

TIIG Lancashire Themed Report

Identifying at-risk groups in Lancashire
April 2012 to March 2015

March 2016

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FOREWORD

In 2012/13, 18.3 million people accessed Emergency Departments (EDs) in England (NHS, 2015), of which approximately 30% were for trauma-related injuries.

In the three year period April 2012 to March 2015, 610,156 Lancashire residents attended Lancashire EDs due to an injury. This report examines these attendances, with a particular focus on attendances due to assaults, self-harm, road traffic accidents and falls. The report examines these attendances by age, gender, geography and social inequality and further develops our understanding of communities most at risk of experiencing these injuries.

The data in this report shows a significant variation in Accident and Emergency Department attendances due to injuries across different population groups in Lancashire. It is important we take time to consider this and work with partners, agencies and communities to ensure injury reduction initiatives are targeted and that when injuries do occur, individuals make the best use of the range of services available to them.



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KEY FINDINGS

- Excluding 79 records where an injury group was not recorded, there were 659,507 injury attendances to Lancashire Emergency Departments (EDs) and 7,603 (by Lancashire residents) to Southport and Formby District Hospital ED between April 2012 and March 2015. There were a total of 667,189 attendances, 610,156 of which were made by residents of Lancashire.
- Of the total ED attendances by Lancashire residents, 8.5% were for falls,¹ 5.7% were sports injuries, 4.2% were road traffic accidents (RTAs), 2.6% were assaults, 0.6% were for deliberate self-harm (DSH) and 78.4% were for other accidents or injuries.
- Between April 2012 and March 2015 Blackpool Unitary Authority (UA) had the highest rate of ED attendances for unintentional injuries (88,600 per 100,000 population over three years) and intentional injuries (assaults and DSH; 2,267 per 100,000 population over three years); West Lancashire Local Authority (LA) had the lowest rate for unintentional injuries (11,706 per 100,000 population over three years) and Rossendale LA had the lowest rate for intentional injuries (612 per 100,000 population over three years).
- In terms of patient referral to an ED, 41.5% of all attendances were self-referred, while 18.3% were referred by the emergency services. Of patients with known referral sources, attendances for DSH had the highest percentage of referral through the emergency services (42.7%).
- In terms of arrival mode, 41.6% of patients arrived at EDs by private transport and 18.7% arrived by ambulance; 26.9% of patient arrival modes were unknown. Where arrival mode was known, assaults and DSH had the highest proportion of arrivals by ambulance, 32.8% and 52.6% respectively.
- In terms of disposal method, 50.8% of all patients were discharged with no follow-up treatment required, 28.9% were referred for follow-up treatment and 13.5% were admitted into hospital.
- Rate of attendance per 100,000 population for assaults, DSH, falls and to a lesser degree RTAs, were all found to increase with increasing levels of deprivation. The causality of this relationship is likely to be complex but the association is useful to consider when informing and commissioning preventative interventions.
- In terms of habitation type, areas classed as 'urban city and town' were found to be associated with higher rates of assaults and RTAs but areas classed as 'urban major conurbation' were found to be associated with the highest rate of DSH.
- In terms of North West Ambulance Service (NWAS) data, between April 2012 and March 2015 there were a total of 633,357 ambulance call outs in Lancashire, of which 143,374 were for trauma-related injuries. For comparable injury groups, including assaults, DSH, RTAs and falls, NWAS data reflected similar trends to ED data over this three year period.

ASSAULTS

- Males aged 15 to 59 years were identified as being at higher risk of presenting to an ED for an assault compared to other age and gender groups; males aged 15 to 29 years comprised 38.9% of all assaults, while males aged 30 to 59 years comprised 27.3%.

¹ Falls were only categorised at Lancashire Teaching Hospitals Trust (Royal Preston Hospital and Chorley and South Ribble Hospital EDs).

- The rate of assault-related ED attendances for males aged 15 to 29 years over this three year period was 4,356 per 100,000 population, the rate for males aged 30 to 59 years was 1,512 per 100,000 population, while the rate for other age and gender groups combined was 51 per 100,000 population.
- Males in higher risk groups, especially those aged 15 to 29 years, were found to be more likely to attend an ED at weekends and during night-time hours; males from higher risk groups were also more likely to be admitted to hospital following an assault, compared to other groups combined, which may indicate an increased severity of injuries sustained.

DELIBERATE SELF-HARM

- Females aged 15 to 59 years were identified as being at higher risk of presenting to an ED for DSH compared to other age and gender groups; females aged 15 to 29 years accounted for 29.7% of DSH attendances and those aged 30 to 59 years accounted for 24.7%.
- The rates of DSH ED attendances per 100,000 population for females aged 15 to 29 and 30 to 59 years were 769 and 316 respectively, compared to 158 for all other age and gender groups combined.
- Like young males in terms of assault, females aged 15 to 29 years attending an ED following an incident of DSH were more likely to present at the weekend and during night-time hours. Young females were less likely than other age and gender groups to be referred to an ED by the emergency services; they were also less likely to arrive at the ED by ambulance. Older females aged 30 to 59 years were more likely than young females and other age and gender groups to be admitted to hospital after presenting to an ED following an incident of DSH.

ROAD TRAFFIC ACCIDENTS

- Males aged 15 to 59 years were identified as being at higher risk of presenting to an ED for RTAs compared to other age and gender groups; males aged 15 to 29 years comprised 21.5% of all RTAs, while males aged 30 to 59 years comprised 24.2%.
- The rate of RTA attendances for males aged 15 to 29 years over this three year period was 3,959 per 100,000 population, the rate for males aged 30 to 59 years was 2,199 per 100,000 population, while the rate for other age and gender groups combined was 1,340 per 100,000 population.
- Males aged 15 to 29 and 30 to 59 years were more likely to be referred for follow-up treatment than other age and gender groups combined and less likely to be discharged with no follow-up treatment; this may indicate that more severe injuries were sustained and that accidents were more serious among the higher risk groups compared to other age and gender groups.

FALLS

- Falls were only recorded at Royal Preston Hospital and Chorley and South Ribble Hospital EDs; findings presented here are limited to those EDs and Preston and Chorley LAs.
- People aged 60 years and over in Preston and Chorley accounted for 35.9% of falls while comprising only 21.4% of the population; females comprised 65.7% of falls among people aged 60 years and over.

- For Preston and Chorley combined, the rate of falls among people aged 60 years and over was 21.2 per 100 population compared to 10.9 per 100 population for other age groups.
- Older people were much more likely than other age groups to be admitted to hospital following a fall, which is likely to indicate that the injuries sustained by older people following a fall were more serious.

INTRODUCTION

In 2012/13, 18.3 million people accessed Emergency Departments (EDs) in England (NHS, 2015), of which approximately 30% were for trauma-related injuries, whether intentional or unintentional. Intentional injuries, sustained from assaults and self-harm, and unintentional injuries, including those sustained from accidents, falls and road traffic accidents (RTAs), are the leading cause of death among people aged between 5 and 44 years in the UK (Parekh, Mitis and Sethi, 2015). In terms of intentional injuries, those suffered through violence affect an estimated 2.5 million people annually in England and Wales (Bellis et al., 2012), while hospital admissions for deliberate self-harm (DSH) has increased in the UK, by as much as 20% per year for some age and gender groups (PHE, 2014). RTAs, followed by falls, are the primary causes of unintentional death and injury globally (World Health Organisation, 2012), and unintentional injuries are a prominent cause of death and ill health for people aged less than 40 years in the UK (Alexandrescu, O'Brien and Lecky, 2009). EDs are at the heart of emergency care systems and can play a key role reducing injuries through various means, including accurate and comprehensive data sharing. While injury attendances to EDs place a burden on health services and social resources, EDs can play a leading role in guiding and informing targeted prevention strategies.

The risk of suffering intentional and unintentional injuries is not equal among various sociodemographic groups; social inequality, the built environment, the prevalence of alcohol and drug abuse, and the absence of community support services can increase the risk of incidents occurring and the seriousness of resulting injuries (Cohen et al., 2003). Age and gender are also key risk factors in the prevalence of injuries; for example RTAs are the leading cause of death amongst children and adolescents globally (World Health Organisation, 2014), while falls are the leading cause of death among people aged 65 years and over (World Health Organisation, 2012). RTAs and fall fatalities are more frequent in males up to the age of 65 years, while females in the same age group are more likely to experience non-fatal injuries from incidents (World Health Organisation, 2012).

ASSAULTS

A key focus of ED data sharing is to reduce violence; high quality information from hospitals can be used by Community Safety Partnerships (CSPs) to tackle violence through local interventions such as targeted policing or licensing restrictions for licensed premises with high rates of assault (DoH, 2012). According to the former British Crime Survey, levels of violence are decreasing but estimates suggest that there were over 2 million incidents of violence in England and Wales in 2009/10 (BCS, 2011). The risk of being a victim of violent crime in 2009/10 was 3.0%; men were found to be more than twice as likely as women to experience violence (4.2% compared with 1.8%) and the risk was highest for men aged 16 to 24 years (13.3%; BCS, 2011). More than half of all incidents of violence result in injuries (BCS, 2011) which may require emergency care.

DELIBERATE SELF-HARM

In recent years there has been an increase in the prevalence of DSH among certain age groups, particularly young people. Between 2011/12 and 2013/14 the number of hospital admissions for DSH increased by 71% from 3,850 to 6,581 for those aged between 10 and 14 years of age. The number of admissions made by those aged between 15 and 19 years also increased by 23% from 16,055 to 19,704 (HSCIC, 2014). When compared to the average in England of 412.1 per 100,000 population, Lancashire overall had a significantly higher prevalence of DSH (524.3 per 100,000 population) in 2013/14, for people aged 10 to 24 years. Blackpool Unitary Authority had the highest rate of DSH for all reported Local Authorities in England (1,246.6 per 100,000 population), which was more than double the average for Lancashire (PHE, 2015). DSH and risk of suicide are complex issues;

there are various age and gender differences between DSH behaviours (Rodham, Hawton and Evans, 2004), risk of repeated behaviour and motivations for DSH (Zahl and Hawton, 2004). ED data use DSH as an umbrella category for various injuries, such as self-poisoning and self-cutting. Likewise North West Ambulance Service (NWAS) data use psychiatric/suicide attempt and overdose/poisoning to incorporate a variety of injury types and behaviours. In each case data are interpreted with caution and are used only as broad measures of trends in given areas.

ROAD TRAFFIC ACCIDENTS

The World Health Organization predicts that, without action, RTAs will rise to become the seventh leading cause of death by the year 2030 (WHO, 2015). While approximately 90% of deaths on the road occur in low and middle income countries (WHO, 2015), police in Great Britain recorded 1,658 independent fatal road accidents in 2014 (Department for Transport, 2015). Of all RTAs worldwide, 73% of deaths occur among men and, from a young age, males are more likely to be involved in road traffic crashes than females; young males under the age of 25 years are almost three times as likely to be killed in a car crash as young females (WHO, 2015). In the UK, young drivers aged 17 to 24 years are at much higher risk of crashing than older drivers; people aged 17 to 19 years comprised 1.5% of UK license holders and yet account for 12% of fatal and serious crashes (Transport Research Laboratory, 2014). Data on British drivers show that young male drivers are involved in many more crashes than young female drivers (Department for Transport, 2014). RTAs are decreasing in Great Britain; there were 1,713 road deaths in 2013, the lowest figures since records began (Department for Transport, 2014). However RTAs are entirely preventable and ED data can play an important role in improving road safety with targeted policing and preventative safety measures.

FALLS

Falls comprise the majority of injuries among older people (DoH, 2001), can cause bone fractures and head traumas and can increase the risk of early death (NCIPC, 2014). Every five hours in England an older person dies as a result of a fall and fall-related injuries are the leading cause of death among older people (DoH, 2009). In a Local Authority (LA) with a population of just over 100,000, there will be approximately 5,600 falls among older people each year; approximately 800 of those will attend an ED² and 400 will sustain a fracture, of which just under one third will be a fracture of the hip (DoH, 2009). Falls can precipitate admission to long-term care and people aged 65 years and over spend four million days in hospital each year as a result of falls and fractures (Royal College of Physicians, 2011). Falls can also result in hypothermia, pressure-related injuries and infection (DoH, 2001). The consequences of falls are not just physical; the fear of subsequent falls can severely limit daily activities, and patients may also experience social isolation³ and depression due to loss of mobility and independence (DoH, 2001). In terms of the economic costs, falls alone cost the National Health Service (NHS) in England £1.8 billion a year and the direct cost of a hip fracture is estimated to be £10,000 before the cost of social care (DoH, 2009). Effective falls prevention services could facilitate direct savings to LAs with a population of around 100,000 of just under £90,000 over five years.

² A similar number will call out an ambulance.

³ Three and a half million people aged 65 years or over live alone in England and Wales (ONS, 2014).

THIS REPORT

This Trauma and Injury Intelligence Group (TIIG) Themed Report presents all injury ED recorded data for Lancashire residents between April 2012 and March 2015. A particular focus of this report is given to demographic groups at elevated risk of suffering particular injuries, such as: young males and assaults; young females and DSH; young males and RTAs, and older people and falls. This report contextualises and provides further analysis of ED data by: calculating rates for geographic areas using population estimates, offsetting such rates against deprivation scores, and by considering the difference between various habitation types. This report also provides detailed recommendations for local government and commissioners in terms of the efficient use of resources, and to health and social care providers in terms of delivering improved outcomes, with the overarching aim of preventing intentional and unintentional injuries for the populations of Lancashire.

AREA DESCRIPTION

Situated in the North West of England, Lancashire is made up of 14 LAs and its total population, according to mid-2013 population estimates was 1.47 million people (ONS, 2013). Table 1 displays Lancashire resident population estimates (ONS, mid-2013) by age group, As shown, Lancashire had a slightly lower proportion of young children (age 0-4 years) and people aged 15 to 29 years but a slightly higher proportion of people aged 60 years and over compared to the North West and England as a whole.

Table 1. Lancashire resident population estimates by age compared to North West England and UK⁴

	0-4		5-14		15-29		30-59		60+	
	N	%	N	%	N	%	N	%	N	%
Lancashire	88811	6.0	168479	11.5	280540	19.1	568356	38.7	362659	24.7
North West	440266	6.2	810475	11.4	1400436	19.7	2795625	39.4	1656458	23.3
UK	3592907	6.3	6504280	11.4	11142562	19.6	22672829	39.8	13035651	22.9

Table 2 shows the population of Lancashire LAs, the percentage compositions in terms of urban and rural densities and the number of lower super output areas (LSOAs) within each LA. Blackburn with Darwen has the largest population (147,369), followed by Blackpool (141,400), Lancaster (140,575) and Preston (140,418). The majority of LAs were comprised mostly of urban city and town areas, except Ribble Valley and West Lancashire which were comprised mostly of rural town and fringe areas and urban major conurbations respectively.

Table 2. Percentage of LSOA habitation types within Local Authorities

Local Authority	Population estimates	Rural town and fringe %	Rural village and dispersed %	Urban city and town %	Urban major conurbation %	LSOAs N
Blackburn with Darwen	147,369	2.2	2.2	95.6	0.0	91
Blackpool	141,400	0.0	0.0	100	0.0	94
Burnley	86,894	1.7	1.7	96.7	0	60
Chorley	110,505	19.7	10.6	69.7	0.0	66
Fylde	76,442	13.7	3.9	82.4	0.0	51
Hyndburn	80,046	9.6	0.0	90.4	0.0	52
Lancaster	140,575	18.0	9.0	73.0	0.0	89
Pendle	90,131	8.8	3.5	87.7	0.0	57
Preston	140,418	1.2	4.7	94.2	0.0	86
Ribble Valley	57,858	37.5	27.5	35.0	0.0	40
Rossendale	68,744	2.3	0.0	95.3	2.3	43
South Ribble	108,913	0.0	1.4	98.6	0.0	70
West Lancashire	111,314	21.9	15.1	24.7	38.4	73
Wyre	108,236	17.4	8.7	73.9	0.0	69
Local Authorities combined	1,468,845	10.0	5.8	81.1	3.1	941

⁴ Throughout this report, percentages may not add up to 100 due to rounding.

DEPRIVATION IN LANCASHIRE

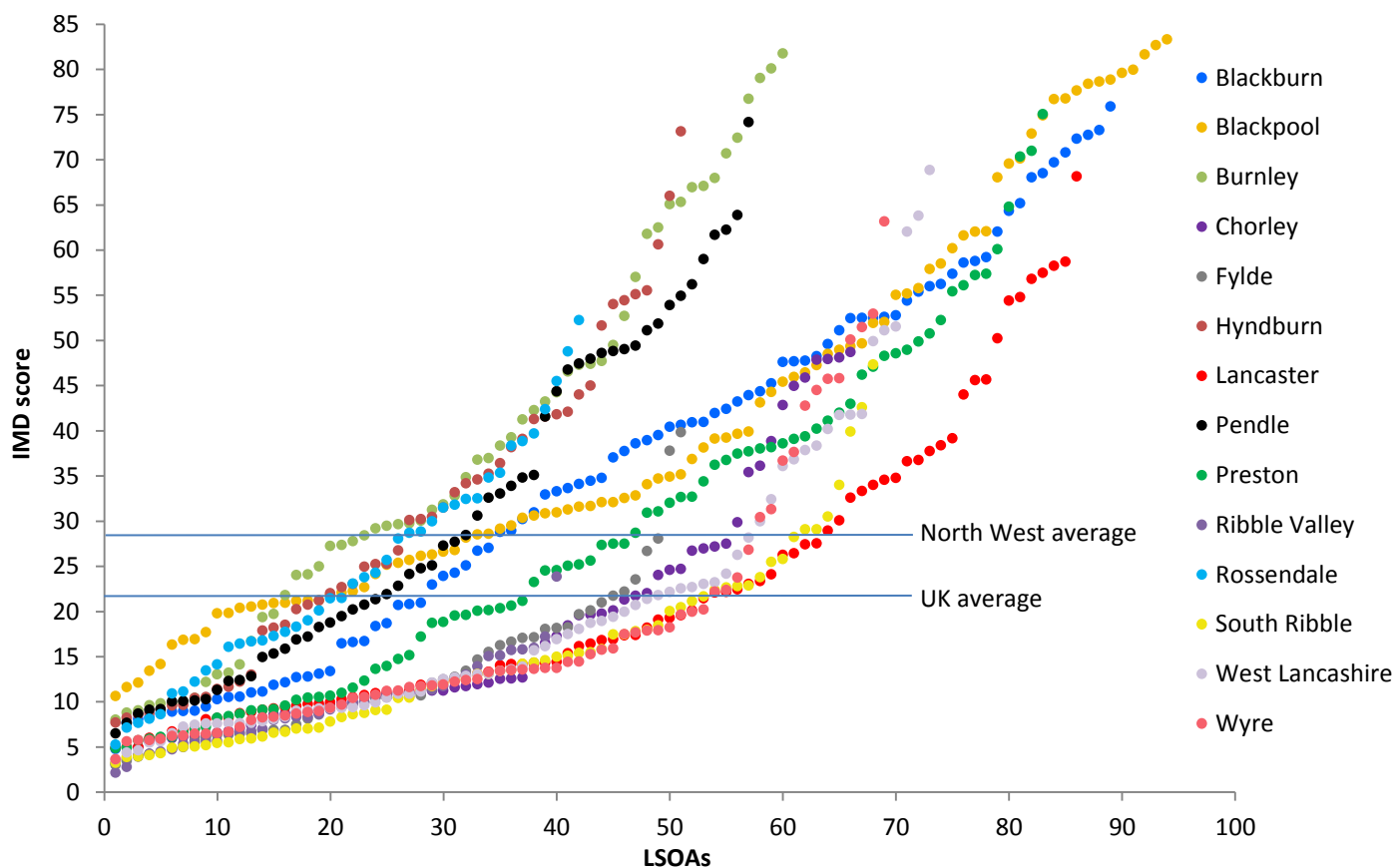
Using the Indices of Multiple Deprivation (IMD 2010), six Lancashire LAs were ranked in the most deprived quintile, which were (in order of most deprived): Blackpool, Burnley, Blackburn, Hyndburn, Pendle and Preston. Rossendale is ranked in the second-most deprived quintile, while Lancaster, West Lancashire, Chorley and Wyre were ranked in the third most deprived quintile. Ribble Valley was ranked in the least deprived quintile, followed by South Ribble and Fylde which were ranked in the second-least deprived quintile.

Table 3. Deprivation score ranges and means for Local Authorities in Lancashire where higher scores indicate increasing levels of deprivation

Local Authority	Population estimates	IMD score range	IMD score average	LSOAs
Blackburn with Darwen	147,369	4.8 - 75.9	36.1	91
Blackpool	141,400	10.6 - 83.3	40.7	94
Burnley	86,894	8.0 - 81.8	37.6	60
Chorley	110,505	3.2 - 48.7	18.0	66
Fylde	76,442	3.0 - 39.8	13.0	51
Hyndburn	80,046	7.7 - 73.1	29.7	52
Lancaster	140,575	4.9 - 68.2	22.0	89
Pendle	90,131	6.5 - 74.1	30.6	57
Preston	140,418	4.9 - 75.0	27.3	86
Ribble Valley	57,858	2.2 - 23.9	9.6	40
Rossendale	68,744	5.3 - 52.2	24.2	43
South Ribble	108,913	3.2 - 47.3	15.1	70
West Lancashire	111,314	3.6 - 68.9	20.3	73
Wyre	108,236	3.6 - 63.1	17.9	69
Local Authorities combined	1,468,845	2.2 - 83.8	25.6	941

Within Lancashire there is substantial variation in terms of deprivation; Blackpool UA has the third and fifth most deprived LSOAs in the UK while Ribble Valley has an LSOA which is ranked 32,263 out of 32,468 LSOAs in England. Figure 1 displays scores for each LSOA within Local Authorities, with North West and UK averages depicted.

Figure 1. Deprivation scores for each LSOA within Local Authorities, with North West and UK average



ACCIDENT AND EMERGENCY DEPARTMENT DATA

EMERGENCY DEPARTMENTS IN LANCASHIRE

Lancashire has six EDs that primarily serve residents of Lancashire (table 4). These are Royal Blackburn Hospital (which includes Burnley General Hospital Urgent Care Centre data), Blackpool Victoria Hospital, Chorley and South Ribble Hospital, Royal Preston Hospital, Ormskirk and District General Hospital and Royal Lancaster Infirmary. Lancashire residents who attended Southport and Formby District General Hospital ED in Merseyside are also included.

Table 4. Lancashire Emergency Departments and Urgent Care Centres

NHS trust	Hospital	ED/UCC [†]
East Lancashire Hospitals NHS Trust	Royal Blackburn Hospital	ED
	Burnley General Hospital	UCC
Blackpool Teaching Hospitals NHS Foundation Trust	Blackpool Victoria Hospital	ED
Lancashire Teaching Hospitals NHS Foundation Trust	Chorley and South Ribble Hospital	ED
	Royal Preston Hospital	ED
Southport and Ormskirk Hospitals NHS Trust	Ormskirk and District General Hospital	ED
	Southport and Formby District General Hospital*	ED
University Hospitals of Morecambe Bay NHS Foundation Trust	Royal Lancaster Infirmary	ED

* Data in this report from this hospital are for Lancashire residents only.

† ED = Emergency Department; UCC = Urgent Care Centre. For the purpose of this report, 'EDs' refer to all the hospitals, whether ED and/or UCC services are provided.

DATA ITEMS

Table 5 displays injury groups collected by each ED. Assaults, DSH, other injuries, RTAs and sports injuries are categorised by all EDs, while falls are only categorised by Lancashire Teaching Hospitals NHS Foundation Trust (Royal Preston Hospital and Chorley and South Ribble Hospital).

Table 5. Lancashire ED injury group data items, April 2012 to March 2015

ED	Assault	Deliberate self-harm	Falls	Firework injuries	Other injury	Road traffic accidents	Sports injuries
Blackpool Victoria Hospital	Y	Y	-	Y	Y	Y	Y
Chorley and South Ribble Hospital	Y	Y	Y	Y	Y	Y	Y
Ormskirk and District General Hospital	Y	Y	-	Y	Y	Y	Y
Royal Blackburn Hospital	Y	Y	-	Y	Y	Y	Y
Royal Lancaster Infirmary	Y	Y	-	Y	Y	Y	Y
Royal Preston Hospital	Y	Y	Y	Y	Y	Y	Y
Southport and Formby District	Y	Y	-	Y	Y	Y	Y

EDs across Lancashire differ in the level of injury-related data they collect; while some collect the College of Emergency Medicine (CEM) recommended assault-related data items (Information Sharing to Tackle Violence [ISTV] mandated data items as of April 2015) others also collect assault-related data items recommended by TIIG (table 6).

Table 6. Lancashire ED assault related data items, April 2012 to March 2015⁵

ED	CEM/ISTV recommended questions						TIIG recommended questions			
	Assault date	Assault time	Assault location	Location details	Assault weapon	Weapon details	Alcohol consumed	Location last drink	Location details	Reported to Police
Blackpool Victoria Hospital	Y	Y	Y	Y	Y	-	-	-	-	-
Chorley and South Ribble Hospital	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ormskirk and District General Hospital	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Royal Blackburn Hospital	Y	Y	Y	Y	Y	Y	-	-	-	-
Royal Lancaster Infirmary	Y	Y	Y	Y	Y	Y	-	-	-	-
Royal Preston Hospital	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Southport and Formby District Hospital	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

⁵ Southport and Ormskirk Hospitals NHS Trust also collects the number of attackers, the gender of attacker/s and the relation to the attacker/s.

DATA OVERVIEW

Table 7 displays all attendance data (including non-Lancashire residents) by injury group and ED; the vast majority of attendances for all EDs was for other injuries (incorporating all unintentional injuries, except those specifically categorised), followed by sports injuries, RTAs, assaults and DSH. Falls comprised a large proportion of attendances at Lancashire Teaching Hospitals (29.8% at Chorley and 41.1% at Preston); based on these numbers it can be estimated that falls comprise between one third and one half of 'other injuries' at EDs which do not separately categorise falls.

Table 7. Injury groups by ED, April 2012 to March 2015^{6, 7}

ED	Assault	Deliberate self-harm	Falls	Firework injuries	Other injury	RTAs	Sports injuries	Total
Blackpool Victoria Hospital	3937	1028	-	57	234263	3412	5291	247988
Chorley and South Ribble Hospital	1644	137	20469	13	36118	4125	6174	68680
Ormskirk and District General Hospital	165	<110	-	***	11074	590	3381	15319
Royal Blackburn Hospital	5941	822	-	15	173184	9243	9464	198669
Royal Lancaster Infirmary	1055	<510	-	***	34288	3275	5709	44833
Royal Preston Hospital	3950	657	34497	15	28808	7417	8674	84018
Southport and Formby District Hospital	442	732	-	-	5203	711	515	7603
Total	17134	3987	54966	104	522938	28773	39208	667110

Table 8 displays injury groups by financial year and shows that all injury groups have decreased by varying degrees between April 2012 and March 2015, except sports injuries, which have increased by 4.2%. Assaults were found to have decreased the most, 19.4% over this three year period.

Table 8. Injury groups by year, April 2012 to March 2015²

Patient group	2012/13	2013/14	2014/15	Change 2012/13 to 2014/15	Total
Assault	6308	5740	5086	-19.4%	17134
Deliberate self-harm	1422	1270	1295	-8.9%	3987
Falls	18929	18251	17786	-6.0%	54966
Firework injuries	38	31	35	-7.9%	104
Other injury	176681	173370	172887	-2.1%	522938
Road traffic accidents	9726	9331	9716	-0.1%	28773
Sports injuries	12769	13137	13302	+4.2%	39208
Total	225873	221130	220107	-2.6%	667110

⁶ There were 79 records from Blackpool Victoria Hospital (19) and Royal Blackburn Hospital (60) from 2012/13 which did not have a patient group recorded; these have been omitted from this table and subsequent analyses.

⁷ For all tables, numbers less than five have been suppressed (***) in line with patient confidentiality. If there is only one number less than five in a category, a second number is suppressed to prevent back calculations from totals.

DEMOGRAPHICS

Of the total 667,189 ED attendances, 610,156 were made by residents of Lancashire; attendances by non-Lancashire residents will be excluded from the remainder of the report. Figure 2 displays the total injury attendances for all injury groups combined for Lancashire residents with LA boundaries.

Figure 2. Number of attendances for Lancashire residents for all injuries combined, April 2012 to March 2015

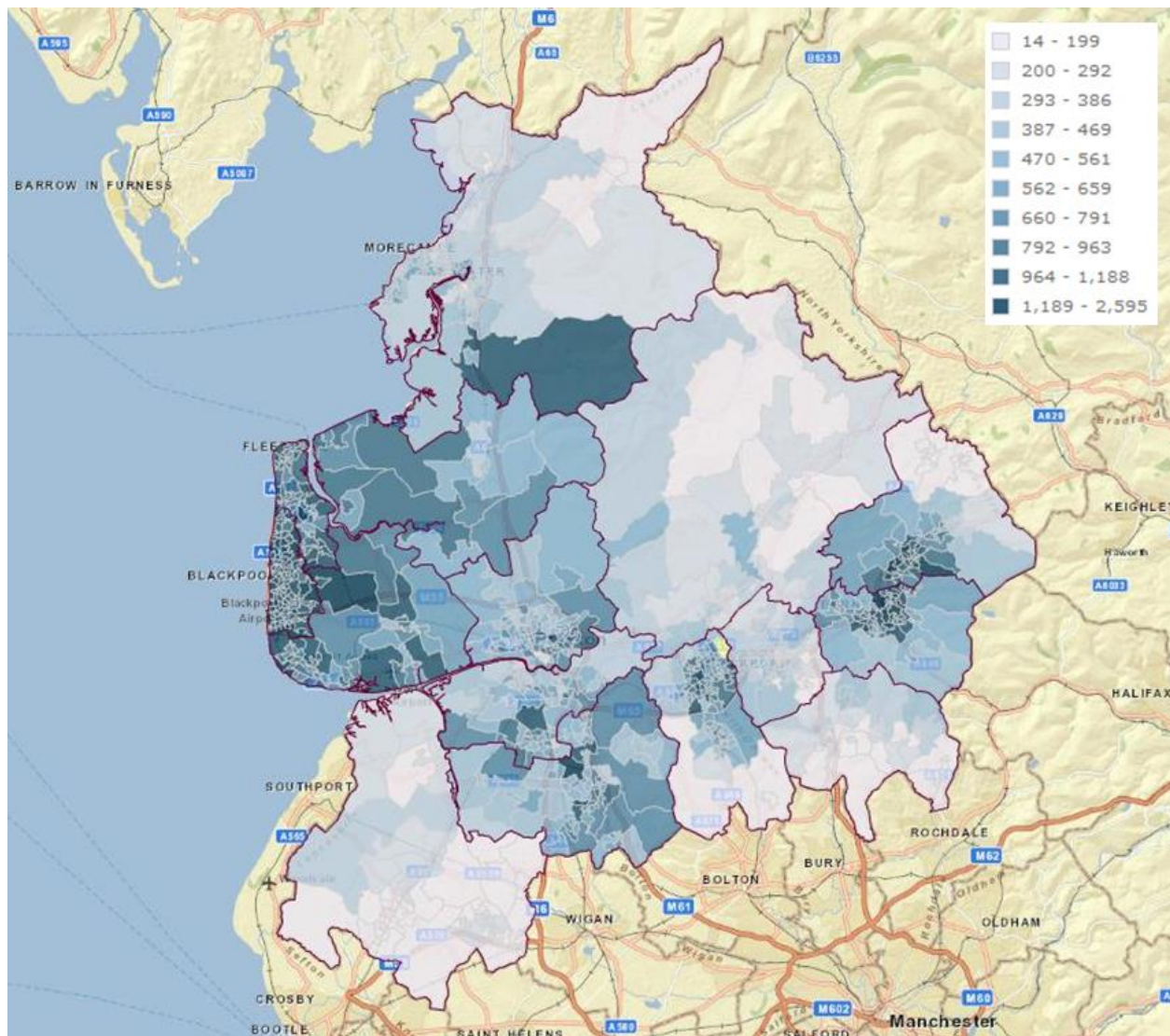


Table 9 shows the number of ED attendances for each injury group by age and gender, while table 10 shows percentage breakdowns for injury group by age and gender; for each injury group the largest two proportions are highlighted. For assaults, males aged 15 to 59 years comprise 66.2% of all assaults (38.9% were males aged 15 to 29 years and 27.3% were males aged 30 to 59 years); for DSH females aged 15 to 59 years comprise 54.5% of all incidents of DSH (29.7% were females aged 15 to 29 years and 24.7% were females aged 30 to 59 years); for falls, people aged 60 years and over comprise 35.9% of all falls (23.6% were females and 12.3% were males); and for RTAs males aged 15 to 59 years comprise 45.8% of all RTAs (21.5% were males aged 15 to 29 years and 24.2% were males aged 30 to 59 years).

Table 9. Injury groups by age and gender, April 2012 to March 2015⁸

Patient group	0-4		5-14		15-29		30-59		60+		Total	
	M	F	M	F	M	F	M	F	M	F	n	%
Assault	15	15	592	228	6110	2249	4296	1831	249	127	15712	2.6
Deliberate self-harm	5	5	32	132	626	1078	715	897	<80	<60	3625	0.6
Falls	3474	2621	4246	3506	3113	3635	5256	7319	6376	12207	51753	8.5
Firework injuries	0	0	14	6	31	11	23	10	***	***	100	0.0
Other injury	23028	17924	31162	26055	54195	51893	82454	73814	52129	65775	478429	78.4
Road traffic accidents	453	439	1012	892	5553	4461	6249	4631	1143	957	25790	4.2
Sports injuries	74	49	7560	2988	14258	2604	5317	1352	229	175	34606	5.7
Total	27049	21053	44618	33807	83886	65931	104310	89854	60206	79301	610015	100

Table 10. Injury group percentages by age and gender, April 2012 to March 2015

Patient group	0-4		5-14		15-29		30-59		60+		Total
	M	F	M	F	M	F	M	F	M	F	
Assault	0.1	0.1	3.8	1.5	38.9	14.3	27.3	11.7	1.6	0.8	100
Deliberate self-harm	0.1	0.1	0.9	3.6	17.3	29.7	19.7	24.7	2.1	1.6	100
Falls	6.7	5.1	8.2	6.8	6.0	7.0	10.2	14.1	12.3	23.6	100
Firework injuries	0.0	0.0	14.0	6.0	31.0	11.0	23.0	10.0	3.0	2.0	100
Other injury	4.8	3.7	6.5	5.4	11.3	10.8	17.2	15.4	10.9	13.7	100
Road traffic accidents	1.8	1.7	3.9	3.5	21.5	17.3	24.2	18.0	4.4	3.7	100
Sports injuries	0.2	0.1	21.8	8.6	41.2	7.5	15.4	3.9	0.7	0.5	100

Table 11 displays ethnicity by injury group attendances; where ethnicity was recorded, the vast majority of attendances were by people of white ethnicity. Ethnicity is not recorded by Royal Blackburn Hospital and Southport and Ormskirk Hospital Trust; where it was recorded, ethnicity was not stated or not recorded in 33.4% of records.

Table 11. Injury group attendances by ethnicity, April 2012 to March 2015⁹

Ethnic group	Assault	Deliberate self-harm	Falls	Firework injuries	Other injury	Road traffic accidents	Sports injuries	Total
White	5705	1390	34619	33	193840	9739	15088	260414
Asian	168	<15	1666	***	2494	673	790	5806
Black	<45	***	143	0	421	76	106	790
Chinese	8	0	50	0	239	13	42	352
Mixed	83	9	313	0	942	128	234	1709
Other	<50	***	191	0	345	80	96	759
Not stated	9666	<2215	14779	<65	280198	15083	18254	340252
Total	15715	3625	51761	100	478479	25792	34610	610082

⁸ There were 141 records where age, gender or patient group were unknown; these have been omitted from this table.

⁹ Of Lancashire residents, there were 74 records where injury group was unknown; these have been omitted from the table.

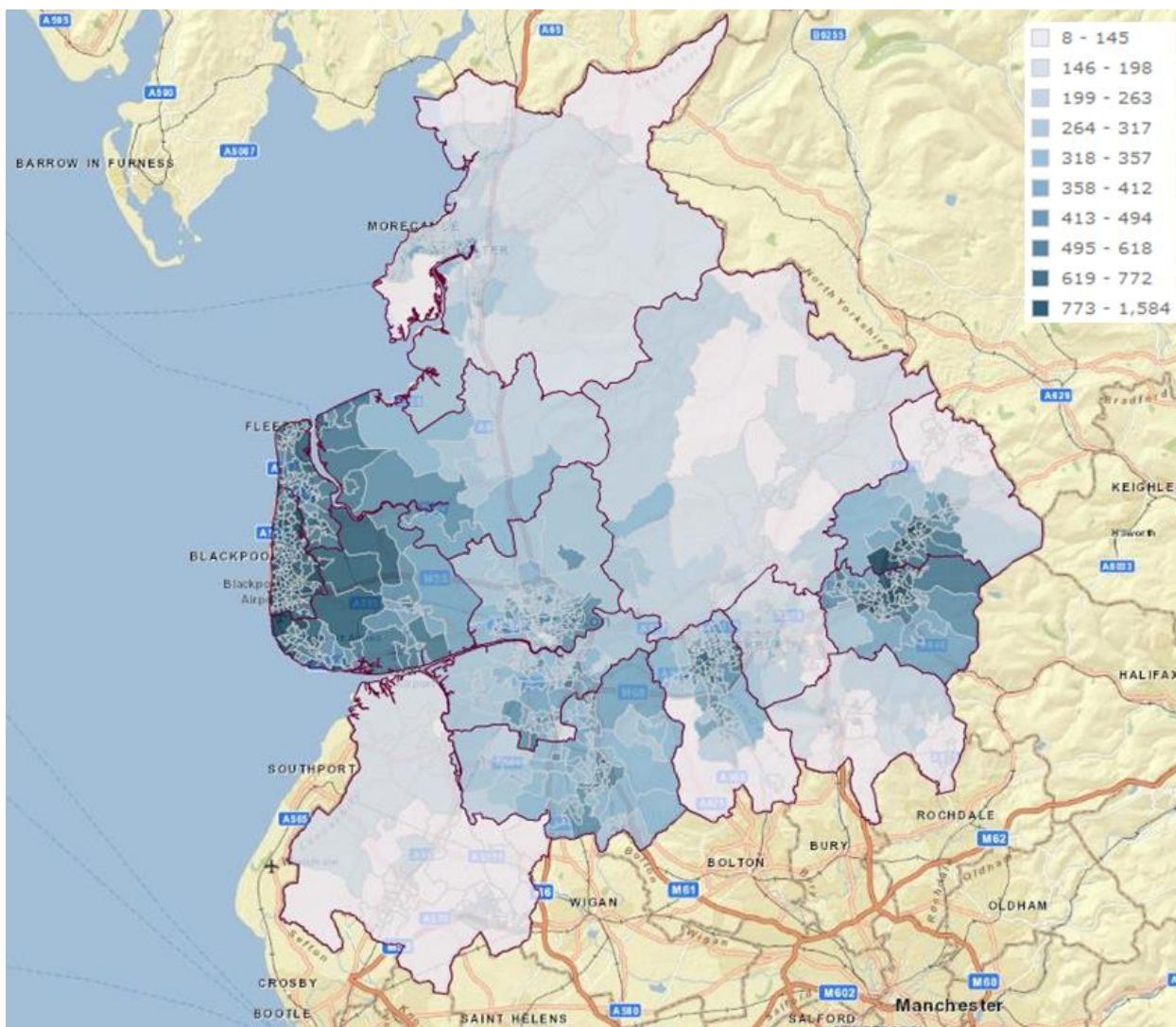
Table 12 shows unintentional and intentional injury rates per 100,000 population by Local Authority. Blackpool had the highest number and rate of unintentional injuries (125,280 attendances and 88,600 per 100,000 population), while Rossendale had the lowest number (10,164 attendances) and West Lancashire had the lowest rate (11,706 per 100,000 population). In terms of intentional injuries, Blackpool UA had the highest number and rate (3,205 attendances and 2,267 per 100,000 population), while Ribble Valley had the lowest number (369 attendances) and Rossendale had the lowest rate (612 per 100,000 population).

Table 12. Unintentional and intentional injury rates per 100,000 population by Local Authority, April 2012 to March 2015⁵

Local Authority	Population	Unintentional injury attendances	Unintentional injury rate	Intentional injury attendances	Intentional injury rate
Blackburn with Darwen	147369	57226	38832	2378	1614
Blackpool	141400	125280	88600	3205	2267
Burnley	86894	52692	60639	1513	1741
Chorley	110505	40418	36576	1294	1171
Fylde	76442	42619	55753	576	754
Hyndburn	80046	16147	20172	1049	1310
Lancaster	140575	34159	24299	1248	888
Pendle	90131	42298	46929	1010	1121
Preston	140418	48235	34351	3027	2156
Ribble Valley	57858	11236	19420	369	638
Rossendale	68744	10164	14785	421	612
South Ribble	108913	37520	34450	1148	1054
West Lancashire	111314	13030	11706	1259	1131
Wyre	108236	59718	55174	843	779
Lancashire	1468845	590742	40218	19340	1317

Figure 3 shows the rate of ED attendances per 1,000 population for Lancashire residents for all injuries combined. The most concentrated areas of all injury attendances are clustered around Blackpool UA and Burnley LA.

Figure 3. Rate of ED attendances per 1,000 population for Lancashire residents for all injuries combined, April 2012 to March 2015



REFERRAL, ARRIVAL AND DISPOSAL

Figures 4 to 6 show selected referral sources, modes of arrival and disposal methods for selected injury groups.¹⁰ Data were selected to highlight key differences between particular injury groups and to inform community partners in commissioning or improving targeted interventions. Figure 4 displays the percent referred by emergency services or self-referral for selected injury groups. RTA attendees had the lowest proportion referred by the emergency services (11.1%) while DSH had the highest proportion (29.2%).

¹⁰ See Appendices 1-3 for full data tables.

Figure 4. Referral by emergency services vs self-referral for assaults, DSH, other injuries and RTAs, April 2012 to March 2015¹¹

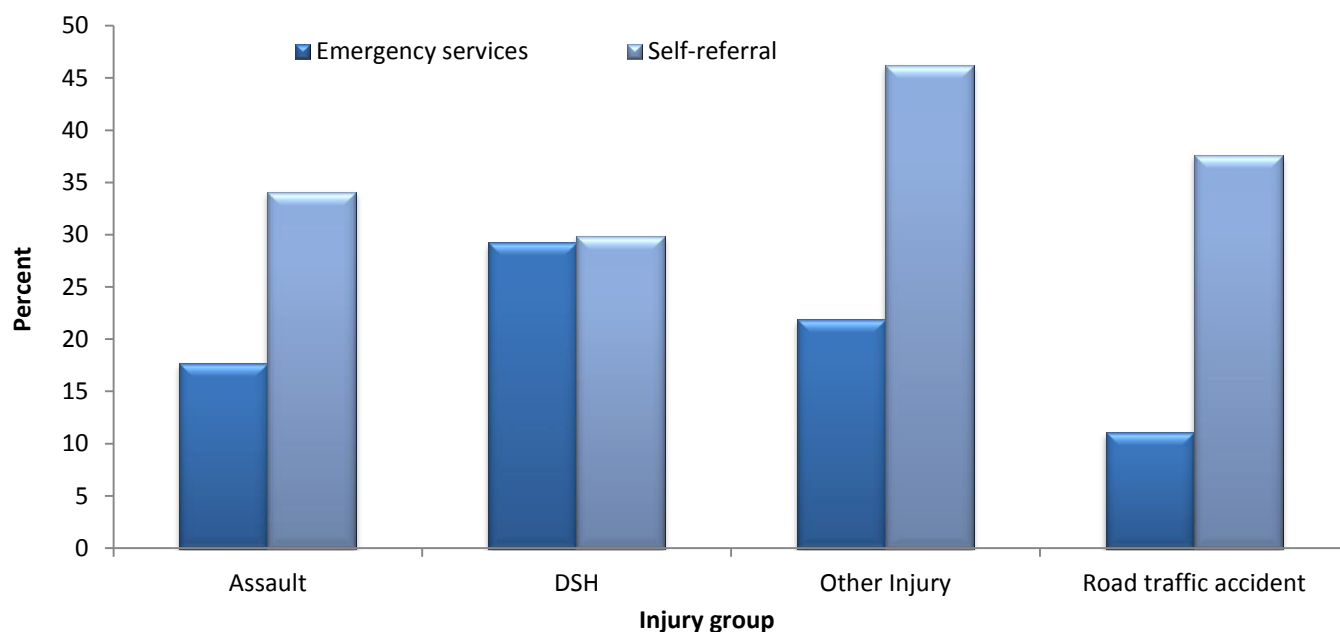


Figure 5 displays arrival mode by ambulance or private transport for selected injury groups. Substantially higher proportions of assaults and DSH attendees arrived at the ED by ambulance (22.6% and 37.0% respectively) compared to other injuries and RTAs (19.4% and 18.5% respectively).

Figure 5. Arrival mode by ambulance vs private transport for assaults, DSH, other injuries and RTAs, April 2012 to March 2015¹¹

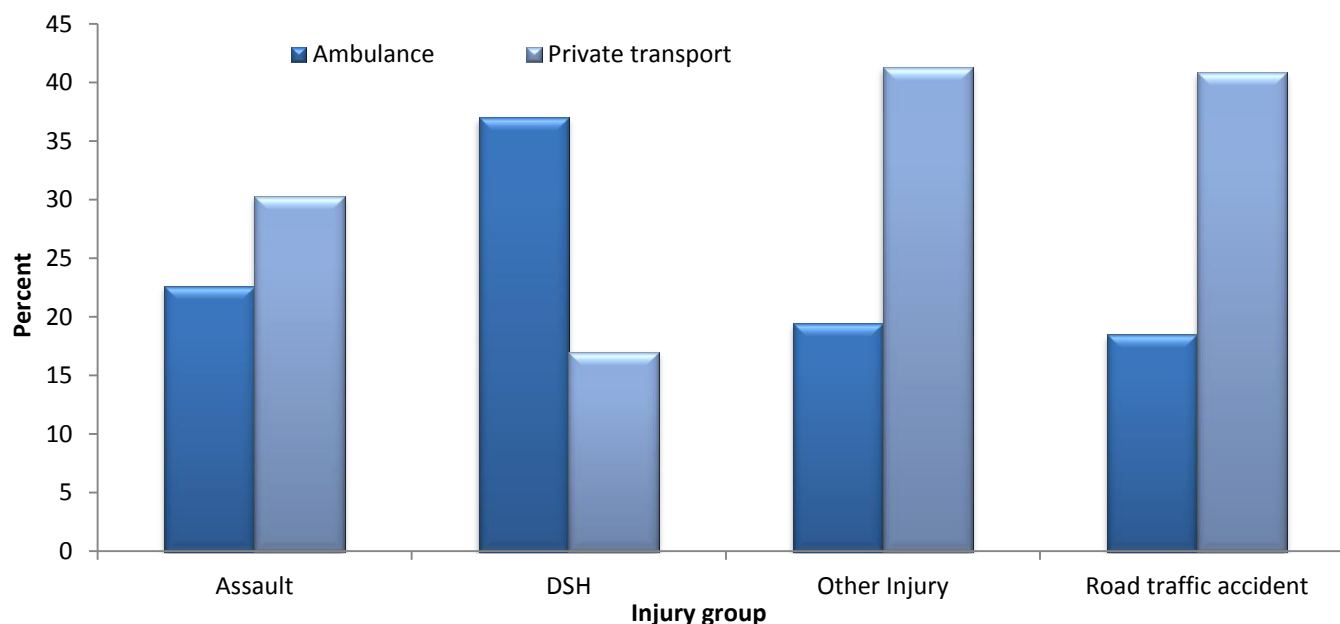
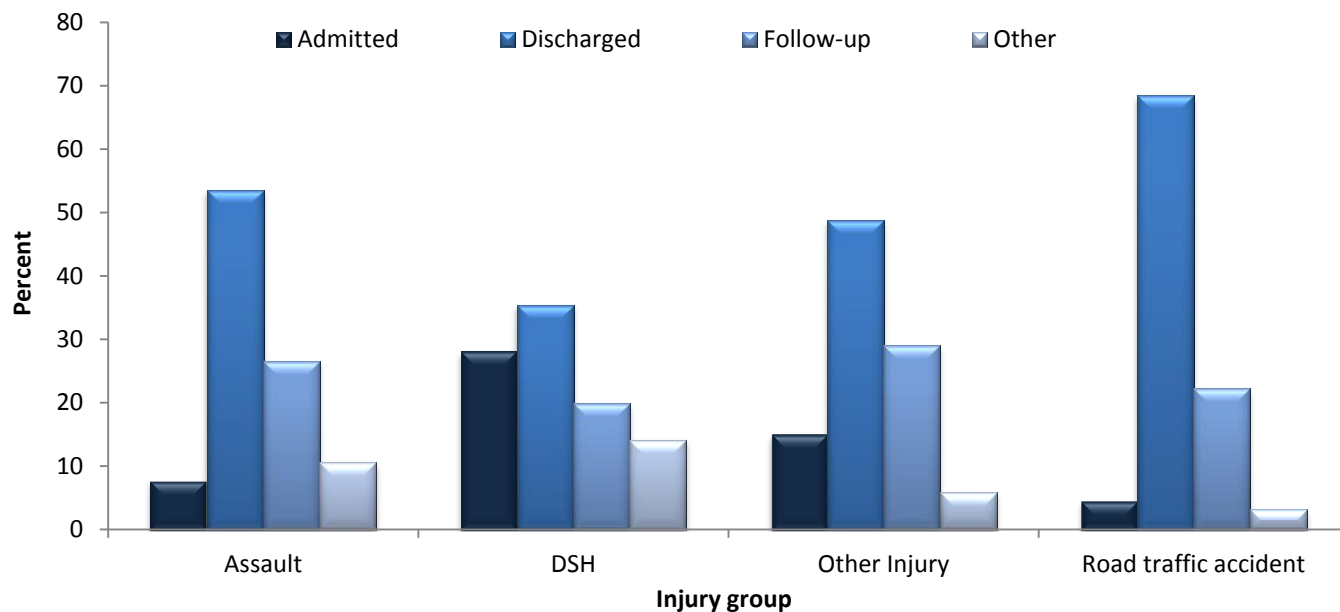


Figure 6 shows disposal method for selected injury groups. The injury group with the highest proportion of attendees admitted into hospital was DSH (28.1%); RTAs had the highest proportion discharged with no follow up treatment required (68.5%); and assaults and other injuries had the highest proportions of attendees referred for follow up treatment (26.6% and 29.1% respectively).

¹¹ This figure shows percentages of all attendances, including those with unknown referral sources.

Figure 6. Disposal method for assaults, DSH, other injuries and RTAs, April 2012 to March 2015



INJURY GROUPS AND DEPRIVATION

Table 13 displays the top 10 LSOAs for assault rates; as shown, the top three were Blackburn with Darwen 006E (6,224 per 100,000 population), Blackpool 006A (5,372 per 100,000 population) and Blackpool 010E (5,010 per 100,000 population).

Table 13. Top 10 LSOAs for assault rates of ED attendances per 100,000 population, April 2012 to March 2015

LSOA	LSOA code	Assault attendances	Population	Rate per 100,000 population
Blackburn with Darwen 006E	E01012655	119	1912	6224
Blackpool 006A	E01012681	88	1638	5372
Blackpool 010E	E01012737	74	1477	5010
Blackpool 011A	E01012670	60	1212	4950
Burnley 007C	E01024858	61	1313	4646
Preston 009E	E01025286	82	1834	4471
Blackpool 010D	E01012736	60	1384	4335
Blackpool 013D	E01012751	63	1480	4257
Blackburn with Darwen 008C	E01012638	67	1627	4118

Figure 7 shows rate of ED attendance per 100,000 population for assaults against deprivation for all areas combined. There is a strong positive association between deprivation and rate of assault, where increasingly deprived areas had increasing assault rates among its residents.

Figure 7. Rate of attendance per 100,000 population for assaults vs deprivation, April 2012 to March 2015

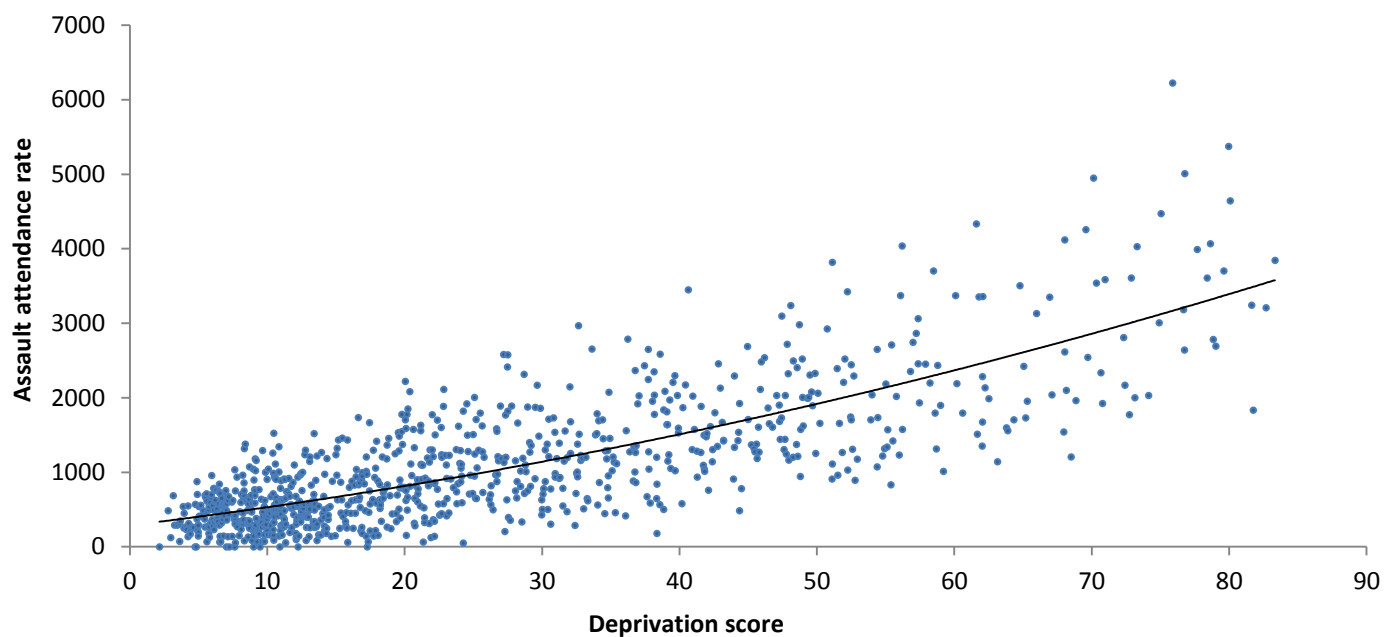


Table 14 displays the top 10 LSOAs for DSH rates; as shown, the top three were Preston 001C (3,871 per 100,000 population), West Lancashire 010F (2,537 per 100,000 population) and West Lancashire 014A (2,499 per 100,000 population).

Table 14. Top 10 LSOAs for DSH rates of ED attendances per 100,000 population, April 2012 to March 2015

LSOA	LSOA code	DSH attendances	Population	Rate per 100,000 population
Preston 001C	E01025282	53	1369	3871
West Lancashire 010F	E01025521	43	1695	2537
West Lancashire 014A	E01025493	42	1681	2499
Preston 015B	E01025292	66	2762	2390
West Lancashire 010B	E01025480	33	1381	2390
West Lancashire 014D	E01025504	26	1126	2309
Blackpool 007C	E01012721	30	1684	1781
West Lancashire 013B	E01025527	25	1438	1739
Blackpool 006A	E01012681	28	1638	1709

Figure 8 shows the rate of ED attendance per 100,000 population for DSH against deprivation for all areas combined. There is a slight positive association between deprivation and rate of DSH, where increasingly deprived areas had increasing DSH rates among its residents. The effect appears to become more pronounced among more deprived areas i.e. scores of 50 and above.

Figure 8. Rate of attendance per 100,000 population for DSH vs deprivation, April 2012 to March 2015

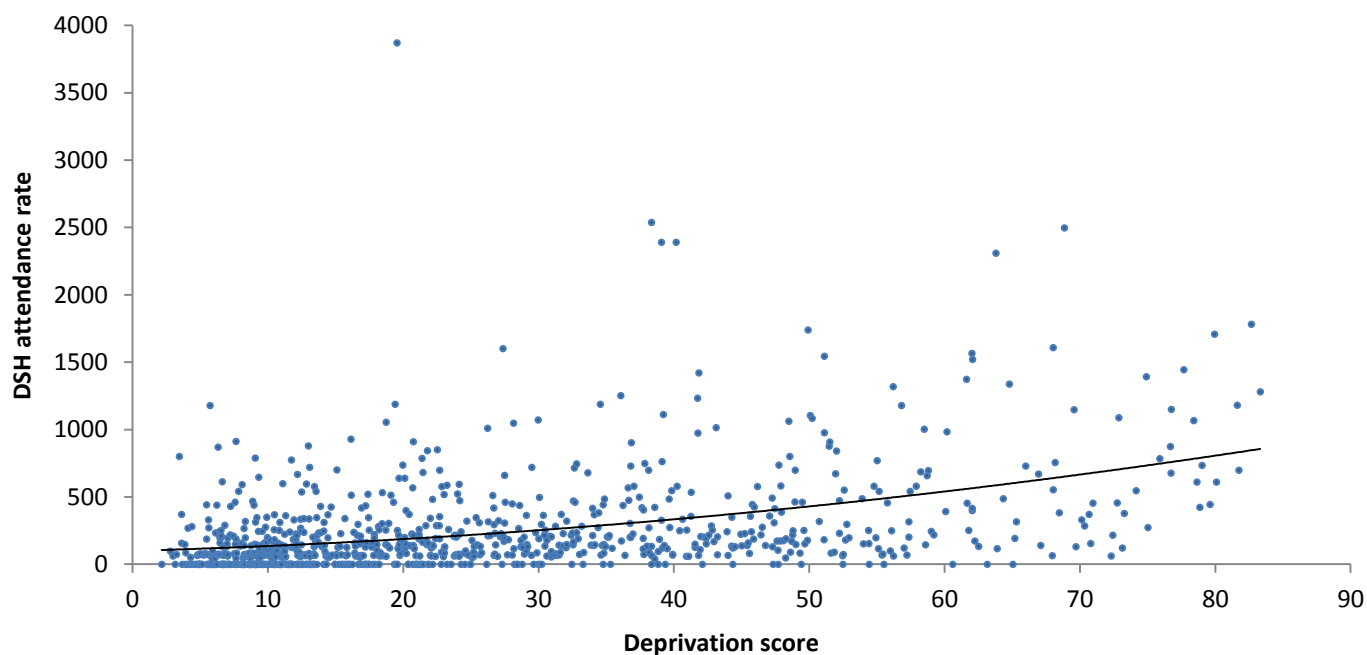


Table 15 displays the top 10 LSOAs for RTA rates; as shown, the top three were Preston 013F (5,774 per 100,000 population), Preston 014C (5,655 per 100,000 population) and Preston 016B (5,497 per 100,000 population).

Table 15. Top 10 LSOAs for RTA rates of ED attendances per 100,000 population, April 2012 to March 2015

LSOA	LSOA code	RTA attendances	Population	Rate per 100,000 population
Preston 013F	E01025269	103	1784	5774
Preston 014C	E01025297	114	2016	5655
Preston 016B	E01025248	73	1328	5497
Pendle 013D	E01025213	58	1113	5211
Preston 016A	E01025247	89	1733	5136
Pendle 009D	E01025184	88	1732	5081
Pendle 009B	E01025182	83	1634	5080
Pendle 011A	E01025224	111	2213	5016
Preston 009E	E01025286	89	1834	4853

Figure 9 shows rate of ED attendance per 100,000 population for RTAs against deprivation for all areas combined. Overall there is a slight positive association between deprivation and rate of RTAs, where increasingly deprived areas had increasing RTA rates among its residents. The effect appears more pronounced among less deprived areas, i.e. scores between zero and 40.

Figure 9. Rate of attendance per 100,000 population for RTAs vs deprivation, April 2012 to March 2015

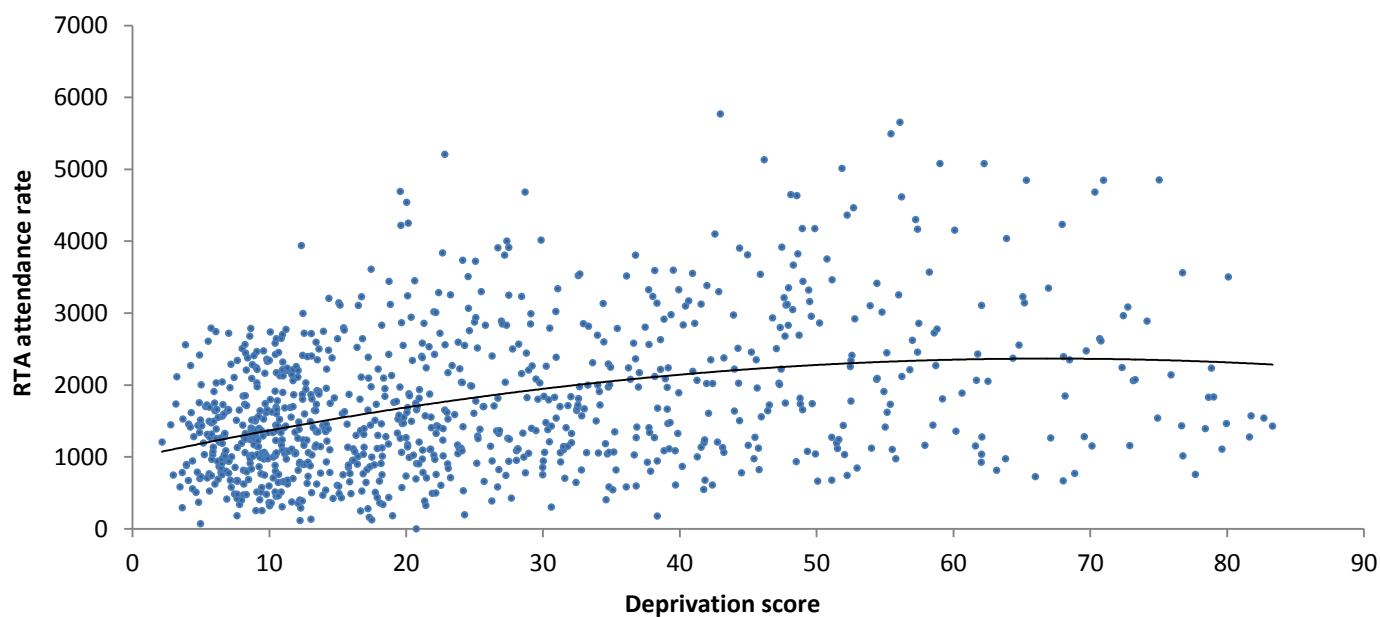


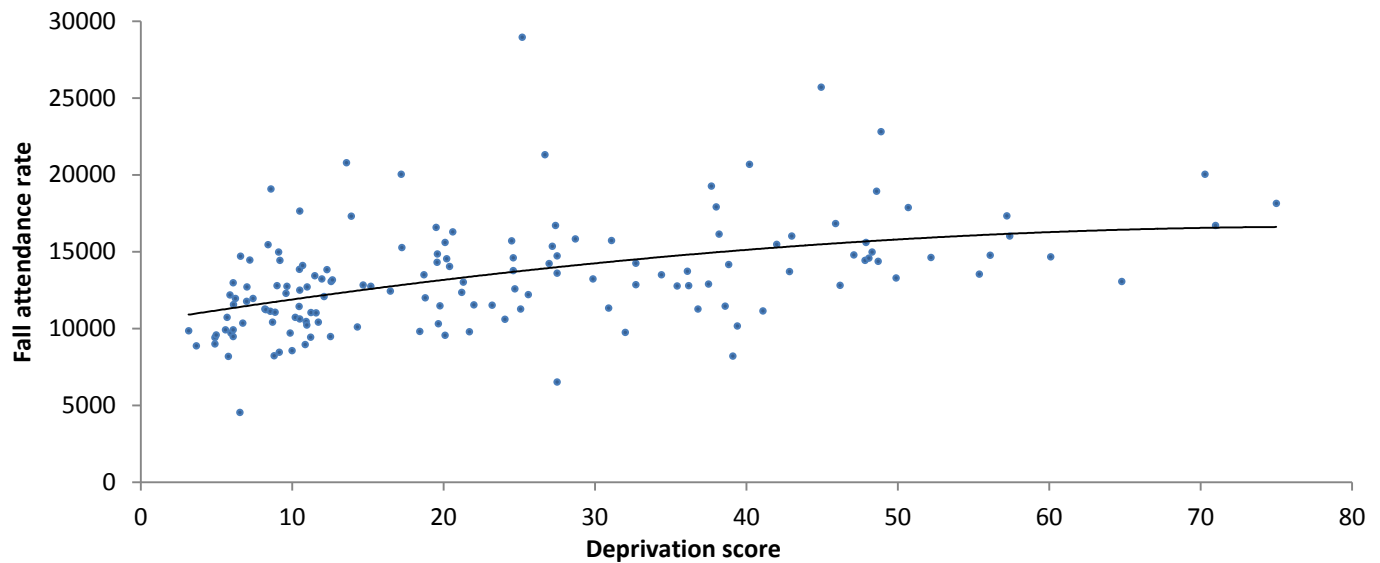
Table 16 displays the top 10 LSOAs in Preston and Chorley for fall rates; as shown, the top three were Preston 004D (28,957 per 100,000 population), Chorley 006A (25,710 per 100,000 population) and Preston 005A (22,812 per 100,000 population).

Table 16. Top 10 LSOAs for fall rates of ED attendances per 100,000 population for residents of Preston and Chorley LAs, April 2012 to March 2015

LSOA	LSOA code	Fall attendances	Population	Rate per 100,000 population
Preston 004D	E01025300	322	1112	28957
Chorley 006A	E01024929	344	1338	25710
Preston 005A	E01025260	344	1508	22812
Chorley 001B	E01024952	289	1356	21313
Preston 013A	E01025231	307	1477	20785
Preston 005C	E01025263	321	1551	20696
Preston 009B	E01025283	351	1751	20046
Preston 006A	E01025239	277	1382	20043
Preston 009C	E01025284	342	1774	19278

Figure 10 shows rate of ED attendance per 100,000 population for falls against deprivation for residents of Preston and Chorley. There is a very slight positive association between deprivation and rate of falls, where increasingly deprived areas had increasing fall rates among its residents.

Figure 10. Rate of attendance per 100,000 population for falls for residents of Preston and Chorley LAs vs deprivation, April 2012 to March 2015



INJURY GROUPS AND HABITATION TYPE¹²

Table 17 displays rates of attendance per 100,000 population for assaults, DSH and RTAs for all areas combined by habitation type. As shown, the vast majority of habitation types in Lancashire were urban city and town areas (80.9%). Urban city and town was the habitation type with the highest average rate for assaults (1,191 per 100,000 population; figure 11) and RTAs (1,839 per 100,000 population); urban major conurbation had the highest average rate for DSH (983 per 100,000 population). Rural village and dispersed had the lowest average rate for assaults (321 per 100,000 population; figure 11), rural town and fringe had the lowest average rate for DSH (193 per 100,000 population) and urban major conurbation had the lowest average rate for RTAs (629 per 100,000 population).

Table 17. Rate of attendance per 100,000 population for assaults, DSH and RTAs for LAs combined by habitation type, April 2012 to March 2015

Habitation type	LSOA n	Total population	Average population	Average assault rate	Average DSH rate	Average RTA rate
Rural town and fringe	94	141203	1502	515	193	1347
Rural village and dispersed	56	96917	1731	321	194	1053
Urban city and town	764	1187152	1554	1191	226	1839
Urban major conurbation	30	43573	1452	669	983	629

¹² Habitation types are taken from Rural Urban Classification: <https://www.gov.uk/government/collections/rural-urban-definition>.

Figure 11. Rate of attendance per 100,000 population for assaults for LAs combined by habitation type, April 2012 to March 2015

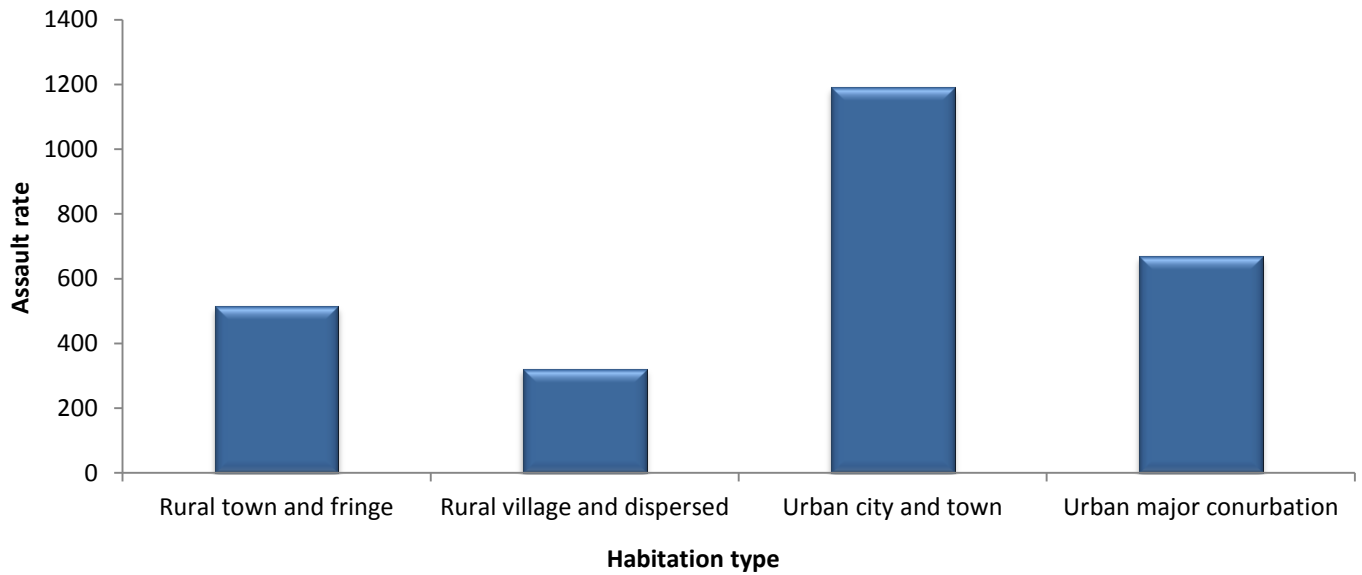
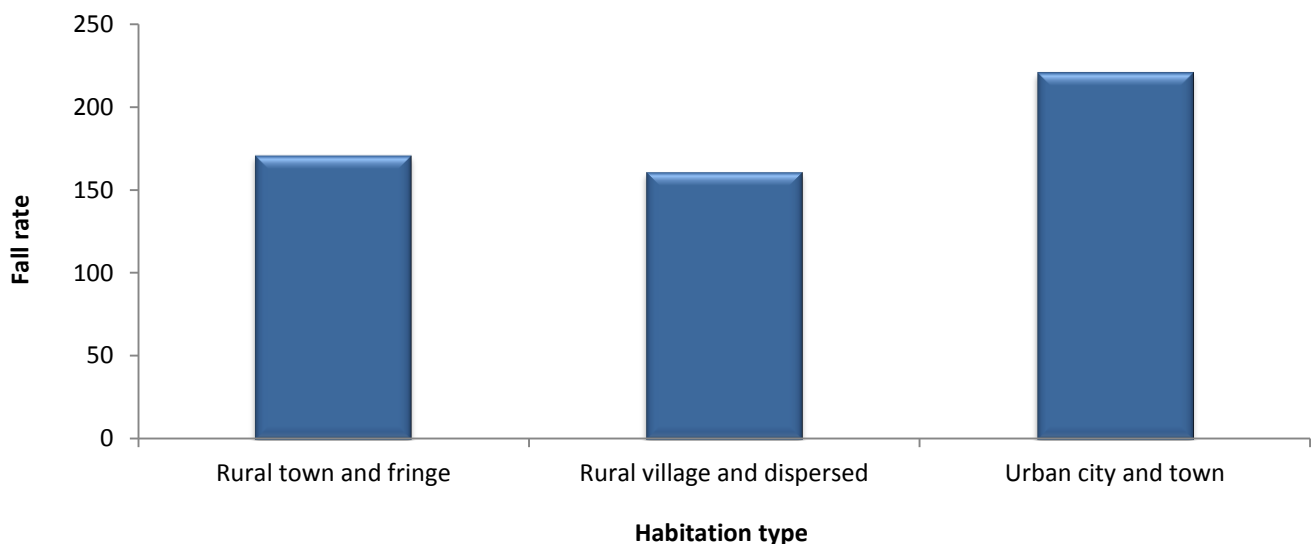


Table 18 shows average rate of attendance per 100,000 population for falls for residents of Preston and Chorley by habitation type. There are no urban major conurbations in Preston or Chorley, the vast majority of habitation types are urban city and town areas, which also have the highest average rate of falls (221 per 100,000 population; figure 12).

Table 18. Rate of attendance per 100,000 population for falls for residents of Preston and Chorley by habitation type, April 2012 to March 2015

Habitation type	n	Average population	Average fall rate
Rural town and fringe	14	1518	171
Rural village and dispersed	12	1641	161
Urban city and town	128	1640	221
Urban major conurbation	0	-	-

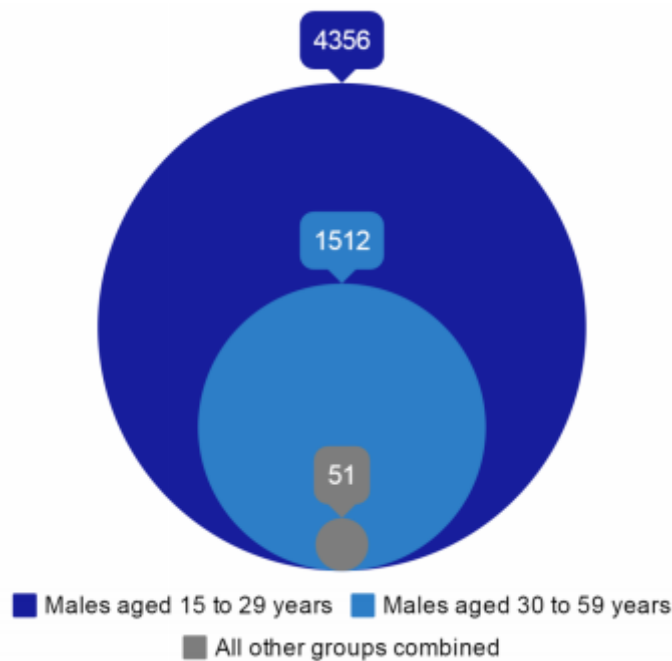
Figure 12. Rate of attendance per 100,000 population for falls for residents of Preston and Chorley by habitation type, April 2012 to March 2015



ASSAULTS: MALES AGED 15 TO 59 YEARS

Males aged 15 to 59 years were identified as being at higher risk of presenting to an ED for an assault compared to other age and gender groups. This group comprised 66.2% of all assaults; males aged 15 to 29 years accounted for 6,110 assaults (38.9% of all assaults) and males aged 30 to 59 years accounted for 4,296 assaults (27.3% of all assaults). In terms of rates by LA among males aged 15 to 29 years, the range across Lancashire was from 1,937 per 100,000 population¹³ in Lancaster to 7,026 per 100,000 population in Blackpool. Among males aged 30 to 59 years, the range was from 596 per 100,000 population¹⁴ in West Lancashire to 2,891 per 100,000 population in Blackpool. Figure 13 displays the rates for LAs combined for each age and gender group and all other groups combined.

Figure 13. Rates of assault per 100,000 population for males aged 15 to 29, 30 to 59 and all other groups combined, April 2012 to March 2015



There was variation between the higher risk groups for assaults and other groups in terms of the day of the week patients presented to an ED. Table 19 and figure 14 display day of ED attendance for assaults for males aged 15 to 29 years, males aged 30 to 59 years and all other groups combined. Both groups of higher risk males were slightly more likely to attend at the weekend, particularly Sunday where 40.6% and 35.5% of males aged 15 to 29 and 30 to 59 years attended, compared to 32.0% of other groups combined.

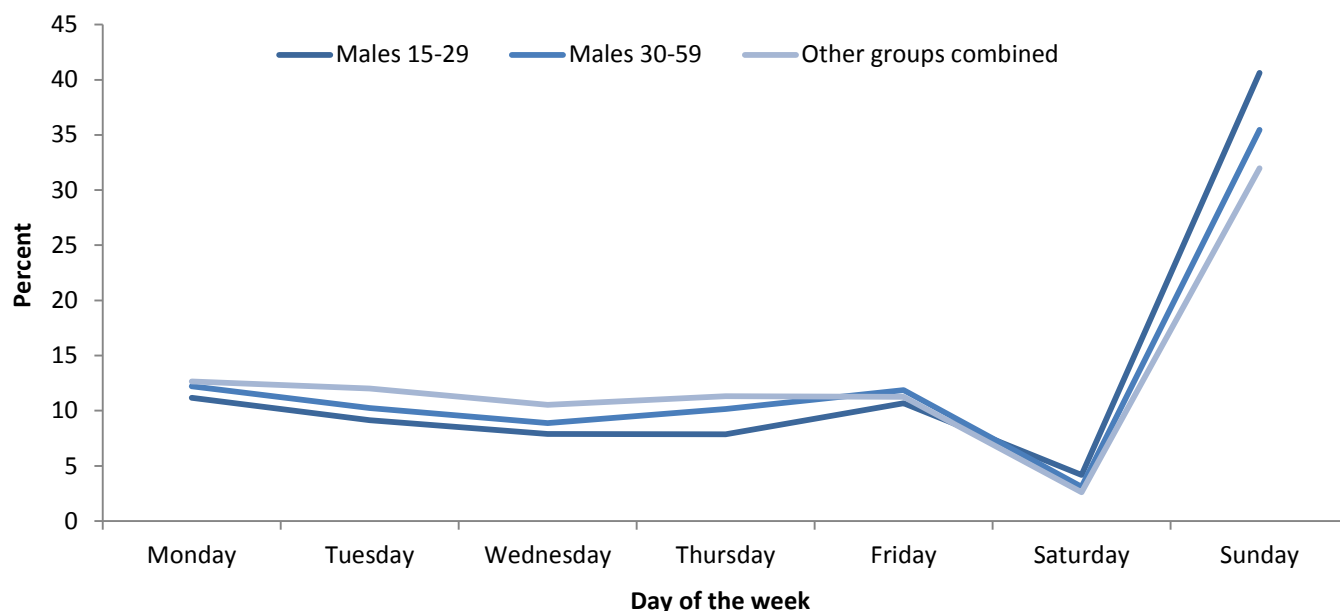
¹³ Please note gender subset populations were estimated by assuming a 1:1 gender ratio for LA populations given by age groups.

¹⁴ See Appendix 4 for full breakdown by LA.

Table 19. Assaults for males aged 15 to 29, 30 to 59 and all other groups combined by day of attendance, April 2012 to March 2015

Day of the week	Males aged 15 to 29 %	Males aged 30 to 59 %	All other age groups %	Total n	Total %
Monday	11.2	12.2	12.6	1878	12.0
Tuesday	9.1	10.2	12.0	1638	10.4
Wednesday	7.9	8.9	10.5	1424	9.1
Thursday	7.9	10.1	11.3	1519	9.7
Friday	10.7	11.9	11.3	1760	11.2
Saturday	4.2	3.1	2.6	529	3.4
Sunday	40.6	35.5	32.0	5702	36.3
Unknown	8.4	8.1	7.6	1265	8.1
Total	100.0	100.0	100.0	15715	100.0

Figure 14. Percentages of assaults by day attended for males aged 15 to 29, 30 to 59 and all other groups combined, April 2012 to March 2015

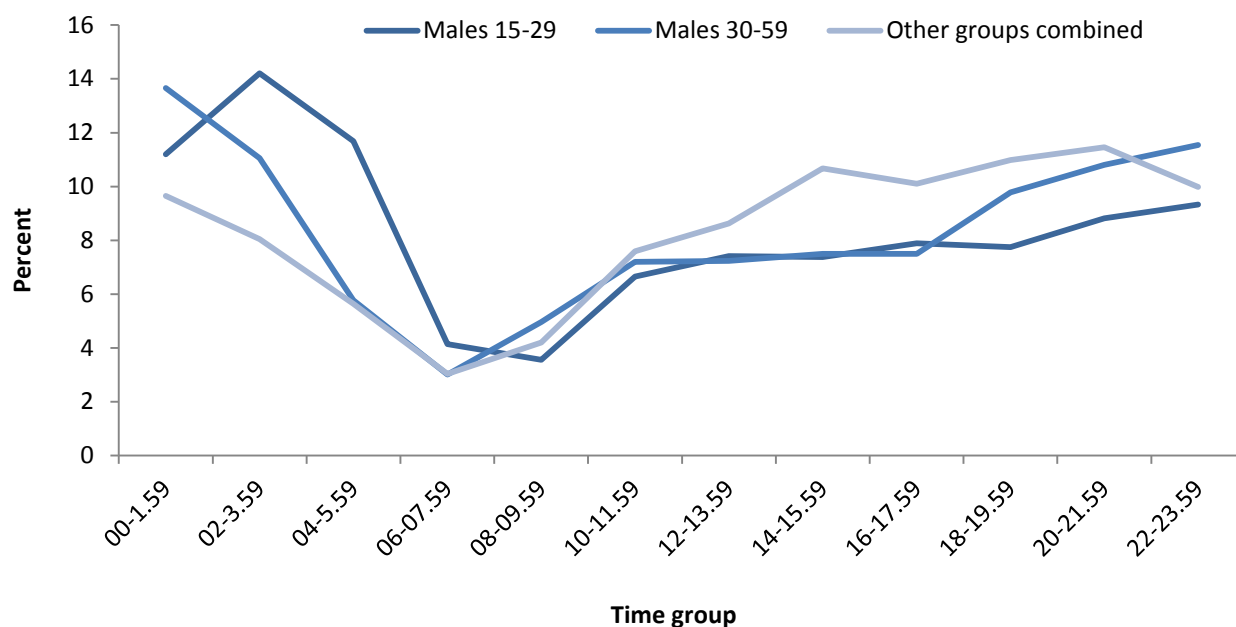


Higher risk groups were more likely to attend between midnight and 05:59am compared to other groups (table 20 and figure 15). Of males aged 15 to 29 years, 37.1% attended an ED during these night time hours, compared to 30.6% of males aged 30 to 59 years and 23.2% of other groups combined.

Table 20. Assaults for males aged 15 to 29, 30 to 59 and all other groups combined by time group, April 2012 to March 2015

Time group	Males aged 15 to 29 %	Males aged 30 to 59 %	All other age groups %	Total n	Total %
00-01.59	11.2	13.7	9.6	1783	11.4
02-03.59	14.2	11.1	8.0	1770	11.3
04-05.59	11.7	5.8	5.6	1261	8.0
06-07.59	4.1	3.0	3.0	543	3.5
08-09.59	3.6	5.0	4.2	654	4.2
10-11.59	6.6	7.2	7.6	1118	7.1
12-13.59	7.4	7.2	8.6	1222	7.8
14-15.59	7.4	7.5	10.7	1340	8.5
16-17.59	7.9	7.5	10.1	1340	8.5
18-19.59	7.7	9.8	11.0	1476	9.4
20-21.59	8.8	10.8	11.5	1611	10.3
22-23.59	9.3	11.5	10.0	1597	10.2
Total	100.0	100.0	100.0	15715	100.0

Figure 15. Percentages of time attended for assaults for males aged 15 to 29, 30 to 59 and all other groups combined, April 2012 to March 2015



There were no substantial differences between higher risk and other groups in terms of referral to the ED. Similar proportions were referred by the emergency services (males aged 15 to 59 years 17.8% compared to other age groups 17.2%); by the police (males aged 15 to 59 years 1.1% compared to other age groups 1.0%); and, by self-referral (males aged 15 to 59 years 33.9% compared to other age groups 33.8%).

In terms of arrival mode there were slight differences between identified groups at elevated risk of assault and other groups. As table 21 shows, a slightly higher proportion of males aged 15 to 59 arrived via the police, a higher proportion of males aged 30

to 59 years arrived by ambulance and both higher risk groups had lower proportions than other groups combined that arrived via private and public transport.

Table 21. Assaults for males aged 15 to 29, 30 to 59 and all other groups combined by arrival mode, April 2012 to March 2015

	Males aged 15 to 29 %	Males aged 30 to 59 %	All other age groups %	Total n	Total %
Ambulance	21.0	25.7	22.0	3556	22.6
By foot	4.9	4.8	4.8	755	4.8
Other	3.4	3.9	2.9	531	3.4
Police	1.3	1.5	1.1	203	1.3
Private transport	30.0	28.3	32.4	4763	30.3
Public transport	1.9	1.7	2.3	309	2.0
Taxi	5.2	3.8	4.3	708	4.5
Unknown	32.4	30.4	30.2	4890	31.1
Total	100.0	100.0	100.0	15715	100.0

As shown by figure 16, in terms of disposal method, higher risk groups combined were more likely than other groups combined to be admitted (9.1% compared to 5.1%), more likely to be referred for follow-up treatment (27.8% compared to 24.3%) and less likely to be discharged with no treatment required (50.1% compared to 60.3%).

Figure 16. Percentages of disposal method for assaults for males aged 15 to 59 combined and all other groups combined, April 2012 to March 2015¹⁵

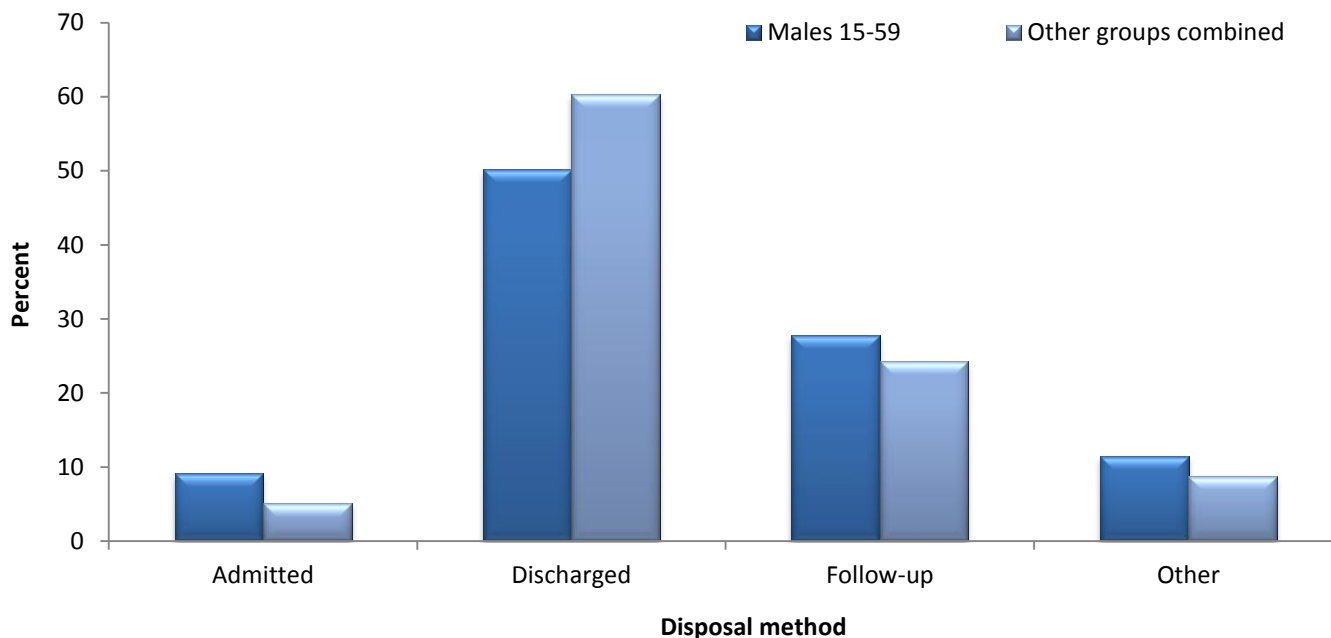
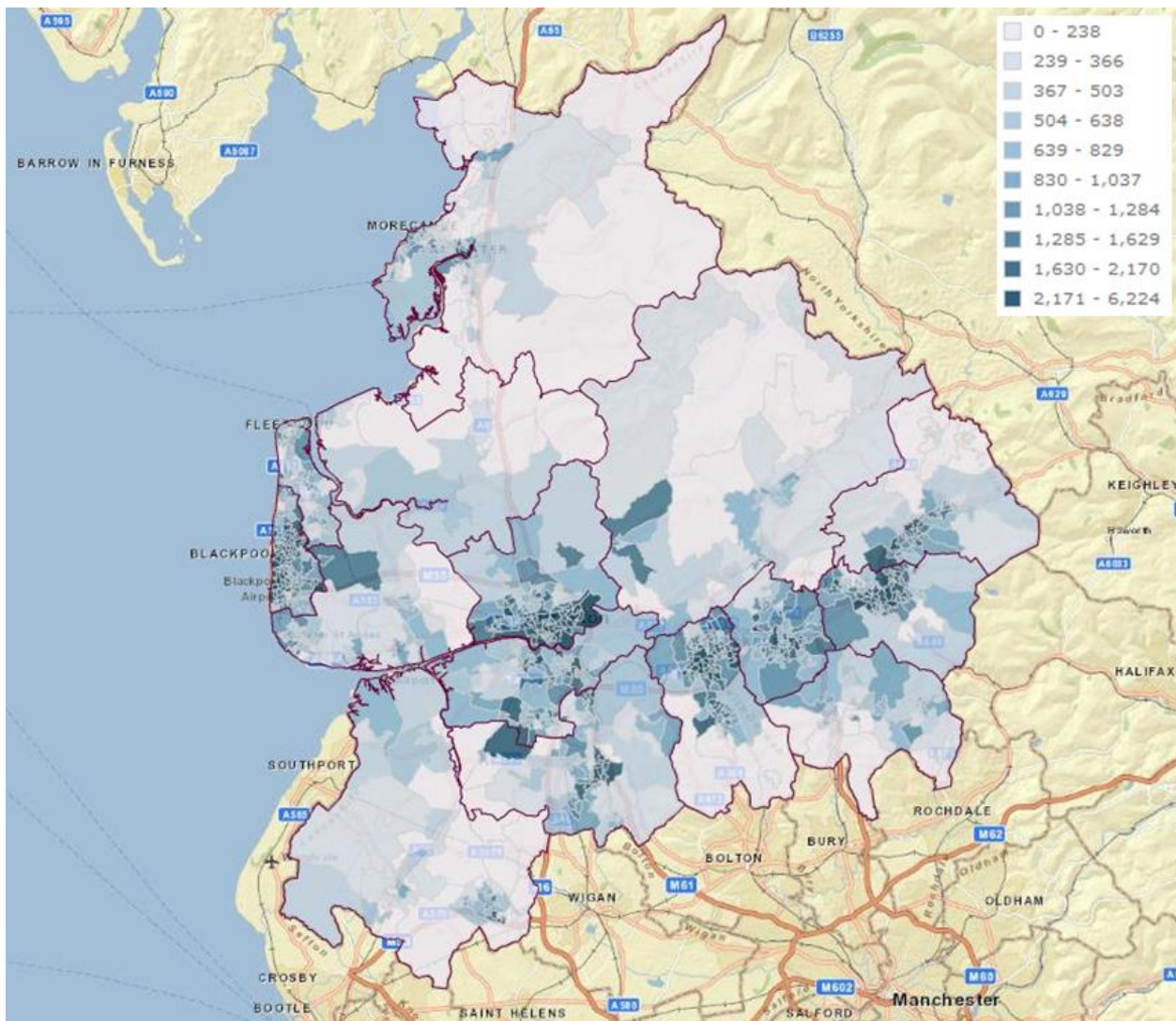


Figure 17 shows rate of assault attendances per 100,000 population for all Lancashire residents. Assaults are clustered around city and town centres, particularly Blackpool, Preston, Blackburn, Accrington and Burnley.

¹⁵ There were 180 records where disposal was not recorded; these have been omitted from the chart.

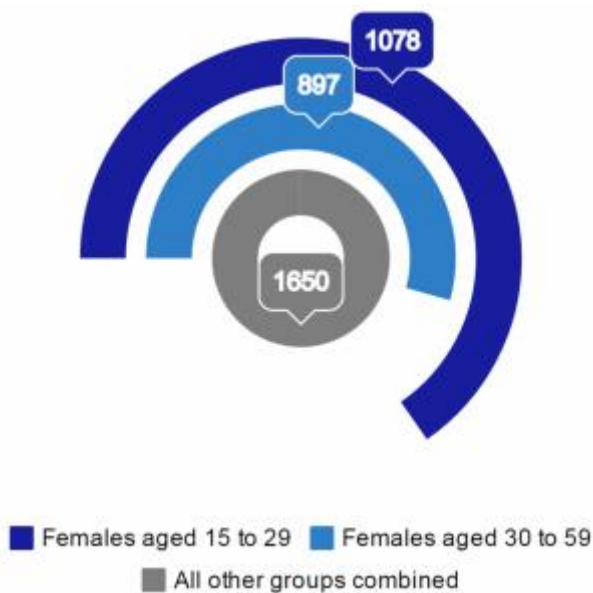
Figure 17. Rate of assault attendances per 100,000 population for all Lancashire residents, April 2012 to March 2015



DELIBERATE SELF-HARM: FEMALES AGED 15 TO 59 YEARS

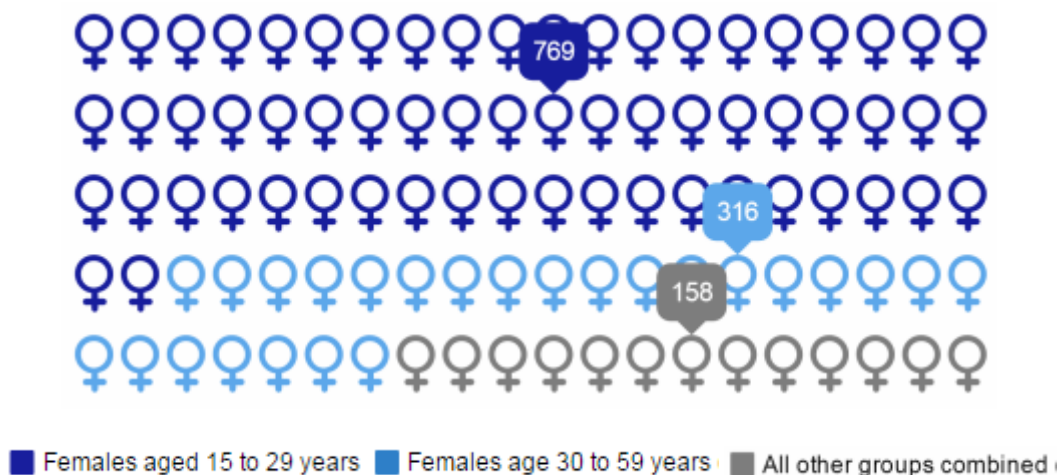
Females aged 15 to 59 years were identified as being at higher risk of presenting to an ED for DSH compared to other age and gender groups. This group comprised 54.5% of all incidents of DSH; females aged 15 to 29 years accounted for 1,078 incidents of DSH (29.7% of the total) and females aged 30 to 59 years accounted for 897 incidents of DSH (24.7% of the total; figure 18).

Figure 18. Number of attendances for DSH for females aged 15 to 29 years, 30 to 59 years and all other groups combined, April 2012 to March 2015



In terms of rates by LA among females aged 15 to 29 years, the rates across Lancashire ranged from 284 in Rossendale to 1,595 in West Lancashire, per 100,000 population.¹⁶ Among females aged 30 to 59 years, the range was from 96 in Burnley to 1,053 in West Lancashire, per 100,000 population.¹⁷ Figure 19 shows the average rates of attendance for higher risk groups and other groups combined.

Figure 19. Rate of attendance per 100,000 population for DSH for females aged 15 to 29 years, 30 to 59 years and all other groups combined, April 2012 to March 2015



In terms of the day of attendance, females aged 15 to 29 years were more likely than females aged 30 to 59 years and other groups combined to attend an ED at the weekend. For example, 29.0% of attendances by females aged 15 to 29 years occurred on a Sunday compared to 25.3% of females aged 30 to 59 years and 25.3% of all other groups combined. Females aged 15 to 29 years were also more likely than other groups to attend an ED during night-time hours; 32.7% of attendances for this group occurred between 00:00 and 05:59 compared to 27.8% of females aged 30 to 59 years and 27.3% of other groups combined.

¹⁶ Please note gender subset populations were estimated by assuming a 1:1 gender ratio for LA populations given by age groups.

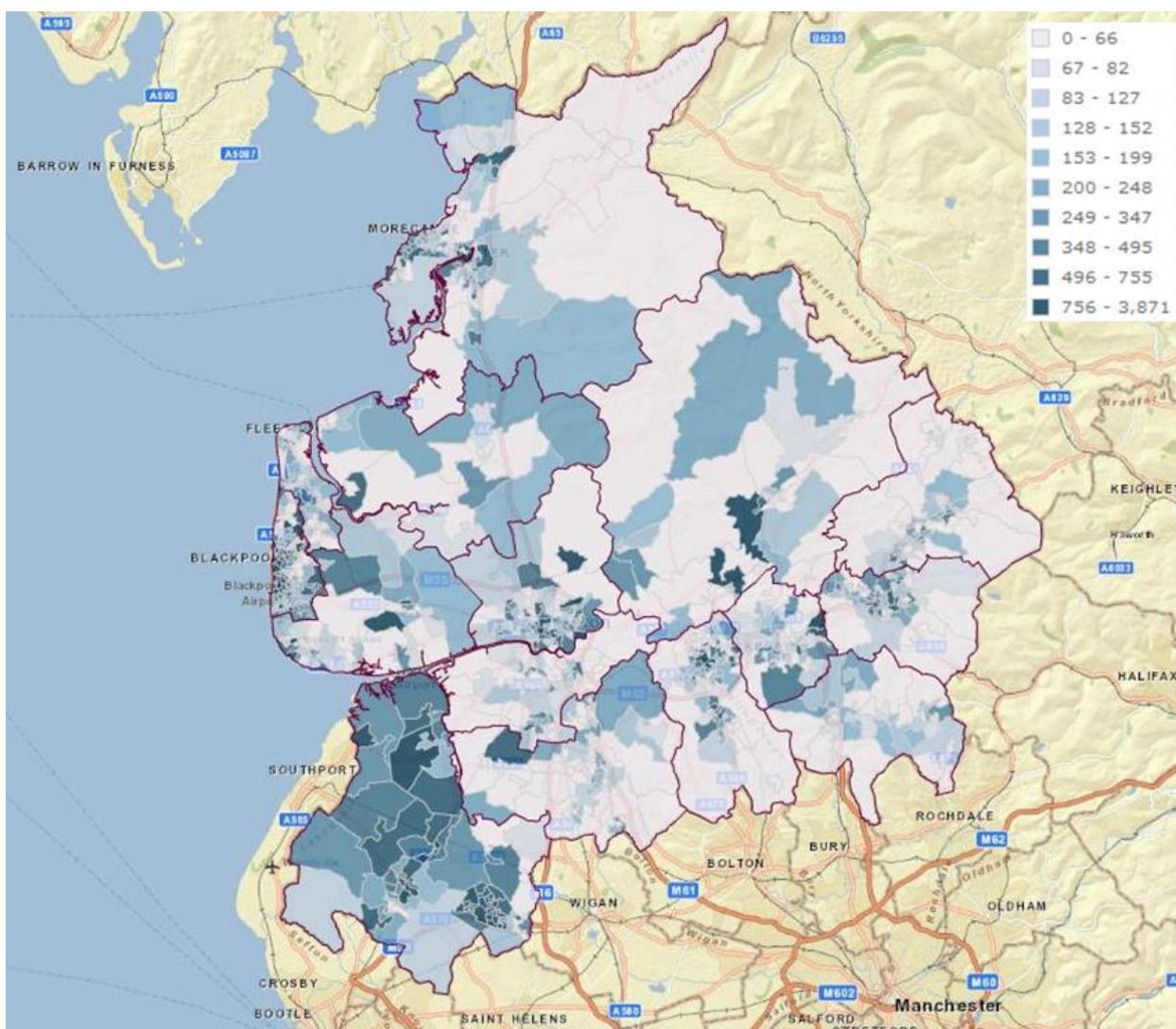
¹⁷ See Appendix 5 for full breakdown by LA.

In terms of referral source, there were no substantial differences between the higher risk groups and other groups combined. Females aged 15 to 29 years were less likely than females aged 30 to 59 years and other groups combined to be referred by the emergency services (24.6% compared to 31.7% and 31.0% respectively). A similar trend was found in terms of arrival mode, where 32.7% of females aged 15 to 29 years arrived at an ED by ambulance compared to 38.5% of females aged 30 to 59 years and 39.1% of other groups combined; a higher proportion arrived by private transport (21.8% compared to 12.5% and 16.3% respectively).

In terms of disposal, patients presenting to an ED for DSH were more likely than any other injury groups to be admitted to hospital. Of the higher risk groups, females aged 30 to 59 were more likely to be admitted than females aged 15 to 29 years and other groups combined (26.3% compared to 24.0% and 23.8% respectively). A slightly higher proportion of females aged 15 to 29 years were discharged with no follow-up treatment than females aged 30 to 59 and other groups combined (38.7% compared to 35.5% and 35.3% respectively).

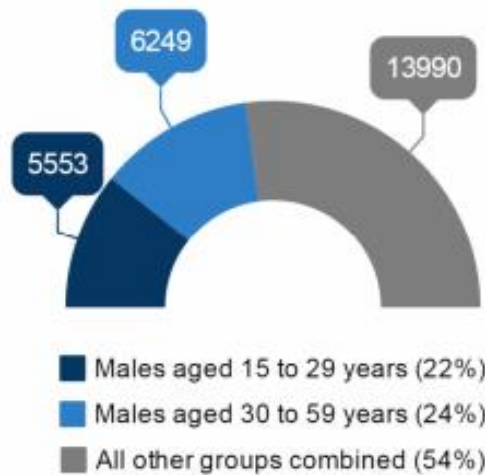
Figure 20 shows the rate of DSH ED attendances for all Lancashire residents; compared to assaults, DSH rates are more dispersed throughout the county and less clustered around town and city centres. Of all LAs, West Lancashire has the highest rates of DSH in Lancashire.

Figure 20. Rate of DSH attendances per 100,000 population for all Lancashire residents, April 2012 to March 2015



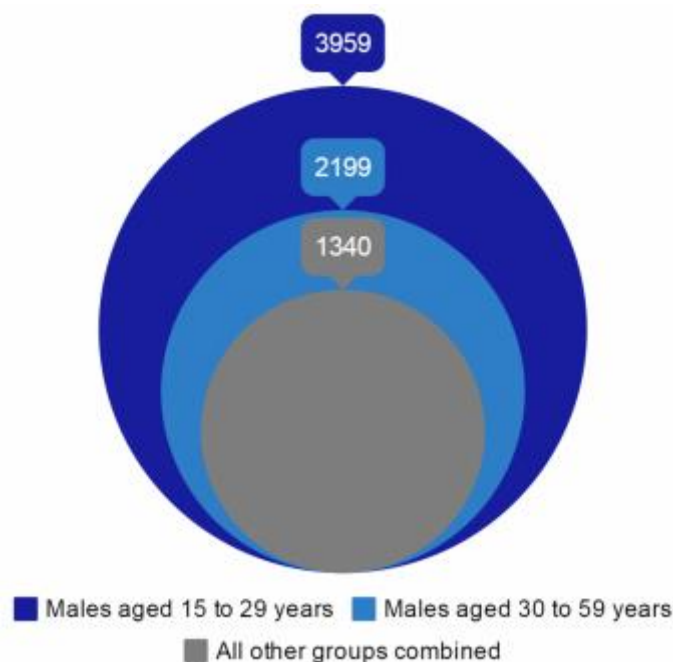
Males aged 15 to 59 years were identified as being at higher risk of presenting to an ED for RTAs compared to other age and gender groups. This group comprised 45.8% of all RTA attendances; males aged 15 to 29 years accounted for 5,553 RTA attendances (21.5% of the total) and males aged 30 to 59 years accounted for 6,249 (24.2% of the total; figure 21).

Figure 21. Number of RTA attendances for males aged 15 to 29 years, 30 to 59 years and all other groups combined, April 2012 to March 2015



In terms of rates by LA among males aged 15 to 29 years, the range across Lancashire was from 1,782 in West Lancashire to 5,727 in Chorley, per 100,000 population. Among males aged 30 to 59 years, the range was from 796 in West Lancashire to 4,029 in Preston, per 100,000 population. Figure 22 shows rates of attendance for higher risk groups and other groups combined.

Figure 22. Rate of attendance per 100,000 population for RTAs for males aged 15 to 29 years, 30 to 59 years and all other groups combined, April 2012 to March 2015

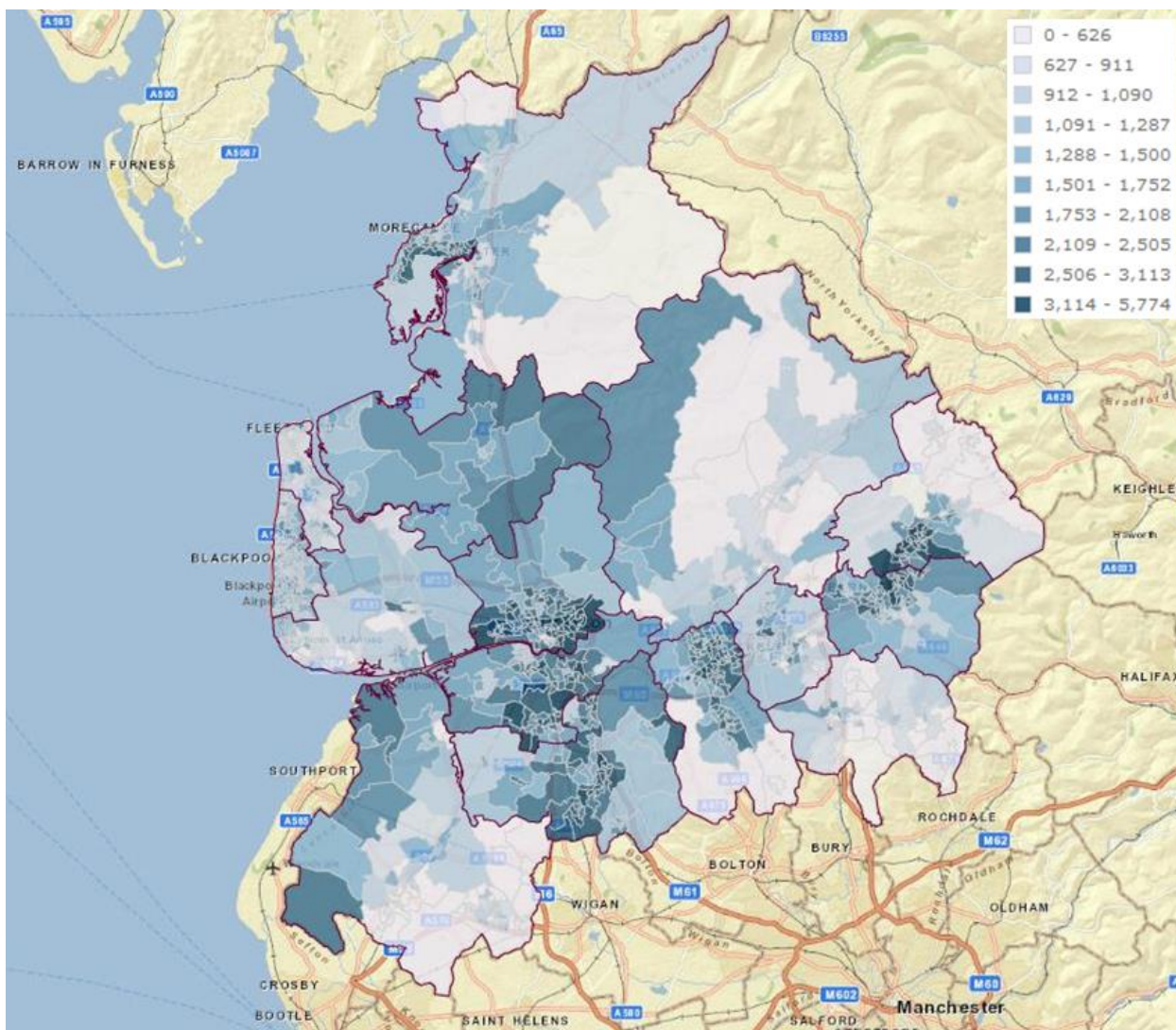


In terms of referral source, there were no substantial differences between the higher risk groups and other groups combined. However males aged 15 to 29 and 30 to 59 years were more likely to be self-referred than other groups (40.4% and 40.7% compared to 35.2%); and, slightly less likely to be referred by the emergency services (10.4% and 9.6% compared to 12.0%). A similar trend was found in terms of arrival mode, where 16.8% and 16.1% of males aged 15 to 29 and 30 to 59 years respectively arrived at an ED by ambulance compared to 20.2% of other groups combined.

In terms of disposal, males aged 15 to 29 and 30 to 59 years were more likely to be referred for follow-up treatment than other groups combined (23.2% and 25.1% compared to 20.5% respectively). A lower proportion of males aged 15 to 29 and 30 to 59 years were discharged with no follow-up treatment than other groups combined (65.8% and 65.5% compared to 70.9% respectively).

Figure 23 shows the rate of RTA ED attendances for all Lancashire residents; compared to intentional injuries, RTAs show clustering around both rural and urban areas. The most concentrated cluster appears in and around Preston city centre.

Figure 23. Rate of RTA attendances per 100,000 population for all Lancashire residents, April 2012 to March 2015



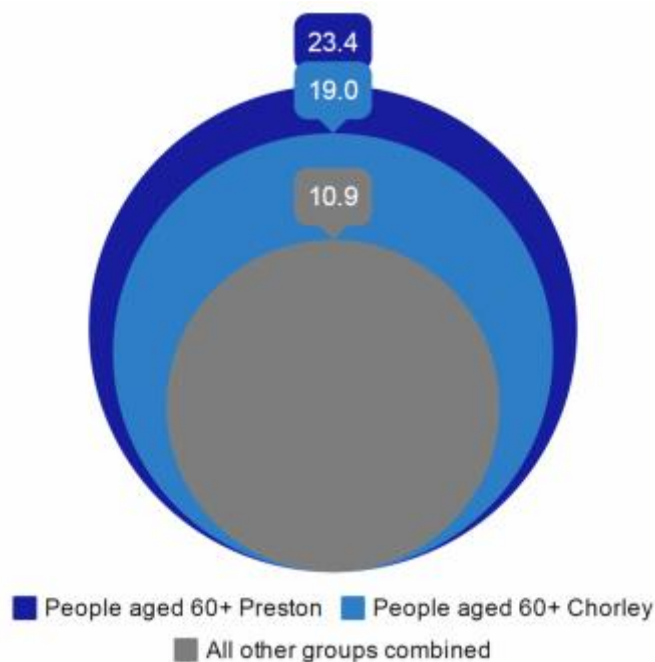
FALLS: PEOPLE AGED 60 YEARS AND OVER IN PRESTON AND CHORLEY

People aged 60 years and over in Preston and Chorley accounted for 35.9% of falls while comprising only 21.4% of the population. While females comprised 65.7% of falls among people aged 60 years and over, males and females are combined for these analyses. Table 22 and figure 24 display rates of fall attendances for Preston and Chorley residents aged 60 years and over, and other groups combined.

Table 22. Rate of fall attendances per 100 population for Preston and Chorley residents aged 60 years and over, and other groups combined, April 2012 to March 2015

LA	People aged 60 years and over			All other age groups combined			All Preston and Chorley residents		
	Population	Falls n	Rate per 100 population	Population	n	Rate per 100 population	Population	Falls n	Rate per 100 population
Preston	26776	6273	23.4	113642	13519	11.9	140418	19792	14.1
Chorley	26943	5113	19.0	83562	7990	9.6	110505	13103	11.9
Total	53719	11386	21.2	197204	21509	10.9	250923	32895	13.1

Figure 24. Rate of fall attendances per 100 population for Preston and Chorley residents aged 60 years and over, and other groups combined, April 2012 to March 2015



In terms of day and time of attendance, people aged 60 years and over were slightly more likely to attend an ED on a weekday and during day time hours compared to other age groups. For example, 67.3% of fall attendances by people aged 60 years or over were during the hours of 08:00 and 17:59 compared to 65.5% of other groups combined, and 24.0% of fall attendances by people aged 60 years or over were at the weekend compared to 26.1% of other groups combined.

Figure 25 shows selected arrival modes for people aged 60 years and over and other groups. A substantially higher proportion of attendees aged 60 years and over arrived at EDs by ambulance compared to other groups (39.5% compared to 8.6%).

Figure 25. Fall attendances for Preston and Chorley residents aged 60 years and over, and other groups combined by arrival mode, April 2012 to March 2015

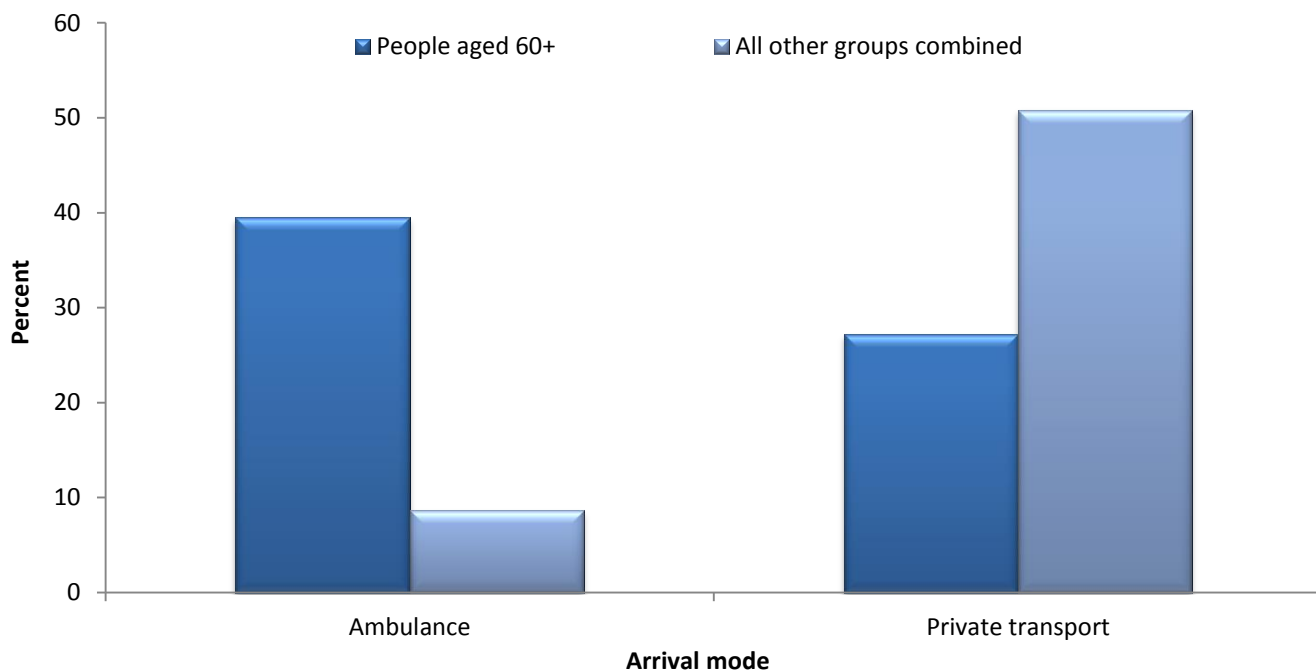
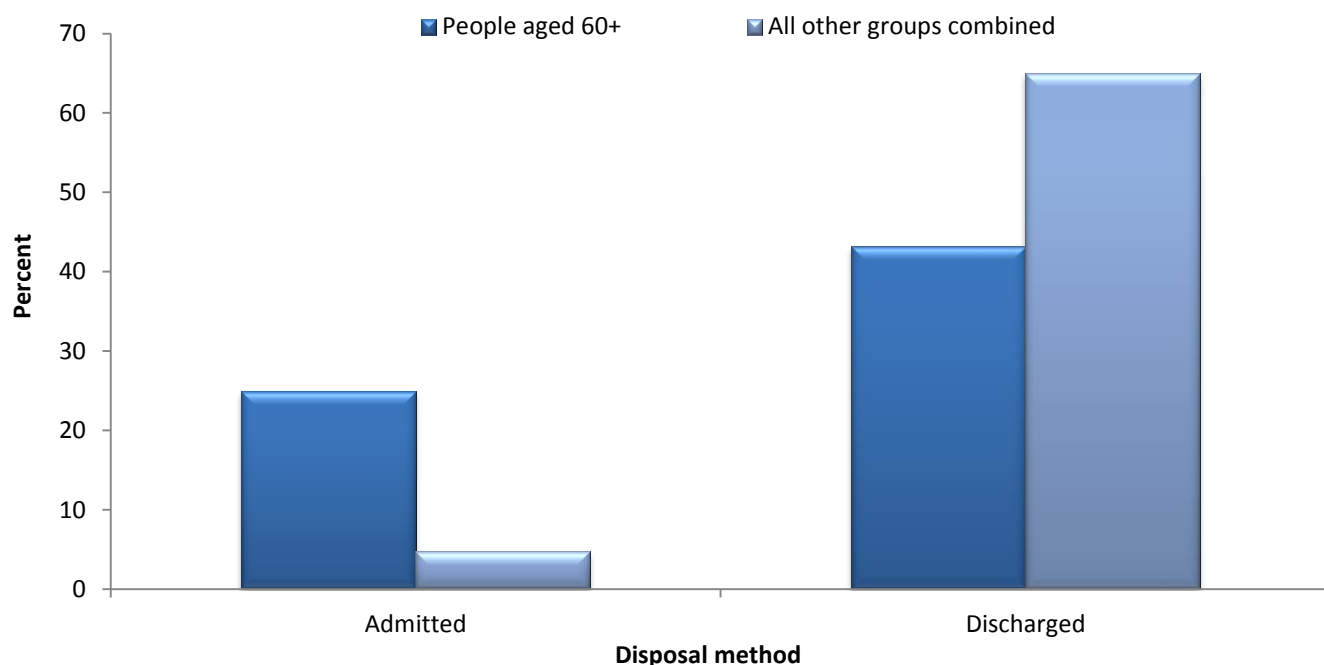


Figure 26 shows selected discharge methods for people aged 60 years and over and other groups. A substantially higher proportion of attendees aged 60 years and over were admitted compared to other groups (24.9% compared to 4.8%).

Figure 26. Fall attendances for Preston and Chorley residents aged 60 years and over, and other groups combined by disposal method, April 2012 to March 2015



The final section of this report provides an overview of NWAS data between April 2012 and March 2015. Data here are based on call out location (usually but not always incident location) rather than patient address, a number of records may relate to non-Lancashire residents and a number of records relating to Lancashire residents which occurred outside the county are not included. For this reason rates per LA have not been calculated. Comparable injury groups have been selected wherever possible. While assaults and RTAs are very similar in terms of categorisation and have comparable numbers (falls are also similar but are not comparable owing to the majority of Lancashire EDs not categorising falls), DSH is not categorised similarly and for NWAS data includes all incidents of overdose, poisoning, ingestion, psychiatric episodes and suicide attempts. For this reason ED data and NWAS data should be considered independently for this injury group.

OVERVIEW

Between April 2012 and March 2015 there were a total of 633,357 ambulance call outs in Lancashire, of which 143,374 were for trauma-related injuries. Table 23 shows all call outs between April 2012 and March 2015; during this three year period trauma related injuries have decreased by 12.4%, while non-trauma related injuries have increased by 9.6%.

Table 23. NWAS call outs for trauma-related injuries and non-trauma, April 2012 to March 2015

Year	2012/13	2013/14	2014/15	Total
Trauma related	50105	49396	43873	143374
Non-trauma	157616	159613	172754	489983
Total	207721	209009	216627	633357

Table 24 displays call outs for trauma related injuries, given by injury group, between April 2012 and March 2015. While all trauma related injury groups have decreased over this period, the extent of the decrease varies. For example, assaults decreased by 46.8% while self-injury decreased by just 1.2%.

Table 24. NWAS call outs by year and injury group, April 2012 to March 2015

Trauma-related nature description	2012/13	2013/14	2014/15	Total
Assault/Sexual Assault ¹⁸	2606	1647	1387	5640
Burns(Scalds)/Explosion	572	486	416	1474
Falls	23425	23195	19974	66594
Self-injury ¹⁹	8867	9602	8763	27232
Traffic/Transportation Accidents	3931	3882	3769	11582
Other accidents ²⁰	10704	10584	9564	30852
Total	50105	49396	43873	143374

¹⁸ Including Stab/Gunshot/Penetrating Trauma.

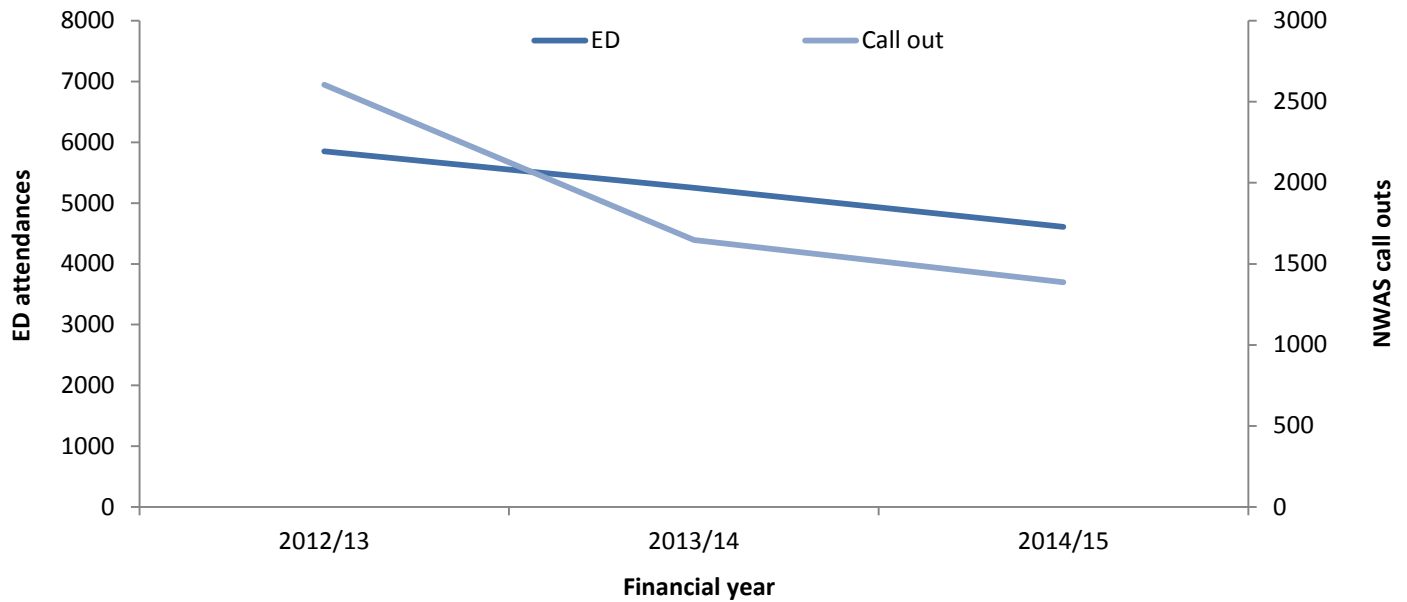
¹⁹ Including Overdose/Poisoning (Ingestion) & Psychiatric/Suicide Attempt.

²⁰ Including Traumatic Injuries (Specific), Allergies/Envenomations-sting/bite, Animal Bites/Attacks, Drowning (Near)/Diving Accident, Electrocution/Lightning, Exercise, Haemorrhage/Lacerations Major, Trauma Emergency Transfer and Major Trauma Urgent Transfer.

ASSAULTS

Figure 27 displays the trends in assault ED attendances and call outs between April 2012 and March 2015. While ED attendances reduced by 21.2% for Lancashire residents, NWAS call outs reduced by 46.8%, the majority of which was between 2012/13 and 2013/14.

Figure 27. NWAS call outs and ED attendance assault trends, April 2012 to March 2015



Males aged 15 to 59 comprised 68.3% of all NWAS call outs for assaults, which was similar to the 66.2% among ED attendances. Similar to ED attendances the areas with the highest numbers of assault call outs, for both males aged 15 to 29 and 30 to 59 years were Blackpool, Preston and Blackburn with Darwen (table 25).

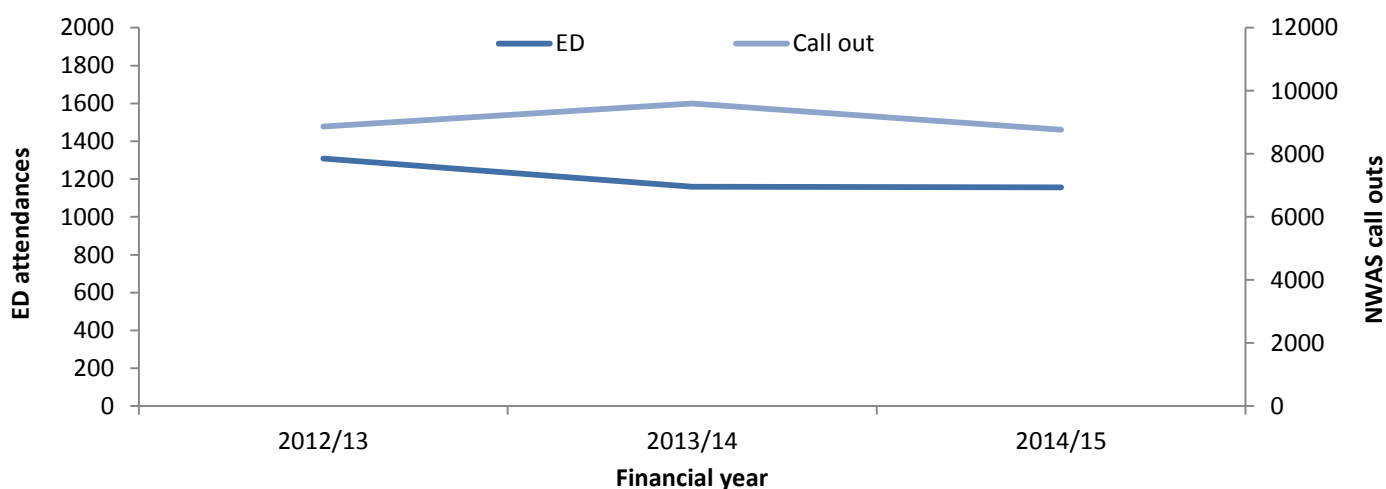
Table 25. NWAS call outs for high risk groups of assaults by Local Authority, April 2012 to March 2015

Local Authority	Total ²¹	Males aged 15 to 29		Males aged 30 to 59	
	n	n	%	n	%
Blackburn with Darwen	469	179	38.2	163	34.8
Blackpool	917	295	32.2	348	37.9
Burnley	332	132	39.8	109	32.8
Chorley	190	67	35.3	58	30.5
Fylde	106	30	28.3	33	31.1
Hyndburn	271	96	35.4	85	31.4
Lancaster	334	122	36.5	98	29.3
Pendle	248	99	39.9	84	33.9
Preston	528	213	40.3	143	27.1
Ribble Valley	50	21	42.0	16	32.0
Rosendale	112	39	34.8	29	25.9
South Ribble	139	53	38.1	37	26.6
West Lancashire	250	111	44.4	68	27.2
Wyre	180	51	28.3	43	23.9
Total	4126	1508	36.5	1314	31.8

SELF-INJURY

Figure 28 displays the trends in DSH ED attendances and call outs for self-injury between April 2012 and March 2015. Over this three year period, ED attendances for DSH reduced by 11.6%, while call outs for self-injury reduced by 1.2%.

Figure 28. Trends for NWAS call outs for self-injury and ED attendances for DSH, April 2012 to March 2015



Females aged 15 to 59 comprised 43.8% of all self-injury call outs, which was lower than the 54.5% for ED attendances. Unlike the ED data, call outs for self-injury were highest in Blackpool and Preston, for both higher risk groups (table 26).

²¹ There were 1,514 records where age and/or gender was not known, these have been omitted from the table.

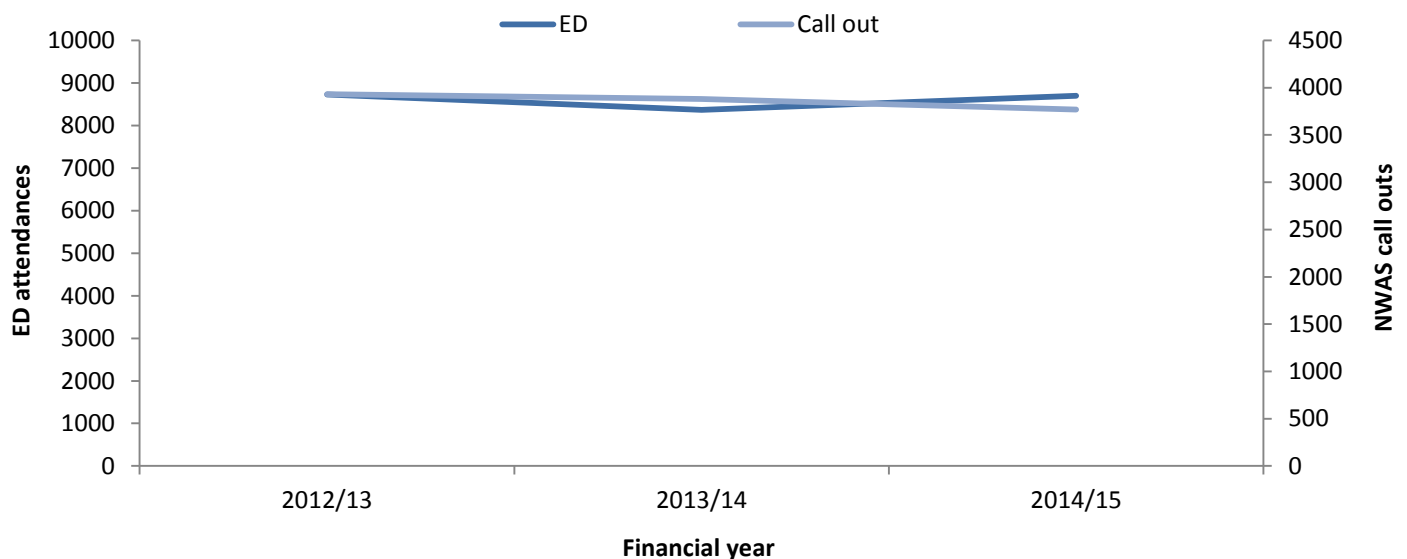
Table 26. NWAS call outs for high risk groups of psychiatric/suicide attempt and overdose/poisoning by Local Authority, April 2012 to March 2015

Local Authority	Total ²²	Females aged 15 to 29		Females aged 30 to 59	
	n	n	%	n	%
Blackburn with Darwen	3003	491	16.4	691	23.0
Blackpool	5428	837	15.4	1406	25.9
Burnley	1702	292	17.2	462	27.1
Chorley	1547	191	12.3	420	27.1
Fylde	904	134	14.8	237	26.2
Hyndburn	1439	292	20.3	326	22.7
Lancaster	2258	425	18.8	707	31.3
Pendle	1273	215	16.9	330	25.9
Preston	2904	717	24.7	729	25.1
Ribble Valley	419	99	23.6	82	19.6
Rossendale	854	138	16.2	209	24.5
South Ribble	1176	223	19.0	350	29.8
West Lancashire	1389	272	19.6	361	26.0
Wyre	1258	244	19.4	312	24.8
Total	25554	4570	17.9	6622	25.9

ROAD TRAFFIC ACCIDENTS

Figure 29 displays the trends in ED attendances and call outs for RTAs between April 2012 and March 2015. Both ED attendances and NWAS call outs remained relatively stable; ED attendances fell by 0.4% and NWAS call outs fell by 4.1%.

Figure 29. NWAS call outs and ED attendance trends for RTAs, April 2012 to March 2015



²² There were 1,678 records where age and/or gender was not known, these have been omitted from the table.

Males aged 15 to 59 comprised 45.6% of all assault NWS call outs, which was the same as ED attendances (45.8%). Also similar to ED attendances, the highest number of call outs for RTAs were in and around Preston.

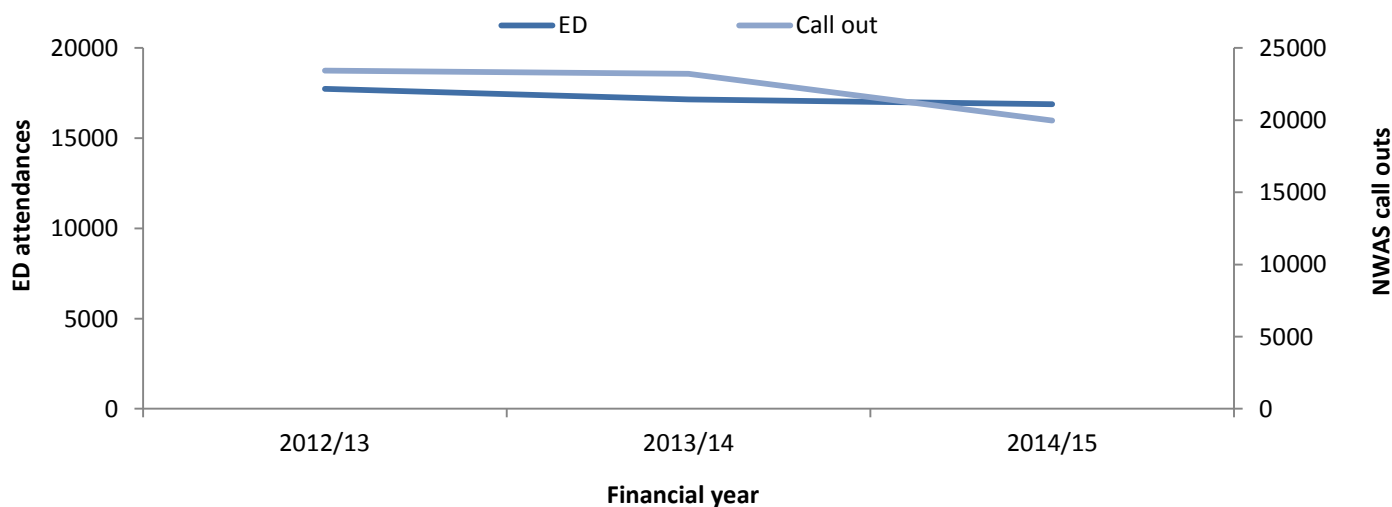
Table 27. NWS call outs for high risk groups of RTAs by Local Authority, April 2012 to March 2015

Local Authority	Total ²³	Males aged 15 to 29		Males aged 30 to 59	
	n	n	%	n	%
Blackburn with Darwen	706	137	19.4	173	24.5
Blackpool	728	132	18.1	172	23.6
Burnley	330	58	17.6	94	28.5
Chorley	396	86	21.7	104	26.3
Fylde	316	50	15.8	82	25.9
Hyndburn	355	65	18.3	80	22.5
Lancaster	567	105	18.5	151	26.6
Pendle	281	68	24.2	61	21.7
Preston	693	158	22.8	166	24.0
Ribble Valley	234	52	22.2	61	26.1
Rosendale	271	57	21.0	72	26.6
South Ribble	468	91	19.4	154	32.9
West Lancashire	456	95	20.8	124	27.2
Wyre	410	93	22.7	93	22.7
Total	6211	1247	20.1	1587	25.6

FALLS

Figure 30 displays the trends in ED attendances and call outs for falls between April 2012 and March 2015. Both ED attendances and NWS call outs reduced between April 2012 and March 2015 (4.9% and 14.7% respectively).

Figure 30. NWS call outs and ED attendance trends for falls, April 2012 to March 2015



²³ There were 5,371 records where age and/or gender was not known, these have been omitted from the table.

Compared to ED attendances by older residents of Preston and Chorley LAs (35.9%), 74.1% of NWS call outs were for people aged 60 years and over. Overall and for people aged 60 years and over, the number of call outs for falls was highest in Blackpool UA. The LAs with the highest proportion of falls among older people were in Fylde, Wyre and South Ribble; this may indicate that older people comprise a greater proportion of the populations there, rather than facing a greater risk than older people in other areas.

Table 28. NWS call outs for high risk groups for falls by Local Authority, April 2012 to March 2015

Local Authority	Total ²⁴	People aged 60 years and over	
	n	n	%
Blackburn with Darwen	5747	3701	64.4
Blackpool	8782	5773	65.7
Burnley	3757	2750	73.2
Chorley	4237	3307	78.1
Fylde	4375	3683	84.2
Hyndburn	3715	2719	73.2
Lancaster	6950	5275	75.9
Pendle	3423	2565	74.9
Preston	5853	4002	68.4
Ribble Valley	2061	1617	78.5
Rosendale	2642	1941	73.5
South Ribble	4278	3457	80.8
West Lancashire	4589	3589	78.2
Wyre	5126	4195	81.8
Total	65535	48574	74.1

²⁴ There were 1,059 records where age and/or gender was not known, these have been omitted from the table.

RECOMMENDATIONS

Recommendations presented here are derived from evidence reported in the literature and information presented in this report, including Trauma and Injury Intelligence Group (TIIG) and North West Ambulance Service (NWAS) data. The recommendations have been presented in terms of data collection and quality, and prevention and intervention.

DATA COLLECTION AND QUALITY

ED data collection and sharing is generally excellent in Lancashire; frequent ED meetings and the multi-agency TIIG steering group are areas of particularly good practice. However there are several areas where data collection and quality may be improved.

- Currently only Lancashire Teaching Hospitals NHS Foundation Trust (Royal Preston and Chorley and South Ribble Hospitals) categorise falls. Consider mechanisms to enable the other EDs in Lancashire to further categorise unintentional injuries to include falls. This can be achieved through multi-agency meetings and dialogue, primarily between the TIIG team and EDs. A potential barrier may be the IT systems used by EDs, which may be overcome with cooperative action and by highlighting the importance of such data in informing prevention and intervention strategies.
- Consider similar mechanisms to enable Royal Blackburn Hospital and Southport and Ormskirk Hospital NHS Trust to record ethnicity. Improvements would also be welcomed in the recording of ethnicity at other EDs; of all injury data at EDs that do record ethnicity, 33.4% did not have a recorded ethnicity.
- Similarly consider mechanisms to enable Blackpool Victoria Hospital and Lancashire Teaching Hospitals NHS Foundation Trust to record referral source for all injury attendances; and to enable Lancashire Teaching Hospitals NHS Foundation Trust to record attendance type (whether first visit or follow up, planned or unplanned).
- Consider mechanisms to enable Blackpool Victoria Hospital to collect weapon details; as of April 2015 this data item became mandatory, as recommended by the ISTV and specified by the NHS standard contract. Discussion around this issue has been ongoing between the TIIG team, the ED and partners at Lancashire County Council.
- Consider mechanisms to improve the completion rates of ISTV and TIIG recommended data items at Southport and Ormskirk Hospital Trust. To achieve this, multi-agency meetings between the ED, the TIIG team and community partners will need to recommence.
- In terms of RTAs, consider mechanisms to enable the EDs in Lancashire to categorise further data items. For example, whether the attendee was in a vehicle or was a pedestrian and, if in a vehicle, whether the attendee was the driver or the passenger, and whether the attendee was wearing a seatbelt or not. Improving the location details of the specific roads or streets would also enable the identification of accident hotspot areas.

PREVENTION AND INTERVENTION

Reducing intentional and unintentional injuries is a key objective of Local Councils, Public Health professionals, service providers and Community Safety Teams. EDs can play a central and leading role, not only in providing rich and timely data but in providing objective and informed recommendations for targeted prevention measures and interventions.

- Consider work to further explore the relationship between deprivation and both intentional and unintentional injuries. Better understanding the cause of this association may inform current service provision and targeted education and awareness campaigns in areas with high incidents of particular injuries.

- Consider the potential for Local Authorities to use the overall rates for intentional and unintentional injuries to appraise current level of service provision and identify potential gaps. Findings may be used to inform needs assessment and commissioning decision making. Consider work in specific LSOAs within Local Authorities which have repeatedly high prevalence of particular injuries; for example DSH in Preston 001C.
- Consider work to explore the associations between habitation types (as determined by the rural/urban classification) and prevalence of given injuries. While different urban and rural areas may fall within the same Local Authority, they may require different and specific interventions based on the physical or urban geography. For example the nature of an RTA is likely to vary depending on whether the road is busy and urban or remote and rural.
- Consider mechanisms to target specific interventions and education to young males identified as being at elevated risk of suffering violence. Analyses indicate a higher proportion of assaults in this group occur during the night time economy; prevention mechanisms may seek to reduce binge drinking among this demographic. Higher proportions of young males are admitted to hospital and referred for follow-up treatment after an incident of violence when compared with other age and gender groups. This indicates that assaults among this group may lead to more serious injuries, but this also represents an opportunity for healthcare professionals, as extended contact with hospitals and other healthcare services may increase their opportunity to administer educational messages or interventions.
- Consider mechanisms to target specific interventions and education for young females identified as being at elevated risk of suffering DSH. Educational messages may include the promotion of mental health services; other promising approaches include problem-solving therapy, provision of emergency service contact information and long-term psychological therapy.
- Females aged 30 to 59 years were also highlighted as being at elevated risk of DSH and high proportions were referred by the emergency services and admitted to hospital following an incident of DSH. This may indicate the injuries suffered were more serious than other groups. Consider the potential to administer psycho-social assessments at triage for all DSH attendees and referring patients, where appropriate for psychiatric follow-up appointments. The National Institute for Health and Care Excellence (2013) also recommends that demographic risk factors may also be used to test and identify key psychological characteristics associated with elevated risk, in particular depression, hopelessness and continuing suicidal intent.
- Road traffic injuries have been neglected from the global health agenda for many years (WHO, 2015), despite being predictable and largely preventable. Evidence shows that dramatic successes in preventing RTAs can be achieved through concerted efforts that involve, but are not limited to, the health sector. Rich and timely data from EDs, analysed by TIIG and applied by community partners may be invaluable in monitoring prevalence and trends, and identifying those at the highest risk of suffering injuries as a consequence of RTAs. This information can then be used to inform the targeting and planning of appropriate interventions across a range of behavioural risk factors including speed, drink driving, mobile phone use, seat belt and helmet use and child restraints (WHO, 2015).
- Explore why, among older people, females were more likely to suffer injuries from falls when compared to males. A proportion of this discrepancy is likely to be due to the difference in life expectancy (i.e. females live longer than males on average and account for an increasing proportion of attendances with increasing age group). However, there may also be a disinclination among older males to engage with healthcare services, including EDs. Consider ways that TIIG data can feed into strategies to reduce the risk of falls for older people. Older adults who have a history of falls are significantly more likely to fall again (WHO, 2004); therefore patients attending EDs for falls can be referred to various follow-up treatments, such as strength and balance training, psychotropic medications and home hazard and safety interventions. In addition to older people who have previously fallen, individuals at elevated risk of falling are patients:

who suffer from neurological conditions or cognitive problems; who are visually impaired; who are recovering from infections; and, who have mobility issues or are suffering from bone or joint conditions such as arthritis (The Health Foundation, 2012). ED attendees, especially elderly patients, suffering from any of the above conditions may be appropriate for specific follow-up treatments

It is understood that EDs are demanding places of work, that staff are frequently operating at and above capacity and that recording information at reception takes valuable time. However, the implementation of these recommendations would be likely to initiate substantial positive change by preventing and reducing intentional and unintentional injuries.

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Appendix 1. ED attendances by injury group and referral source for Lancashire residents, April 2012 to March 2015

	Assault	Deliberate self-harm	Falls	Firework injuries	Other injury	Road traffic accidents	Sports injuries	Total
Educational establishment	15	<10	0	0	1190	***	222	1439
Emergency services	2781	1060	0	12	104641	2858	549	111901
GP	35	<20	0	***	7541	84	101	7776
Other	376	164	0	***	23937	624	1878	26981
Other health care provider	121	40	0	0	16632	174	<270	17233
Police	169	113	0	***	713	<30	***	1025
Self-referral	5357	1084	0	52	221181	9706	15948	253328
Unknown	6861	1141	51761	32	102644	12318	15642	190399
Total	15715	3625	51761	100	478479	25792	34610	610082

Appendix 2. ED attendances by injury group and arrival mode for Lancashire residents, April 2012 to March 2015

	Assault	Deliberate self-harm	Falls	Firework injuries	Other injury	Road traffic accidents	Sports injuries	Total
Ambulance	3556	1341	10527	8	92963	4765	985	114145
By foot	755	<165	623	***	25826	1594	4049	33009
Unknown	4889	1075	13609	34	129037	6856	8628	164128
Other	531	<250	130	***	15052	825	1740	18525
Police	204	29	51	0	128	22	5	439
Private transport	4763	616	22624	49	197604	10529	17719	253904
Public transport	309	<85	1415	***	9380	312	524	12024
Taxi	708	<80	2782	***	8489	889	960	13908
Total	15715	3625	51761	100	478479	25792	34610	610082

Appendix 3. ED attendances by injury group and disposal method for Lancashire residents, April 2012 to March 2015

	Assault	Deliberate self-harm	Falls	Firework injuries	Other injury	Road traffic accidents	Sports injuries	Total
Admitted	1217	1017	6489	6	72026	1184	630	82569
Died	***	***	15	0	121	13	0	153
Discharged	8419	<1290	29199	<70	233318	17665	20024	309976
Follow-up	4179	722	14073	24	139099	5724	12699	176520
Not stated	<245	<90	941	0	6001	377	651	8297
Other	1660	<515	1044	***	27914	829	606	32567
Total	15715	3625	51761	100	478479	25792	34610	610082

Appendix 4. Number of assault attendances and rates per 100,000 population for higher risk groups by Local Authority, April 2012 to March 2015

Local Authority	Males aged 15 to 29			Males aged 30 to 59		
	n	Population	Rate	n	Population	Rate
Blackburn with Darwen	805	14885	5408	599	28905	2072
Blackpool	907	12910	7026	799	27637	2891
Burnley	521	8270	6300	350	16927	2068
Chorley	420	9465	4438	308	22864	1347
Fylde	180	5498	3274	104	14719	707
Hyndburn	372	7554	4925	263	15602	1686
Lancaster	325	16780	1937	234	25177	929
Pendle	355	8421	4216	259	17375	1491
Preston	990	17464	5669	695	26606	2612
Ribble Valley	116	4469	2596	75	11470	654
Rosendale	141	5984	2356	94	14159	664
South Ribble	443	9413	4707	248	21865	1134
West Lancashire	234	10660	2195	125	20983	596
Wyre	301	8499	3542	143	19891	719
Total	6110	140272	4356	4296	284180	1512

Appendix 5. Number of DSH attendances and rates per 100,000 population for higher risk groups by Local Authority, April 2012 to March 2015

Local Authority	Females aged 15 to 29			Females aged 30 to 59		
	n	Population	Rate	n	Population	Rate
Blackburn with Darwen	56	14885	376	67	28905	232
Blackpool	187	12910	1448	170	27637	615
Burnley	52	8270	629	38	16927	225
Chorley	35	9465	370	22	22864	96
Fylde	39	5498	709	31	14719	211
Hyndburn	44	7554	582	25	15602	160
Lancaster	109	16780	650	92	25177	365
Pendle	42	8421	499	44	17375	253
Preston	192	17464	1099	93	26606	350
Ribble Valley	28	4469	627	13	11470	113
Rosendale	17	5984	284	19	14159	134
South Ribble	44	9413	467	31	21865	142
West Lancashire	170	10660	1595	221	20983	1053
Wyre	63	8499	741	31	19891	156
Total	1078	140272	769	897	284180	316

Appendix 6. Number of RTA attendances and rates per 100,000 population for higher risk groups by Local Authority, April 2012 to March 2015

Local Authority	Males aged 15 to 29			Males aged 30 to 59		
	n	Population	Rate	n	Population	Rate
Blackburn with Darwen	728	14885	4891	840	28905	2906
Blackpool	384	12910	2974	449	27637	1625
Burnley	402	8270	4861	508	16927	3001
Chorley	542	9465	5727	640	22864	2799
Fylde	146	5498	2656	174	14719	1182
Hyndburn	256	7554	3389	229	15602	1468
Lancaster	505	16780	3010	555	25177	2204
Pendle	470	8421	5581	499	17375	2872
Preston	904	17464	5177	1072	26606	4029
Ribble Valley	144	4469	3223	154	11470	1343
Rossendale	125	5984	2089	118	14159	833
South Ribble	477	9413	5068	577	21865	2639
West Lancashire	190	10660	1782	167	20983	796
Wyre	280	8499	3295	267	19891	1342
Total	5553	140272	3959	6249	284180	2199

