

Merseyside & Cheshire Local Authority Profile Wirral

Injuries in Older People
April 2012 to March 2015

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Key findings

- Between April 2012 and March 2015 there were 101,873 injury attendances made by Wirral residents to Emergency Departments (EDs) across Merseyside and Cheshire; of which 18,942 (19%) were made by people aged 65 years and over. This represents 19% of total injury attendances to EDs while representing 20% of the total population.
- Of attendees aged 65 years or over, 65% were female and 35% were male.
- Across all EDs combined, 75% of attendances were classified as falls, 18% as other, 4% as assaults and 2% as road traffic collisions.
- Females were more likely than males to attend an ED for falls (78% of total injuries compared to 71%). People aged 85 years and over were also more likely to attend an ED for falls compared to people aged 65 to 74 and 75 to 84 (84% compared to 64% and 77% respectively).
- The time of day with the most attendances was between 10:00 and 11:59 (16%); the busiest day of the week was Monday (15% of attendances); and, the month with the highest average daily attendances was July (57 per day).
- People aged 65 years and over were more likely to arrive at the EDs by ambulance, be referred to an ED by the emergency services and be admitted into hospital than the average for all age groups combined. Older people were also more likely than other age groups to report their home as the injury location.
- Rates of injury attendances were not found to strongly correlate with deprivation.
- Rates of falls were correlated with deprivation but inconsistent categorisation of falls between EDs prevented more robust analyses.

Older people in Wirral

Wirral is a metropolitan borough in Merseyside, in the North West of England. According to the mid-2013 census, Wirral has a population of 320,295, of which 64,634 are people aged 65 years and over (ONS, 2015). Of people aged 65 years and over, 56% (36,259) are female and 44% (28,375) are male, compared to all age groups combined where 52% (166,048) are female and 48% (154,247) are male. People aged 65 and over in Wirral represent 20% of the total population which is higher than the average for Cheshire and Merseyside (19%), the North West region (18%) and England (17%). The number of people aged 65 years and over is increasing in Wirral and the UK generally. Owing to the post-war baby boom of 1946/47, the number of people who reached state retirement age in 2012 increased by 169,000 to 726,069 and the number of people turning or aged 65 is expected to continue increasing steadily (ONS, 2015).

Among older people, there are inequalities in life expectancy and general health, and it is often the poorest older adults who suffer the greatest disadvantage. Wirral has an average level of deprivation; the Index of Multiple Deprivation (IMD) ranks Wirral as the 103rd most deprived in England (ONS, 2010).

Longer life expectancies do not always correlate with healthy life expectancy and it is important to understand the needs and risks for older people to ensure their later years of life are healthy and happy. A key aim of health and social care providers is to invest in local prevention services which offer advice, support and interventions which help healthy older people to live long and independent lives and help injured or unwell older people to regain independence and prevent or delay the onset of further health problems or injuries (DoH, 2009).

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). Wirral which has a population of over 300,000, will have approximately 16,800 falls among older people each year; approximately 2,400 of those will attend an ED and 1,200 will sustain a fracture, of which just under one third will be a fracture of the hip (DoH, 2009).

This Trauma and Injury Intelligence Group (TIIG) Local Authority Profile presents injuries suffered by older people in Wirral using ED recorded data between April 2012 and March 2015. In the context of this report, older people are categorised as people aged 65 years and older, as agreed with local partners. This report will contextualise ED data by providing an overview of the population, highlighting who is at increased risk of injury and describing the specific level of need in Wirral. This report also provides 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 enabling older people to live happy, healthy and independent lives.

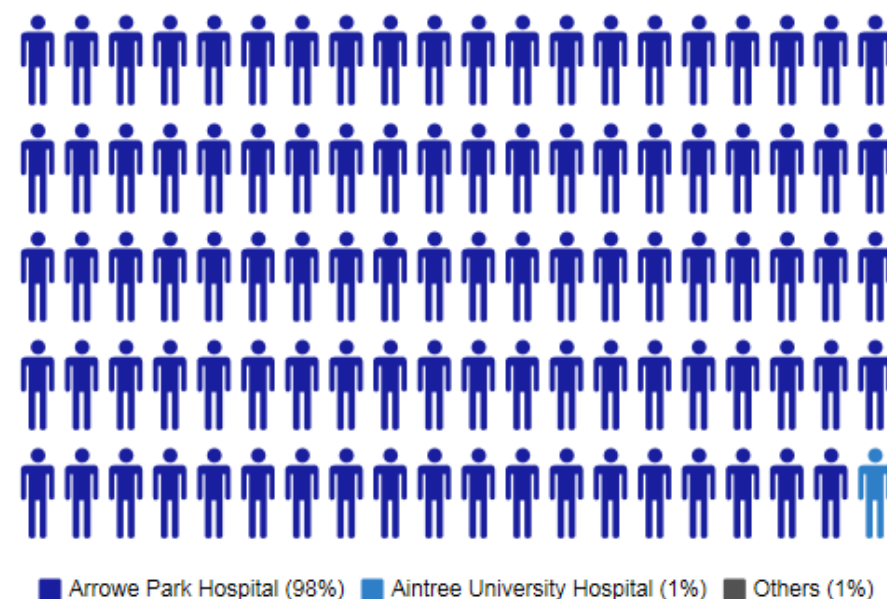
Injuries across Wirral, April 2012 to March 2015

For all age groups, between April 2012 and March 2015 there were 101,873 injury attendances made by Wirral residents to Emergency Departments (EDs) across Merseyside and Cheshire; 18,942 of these were made by people aged 65 years and over. Attendances by people aged 65 years and over accounted for 19% of total injury attendances to EDs while representing 20% of the total population of Wirral. Of those, 18,658 (99%) attended Arrowe Park Hospital ED and 1% (156) attended Aintree University Hospital ED. There were 128 (1%) combined attendances to Countess of Chester Hospital ED, Whiston Hospital ED, Warrington Hospital ED, Southport District General Hospital ED, Leighton Hospital ED, Macclesfield District General Hospital ED and Royal Liverpool Hospital ED.

Table 1. All injury attendances by people aged 65 years and over by Local Authority

Local Authority	2012/13	2013/14	2014/15	Total
Halton	3014	2896	2333	8243
Warrington	2583	3042	2434	8059
Cheshire East	6497	6652	6678	19827
Cheshire West	4662	4707	4329	13698
Knowsley	6540	5317	5042	16899
Liverpool	13970	13019	12906	39895
Sefton	14907	12755	13400	41062
St Helens	4679	3753	3210	11642
Wirral	6111	6293	6538	18942
Total	62963	58434	56870	178267

Figure 1. Attendances by people aged 65 years and over by Emergency Department



In terms of gender, 65% (12,233) of attendees aged 65 years and over were female, 35% (6,709) were male. Of people aged 65 years or over, 5,981 (32%) were aged between 65 and 74 years, 6,838 (36%) were aged between 75 and 84 years, and 6,123 (32%) were aged 85 years or over. Information relating to ethnicity cannot be provided,¹ since 99% of attendances were to Arrowe Park Hospital ED where ethnicity is not recorded. Table 2 displays injury attendances of Wirral residents by financial year and injury group;² injuries overall increased by 7% over this three year period.

Table 2. Injury attendances by Wirral residents aged 65 years and over by financial year and injury group

Injury group	2012/13	2013/14	2014/15	Total	% ³
Assault	258	251	248	757	4
Burns and scalds	28	33	24	85	0
Deliberate self-harm ⁴	24	13	15	52	0
Falls	4627	4814	4800	14241	75
Other ⁵	1043	1027	1293	3363	18
Road traffic collision	113	133	152	398	2
Sports injury	18	22	6	46	0
Total	6111	6293	6538	18942	100

¹ University Hospital Aintree, Arrowe Park Hospital, Southport District General Hospital and Warrington Hospital do not collect data on ethnicity. Unknown ethnicities from EDs who do collect this information have been included.

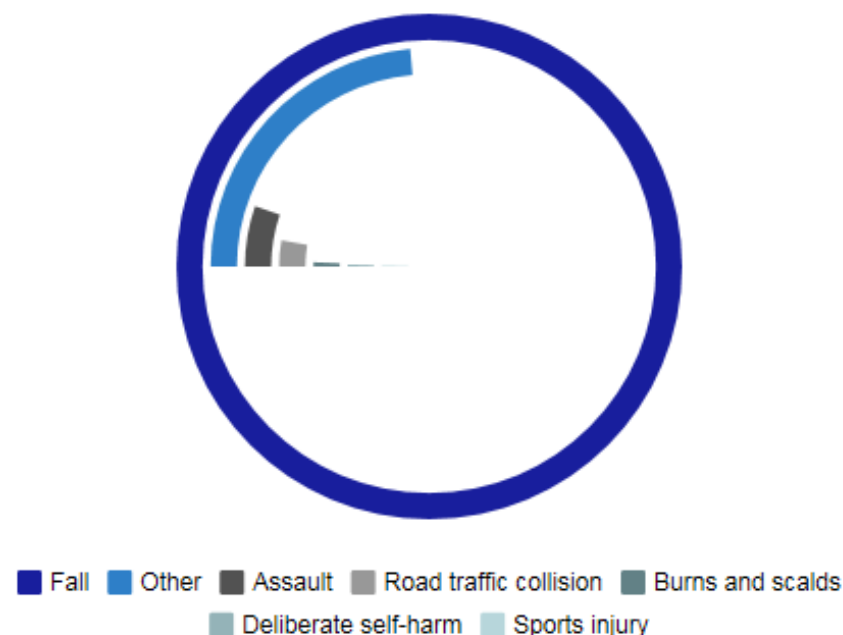
² Countess of Chester Hospital, Leighton Hospital, Macclesfield District General Hospital, Southport District General Hospital and Warrington Hospital do not categorise falls; these EDs accounted for 101 records.

³ Due to rounding percentages may not add up to 100.

⁴ Deliberate self-harm includes less than five records of overdose.

⁵ Other injury includes 16 records of firework injuries, less than five unknown injuries and 77 records of injuries from ingestion.

Figure 2. Injury groups for people aged 65 years and over



“In Wirral, the majority of patients aged 65 and over attending A&E do so after sustaining a fall.”

Table 3, displaying injury attendances by age group and gender, shows that females were more likely to present to an ED for falls and assaults, while males were more likely to present to an ED for road traffic collisions and sports injuries.

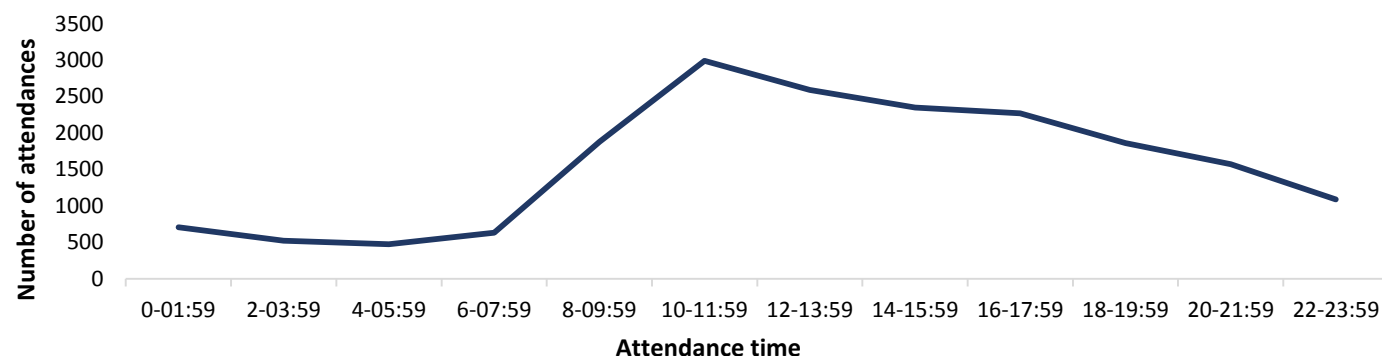
Table 3. Injury attendances by Wirral residents aged 65 years and over by injury group, age group and gender⁶

Age Gender Injury group	65-74				75-84				85+			
	Male		Female		Male		Female		Male		Female	
	N	% ⁴	N	% ⁴	N	%	N	% ⁴	N	%	N	% ⁴
Assault	179	7	222	7	105	4	139	3	30	2	82	2
Burns and scalds	10	0	29	1	<15	0	17	0	***	0	15	0
Deliberate self-harm	17	1	16	0	9	0	<10	0	***	0	***	0
Falls	1548	59	2290	68	1823	75	3441	78	1363	83	3776	84
Other ⁶	740	28	691	21	422	17	717	16	207	13	586	13
Road traffic collision	114	4	84	3	66	3	76	2	33	2	25	1
Sports injury	26	1	15	0	***	0	***	0	0	0	***	0
Total	2634	100	3347	100	2439	100	4399	100	1636	100	4487	100

Time, day and month of attendance

Figure 3 displays attendances by people aged 65 years or over by time group. Where time groups were recorded (18,931), attendances peaked between 10:00 and 11:59 (2,991; 16%); attendances were lowest between 4:00 and 5:59 (472; 2%).

Figure 3. Injury attendances by Wirral residents aged 65 years and over by time group



⁶ Numbers less than five have been suppressed (***) in line with patient confidentiality. If there is only one number less than five in a category then two numbers will be suppressed at the next level to prevent back calculations from totals.

Monday had the most attendances overall for people aged 65 and over for all EDs combined with 15% (2,831) of total attendances; Sunday had the fewest attendances for EDs combined with 14% (2,607) of total attendances. July had the highest rate of attendances with an average of 57 attendances per day (1,755 in total), while January and October had the lowest rate with an average of 48 attendances per day (1,486 and 1,475 in total).

Arrival, referral and disposal

Table 4 displays the arrival mode to EDs for people aged 65 years and over compared to all age groups combined and shows that a higher proportion of attendees aged 65 years and over arrived at EDs by ambulance compared to all age groups combined.

Table 4. Arrival mode by Wirral residents aged 65 years and over compared to all age groups combined⁶

Arrival mode	People aged 65 and over		All age groups combined	
	N	%	N	%
Ambulance	10410	55	21504	21
Foot	38	0	769	1
Other	109	1	1462	1
Police	47	0	971	1
Private transport	8108	43	75377	74
Public transport	228	1	1720	2
Taxi	***	0	61	0
Unknown	***	0	9	0
Total	18942	100	101873	100

Table 5 displays the referral source to EDs for people aged 65 years and over compared to all age groups combined which shows that a higher proportion of attendees aged 65 years and over were referred by emergency services, and a lower proportion self-referred compared to all age groups combined.

Table 5. Referral source for Wirral residents aged 65 years and over compared to all age groups combined⁶

Referral source	People aged 65 and over		All age groups combined	
	N	% ⁴	N	% ⁴
Carer	0	0	2	0
Educational establishment	***	0	340	0
Emergency services	1258	7	2579	3
Friend/relative	***	0	229	0
GP	139	1	497	0
Health professional	492	3	1777	2
Other ⁷	703	4	4072	4
Police	20	0	556	1
Self-referral	16324	86	91552	90
Work	0	0	269	0
Total	18942	100	101873	100

Table 6 displays the disposal method for Wirral residents aged 65 years and over by injury group and shows that those patients who had self-harmed were more likely to be admitted into hospital than any other injury group. A

lower than average proportion of attendees aged 65 years or over were admitted after being assaulted (7% respectively). For all injury groups, compared to all age groups combined, a substantially higher proportion of attendances for people aged 65 years and over were admitted to hospital (35% compared to 12%) and a lower proportion were discharged with no follow up treatment required (29% compared to 52%).

Table 6. Disposal of Wirral residents aged 65 years and over by injury group⁶

Injury group		Admitted	Discharged	Other	Referred	Total
Assault	N	50	385	25	297	757
	%	7	51	3	39	100
Burns and scalds	N	19	24	<10	<40	85
	%	22	28	6	44	100
Deliberate self-harm	N	32	10	***	<10	52
	%	62	19	6	13	100
Falls	N	5810	3619	455	4357	14241
	%	41	25	3	31	100
Other	N	683	1181	127	1372	3363
	%	20	35	4	41	100
Road traffic collision	N	104	195	15	84	398
	%	26	49	4	21	100
Sports injury	N	9	15	0	22	46
	%	20	33	0	48	100
Total	N	6707	5429	630	6176	18942
	%	35	29	3	33	100

Location of injury

Table 7 displays incident location by injury group for people aged 65 years and over which shows that a substantially higher proportion of injuries among older people in Wirral occurred at home compared to all age groups combined.

⁷ For people aged 65 years and over, 'Other' includes less than five records referred from social services and unknown sources.

Table 7. Incident location for Wirral residents aged 65 years and over compared to all age groups combined^{6, 8}

Location	People aged 65 and over		All age groups combined	
	N	% ⁴	N	%
Educational establishment	***	0	4639	5
Home	10810	57	31268	31
Other	2396	13	26120	26
Public place	5646	30	35631	35
Unknown	<25	0	199	0
Work	43	0	3612	4
Total	18916	100	101469	100

LSOA breakdown

Table 8 displays the number and rate of attendances for the top ten Lower Super Output Areas (LSOAs) for people aged 65 years and over.

Table 8. Top ten LSOAs in terms of all injury attendance rates per 100 population for Wirral residents aged 65 years and over

LSOA		65 and over population	Total attendances	Rate of attendances per 100 population
Name	Code			
Wirral 011D	E01007123	138	130	94.2
Wirral 020A	E01007155	354	318	89.8
Wirral 002E	E01007236	243	187	77.0
Wirral 019D	E01007300	285	191	67.0
Wirral 020C	E01007240	333	187	56.2
Wirral 005E	E01007275	198	108	54.5
Wirral 012D	E01007227	276	146	52.9
Wirral 029C	E01007176	246	129	52.4
Wirral 027B	E01007290	279	144	51.6
Wirral 020B	E01007160	313	156	49.8

⁸ Whiston Hospital does not record incident location and all records from this ED have been omitted.

Figure 4 displays the rate of all injury attendances per 100 population by Wirral residents aged 65 years and over. As displayed, the majority of LSOAs with the highest rates of attendance are clustered in the east of the Local Authority.

Figure 4. All injury attendance rates per 100 population for Wirral residents aged 65 years and over, April 2012 to March 2015

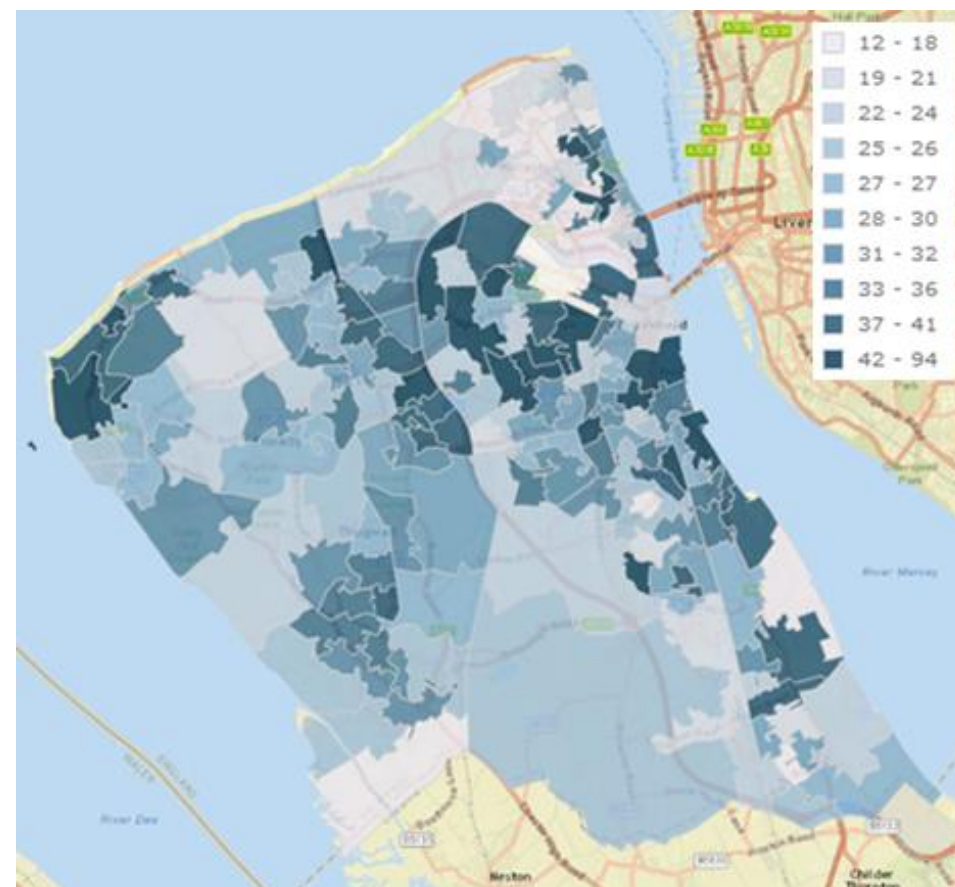
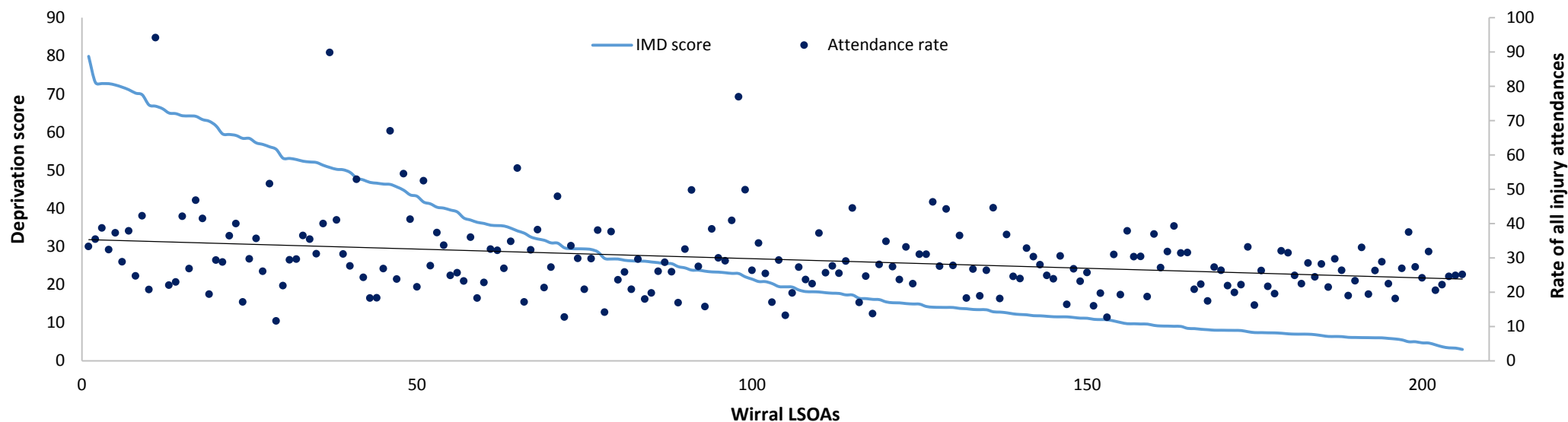


Figure 5 displays all injury attendance rates per 100 population for Wirral residents aged 65 years and over, with a linear trend line, plotted against deprivation scores, where higher scores represent higher levels of deprivation, for each LSOA. As shown, attendance rates decreased slightly with decreasing level of deprivation but the effect was not as pronounced as other LAs.

Figure 5. All injury attendance rates per 100 population for Wirral residents aged 65 years and over for each LSOA by deprivation score, April 2012 to March 2015



Falls

Falls accounted for 75% (14,241) of all injury attendances for people aged 65 years and over in Wirral. This number is substantially higher than other LAs but is likely to be a reliable indicator of the prevalence of falls among people aged 65 years and over. Arrowe Park Hospital ED accurately classifies falls (76% of all injuries), as opposed to other EDs in Merseyside and Cheshire which classify falls as other injuries or other accidents.

“Among older people, there are inequalities in life expectancy and general health, and it is often the poorest older adults who suffer the greatest disadvantage.”

Table 9 displays the number and rate of attendances for the top ten Lower Super Output Areas (LSOAs) for people aged 65 years and over.

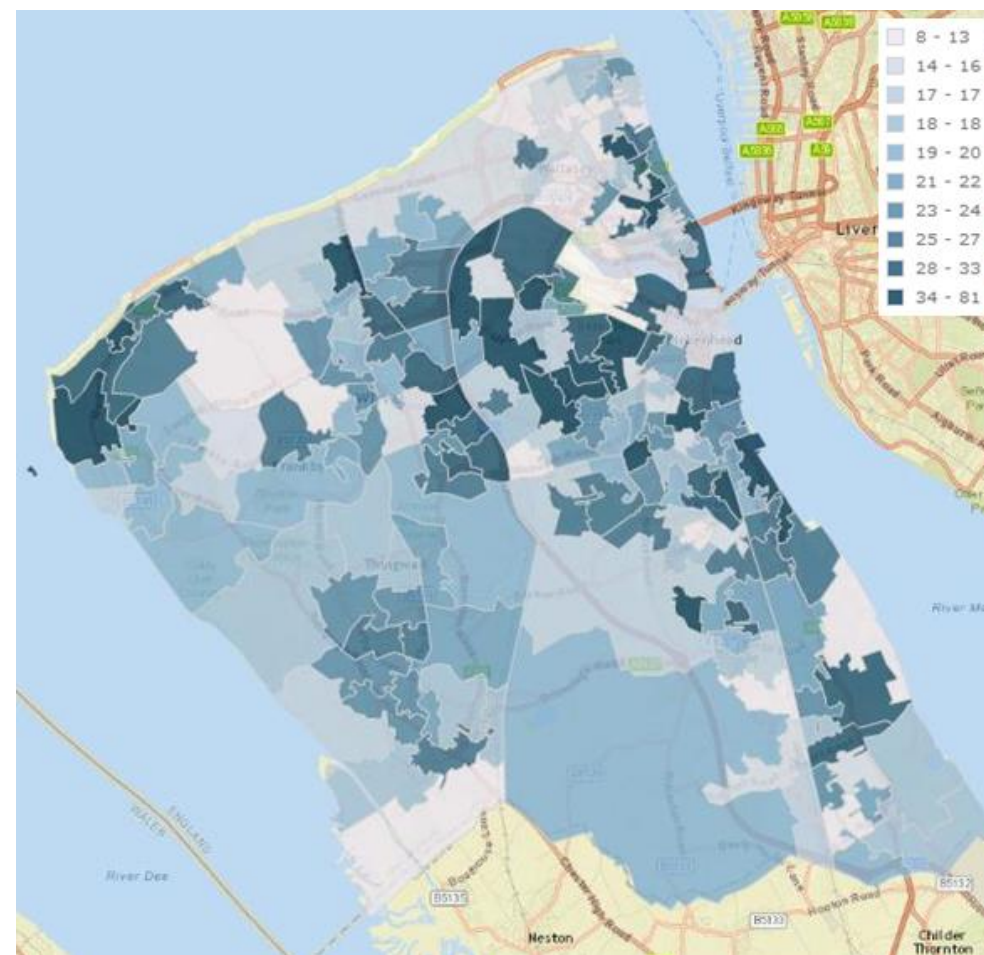
Table 9. Top ten LSOAs in terms of fall attendance rates per 100 population for Wirral residents aged 65 years and over

LSOA Name	LSOA Code	65 and over population	Total fall attendances	Rate of fall attendances per 100 population
Wirral 011D	E01007123	138	112	81
Wirral 020A	E01007155	354	265	75
Wirral 002E	E01007236	243	164	67
Wirral 019D	E01007300	285	149	52
Wirral 005E	E01007275	198	99	50
Wirral 020C	E01007240	333	152	46
Wirral 012D	E01007227	276	122	44
Wirral 029C	E01007176	246	106	43
Wirral 022B	E01007181	215	90	42
Wirral 027B	E01007290	279	116	42

Figure 6 displays the rate of fall attendances per 100 population by Wirral residents aged 65 years and over. As displayed the majority of LSOAs with the highest rates of attendance are clustered in the east of the Local Authority.

“A high proportion of injuries for people aged 65 years and over occur in the home; community interventions may consider preventative action to make homes safer.”

Figure 6. Fall attendance rates per 100 population for Wirral residents aged 65 years and over, April 2012 to March 2015



Recommendations

- Despite comprising a small percentage of attendances, consider mechanisms to improve the categorisation of falls at Aintree Hospital ED and to include the incident location data item to the IT system at Whiston Hospital ED. This can be achieved through multi-agency working and meetings between the TIIG team, stakeholders and EDs.
- Conduct further analyses to understand the disproportionate gender split in terms of injury attendances. Community partners and preventative interventions could be improved by ascertaining whether the higher number of females presenting to EDs is due to higher incidence of injuries or unwillingness by males to seek medical services when injuries occur.
- Conduct further analyses to understand why a relatively high proportion of attendees aged 65 years and over were referred to EDs by emergency services and a relatively lower proportion were referred by friends or relatives compared to all age groups combined. Such a trend could imply that older people are sustaining more serious injuries or that older people do not have the support networks available to younger people. If older people are lacking support, explore mechanisms to improve outreach and support services for older people.
- Explore why older people presenting for deliberate self-harm were admitted and referred for further treatment less than other injury groups. Deliberate self-harm has high rates of repeat attendances and is a high risk factor for suicide. Consider evaluating the process of how self-harm is dealt with among older people within EDs; for example consider giving psycho-social assessments for all patients presenting for self-harm and offering psychiatric follow-up appointments where appropriate.
- 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 or preventative interventions. In addition to medical treatment for injuries, patients may also require: mental health assessments to identify feelings of social isolation or depression; rehabilitation or counselling to reduce the fear of falling again; regular eye tests to maximize vision; and, enrolment on exercise programs to increase leg strength and improve balance.

- 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.
- Consider the high proportion of injuries for people aged 65 years and over that occur in the home. Community interventions may seek to make homes safer in a number of ways, including reducing tripping hazards, adding grab bars or railings at strategic points, and improving lighting within the home.
- Explore why rates of attendance for people aged 65 years and over are highest in the LSOA in the north of the Local Authority. Such exploration may include a further analysis of the relationship between deprivation and injury, and an assessment of extrinsic factors, or dangerous environments, which may include busy roads, hazards for pedestrians or risk factors in or around people's homes.

These recommendations are unlikely to be achieved without sustained working between cooperating agencies. However their implementation would be likely to initiate substantial positive change by preventing and reducing unintentional and intentional injuries among older populations in Wirral.

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