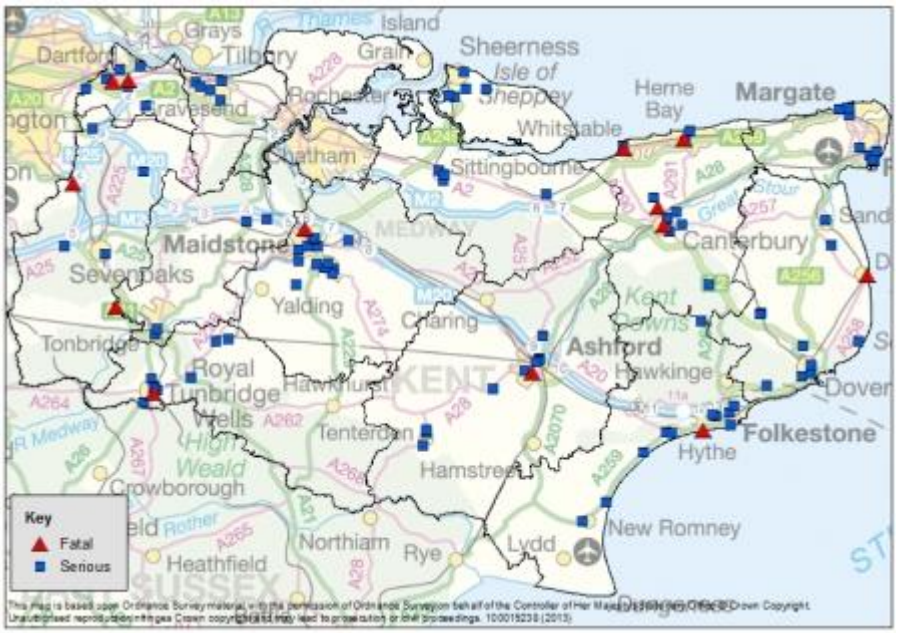
Many serious injuries require ambulance services. Reducing the number of unintentional injuries has the potential to reduce the need for ambulance services. Future research could identify the proportion of ambulance call-outs which are in response to an injury, and therefore the impact of effective injury prevention programmes on ambulance use.

10. APPENDIX 1: Maps

Map 1: Locations of KSI collisions involving cars in Kent, 2012

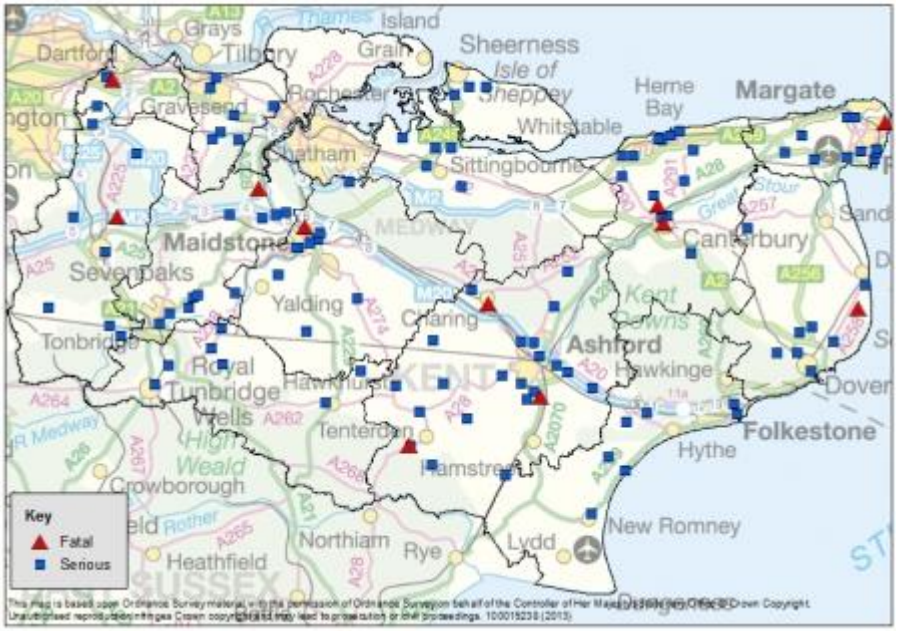


Map 2: Locations of KSI collisions involving pedestrians in Kent, 2012



Map 3: Locations of KSI collisions involving cyclists in Kent, 2012

Map 4: Locations of KSI collisions involving young people aged 17-24 in Kent, 2012



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