

Merseyside & Cheshire Local Authority Profile Warrington

Injuries in Older People
April 2012 to March 2015

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Key findings

- Between April 2012 and March 2015 there were 53,553 injury attendances made by Warrington residents to Emergency Departments (EDs) across Merseyside and Cheshire; of which 8,059 (15%) were made by people aged 65 years and over. People aged 65 and over represent 15% of total injury attendances to EDs while representing 17% of the total population.
- Of attendees aged 65 years or over, 63% were female and 37% were male; where ethnicity was known, 68% of attendees were white.
- Across all EDs combined, 95% of attendances were classified as other injuries, 1% were falls, 2% were road traffic collisions and 1% were assaults and deliberate self-harm, while less than one percent were for burns and scalds and sports injuries.
- Females were equally as likely as males to attend an ED for falls. People aged 75 to 84 years were also more likely to attend an ED for falls compared to people aged 65 to 74 years and people aged 85 years and over (36% compared to 35% and 28% respectively).
- The time of day with the most attendances was between 10:00 and 11:00 (15%); the busiest day of the week was Monday (17% of attendances); and, the month with the highest average daily attendances was July (27 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 found to correlate with deprivation, with increasing attendances found to be associated with increasing levels of deprivation.
- Rates of falls were also correlated with deprivation but inconsistent categorisation of falls between EDs prevented more robust analyses.

Older people in Warrington

Warrington is a metropolitan borough in Cheshire, in the North West of England. According to the mid-2013 census, Warrington has a population of 205,109, of which 35,064 are people aged 65 years and over (ONS, 2015). Of people aged 65 years and over, 55% (19,305) are female and 45% (15,759) are male, compared to all age groups combined where 50% (103,387) are female and 50% (101,722) are male. People aged 65 and over in Warrington represent 17% of the total population which is less than the average for Cheshire and Merseyside (19%), the North West region (18%) and England (17%). Despite having a lower proportion than other areas, the number of people aged 65 years and over is increasing in Warrington 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. Warrington is one of the least deprived Local Authorities (LAs) in England and the Index of Multiple Deprivation (IMD) ranks the Borough as the 83rd most deprived in the North West and the 182nd 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). Warrington which has a population of just over 200,000, will have approximately 11,200 falls among older people each year; approximately 1,600 of those will attend an ED and 800 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 Warrington 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 Warrington. 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 Warrington, April 2012 to March 2015

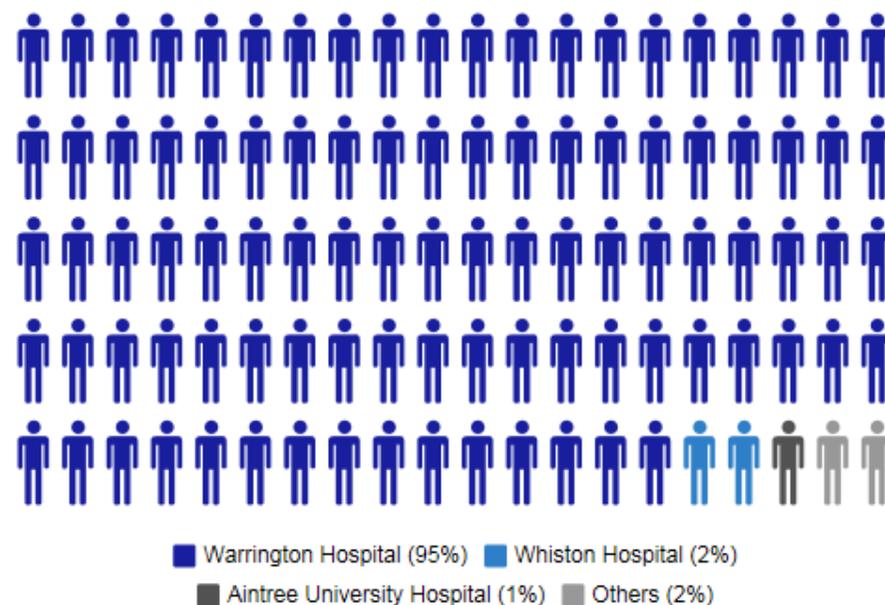
For all age groups, between April 2012 and March 2015 there were 53,553 injury attendances made by Warrington residents to Emergency Departments (EDs) across Merseyside and Cheshire; 8,059 of these were made by people aged 65 years and over. Attendances by people aged 65 years and over accounted for 15% of total injury attendances to EDs, while representing 17% of the total population of Warrington. Of those, 7,624 (95%) attended Warrington Hospital ED, 192 (2%) attended Whiston Hospital ED and 104 (1%) attended the Aintree University Hospital ED. There were 139 (2%) combined attendances to Arrowse Park Hospital ED, Countess of Chester Hospital ED,

Leighton Hospital ED, Macclesfield District General Hospital ED, Royal Liverpool University ED and Southport District General 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, 63% (5,116) of attendees aged 65 years and over were female, 37% (2,943) were male. Of people aged 65 years or over, 2,881 (36%) were aged between 65 and 74 years, 2,887 (36%) were aged between 75 and 84 years, and 2,291 (28%) were aged 85 years or over. In terms of ethnicity,¹ 219 (3%) of injury attendees from Warrington were White, 93 (1%) were unknown, six (0%) were Black and there were less than five combined attendances by patients of Chinese, Mixed and other ethnic groups. Table 2 displays injury attendances of Warrington residents by financial year and injury group;² injuries overall decreased by 7% over this three year period.³

Table 2. Injury attendances by Warrington residents aged 65 years and over by financial year and injury group⁴

Injury group	2012/13	2013/14	2014/15	Total	% ⁵
Assault	16	18	8	42	1
Burns and scalds	***	***	5	12	0
Deliberate self-harm	<20	16	<15	42	1
Falls	20	30	66	116	1
Other ⁶	2450	2915	2281	7646	95
Road traffic collision	64	55	59	178	2
Sports injury	13	<10	<10	23	0
Total	2583	3042	2434	8059	100

¹ University Hospital Aintree, Arrowe Park Hospital, Southport District General Hospital and Warrington Hospital do not collect data on ethnicity which accounted for 96% of records. Unknown ethnicities from EDs who do collect this information have been included.

² Warrington Hospital, Countess of Chester Hospital, Leighton Hospital, Macclesfield District General Hospital and Southport District General Hospital do not categorise falls; these EDs accounted for 7,673 records.

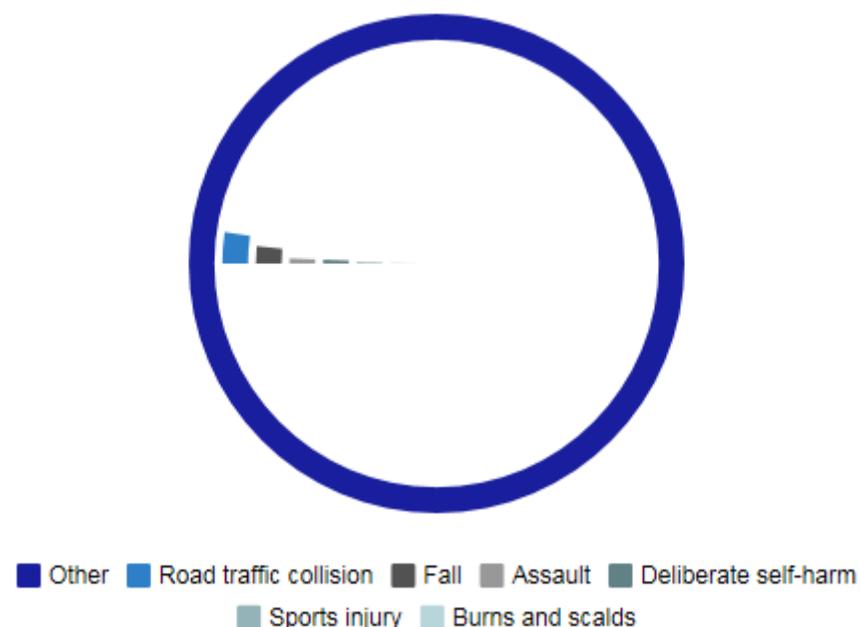
³ While falls have increased by 330% over three years, it is likely that the categorisation of falls has varied over time and between EDs and that a proportion of other injuries include a substantial number of falls.

⁴ 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 to prevent back calculations from totals.

⁵ Due to rounding percentages may not add up to 100.

⁶ Other injury includes 6 records of firework injuries, less than five records for each unknown injuries, injuries from ingestion and bites and stings injuries.

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



“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 3, displaying injury attendances by age group and gender, shows that females were more likely to present to an ED for falls compared to males, while males were more likely to attend an ED for assault injuries, except for people aged 85 years and over.

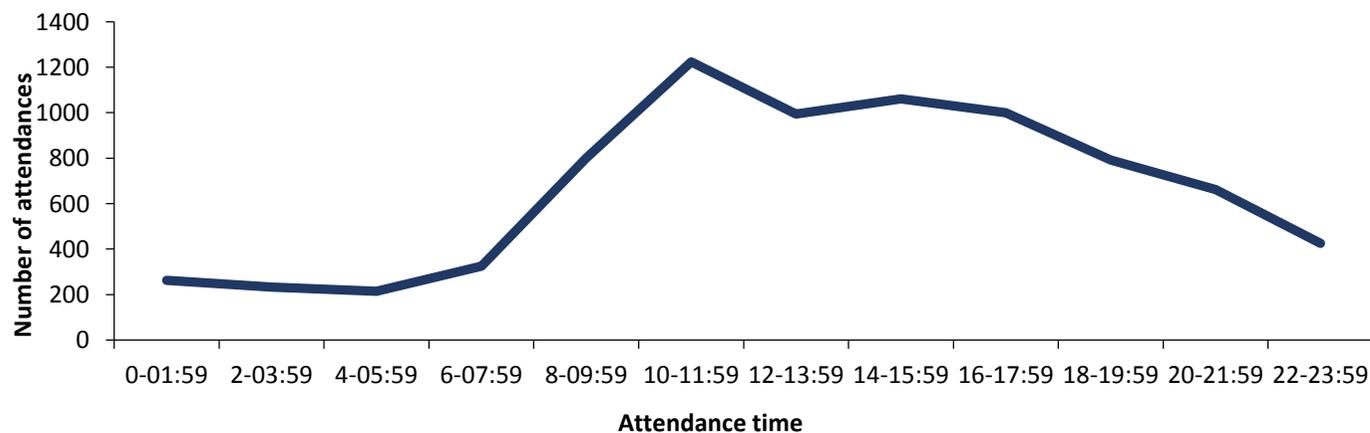
Table 3. Injury attendances by Warrington residents aged 65 years and over by injury group, age group and gender⁴

Age Gender Injury group	65-74				75-84				85+			
	Male		Female		Male		Female		Male		Female	
	N	% ⁵	N	% ⁵	N	% ⁵						
Assault	11	1	8	0	7	1	***	0	***	0	10	1
Burns and scalds	***	0	5	0	***	0	***	0	0	0	***	0
Deliberate self-harm	10	1	12	1	6	1	<10	0	***	0	7	0
Falls	13	1	28	2	19	2	23	1	8	1	25	1
Other ⁶	1125	92	1550	93	1039	94	1718	96	604	97	1610	96
Road traffic collision	54	4	52	3	28	3	29	2	***	1	<15	1
Sports injury	<10	0	6	0	***	0	***	0	***	0	<10	0
Total	1220	100	1661	100	1102	100	1785	100	621	100	1670	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 (1,224), attendances peaked between 10:00 and 11:59 (1,224; 15%); attendances were lowest between 04:00 and 05:59 (214; 3%).

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



Monday had the most attendances overall for people aged 65 and over for all EDs combined with 17% (1,392) of total attendances; Sunday had the fewest attendances for EDs combined with 12% (952) of total attendances. July had the highest rate of attendances with an average of 27 attendances per day (851 in total), while October had the lowest rate with an average of 16 attendances per day (489 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 Warrington residents aged 65 years and over compared to all age groups combined⁴

Arrival mode	People aged 65 and over		All age groups combined	
	N	%	N	% ⁵
Ambulance	4175	52	9694	18
Foot	24	0	262	0
Other	3731	46	41653	78
Police	0	0	19	0
Private transport	124	2	1810	3
Public transport	***	0	49	0
Taxi	***	0	26	0
Unknown	0	0	40	0
Total	8059	100	53553	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 were self-referred compared to all age groups combined.

Table 5. Referral source for Warrington residents aged 65 years and over compared to all age groups combined⁴

Referral source	People aged 65 and over		All age groups combined	
	N	% ⁵	N	%
Carer	11	0	12	0
Educational establishment	***	0	112	0
Emergency services	819	10	1736	3
Friend/relative	13	0	225	0
GP	88	1	385	1
Health professional	171	2	871	2
Other ⁷	113	1	852	2
Police	***	0	111	0
Self-referral	6841	85	49068	92
Work	***	0	181	0
Total	8059	100	53553	100

Table 6 displays the disposal method for Warrington residents aged 65 years and over by injury group and shows that approximately half of all attendances

⁷ For people aged 65 years and over, 'Other' includes less than five records referred from social services. For all ages combined 'Other' includes 9 records from unknown sources and less than five records from NHS direct and social services.

resulted in an admission to hospital for people aged 65 years and over, with the exception of attendances for road traffic collisions, where approximately half of all attendees were referred for further treatment. A larger than average proportion of attendees aged 65 years or over were admitted for deliberate self-harm (88%). 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 (43% compared to 14%) and a lower proportion were discharged with no follow up treatment required (20% compared to 32%).

Table 6. Disposal of Warrington residents aged 65 years and over by injury group⁴

Injury group		Admitted	Discharged	Other	Referred	Total
Assault	N	17	10	0	15	42
	%	40	24	0	36	100
Burns and scalds	N	<10	***	0	***	12
	%	75	8	0	17	100
Deliberate self-harm	N	37	0	***	***	42
	%	88	0	2	10	100
Falls	N	74	28	***	<15	116
	%	64	24	1	11	100
Other ⁶	N	3281	1482	121	2750	7634
	%	43	19	2	36	100
Road traffic collision	N	35	60	6	77	178
	%	20	34	3	43	100
Sports injury	N	***	***	0	***	8
	%	25	38	0	38	100
Total	N	3468	1592	130	2869	8059
	%	43	20	2	36	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 Warrington occurred at home compared to all age groups combined.

Table 7. Incident location for Warrington residents aged 65 years and over compared to all age groups combined⁸

Location	People aged 65 and over		All age groups combined	
	N	% ⁵	N	% ⁵
Bar/pub/club	0	0	55	0
Educational establishment	0	0	2232	4
Home	3840	48	19807	37
Other	1105	14	13047	24
Public place	196	2	4095	8
Unknown	2707	34	10860	20
Work	19	0	2170	4
Total	8059	100	53553	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 Warrington residents aged 65 years and over

LSOA Name	LSOA Code	65 and over population	Total attendances	Rate of attendances per 100 population
Warrington 017B	E01012480	292	208	71.2
Warrington 010B	E01012564	202	112	55.4
Warrington 004B	E01012462	185	86	46.5
Warrington 019F	E01012532	482	224	46.5
Warrington 014D	E01012555	328	146	44.5
Warrington 003C	E01012469	309	136	44.0
Warrington 023B	E01012451	308	132	42.9
Warrington 015C	E01012493	393	164	41.7
Warrington 011B	E01012482	396	160	40.4
Warrington 010F	E01012570	239	92	38.5

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 Warrington residents aged 65 years and over. As displayed, the majority of LSOAs with the highest rates of attendance are clustered in the north west of the Local Authority.

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

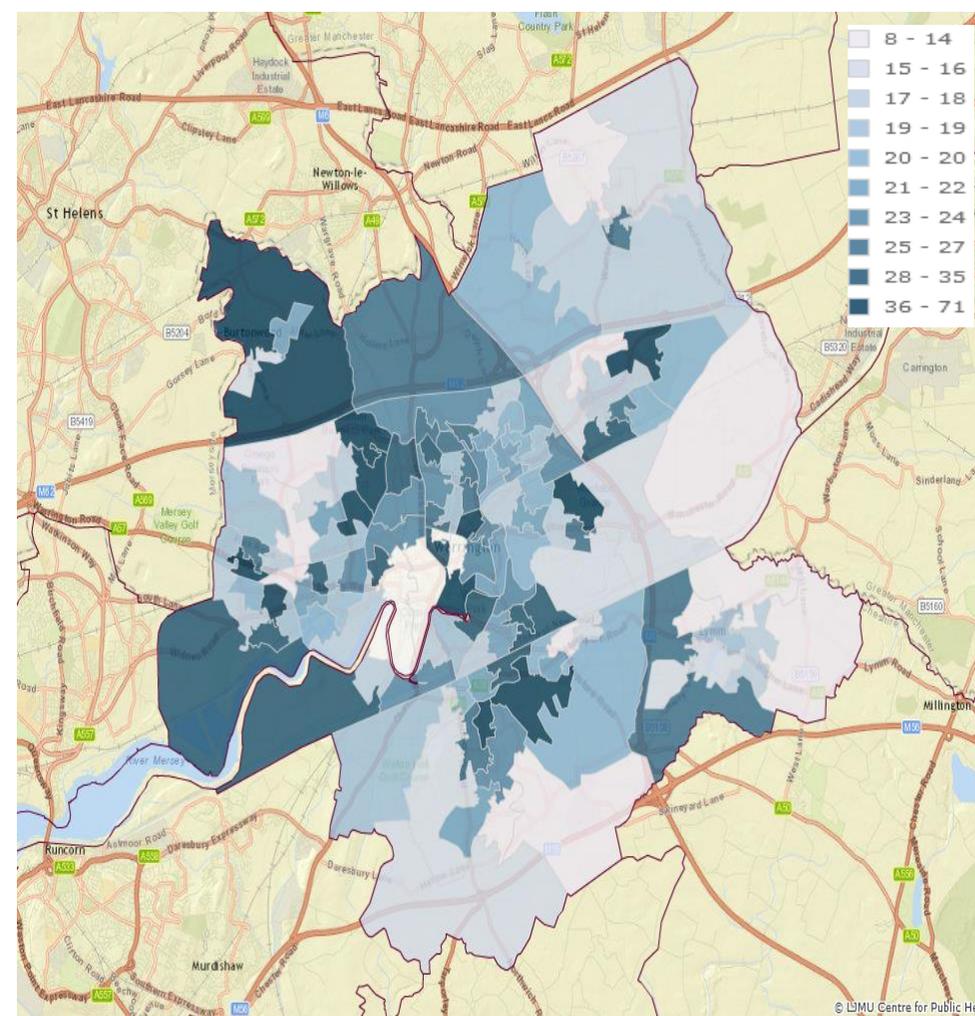
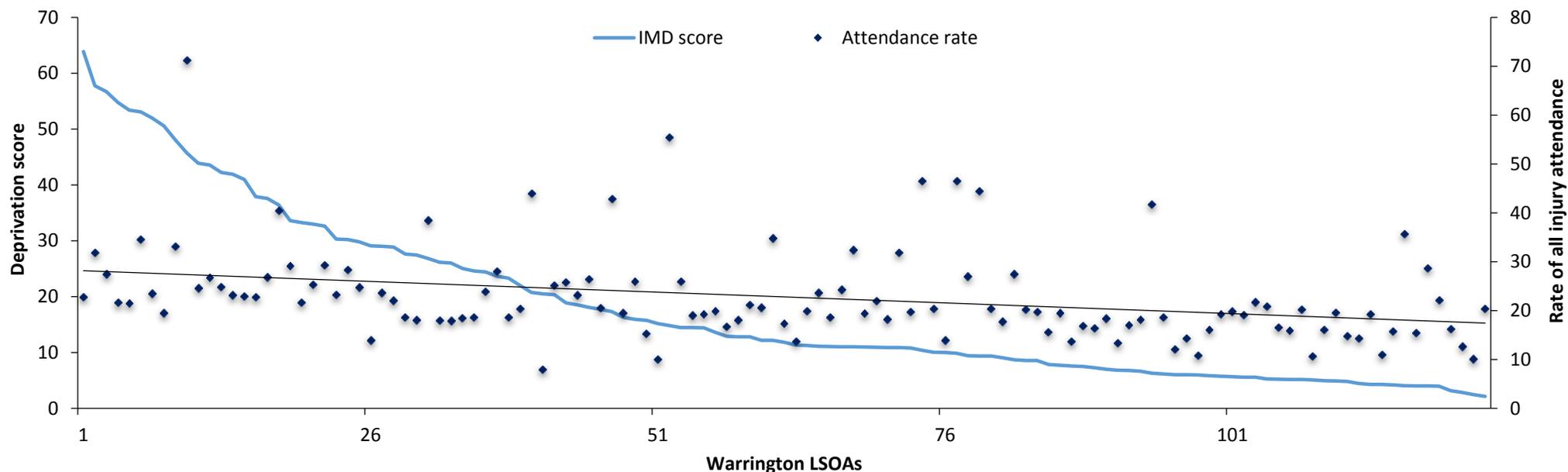


Figure 5 displays all injury attendance rates per 100 population for Warrington residents aged 65 years and over, with a linear trend line, plotted against deprivation scores, where higher scores represent higher levels of deprivation, for each LSOA. As shown, attendance rates generally declined with decreasing levels of deprivation.

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



Falls

Falls accounted for 1% (116) of all injury attendances for people aged 65 years and over in Warrington. However, this is substantially lower than the actual proportion since Warrington Hospital ED, which accounts for 95% of injury attendances, does not categorise falls as a primary injury group. Warrington Hospital ED categorises falls as other accidents and then specifies falls as a reason for visit. Other EDs attended by Warrington residents, except for Whiston and Aintree Hospitals, do not categorise falls.²

“Injury attendance rates for Warrington residents per 100 population generally increased with increasing level of deprivation.”

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 Warrington residents aged 65 years and over⁴

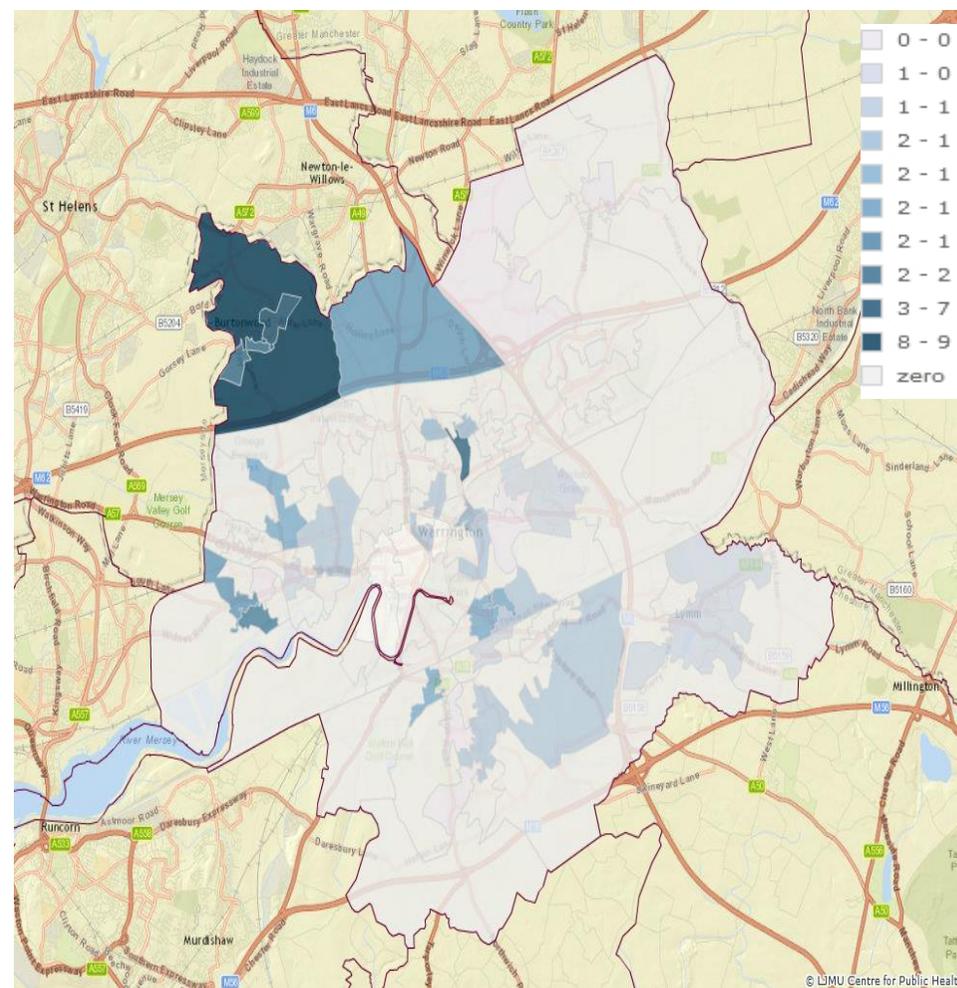
LSOA		65 and over population	Total fall attendances	Rate of fall attendances per 100 population
Name	Code			
Warrington 003C	E01012469	309	29	9.4
Warrington 003C	E01012467	449	11	2.4
Warrington 003C	E01012470	258	***	1.6
Warrington 003C	E01012536	171	***	1.2
Warrington 003C	E01012528	398	***	1.0
Warrington 003C	E01012468	431	***	0.9
Warrington 003C	E01012529	346	***	0.9
Warrington 003C	E01012568	120	***	0.8
Warrington 003C	E01012507	254	***	0.8
Warrington 003C	E01012558	277	***	0.7

Figure 6 displays the rate of fall attendances per 100 population by Warrington residents aged 65 years and over. As displayed the majority of LSOAs with the highest rates of attendance are clustered in the north west of the Local Authority.⁹

“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.”

⁹ These LSOAs are geographically closer to Merseyside EDs, where falls are more comprehensively categorised.

Figure 6. Fall attendance rates per 100 population for Warrington residents aged 65 years and over, April 2012 to March 2015²



Recommendations

- Encourage Warrington Hospital ED to record falls as a primary injury group rather than specifying them as a reason for visit. The TIIG team can also consider mechanisms to retrospectively categorise falls from the reason for visit but this will depend upon improved consistency of the field.
- Encourage Countess of Chester Hospital ED, Leighton Hospital ED, Macclesfield District General Hospital ED and Southport District General Hospital ED to record fall injuries.
- Consider mechanisms to include the incident location data item to the IT system at Whiston Hospital ED. This can primarily be achieved through liaison between the TIIG team and the systems team within the ED.
- 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 self-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.
- 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 west 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 Warrington.

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