

# Merseyside & Cheshire Local Authority Profile Halton

Injuries in Older People  
April 2012 to March 2015

November 2015

Simon Russell, James Marrin and Mark Whitfield



Centre for Public Health,  
Faculty of Education, Health and Community,  
Liverpool John Moores University,  
Henry Cotton Campus,  
15-21 Webster Street,  
Liverpool, L3 2ET

[cph.org.uk](http://cph.org.uk)

☎ 0151 231 4500

✉ [tiig@ljmu.ac.uk](mailto:tiig@ljmu.ac.uk)

🌐 [tiig.info](http://tiig.info)

🐦 [twitter.com/tiig\\_cph](https://twitter.com/tiig_cph)

ISBN: 978-1-910725-34-4 (web)

CPH | CENTRE FOR  
PUBLIC HEALTH  
LIVERPOOL JOHN MOORES UNIVERSITY



## Key findings

- Between April 2012 and March 2015 there were 58,776 injury attendances made by Halton residents to Emergency Departments (EDs) across Merseyside and Cheshire; of which 8,243 (14%) were made by people aged 65 years and over. People aged 65 and over represent 14% of total injury attendances to EDs while representing 16% of the total population.
- Of attendees aged 65 years or over, 60% were female and 40% were male; where ethnicity was known, 98% of attendees were white.
- Across all EDs combined, 72% of attendances were classified as other injuries, 23% were falls, 3% were road traffic collisions, 1% were assaults and sports injuries, while less than one percent were for burns and scalds and deliberate self-harm.
- Females were more likely than males to attend an ED for falls (25% of total injuries compared to 20%). 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 (37% compared to 23% and 15% respectively).
- The time of day with the most attendances was between 10:00 and 11:00 (14%); the busiest day of the week was Monday (16% of attendances); and, the month with the highest average daily attendances was July (29 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 Halton

Halton is a metropolitan borough in Cheshire, in the North West of England. According to the mid-2013 census, Halton has a population of 125,970, of which 20,306 are people aged 65 years and over (ONS, 2015). Of people aged 65 years and over, 54% (11,027) are female and 46% (9,279) are male, compared to all age groups combined where 51% (64,499) are female and 49% (61,471) are male. People aged 65 and over in Halton represent 16% 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 Halton 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. Halton is one of the most deprived Local Authorities (LAs) in England and the Index of Multiple Deprivation (IMD) ranks the Borough as the 24<sup>th</sup> most deprived in the North West and the 32<sup>nd</sup> 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). Halton which has a population of just under 150,000, will have approximately 8,400 falls among older people each year; approximately 1,200 of those will attend an ED and 600 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 Halton 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 Halton. 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.

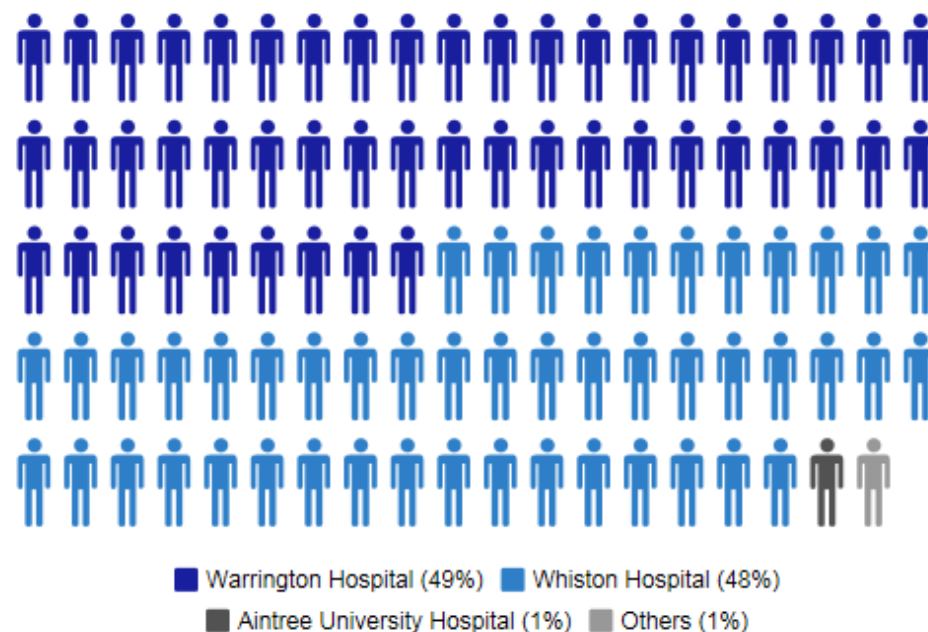
### Injuries across Halton, April 2012 to March 2015

For all age groups, between April 2012 and March 2015 there were 58,776 injury attendances made by Halton residents to Emergency Departments (EDs) across Merseyside and Cheshire; 8,243 of these were made by people aged 65 years and over. Attendances by people aged 65 years and over accounted for 14% of total injury attendances to EDs while representing 16% of the total population of Halton. Of those, 4,052 (49%) attended Warrington Hospital ED, 3,972 (48%) attended Whiston Hospital ED and 121 (1%) attended the Aintree University Hospital ED. There were 98 (1%) combined attendances to Arrowe Park Hospital ED, Countess of Chester Hospital ED, Leighton Hospital ED, Macclesfield District General Hospital ED, Royal Liverpool University Hospital 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
<b>Total</b>	<b>62963</b>	<b>58434</b>	<b>56870</b>	<b>178267</b>

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



In terms of gender, 60% (4,959) of attendees aged 65 years and over were female, 40% (3,284) were male. Of people aged 65 years or over, 3,391 (41%) were aged between 65 and 74 years, 2,995 (36%) were aged between 75 and 84 years, and 1,857 (23%) were aged 85 years or over. In terms of ethnicity,<sup>1</sup> 2,850 (35%) of injury attendees from Halton were White, 1,159 (14%) were unknown, 38 (<1%) were Black and there were 11 combined attendances by patients of Chinese and other ethnic groups. Table 2 displays injury attendances of Halton residents by financial year and injury group;<sup>2</sup> injuries overall decreased by 23% over this three year period.<sup>3</sup>

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

Injury group	2012/13	2013/14	2014/15	Total	%
Assault	30	22	11	63	1
Burns and scalds	12	7	8	27	0
Deliberate self-harm	12	9	7	28	0
Falls	439	621	832	1892	23
Other <sup>4</sup>	2374	2159	1425	5958	72
Road traffic collision	114	67	42	223	3
Sports injury	33	11	8	52	1
<b>Total</b>	<b>3014</b>	<b>2896</b>	<b>2333</b>	<b>8243</b>	<b>100</b>

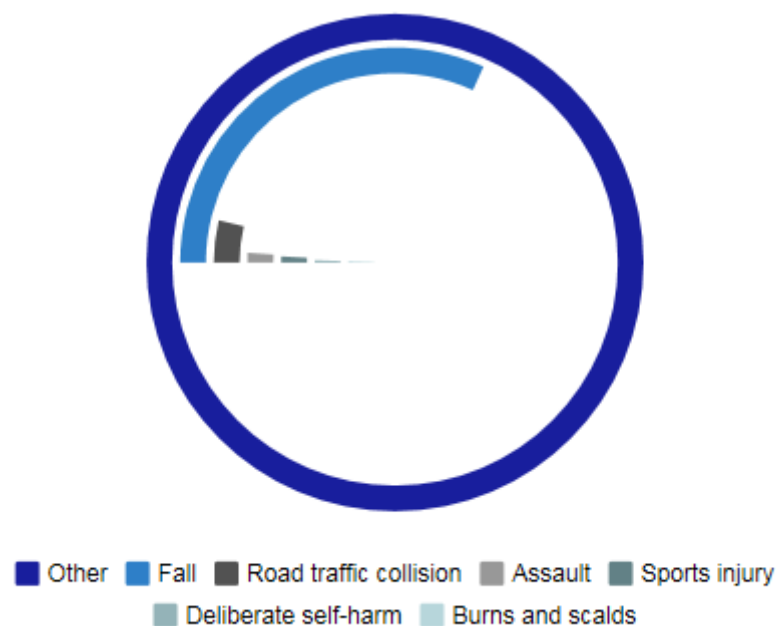
<sup>1</sup> University Hospital Aintree, Arrowe Park Hospital, Southport District General Hospital and Warrington Hospital do not collect data on ethnicity. Unknown ethnicities from EDs who do collect this information have been included.

<sup>2</sup> 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 4,086 records.

<sup>3</sup> While falls have increased by 90% 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.

<sup>4</sup> Other injury includes 34 records of injuries from ingestion and less than five records for unknown 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 present to an ED for burns and scalds injuries, across all age groups.

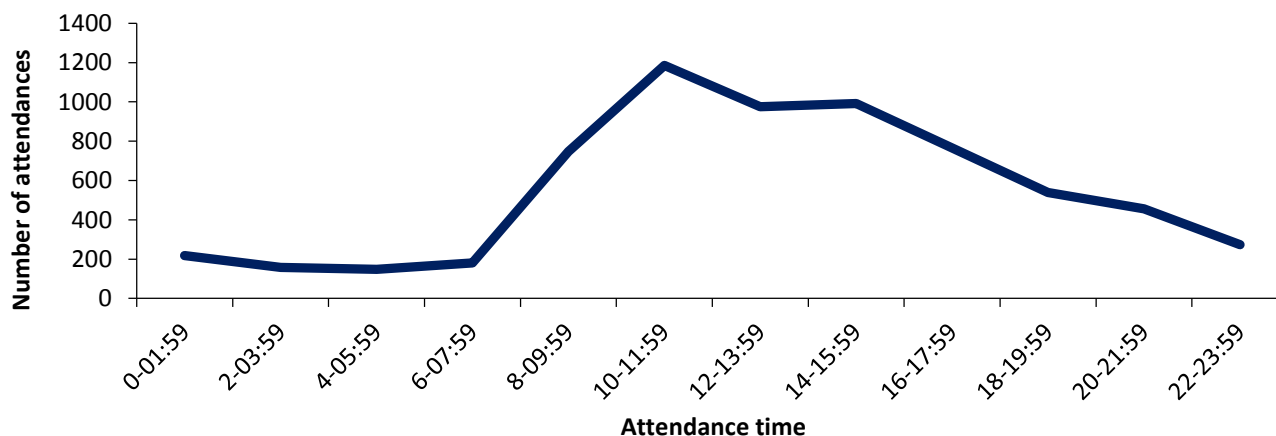
**Table 3. Injury attendances by Halton residents aged 65 years and over by injury group, age group and gender<sup>5</sup>**

Age Gender Injury group	65-74				75-84				85+			
	Male		Female		Male		Female		Male		Female	
	N	% <sup>6</sup>	N	%	N	% <sup>6</sup>	N	%	N	% <sup>6</sup>	N	% <sup>6</sup>
Assault	25	2	10	1	10	1	<15	1	***	0	5	0
Burns and scalds	8	1	6	0	***	0	***	0	***	1	***	0
Deliberate self-harm	11	1	9	0	***	0	***	0	0	0	***	0
Falls	202	13	311	17	268	22	430	24	187	35	494	37
Other <sup>4</sup>	1210	79	1456	79	889	73	1270	72	323	61	810	61
Road traffic collision	69	4	55	3	30	2	44	2	11	2	14	1
Sports injury	13	1	6	0	<15	1	16	1	0	0	***	0
<b>Total</b>	<b>1538</b>	<b>100</b>	<b>1853</b>	<b>100</b>	<b>1219</b>	<b>100</b>	<b>1776</b>	<b>100</b>	<b>527</b>	<b>100</b>	<b>1330</b>	<b>100</b>

### 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 (6,636), attendances peaked between 10:00 and 11:59 (1,186; 14%); attendances were lowest between 04:00 and 05:59 (148; 2%).

**Figure 3. Injury attendances by Halton residents aged 65 years and over by time group<sup>7</sup>**



<sup>5</sup> 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.

<sup>6</sup> Due to rounding percentages may not add up to 100.

<sup>7</sup> There were 1,607 records where the time was unknown which have been omitted from this figure.

Monday had the most attendances overall for people aged 65 and over for all EDs combined with 16% (1,356) of total attendances; Sunday had the fewest attendances for EDs combined with 12% (1,008) of total attendances. July had the highest rate of attendances with an average of 29 attendances per day (884 in total), while November had the lowest rate with an average of 18 attendances per day (538 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 Halton residents aged 65 years and over compared to all age groups combined<sup>5</sup>**

Arrival mode	People aged 65 and over		All age groups combined	
	N	% <sup>6</sup>	N	%
Ambulance	3811	46	9442	16
Foot	35	0	662	1
Other	2885	35	32982	56
Police	0	0	56	0
Private transport	1406	17	14435	25
Public transport	72	1	592	1
Taxi	***	0	32	0
Unknown	<35	0	575	1
<b>Total</b>	<b>8243</b>	<b>100</b>	<b>58776</b>	<b>100</b>



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 referred by friends or relatives compared to all age groups combined.

**Table 5. Referral source for Halton residents aged 65 years and over compared to all age groups combined**

Referral source	People aged 65 and over		All age groups combined	
	N	% <sup>6</sup>	N	% <sup>6</sup>
Carer	120	1	208	0
Educational establishment	5	0	129	0
Emergency services	838	10	2345	4
Friend/relative	340	4	3465	6
GP	327	4	1410	2
Health professional	409	5	3011	5
Other <sup>8</sup>	356	4	1352	2
Police	11	0	168	0
Self-referral	5830	71	46506	79
Work	7	0	182	0
<b>Total</b>	<b>8243</b>	<b>100</b>	<b>58776</b>	<b>100</b>

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

<sup>8</sup> For people aged 65 years and over, 'Other' includes less than five records referred from unknown sources, for all ages 'Other' includes 20 records referred from unknown sources, 7 referred from social services and less than five from NHS direct.

resulted in an admission to hospital for people aged 65 years and over, with the exception of attendances for other injuries, where a higher proportion were discharged with no further treatment required. A higher than average proportion of attendees aged 65 years or over were admitted for burns and scalds and deliberate self-harm (74% and 71% 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 (41% compared to 13%) and a lower proportion were discharged with no follow up treatment required (32% compared to 51%).

**Table 6. Disposal of Halton residents aged 65 years and over by injury group<sup>5</sup>**

Injury group		Admitted	Discharged	Other <sup>9</sup>	Referred	Total
Assault	N	34	20	***	<10	63
	% <sup>6</sup>	54	32	2	13	100
Burns and scalds	N	20	<10	0	***	27
	%	74	22	0	4	100
Deliberate self-harm	N	20	6	***	***	28
	%	71	21	4	4	100
Falls	N	1156	436	14	286	1892
	%	61	23	1	15	100
Other <sup>4</sup>	N	1993	2038	97	1830	5958
	%	33	34	2	31	100
Road traffic collision	N	91	76	***	<55	223
	%	41	34	2	23	100
Sports injury	N	26	<20	***	9	52
	%	50	31	2	17	100
Total	N	3340	2598	118	2187	8243
	% <sup>6</sup>	41	32	1	27	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 Halton occurred at home compared to all age groups combined.

<sup>9</sup> 'Other' includes less than five records where disposal method was unknown.

**Table 7. Incident location for Halton residents aged 65 years and over compared to all age groups combined<sup>5, 10</sup>**

Location	People aged 65 and over		All age groups combined	
	N	%	N	% <sup>6</sup>
Educational establishment	***	0	1895	5
Home	1943	45	12182	31
Other <sup>11</sup>	1117	26	12888	33
Public place	152	4	2951	8
Unknown	1023	24	6872	18
Work	<40	1	2252	6
<b>Total</b>	<b>4271</b>	<b>100</b>	<b>39040</b>	<b>100</b>

### 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 Halton residents aged 65 years and over**

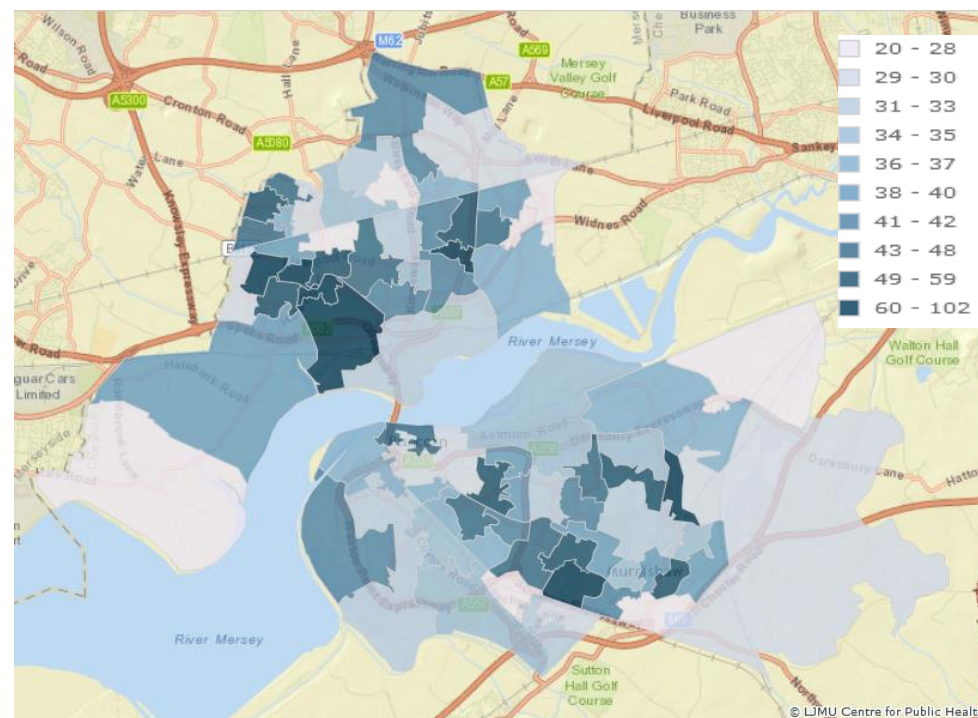
LSOA Name	LSOA Code	65 and over population	Total attendances	Rate of attendances per 100 population
Halton 006C	E01012380	250	254	101.6
Halton 008D	E01012443	223	211	94.6
Halton 007B	E01012370	250	218	87.2
Halton 015C	E01012409	292	223	76.4
Halton 006E	E01012442	176	112	63.6
Halton 004B	E01012390	389	235	60.4
Halton 009D	E01012434	218	131	60.1
Halton 006D	E01012388	222	130	58.6
Halton 003A	E01012368	406	237	58.4
Halton 011C	E01012402	285	163	57.2

<sup>10</sup> Whiston Hospital does not record incident location and all records from this ED have been omitted.

<sup>11</sup> For all age groups combined 'Other' includes 26 records where the incident location was bar/pub/club.

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

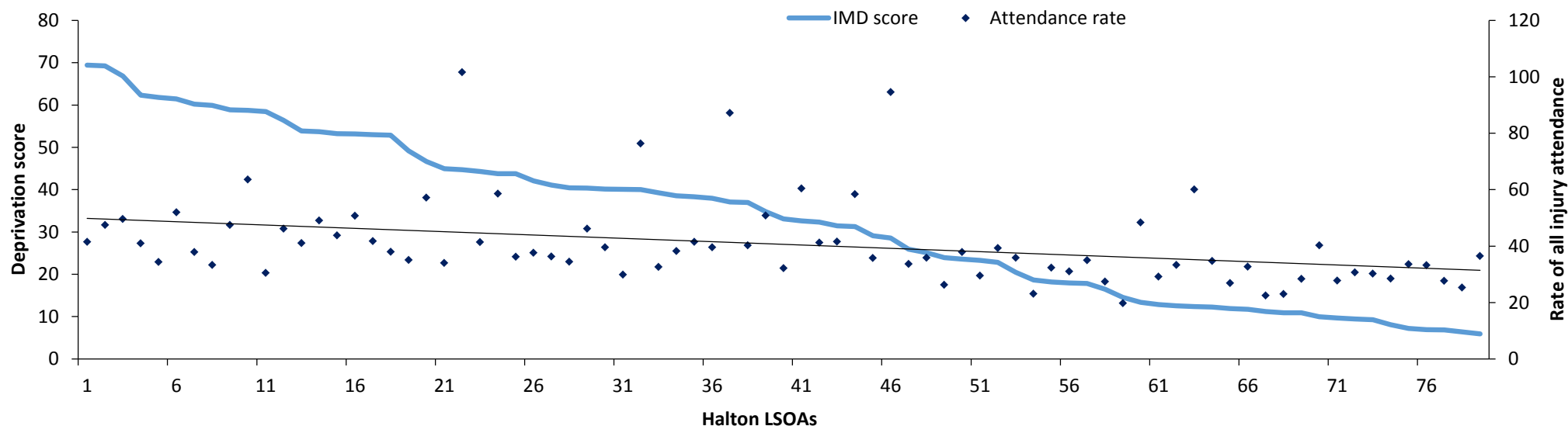
**Figure 4. All injury attendance rates per 100 population for Halton residents aged 65 years and over, April 2012 to March 2015**



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

Figure 5 displays all injury attendance rates per 100 population for Halton 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 level of deprivation.

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



## Falls

Falls accounted for 23% (1,892) of all injury attendances for people aged 65 years and over in Halton. However, this is substantially lower than the actual proportion since Warrington Hospital ED (which accounts for 49% of injury attendances by Halton residents) does not categorise falls as a primary injury group. While Whiston ED categorised 47% of injuries among people aged 65 years and over as falls, Aintree ED categorised just 5%, implying a large proportion of falls are categorised as other injuries at Aintree ED.

“The number of categorised falls is substantially lower than the actual proportion of total injuries since Warrington Hospital ED (which accounts for 49% of injury attendances by Halton residents) does not categorise falls as a primary injury group.”



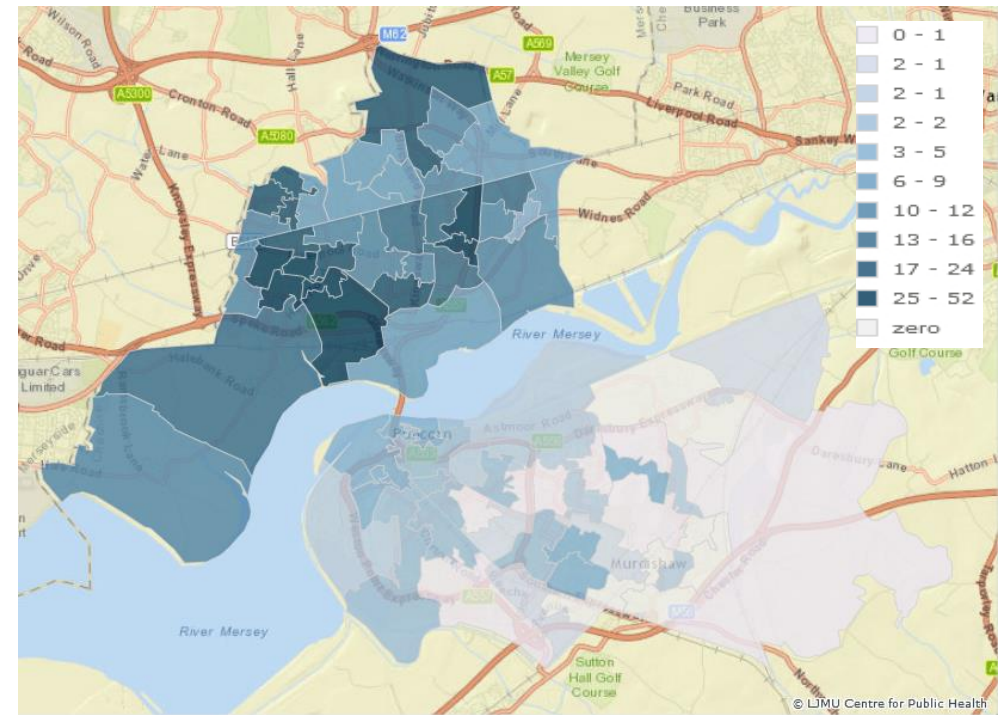
Table 9 displays the number and rate of attendances for the top ten Lower Super Output Areas (LSOAs) for people aged 65 years and over.

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

LSOA Name	LSOA Code	65 and over population	Total fall attendances	Rate of fall attendances per 100 population
Halton 006C	E01012380	250	131	52.4
Halton 008D	E01012443	223	108	48.4
Halton 007B	E01012370	250	90	36.0
Halton 004B	E01012390	389	115	29.6
Halton 006E	E01012442	176	49	27.8
Halton 006D	E01012388	222	56	25.2
Halton 003A	E01012368	406	99	24.4
Halton 004D	E01012420	318	75	23.6
Halton 002E	E01012423	271	58	21.4
Halton 006B	E01012379	250	49	19.6

Figure 6 displays the rate of fall attendances per 100 population by Halton residents aged 65 years and over. As displayed the majority of LSOAs with the highest rates of attendance are clustered in the north of the Local Authority.<sup>12</sup>

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



<sup>12</sup> These LSOAs are geographically closer to Whiston, where falls are more comprehensively categorised.

## Recommendations

- Consider mechanisms to improve the categorisation of injury groups, particularly in relation to falls at Warrington Hospital and Aintree Hospital EDs. This can be achieved through multi-agency working and meetings between the TIIG team, stakeholders and EDs.
- 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. Information for 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 LSOAs 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 Halton.

## References

Department for Communities and Local Government. (2010) English indices of deprivation. Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010> [Accessed 15th April 2015].

Department of Health. (2001). National service framework: older people, March 2001. [online]. Available at: <https://www.gov.uk/government/publications/quality-standards-for-care-services-for-older-people> [Accessed 24th April 2015].

Department of Health. (2009). Falls and fractures. Exercise Training to Prevent Falls, 2009. [online]. Available at: [http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/dh\\_103146](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/dh_103146) [Accessed 24th April 2015].

Office for National Statistics. (2015). Life Expectancy at Birth and at Age 65 by Local Areas in England and Wales, 2011–13.[online]. Available at: <http://www.ons.gov.uk/ons/rel/subnational-health4/life-expectancy-at-birth-and-at-age-65-by-localareas-in-england-and-wales/2011-13/stb-life-expectancy-at-birth-2011-13.html> [Accessed 24th April 2015].

The Health Foundation. (2012). Patient safety resource centre: Frail older people. Available at: <http://www.healthcommunities.com/healthy-aging/healthy-living-tips-50s.shtml> [Accessed 28th April 2015].

World Health Organisation. (2004). Health Evidence Network: What are the main risk factors for falls amongst older people and what are the most effective interventions to prevent these falls? Available at: [www.euro.who.int](http://www.euro.who.int) [Accessed 19th April 2015].

This work was commissioned by the Cheshire and Merseyside Public Health Intelligence Network.



CPH | CENTRE FOR  
PUBLIC HEALTH  
LIVERPOOL JOHN MOORES UNIVERSITY

