



Wirral JSNA: Falls

Wirral Intelligence Service

May 2017

Wirral JSNA: Falls

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Version: 1.0 18th April 2017

Version Number	Date	Author	Reviewer	Actions
1.0	18 th April 2017	Hannah Cotgrave	Sarah Kinsella, Tricia Cavanagh- Wilkinson, Matthew Atkinson, John Highton	Commentary updated

Report Overview

Abstract	<p>This is a review of the current performance, activity, guidance and service provision relating to falls in Wirral.</p> <p>Evidence suggests that the main risk factors for falls are; ever having fallen, age (older population (65+)) and gender (females more at risk).</p> <p>There is evidence for a multifactorial and multidisciplinary approach to reduce the incidence and impact of falls; Wirral Council and Wirral CCG currently jointly commission the Wirral Falls Prevention Service which adopts this approach.</p>
Intended or potential audience	<p>Internal</p> <ul style="list-style-type: none">• Public Health• Wider Families and Wellbeing Directorate <p>External</p> <ul style="list-style-type: none">• JSNA Website• Wirral CCG

Wirral JSNA: Falls

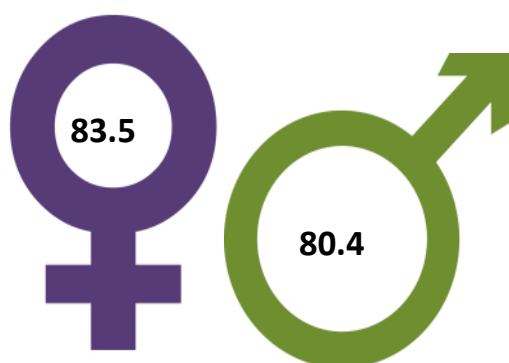
Headlines



7 in 10 A&E Falls admissions are 65+



7 in 10 falls, in those aged 65 and over, are female



**Average age of those (aged 65+)
admitted to A&E after a fall**



**Falls in Wirral cost the health & social care economy
around £8.9 million per year!**

Summary

- The consequences of falls are serious. Half of older people are unable to live independently following a hip fracture arising from a fall
- Around 40% of all admissions to care homes are as the result of a fall
- Prevention of falls is therefore key to enabling people to stay independent. Evidence suggests that targeting those at high-risk of falling and interventions which tackle a range of risk-factors (multi-factorial, not concentrating on just one risk factor alone) are the most successful
- Successful schemes/services/interventions should include as a minimum: home hazard identification/rectification/home aids/adaptations; evidence based exercise programmes; and medication review/appropriate identification and treatment of medical conditions
- Evidence shows that between 5 and 25 people need to be treated to prevent one fall. This favourable in comparison to many screening programmes
- The biggest risk factors for a fall are ever having fallen before and older age (those aged 80+). Local evidence suggests that this higher risk is apparent at younger ages (65+) in women in Wirral
- Wirral had a significantly higher rate of falls than England in 2014/15
- Seven out of every ten falls in Wirral are in those aged 65 and over; this has increased slightly on previous years
- Almost three-quarters (73%) of all injuries in older people attending Arrowe Park A&E were falls). The majority of these falls occur in the home environment
- The Wirral wards with the highest rate of hospital admissions due to falls were Claughton, Oxton, Prenton and New Brighton
- It is estimated that falls cost Wirral's health and social care economy approximately £8.9million per annum, which equates to around £5,657 per fall
- There is a strong positive correlation between the number of patients taking 4 or more medications (poly-pharmacy) and number of falls admissions in Wirral
- In January 2017, over 40,000 people aged 65+ in Wirral were being regularly prescribed 4+ medications (poly-pharmacy patients). Females aged 80+ had the highest rate of polypharmacy
- Wirral has a higher rate of preventable sight loss than both the North West and England. Visual impairment is an important risk factor for falls
- Wirral has a higher prevalence of osteoporosis than both the North West and England. Osteoporosis can make the consequences of a fall more serious

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Special Acknowledgement:

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Simon Russell, TIIG Project Lead, Liverpool John Moore's University
Susan Maire, Senior Medicines Optimisation Lead for Wirral, Midlands and Lancashire CSU
Zoe Barber, Wirral Falls Service, Community Voice

What do we know?

Overview

The consequences of falls are serious. Half of older people are unable to live independently following a hip fracture arising from a fall and around 40% of all admissions to care homes are as the result of a fall (1). Approximately 1 in 3 people aged 65+ fall each year (24), and for those aged 80+ rates increase to 1 in 2 (or 50%). Recent data indicates that Wirral has a higher rate of falls related injuries (2,624 per 100,000 population, 2014/15) in those aged 65+ compared to England (1,740 per 100,000) (Public Health Outcomes Framework (PHOF), 2016).

The two most critical risk factors for falls are age (the 'oldest old' are more at risk) and ever having had a previous fall. Evidence shows that other important risk factors are:

- Gender (females are at higher risk) (5)
- Visual impairment (16)
- Postural hypotension (dizziness upon standing, often due to medicines)
- Continence issues (e.g. rushing to the toilet at night in the dark)
- Environmental hazards (e.g. loose rugs, clutter on stairs (poor lighting, slippery floors, uneven surfaces) (18)
- Living alone (6)
- Inappropriate footwear/foot problems (14,17,18)
- Alcohol
- Uncontrolled hypertension (22)
- Low body weight/poor nutrition (14)
- Taking 4+ medications (in particular, medicines for circulatory disease and mental health conditions) (7,8,23)
- Dependency for activities of daily living
- Confusion/cognitive impairment (e.g. as result of a stroke, dementia or medicines) (9, 15)
- Medical conditions, e.g. circulatory disease, chronic obstructive pulmonary disease, depression and arthritis are each associated with a 32% increased risk (9)
- Sedentary behaviour/muscle loss/impaired mobility and gait (10)
- Inappropriate walking aids/assistive devices (19)

Between 20% and 30% of those who fall suffer injuries that reduce mobility and independence and increase the risk of premature death (2). Around two in three of all falls (67%) occur in the home. Patients aged 50+ that are admitted for falls are more likely to be discharged to a different residence, such as residential/nursing accommodation, than those admitted for other reasons (3). Furthermore, those with severe co-morbidities are twice as likely to be discharged to an alternative residence as those with no co-morbidities (3). Falls also destroy confidence and increase isolation, with around 1 in 10 older people who fall becoming afraid to leave their homes in case they fall again (19).

Prevention is therefore the key to reducing falls and enabling people to stay independent. We know from the evidence that what works in preventing falls are targeting those at high-risk of falling (as opposed to population approaches which target everybody) and interventions/services which target a range of risk-factors (multifactorial), and do not concentrate on just one risk factor alone (2). The components that successful schemes/services/interventions need to include:

- Home hazard identification and rectification, home aids/adaptations (19,20)
- Evidence based exercise programmes (21). One randomised controlled trial showed that a tailored group exercise programme delivered over a nine month period can reduce the risk of falling by as much as 54% – another, based in New Zealand and using home based exercise over a year, showed a reduction of 35% (4,11,12).
- Medication review and appropriate identification and treatment of medical conditions relevant to falls (e.g. eye checks to identify deteriorating vision) (7, 8, 9, 15, 22, 23)

A range of multifactorial fall prevention studies carried out with older people living in their own homes showed that between 5 and 25 people need to be treated to prevent one fall. Even at the top end of these estimates (25) interventions per fall prevented, this is favourable in comparison to many health screening programmes (20). Strategies aiming to reduce overall population risk may be inexpensive, but targeting those at higher risk appears to be more effective.

Multidisciplinary, multifactorial, tailored interventions are effective in reducing falls in the following population groups and settings: Older people living in their own homes; older people in extended care settings; and older people presenting at A&E following a fall.

Facts, figures and trends (Wirral and beyond)

A&E attendances

Falls attendances by gender

Table 1: Number and rate of emergency attendances by Wirral residents at Arrowe Park A&E for falls amongst older people aged 65+ living in Wirral, by gender (2013/14 to 2015/16)

	2013/14			2014/15			2015/16		
	Falls attendances	%	Rate per 1,000	Falls attendances	%	Rate per 1,000	Falls attendances	%	Rate per 1,000
Females	3,235	67%	89.2	2,774	66%	75.3	2,562	67%	69.0
Males	1,610	33%	56.7	1,404	34%	48.2	1,274	33%	42.6
All	4,845	100%	75.0	4,178	100%	63.3	3,836	100%	57.2

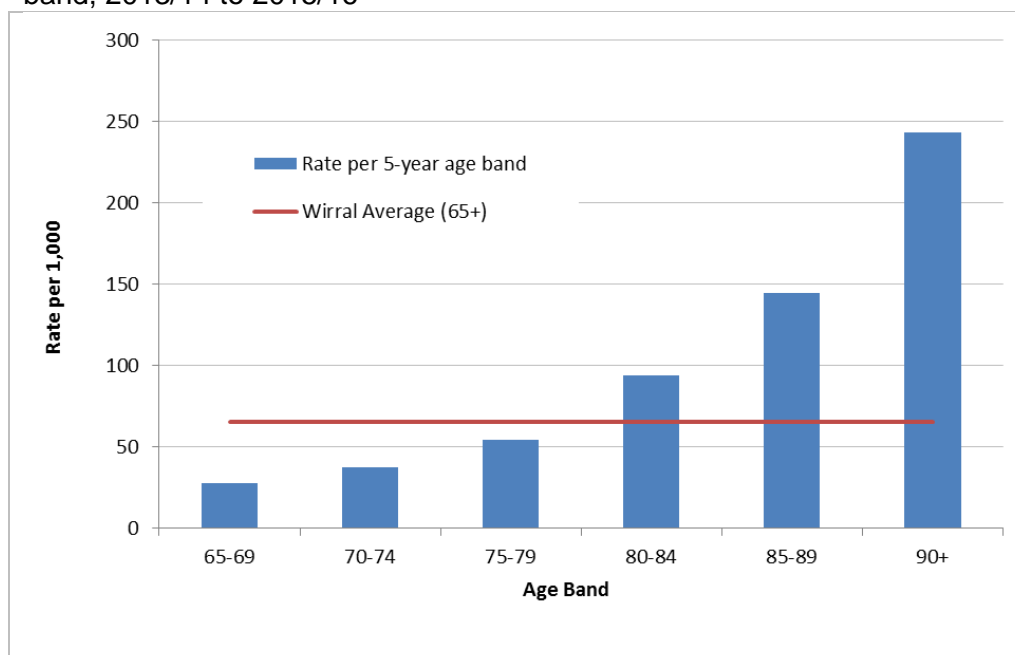
Source: Trauma & Injury Intelligence Group (TIIG) data, 2016

As the table shows, there were 12,859 attendances for falls at Arrowe Park A&E department between 2013/14 and 2015/16 in older people aged 65+ living in Wirral; this averages at approximately 4,286 attendances per year. Two out of three of these were female patients (8,571 or 66.6%), compared to 1 in 3 males (4,288 or 33.4%).

Although numbers are higher because there are more women than men in this age group, rates (which take into account population numbers) also show that falls amongst women are higher, indicating that even when their higher numbers in the older population are taken into account, women are still at greater risk of falling than men.

Falls attendances by age

Figure 1: Rate of attendances by Wirral residents for falls in the over 65s in Wirral by 5-year age band, 2013/14 to 2015/16



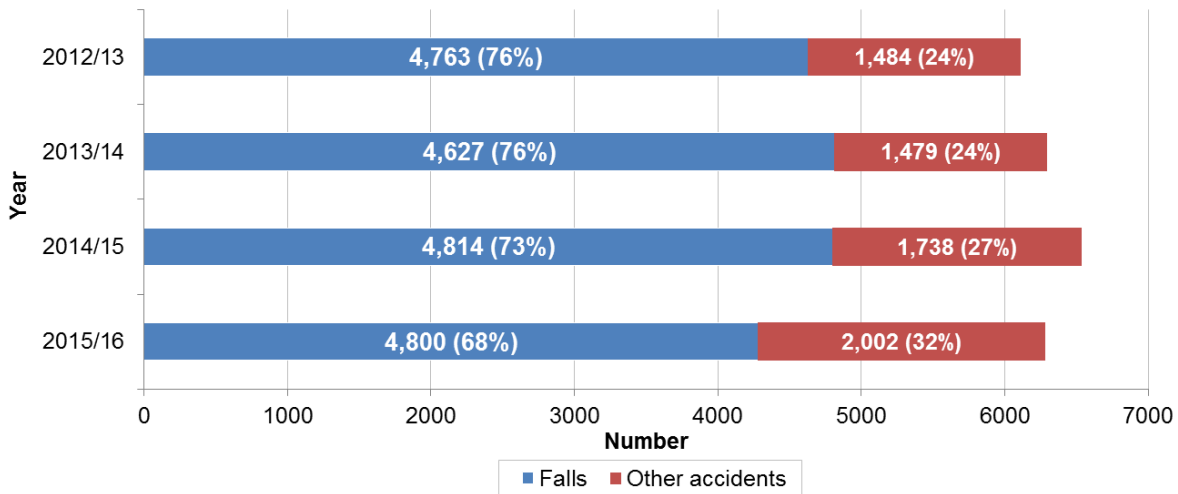
The chart shows very clearly how increasing age is a hugely significant factor for falls in older people. Between 2013/14 and 2015/16, attendances at Arrowe Park for those aged 90+ were around 9 times higher compared to somebody aged 65-69.

Source: Trauma & Injury Intelligence Group (TIIG) data, 2016

Falls attendances by injury type and location

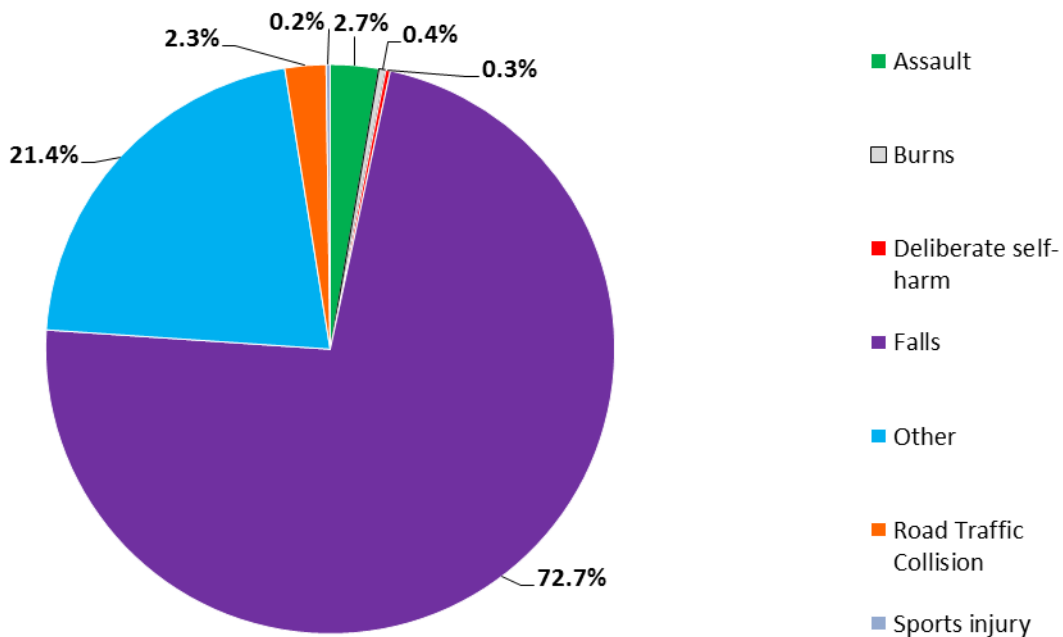
As Figure 2 shows, falls have consistently been the most common reason for older people to attend A&E at Arrowe Park due to trauma and injury. Other reasons for those aged over 65 include assaults, burns and road traffic collisions. A breakdown of these attendances is shown in Figure 3.

Figure 2: Trend in proportion of accidents that were falls in the 65+ age group, 2012/13 to 2015/16



Source: TIIG data, 2016

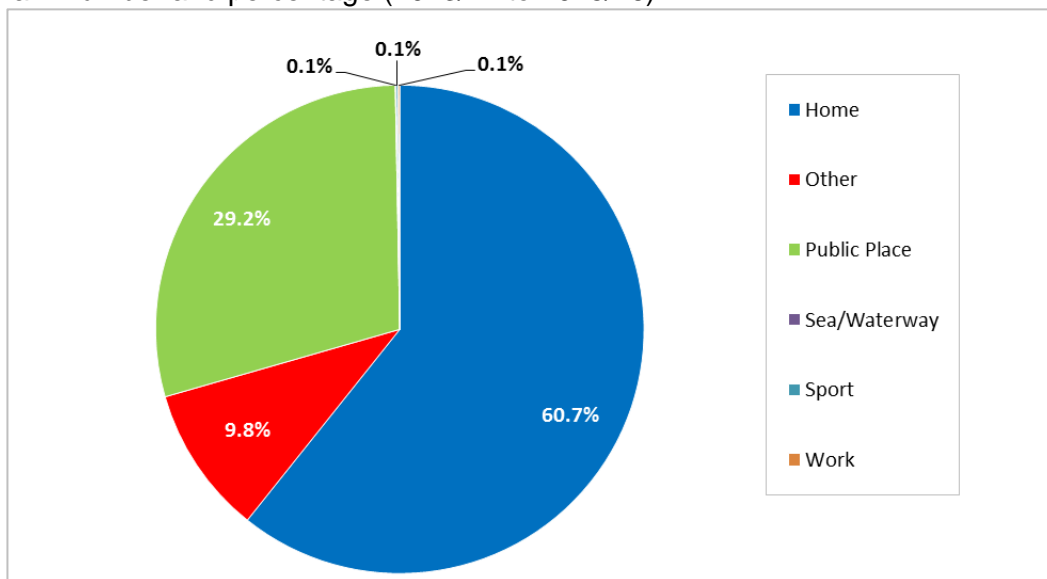
Figure 3: Injury attendances by Wirral residents at Arrowe Park A&E (2013/14 to 2015/16) in the 65+ age group, by injury type



Source: TIIG data, 2016

As the chart shows, almost three out of every four injury attendances to A&E in Wirral in the over 65s between 2013/14 and 2015/16, were for a fall. The next most common injuries were classified as 'Other', which includes injuries such as injuries from fireworks and ingestion). Assaults made up less than 3% of attendances. Falls is by far the most likely reason for an older person to sustain injury.

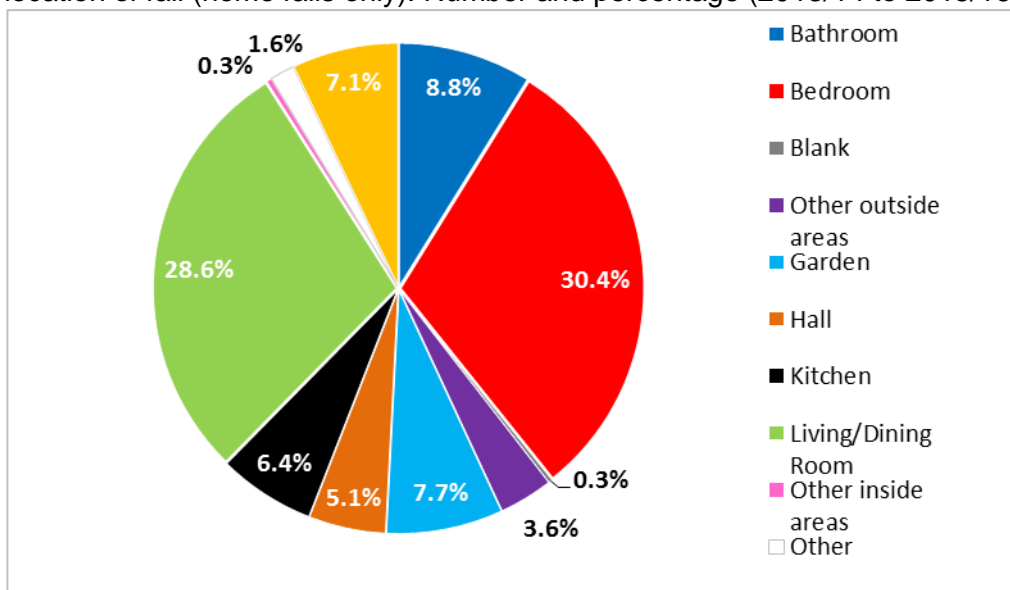
Figure 4: Attendances of Wirral residents at Arrowe Park A&E in the 65+ age group by location of fall: Number and percentage (2013/14 to 2015/16)



Source: TIIG data, 2016

As the chart shows, the home environment is the place an older person is most likely to fall, with more than half of all those who attended A&E at Arrowe Park between 2013/14 and 2015/16 for a fall, falling in the home (60.7%). This percentage increases with increasing age, reflecting the fact that as people age, they spend more and more of their time at home.

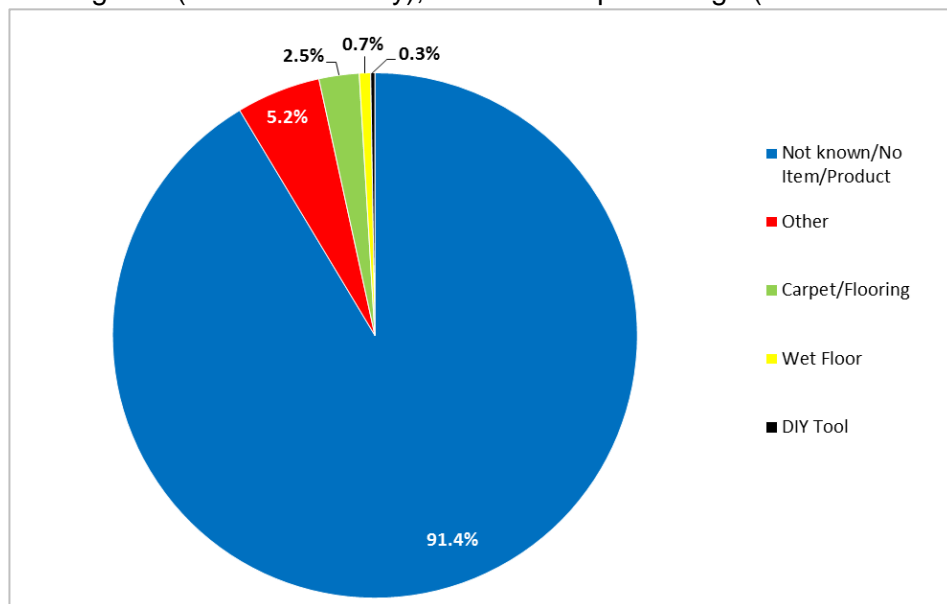
Figure 5: Attendances by Wirral residents at Arrowe Park A&E in the 65+ age group by specific location of fall (home falls only): Number and percentage (2013/14 to 2015/16)



Source: TIIG data, 2016

As Figure 5 shows, the most likely places in the home for an older person to fall are the bedroom (30.4%) and the living/dining rooms (28.6%). This reflects where people spend the majority of their time. The next most common locations were the bathroom (8.8%) and garden (7.7%), both of which are more risky locations (e.g. likely to have slippery surfaces).

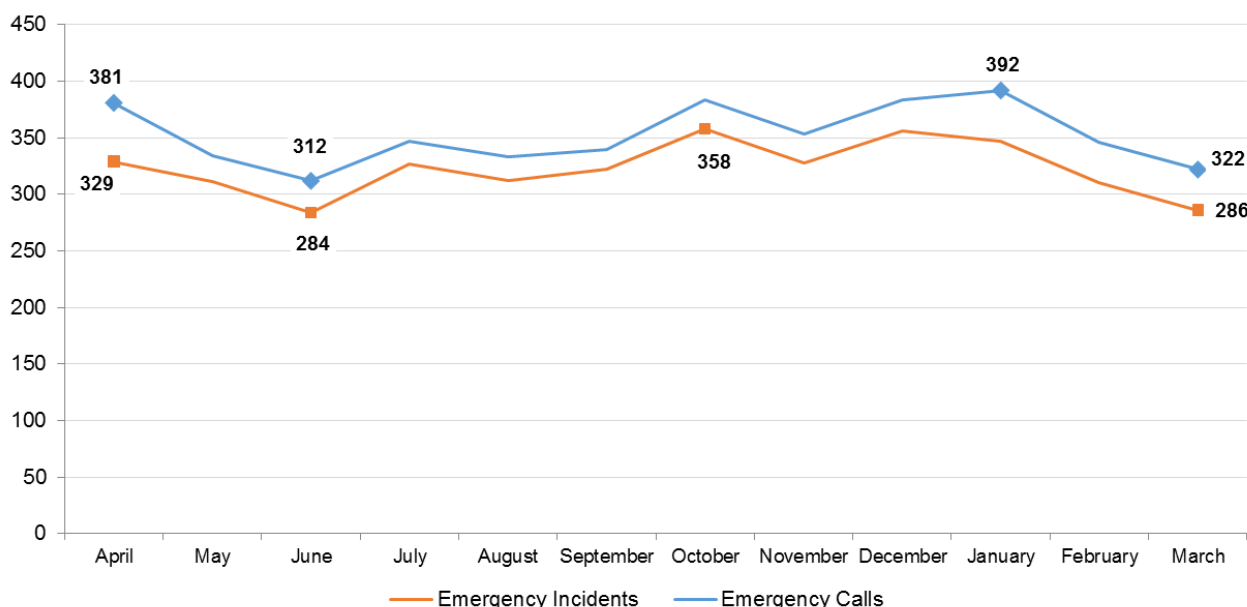
Figure 6: Top 5 items or products attendances by Wirral residents at Arrowe Park A&E aged 65+ causing falls (in the **home** only), number and percentage (2013/14 to 2015/16)



Source: TIIG data, 2016

As Figure 6 shows, in the majority of falls (91.4%) in the home, there was no specific item or product identified as causing the fall, or the field was left blank (there are any number of reasons for this, including dementia, seriousness of their injuries taking priority or simply that the older person was not asked). Where a cause or item was recorded, the largest causes were 'other' (5.2%) and 'carpets/flooring' (2.5%).

Figure 7: Falls-related NWAS Emergency Incidents and Calls by Wirral residents, by month, 2015/16

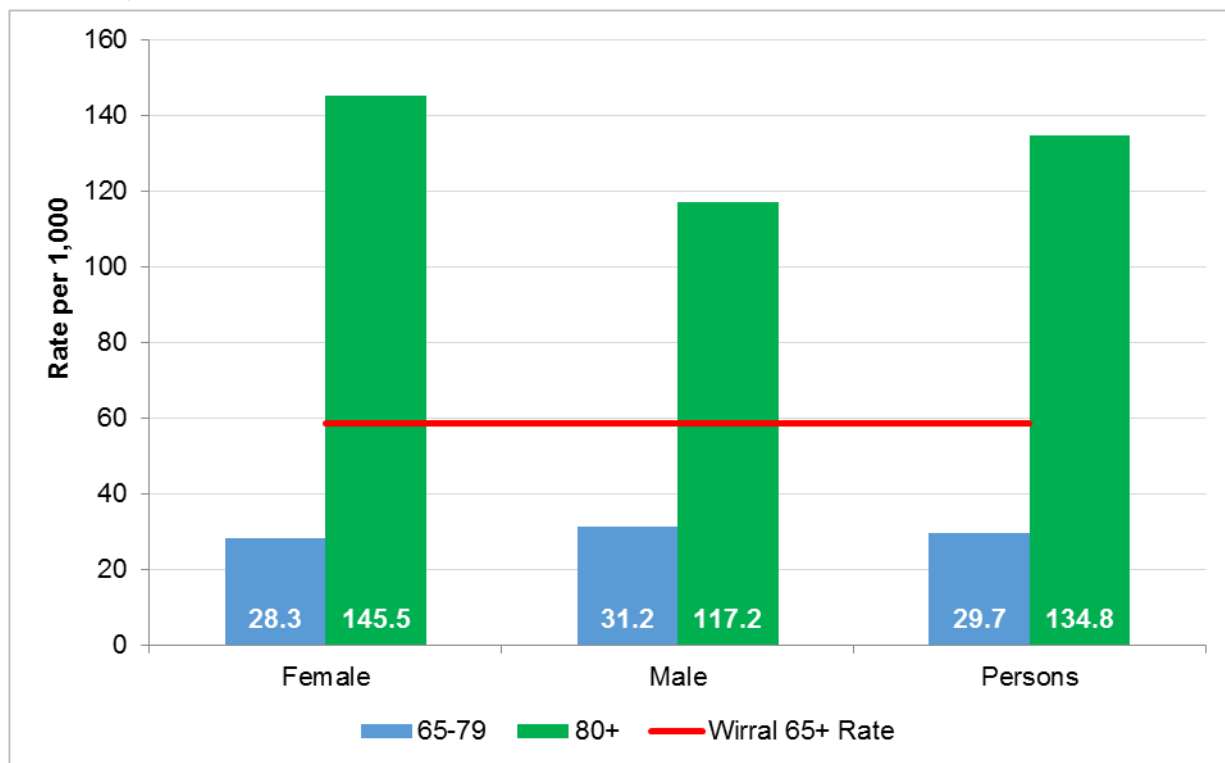


Source: North West Ambulance Service Informatics Team, 2017

Note: Calls defined as any calls received, including duplicates, excluding test calls, and calls made for information, from out of area and in error. Incidents are emergency calls that result in a face to face attendance at scene, excluding duplicates

Figure 7 shows that the number of emergency calls received by NWAS for 2015/16 peaked in January 2016 (392 calls), whereas the highest number of emergency incidents was recorded in October 2015 (358).

Figure 8: Rate of falls-related calls and incidents to North West Ambulance Service by Wirral residents, 2015/16



Source: North West Ambulance Service Informatics Team, 2017

As Figure 8 shows, the rate of falls-related calls and incidents in 2015/16 was significantly higher for those aged 80 years and over, for females, males and persons. The highest rate of falls-related calls and incidents was for females aged 80 years and over (145.5 per 1,000), however the lowest rate was also seen in their younger counterparts; females aged 65-79, 28.3 per 1,000. Overall, Figure 8 provides further evidence that age (oldest older population) and gender (being female) confer a higher risk of falling.

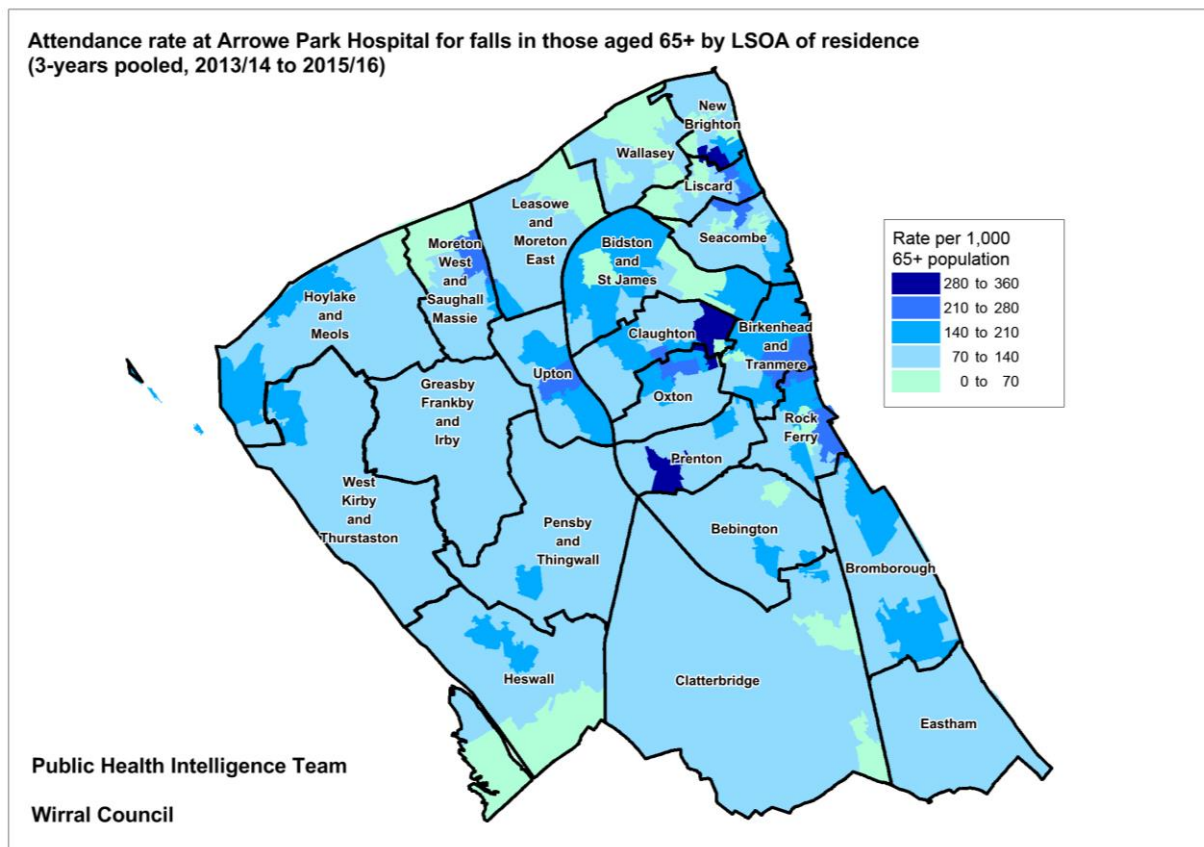
Falls attendances by location of residence (of the person falling)

As Map 1 shows, there are several ‘hotspots’ for falls in those aged 65+ in Wirral. Most notable are the Prenton, Oxton/Claughton and New Brighton areas. Please note that the map was constructed using the home postcode of the person who fell, NOT the location of where the fall itself happened (although as the majority of older people fall in their own homes, the location of fall and area of residence will be one and the same in 60% of cases).

Map 2 shows just those falls which occurred in the older person’s own home (which made up 60% of all falls in this age group and period).

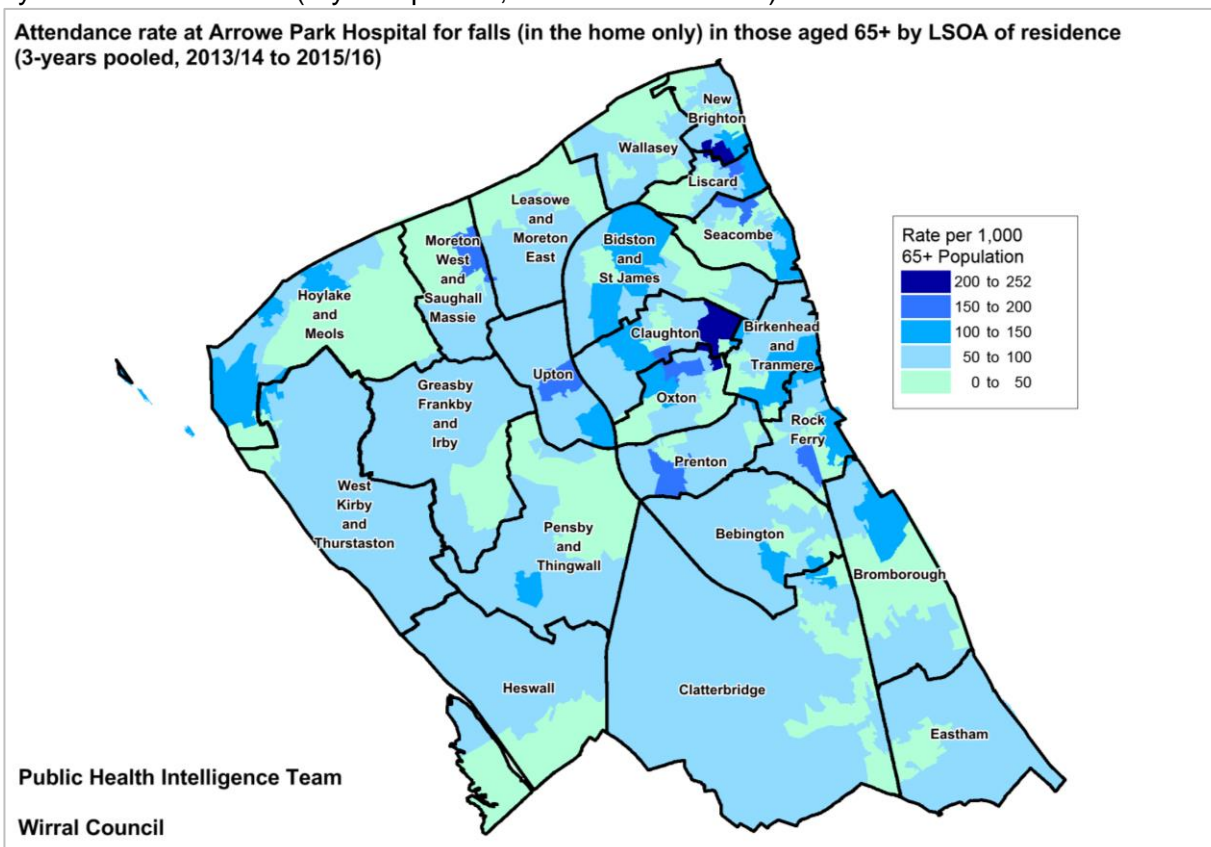
As Map 2 shows, there is a similar pattern in the falls occurring in the home (including residential and/or nursing homes for older people), as there was to falls which occurred in all locations. Map 2 shows the same locations; Oxton/Claughton and New Brighton areas, are highlighted.

Map 1: Attendance rate at Arrowse Park Hospital for falls in those aged over 65s by LSOA of residence (3-years pooled, 2013/14 to 2015/16)



Source: TIIG data, 2016

Map 2: Attendance rate at Arrowse Park Hospital for falls (in the home only) in those aged over 65 by LSOA of residence (3-years pooled, 2013/14 to 2015/16)



Source: TIIG data, 2016

Hospital admissions

The following data refer to **admissions** to hospital which resulted from falls, rather than attendances (shown in previous charts). Three [Public Health Outcomes Framework](#) indicators (2.24i, 2.24ii and 2.24iii) are monitored as a proxy for all falls (even though it will only be the falls with more serious consequences which are captured) and the effectiveness of preventive services which aim to reduce falls.

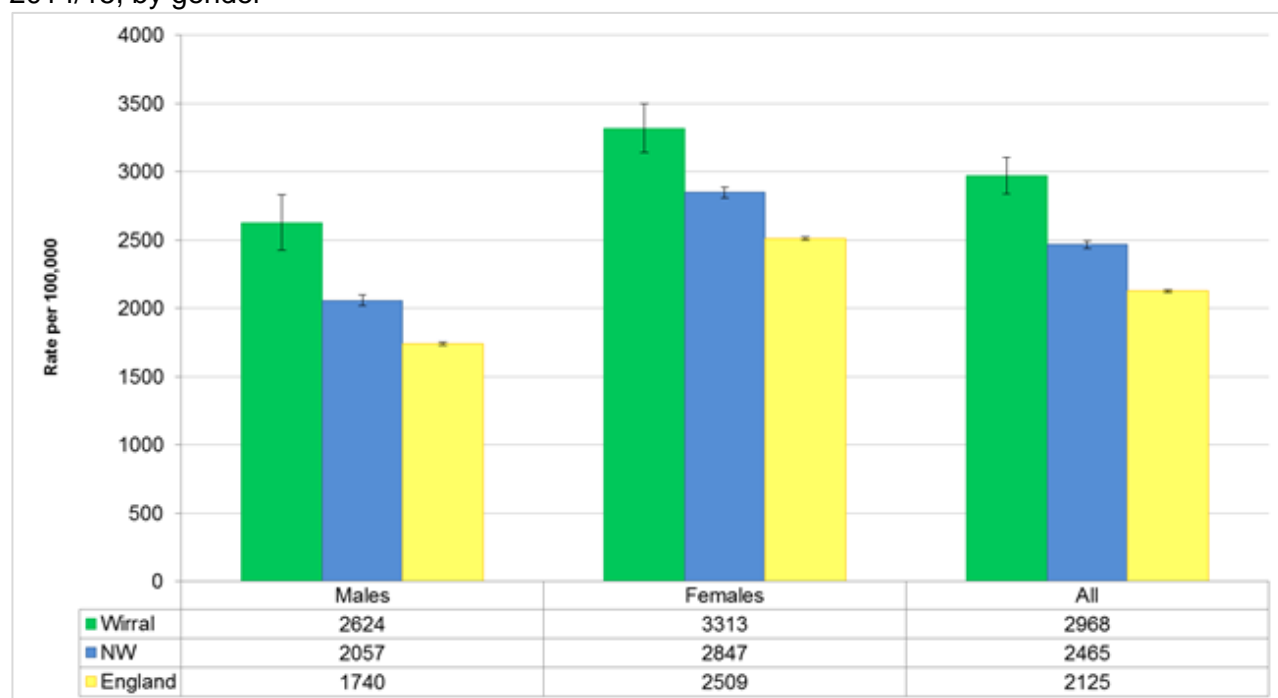
Table 2: Rate of falls by age band, Wirral, 2012/13 to 2015/16

Age Band	2012/13	2013/14	2014/15	2015/16
0-64	34.1%	30.4%	28.9%	31.4%
65 and over	65.9%	69.6%	71.1%	68.6%

Source: Hospital Episode Summary data, 2016

Table 2 shows that, in Wirral, approximately 7 in 10 hospital admissions related to falls are by those aged 65 and over.

Figure 7: Rate of admissions due to falls in the over 65s, Wirral, North West (NW) & England in 2014/15, by gender

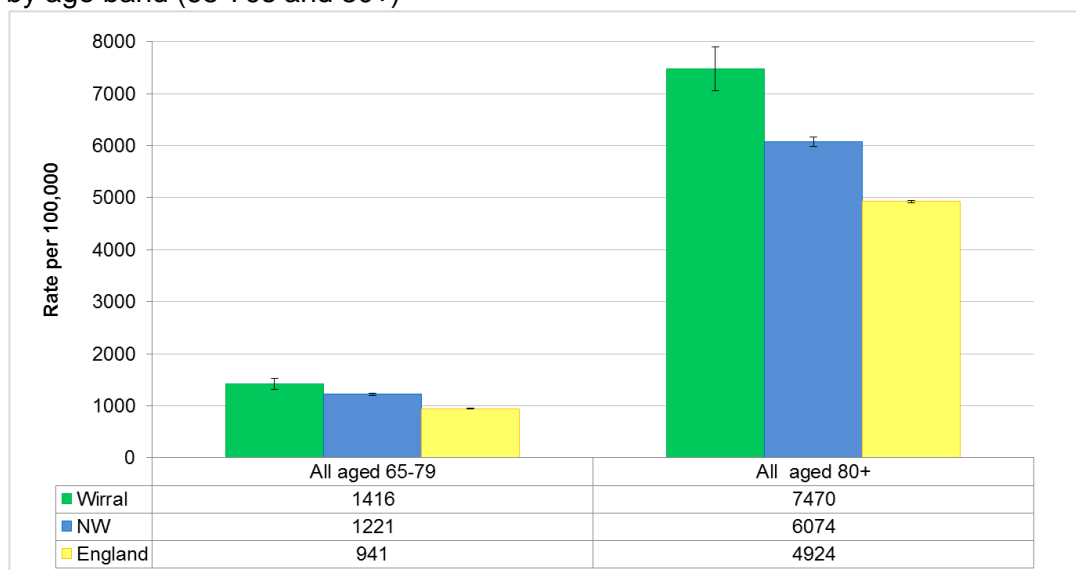


Source: Public Health Outcomes Framework, 2016

Note: The rate used is per 100,000 population aged 65+. In February 2016, the back series for this indicator was revised. The change in emergency admission codes in the Hospital Episode Statistics database meant that in previous publications, some emergency admissions were not being reported. This change rectifies that (PHE, 2016). Data for 2015/16 is not currently available.

As Figure 7 shows, Wirral had a significantly higher rate of admissions caused by falls than both the North West and England in 2014/15. Figure 7 also highlights that falls in Wirral conform to the pattern outlined by the evidence (women fall more than men), but that males in Wirral also have significantly higher rates compared to England and the North West.

Figure 8: Rate of admissions due to falls in the over 65s, Wirral, North West & England in 2014/15, by age band (65-79s and 80+)

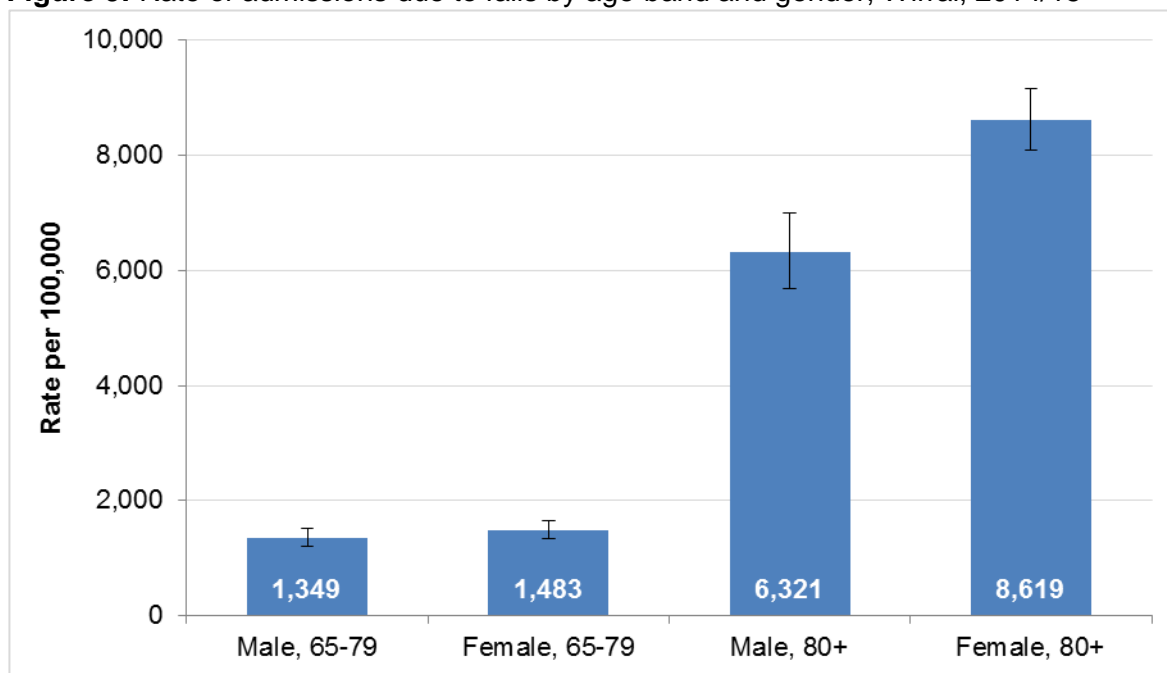


Source: Public Health Outcomes Framework, 2016

Note: See note in Figure 7

Figure 8 shows that admissions, like attendances, are related to age, with the ‘oldest old’ being the most likely to require a hospital admission following a fall. It is also apparent that Wirral has a significantly higher rate of admissions due to falls in both age groups than either England or the North West overall.

Figure 9: Rate of admissions due to falls by age-band and gender, Wirral, 2014/15

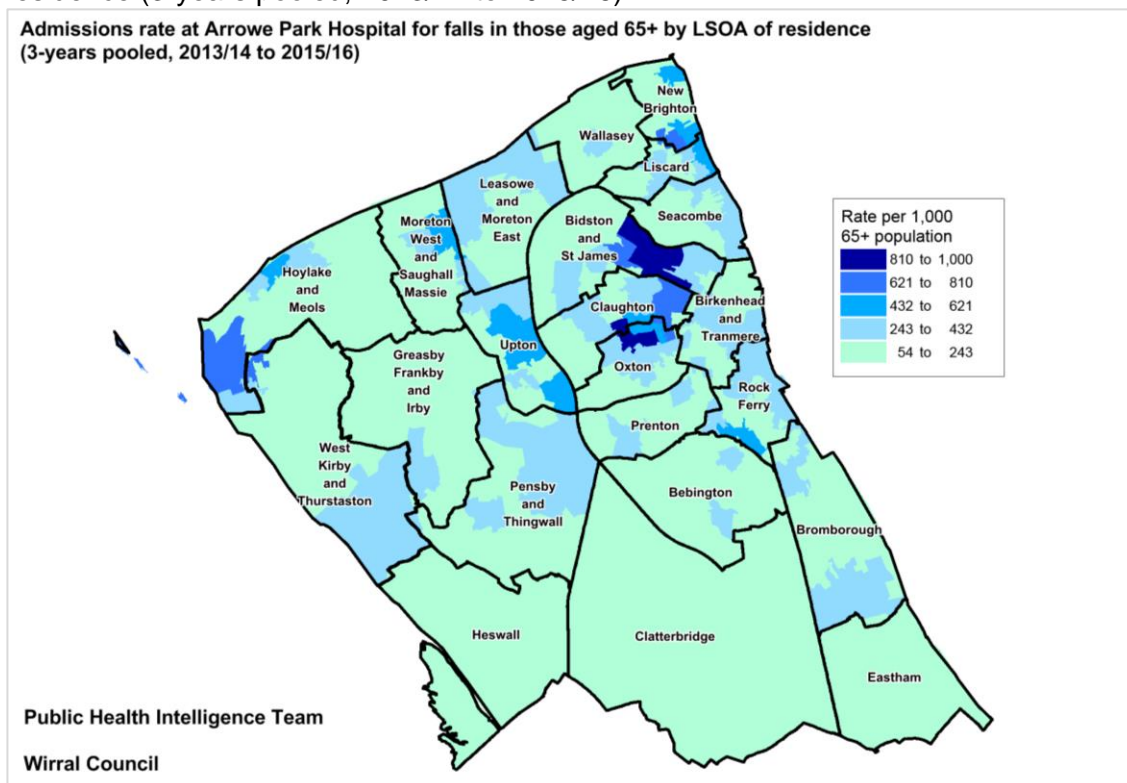


Source: Public Health Outcomes Framework, 2017

Note: See note in Figure 7

Figure 9 shows that females aged 80 and over in Wirral have the highest rate of falls for the population aged 65 and over. In fact, Figure 9 shows that for both age-bands, the rate of admissions by females was higher than males (1,483 and 8,619 compared to 1,349 and 6,321 respectively).

Map 3: Admissions rate at Arrowe Park Hospital for falls in those aged over 65 by LSOA of residence (3-years pooled, 2013/14 to 2015/16)



Source: Hospital Episode Summary data, 2016

As Map 3 shows, the areas with the highest rate of hospital admissions due to falls were in the Bidston & St James, Oxtion and Claughton wards, with Oxtion and Claughton wards being areas with an older age profile than the Wirral average. In contrast with many other health issues, Birkenhead & Tranmere and Rock Ferry wards have some of the lowest admission rates for falls in Wirral.

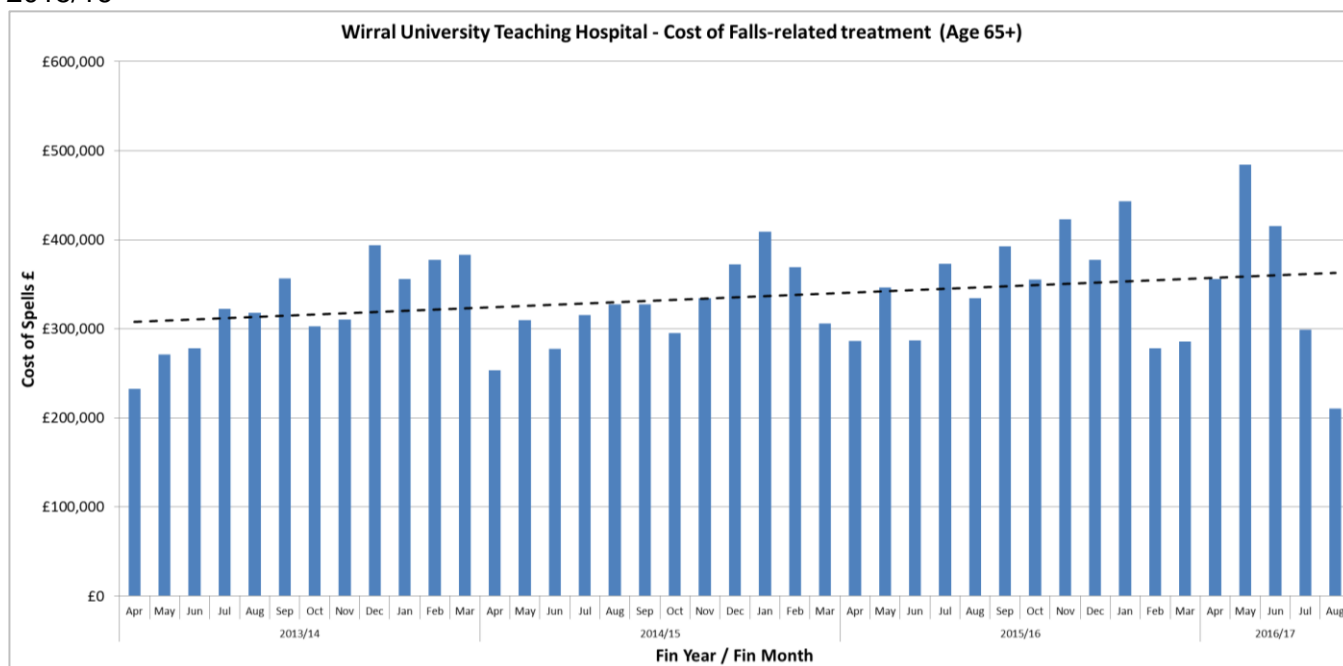
Table 3: Monthly expenditure by Wirral University Teaching Hospital NHS FT by financial year, 2013/14 to 2015/16

Financial Year	Total Cost	Number of falls admissions	Cost per fall
2013/14	£ 3,902,399.78	1,431	£ 2,727.04
2014/15	£ 3,896,905.89	1,521	£ 2,562.07
2015/16	£ 4,182,571.43	1,723	£ 2,427.49

Source: Secondary User Service (SUS) Data, Wirral CCG, 2016

Table 3 shows that over the last 3 financial years, the cost of falls admissions overall has increased; total financial year costs have increased from £3.9million in 2013/14 to £4.2million in 2015/16. However, the cost per fall has decreased from £2727 in 2013/14 to £2427 in 2015/16; a percentage decrease of 11%.

Figure 10: Trend in expenditure relating to falls admissions in those aged 65+, Wirral, 2013/14 to 2015/16



Source: Secondary User Service (SUS) Data, Wirral CCG, 2016
Note: Costs attributable to bed days are excluded. Chart includes cost of treatment only.

Figure 10 allows seasonal fluctuations in the cost of admissions to be seen more clearly; for example, in each financial year the spring months (April-June) incur a smaller amount of falls-related costs, whereas winter months (January-March) incur higher costs. This seasonal fluctuation supports the idea that the colder weather during winter causes people to spend more time in the home, which is the most common place for falls in the those aged 65+ in Wirral, as Figure 3 shows earlier.

The Chartered Society of Physiotherapy (28) developed a falls prevention economic model, which estimates that the total cost to the wider economy for falls is approximately £8.9million per year (based on 1,579 falls). This equates to £5,656.76 per fall, meaning 57% of costs are incurred by the wider health and social economy, such as; ambulance service, community care and social services.

Mortality

In 2012-14, falls accounted for 170 deaths in Wirral, making it the 4th biggest single cause of avoidable mortality for this period. More details will be available in the Public Health Annual Report 2017, which will be published on the [JSNA website](#).

Key Falls Issues

Risk Factors

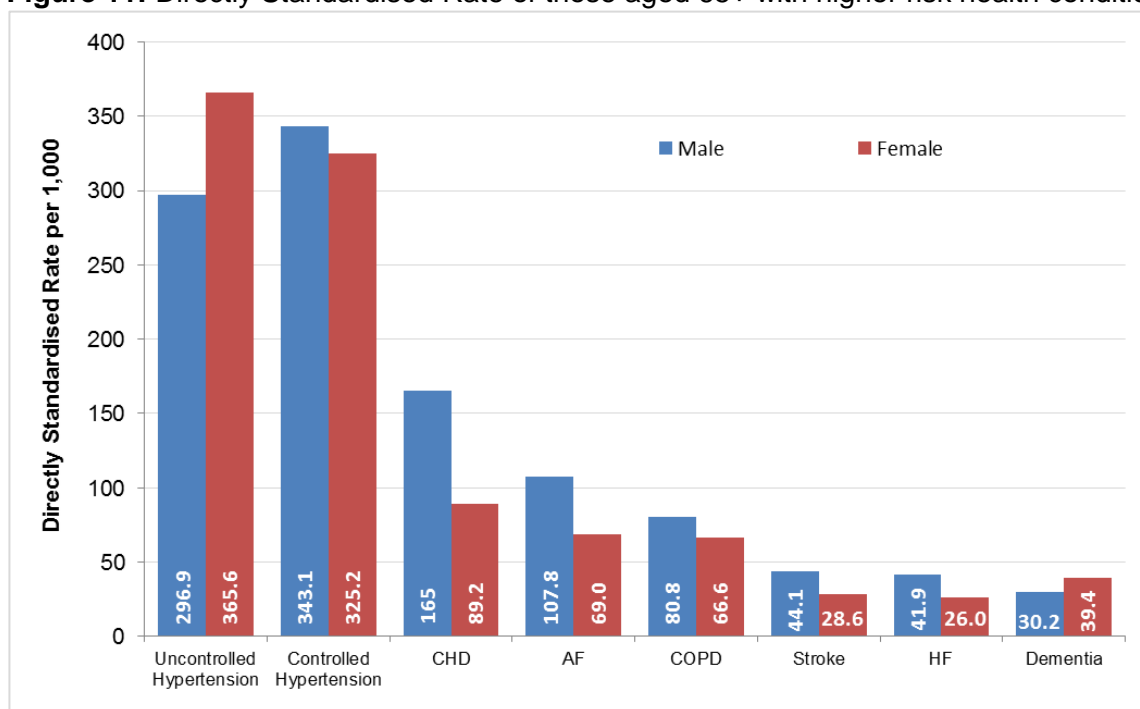
The two most critical risk factors for falls are age (the ‘oldest’ old are more at risk) and ever having had a previous fall. Evidence shows that in addition to these risks, other factors may increase the probability of falls in the population aged 65 and over.

Higher risk health conditions

Research (22, 26) shows that uncontrolled hypertension can lead to an increased probability of falling in those aged 65 and over. It is suggested that this is likely a consequence of increased impairment to ‘immediate standing balance’ - approximately 3 times more likely in older people with uncontrolled hypertension. Figure 11 shows that females aged 65+ in Wirral have a higher rate of uncontrolled hypertension supporting the evidence that females are more likely to suffer a fall.

Orthostatic Hypotension can also impair immediate standing balance; however, there is no data available around the prevalence of this condition. Other health conditions associated with a higher risk of falling in those aged 65 and over, include cardiovascular diseases and dementia.

Figure 11: Directly Standardised Rate of those aged 65+ with higher risk health conditions, 2016



Source: Wirral CCG QOF Data, October 2016

Note: AF = Atrial Fibrillation, CHD = Coronary Heart Disease, COPD = Chronic Obstructive Pulmonary Disease, HF = Heart Failure
 Rates have been calculated using incomplete figures as 10% of the Wirral population have opted out of the Wirral Care Record. Estimates have therefore been produced using recorded figures plus 10%.

Polypharmacy Patients

Any medication(s) can increase the risk of falls where certain side effects are caused, including; sedation/drowsiness, confusion, hypoglycaemia, dehydration or blurred vision.

Polypharmacy is a term used when patients are prescribed 4 or more medications. These patients are at an increased risk of falls due to the greater potential of experiencing side effects caused by the amount of drugs being taken and/or the interaction between them.

In January 2017, there were 40,538 people aged 65 and over in Wirral who were being prescribed at least 4 medications. Figure 12 compares the rates of polypharmacy patients between age band and gender.

Figure 12: Rate of polypharmacy patients by age band and gender, Wirral, January 2017

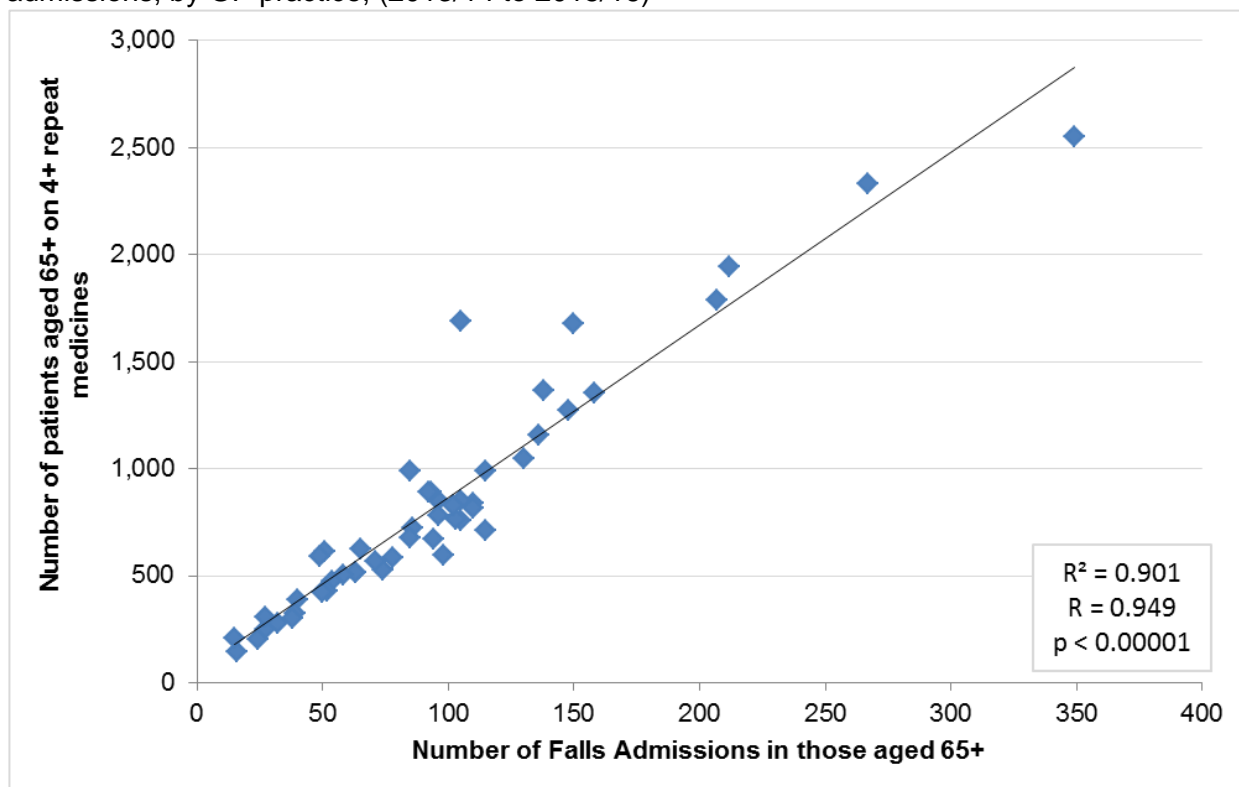


Source: Wirral CCG, 2017

Notes: Please see [Appendix 3y](#) at the end of this document for full methodology.

As Figure 12 shows, females aged 80 and over have a higher rate of polypharmacy. This is not surprising as the Public Health Outcomes Framework shows that in 2014/15, females aged 80 and over in Wirral were more likely to be admitted to hospital following a fall than their younger counterparts and males.

Figure 13: Correlation between number of polypharmacy patients (2017) and number of admissions, by GP practice, (2013/14 to 2015/16)



Source: EMIS and Secondary User Service (SUS) Data, Wirral CCG, 2016

Note: Both counts have been calculated using those aged 65 and over only.

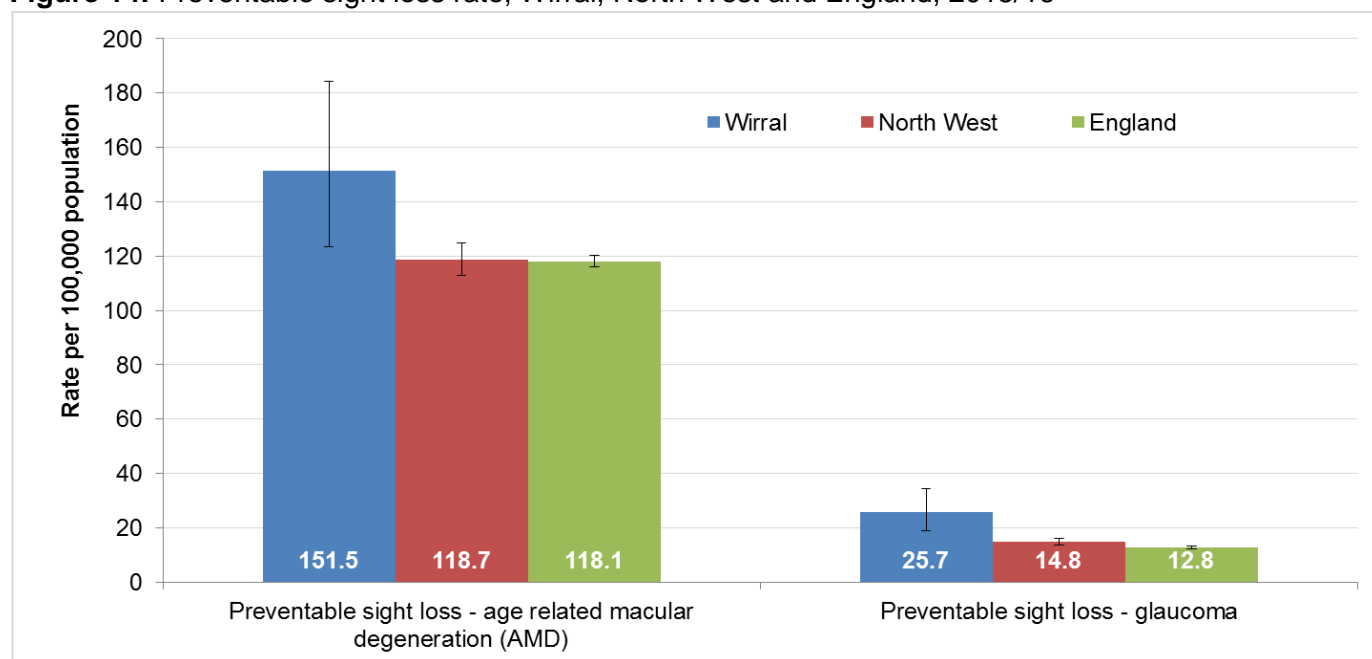
Figure 13 shows that there is a strong positive correlation between the number of falls admissions and the number of polypharmacy patients in a GP practice; the higher the number of polypharmacy patients, the higher the number of falls admissions.

This correlation has been further analysed by age-band and gender (females: 65-79 and 80+, males: 65-79 and 80+), which can be found in the appendices section of this document (Appendix 3i-3iv).

Visual Impairment

Research (16) shows that visual impairment can increase the risk of falling. As Figure 14 shows below, Wirral has a significantly higher rate than England of adults with preventable sight loss due to both glaucoma and age-related macular degeneration (AMD).

Figure 14: Preventable sight loss rate, Wirral, North West and England, 2015/16



Source: Public Health Outcomes Framework, 2017

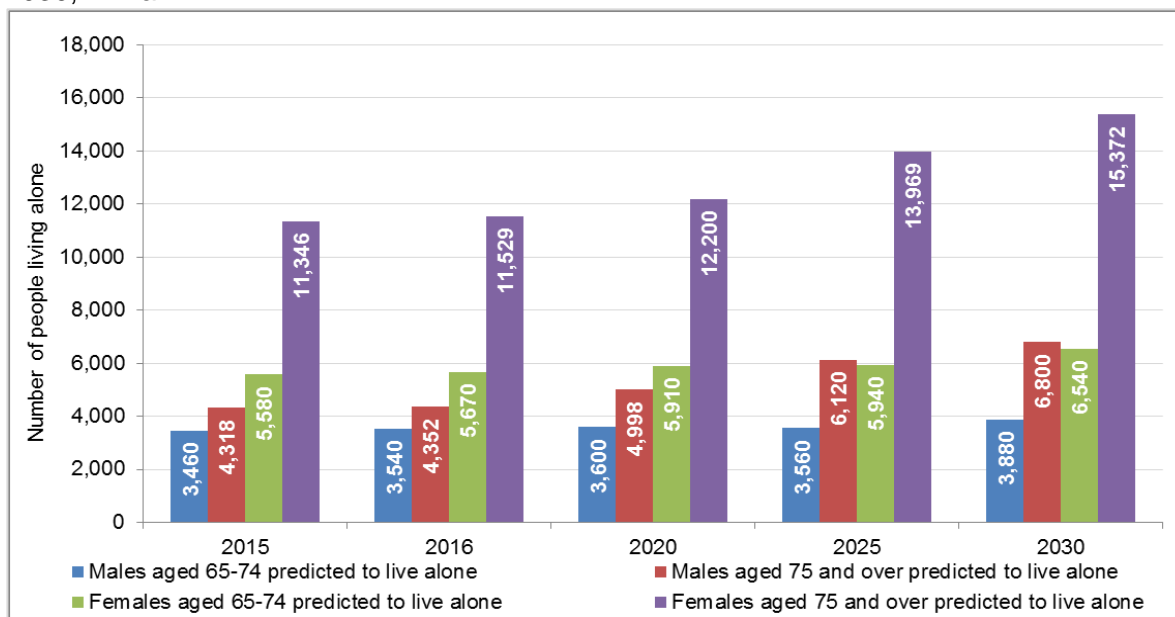
Notes: Rate for AMD is calculated for those aged 65 and over. Rate for glaucoma is calculated for those aged 50 and over. PHOF indicators 4.12i and 4.12ii

Further details on risk factors can be found in other JSNA chapters via these [links](#).

Older people living alone

The World Health Organisation (WHO) reported that living alone can increase the risk of falling in the older population (25). Figure 16 shows that the number of people aged 65 and over living alone will increase over the next 15 years. The chart also highlights the largest group of older people who live alone will be females aged 75 and over; this will increase over 35% between 2015 and 2030. However, males aged 75 and over will see the greatest increase of more than 57% over the same period. Living alone is also shown to increase the likeliness of other risk factors such as dementia. Further details on risk factors can be found in other JSNA chapters via these [links](#).

Figure 16: Projected numbers of people aged 65 and over living alone, by age and gender, 2015 to 2030, Wirral

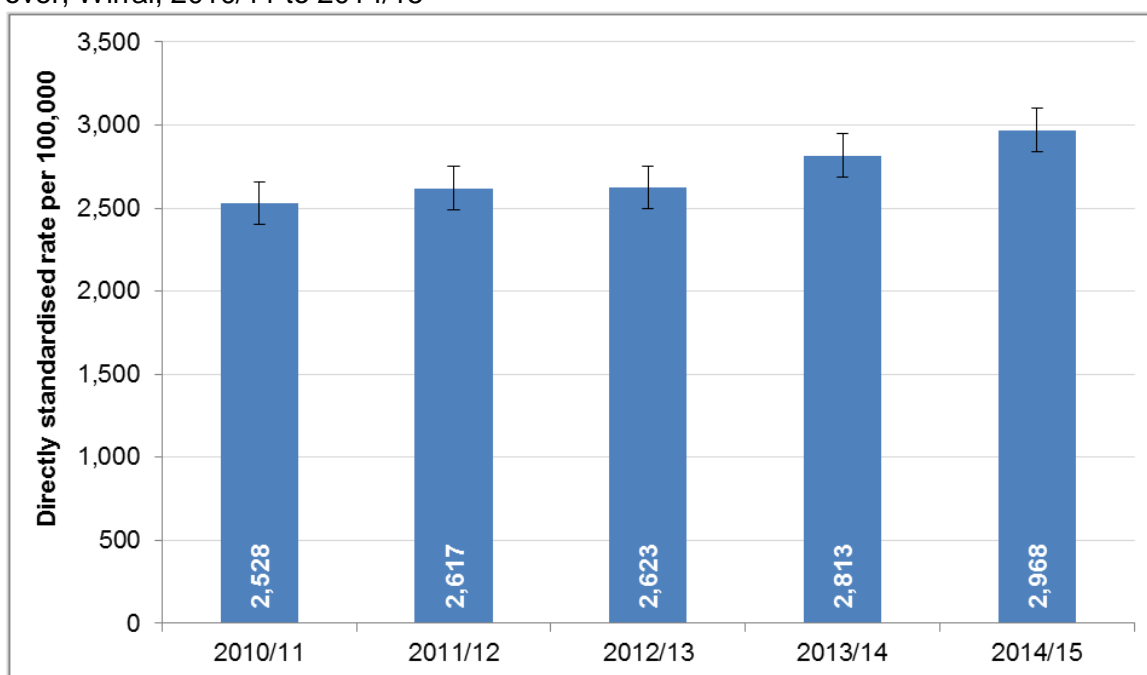


Source: [POPPI](#), 2016

Hospital Admissions

As Figure 15 shows the rate of injuries due to falls in Wirral in those aged 65+ has increased since 2010/11; from 2,528 to 2,968 per 100,000 in 2014/15 (or around 400 additional falls).

Figure 15: Trend in emergency hospital admissions due to falls injuries in persons aged 65 and over, Wirral, 2010/11 to 2014/15



Source: [PHOF](#), 2016

What is this telling us?

Overview

Evidence suggests that older people admitted to hospital due to a fall are more likely to be discharged to an alternative residence, due to the probability of no longer being able to care for

themselves. As falls continue to be a major contributor behind Wirral's older population attending Accident & Emergency and subsequent hospital admissions, there will be a significant cost to local services and impact on families and/or carers.

Wirral has a higher rate of hospital attendances and admissions relating to falls than the national average, which has continued to increase since 2010/11.

Although there is currently no national benchmarking for polypharmacy patients, evidence suggests that, locally, females aged 80 and over are more likely to be on 4 or more repeat medications. This population category are also more likely to be admitted to hospital following a fall, suggesting that female polypharmacy patients aged 80 and over are, perhaps, more vulnerable than their counterparts; females aged 65-79 years and males aged 65+ years.

Local evidence shows that the above cohort (females aged 80+) may potentially be more at risk of falling due to lack of physical activity. Figures from the Health Survey for England (2013) indicate that 55% of females aged 55-64 years, undertake the recommended levels of physical activity; this decreases to 42% in females aged 65-74 years, before a sharp decline to just 13% in females aged 75+. The proportion of males undertaking the recommended levels of physical activity also decreases with age but less pointedly; 55% at 55-64 years, 51% at 65-74 years and at 75+, 30% (or one in 3) are still undertaking the recommended level of physical activity, compared to just one in 7 women in this age band (13%).

Local, Community and Stakeholder views

Patient Experience Survey – Falls Prevention Service

Patient experience surveys have been carried out by Wirral's Falls Prevention Service following clinical assessments and home visits. Feedback received was extremely positive with 99% of patients likely or extremely likely to recommend the service to friends and family. Other key points to note were:

- 100% felt that they were treated with compassion, dignity and respect
- 100% felt their clinician was approachable
- 100% felt involved in their assessment and treatment
- 100% felt that input from the service had been beneficial

The vast majority of feedback indicated that the service was helpful, informative and individually-focussed, with some patients commending the service's ability to signpost to services they were not already aware of.

"Primarily we do not feel alone in dealing with [...]s mobility problems. Everyone was informative and helpful. Only 3 weeks after the home visit we now have all the aids we need, including bannisters and handrails. THANK YOU ALL"

"Help with services I didn't know were available"

"Everything was first class! You could not have done more, we are so grateful"

Postural Stability Instruction (PSI - exercise programme)

Fifty individuals have recently completed a Postural Stability Instruction programme run by the Falls Prevention Service in Wirral. There were several themes from the feedback provided by participants, namely that the classes were friendly, enjoyable and professional.

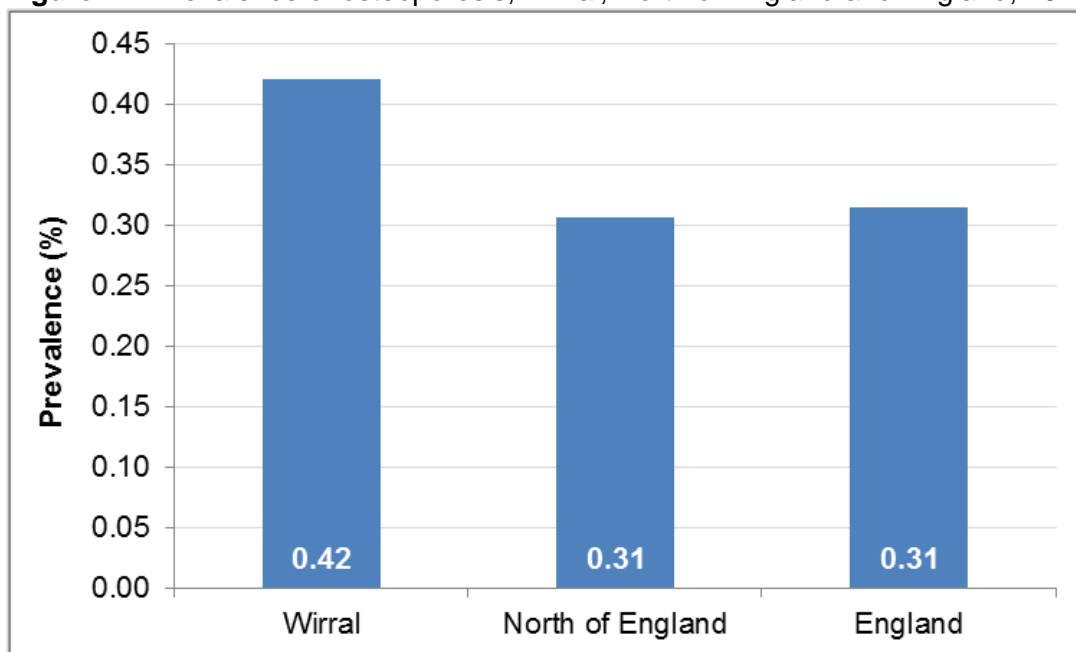
"This was an excellent programme and I was impressed by the professionalism and care of all the staff"
Other highlights from the feedback include:

- 66% reported an improvement in balance
- 46% felt they had more stamina
- 78% felt that they walk better
- 72% felt that their confidence had increased
- 100% felt they knew more about preventing falls

Key inequalities

The [National Service Framework for Older People \(NSF\)](#) (2001) (28) includes a section relating to the treatment and prevention of osteoporosis, as those with the condition are more likely to experience a fracture as a result of a fall. Risk factors of osteoporosis include family history of osteoporosis, low body mass, smoking and previous fragility fracture(s).

Figure 17: Prevalence of osteoporosis, Wirral, North of England and England, 2015/16



Source: Quality and Outcomes Framework, 2016

As Figure 17 shows, Wirral has a higher prevalence than both the North of England and England (0.42% compared to 0.31%). Osteoporosis is more common in females who have gone through the menopause and so it is likely, given the expected increase in the older population (aged 65 and over) that the prevalence of this will continue to rise.

Current activity and services

The Falls Prevention Service is currently commissioned by Wirral Council, delivered by Community Voice and is part of the wider Wirral Independence Service. Wirral's Clinical Commissioning Group and Wirral Council worked in partnership to commission Wirral Independence Service in order to enhance integration of pathways and hopefully realise benefits to the patient journey and economies of scale. The overall service includes several initiatives designed to support the older population including a Falls Pick-up Service, Assistive Technology, [POPIN \(Promoting Older People's Independence Network\)](#), Telehealth service and a Home Adaptations service which arranges major and minor alterations to people's homes.

The overall aim of the Falls Prevention Service is to reduce the number of falls in older people (65 years and above) by providing a person-centred service. The service will promote older people living an independent life, enabling them to stay in their own home for longer. The service aims to provide a multifactorial risk assessment to identify and where possible, eliminate or reduce risk factors associated with falls (therefore reducing the number of recurrent falls).

The assessment follows NICE guidelines and includes medication review, blood pressure and pulse checks, a review of posture and use of walking aids. An action plan is then developed which includes education and advice on how people can eliminate or manage their risk factors. It may include signposting to other services such as Community Therapy Services or Social Services.

Part of the action plan also includes an exercise programme to help build an individual's strength, balance, mobility and confidence. Individuals attend a 12 week Postural Stability Instruction

programme¹, if appropriate, which are located at different venues across Wirral. A home-based exercise programme is developed for those patients who are not at a suitable level of mobility to attend classes. The classes are led by a specialist exercise instructor and include seated and standing exercises that are designed to strengthen walking muscles, and improve balance and co-ordination - which in turn will improve confidence and promote independence in daily activities. Individuals requiring a more bespoke exercise programme, a specific rehabilitation programme or an Activities of Daily Living² review will be signposted to a Community Therapy service.

Outcomes the Wirral Independence Service are aiming toward include; reducing the number of falls, preventing and reducing presentations to/admissions to hospital from A & E, reducing overall hospital admissions, improving timely discharge from hospital, achieving more effective support at home, a reduction in the requirements for care packages/nurse visits, a reduction in care home admissions.

The current activity of the service shows that more than 90% of those referred are aged 65 years and over (with more than 60% being aged 80 years or more). A breakdown of referrals for 2016/17 (year-to-date) can be found in the [appendices](#).

NICE Guideline CG161 (Falls in older people: assessing risk and prevention) recommends that medication reviews are included as part of a multifactorial risk assessment in those aged 65 and over. The current Falls Prevention Service in Wirral undertakes a comprehensive assessment of all who are referred, which includes noting any medications being taken. They also provide advice on their website encouraging regular discussions around medication(s) with a GP or pharmacist.

Further information can be found on the Falls Prevention Service website:
<http://www.communityvoice.org.uk/Our-Services/falls-prevention.html>

In May 2017, Merseyside Fire Service Advocates will pilot the introduction of the Falls Risk Assessment Tool (FRAT) to their Safe and Well Visits. The FRAT will be conducted with all clients aged 60 years and above. The tool consists of 5 questions, with 2 positive outcomes triggering a referral to the Falls Prevention Service.

Key gaps in knowledge and services

There is currently no national polypharmacy data available which would enable us to benchmark (compare Wirral to the rest of England).

Data from the current Falls Prevention Service is currently not comprehensive enough to allow for definite conclusions to be drawn. Work to resolve this issue is ongoing.

What is coming on the horizon?

Considering the changing demography of the UK (ageing population) and the impact that falls has on individuals, the NHS and Social Care, more attention could and should be focused on falls.

Public Health England have commissioned York Health Economics Consortium (YHEC) to carry out a literature review to identify interventions for preventing falls in older people living in the community and to develop an economic model to report the return on investment (RoI) for each cost-effective intervention.

An evaluation of Merseyside Fire Service's FRAT will be undertaken after a 12month pilot, with the intention to include the tool as part of the full service, i.e. Fire Fighters will engage with the tool in addition to advocates.

¹ (this is a 12 week programme of progressive exercises aimed at improving strength in those muscles used for balance which in turn improves ability and confidence to move around independently both indoors and outdoors)

² (this is a review of daily activities such as washing, dressing, meal preparation, assessment for and any provision of community equipment such as walking aids or home adaptations that are necessary to enable an individual to remain independent at home)

What further actions could be considered?

A recent report (20) urging for greater integration of health and social care however has used falls to illustrate that issues should not be viewed or tackled in isolation, instead arguing that older people should be supported and enabled to deal with their (often multiple) chronic conditions in a more integrated way.

The local Ageing Well strategy identifies 'Being emotionally and Physically Healthy' as one of the key areas for Wirral's older population. The strategy also sets out that one of the ways this aim will be achieved is by encouraging older residents to participate in activities that will improve their physical and emotional health. The evidence in this document suggests that a more targeted approach around older females in Wirral should be considered. The full document can be found on the [Wirral Council website](#).

Links

JSNA Chapters related to risk factors and related content:

- [Adult Eye Health](#)
- [Adult Social Care Market Position Statement](#)
- [Alcohol](#)
- [Cardiovascular Disease](#)
- [Chronic Obstructive Pulmonary Disease \(COPD\)](#)
- [Dementia](#)
- [Depression/Mental Health](#)
- [Hypertension](#)
- [Older People](#)
- [Physical Activity](#)
- [Social Isolation \(in the elderly\)](#)
- [Stroke](#)

Relevant and related national and local strategies

Despite not focussing on falls prevention specifically, the local strategy document, Ageing Well (30), includes 'Being emotionally and Physically Healthy' as one of the key areas for Wirral's older population. The strategy identifies that the local population are less likely to be active, the older they get, and aims to reduce this through various schemes such as volunteering and leisure activities, e.g. Invigor8 Active Age and the Live Well Programme. The full document can be found on the [Wirral Council website](#).

The evidence base for falls prevention is well established and much of the current practice responds to the Older People NSF Standard 6 and the 2004 and 2013 NICE guidance.

The [National Service Framework for Older People \(NSF\)](#) (28) was published in 2001 and included a standard on falls (Standard Six). It provided a comprehensive blueprint for the national and local response to falls in older people. It was developed to reduce the number of falls in older adults and to ensure effective treatment and rehabilitation of those who have fallen. It tasked health economies, in partnership with local authorities, to:

- Review the local system of services for falls, including the prevention of falls, identifying those at risk and minimising this risk, improving the care of those who have fallen, including rehabilitation and the continuing care for those whose falls have longer term consequences;
- Agree and implement local priorities to reduce the incidence of falls, and to reduce the impact a fall can have on health, well-being and independence including appropriate interventions and advice to prevent osteoporotic fracture.

The Standard outlines the required actions to reduce the number of falls and their impact through; prevention including the prevention and treatment of osteoporosis, improving the diagnosis, care and treatment of those who have fallen and rehabilitation and long-term support. The Standard advises the implementation of a community strategy targeting environmental hazards as a means of population level prevention and the implementation of a specialist falls service providing assessment and intervention through a multidisciplinary and multifaceted approach.

In 2004 NICE developed a falls guideline which outlined recommendations on the assessment and prevention of falls in older people. The guideline was recently updated NICE Guidance on preventing falls in older people (1) in January 2017 and extended incorporating the most recent, and best available, evidence. The update consists of three new quality statements to the existing guidance:

- Quality Statement 1: Identifying people at risk of falling
- Quality Statement 2: Multifactorial risk assessment for older people at risk of falling
- Quality statement 3: Multifactorial intervention

The updated guidance can be accessed via this link.

The guidance outlines the recommendations for preventing falls specifically the need for identification and assessment of people who have fallen or who are at risk of falls; providing a multifactorial intervention where required. The components of a successful multifactorial intervention programmes are described as including; strength and balance training, home hazard assessment and intervention, vision assessment and referral and medication review with modification/withdrawal. Encouraging the participation of older people in falls prevention programmes, as well as the provision of educational material for patients and carers, is also recommended.

The guideline includes a series of recommendations for preventing falls in hospital. It suggests that all patients aged 65 years or older and patients aged 50 to 64 years who are considered to be at higher risk of falling because of an underlying condition should be regarded as being at risk of falling in hospital and managed accordingly. This includes risk assessment and when required a multifactorial intervention response during the inpatient stay. The guideline reported that there is ineffective or equivocal evidence for the following:

- Brisk walking
- Low intensity exercise combined with continence training
- Cognitive and behavioural interventions
- Referral for visual disturbance
- Vitamin D
- Hip protectors

A NICE pathway has also been developed regarding falls in older people (January 2014) at www.pathways.nice.org.uk/pathways/falls-in-older-people.

The recently published [Falls and fracture consensus statement](#) was produced by Public Health England and member organisations of the National Falls Prevention Coordination Group. The content of this publication further reinforces the importance of multifactorial falls assessments and interventions through risk identification and effective commissioning.

A measure that reflects the success of services in preventing falls will give an indication of how the NHS, public health and social care are working together to tackle issues locally. The PHOF target is to reduce the rate of age-sex standardised emergency hospital admissions for injuries due to falls in persons aged 65+ per 100,000 population. Interventions for recently retired and active older people are likely to be different in provision and uptake for frailer older people, this indicator therefore has sub indicators for ages 65-79 and 80+.

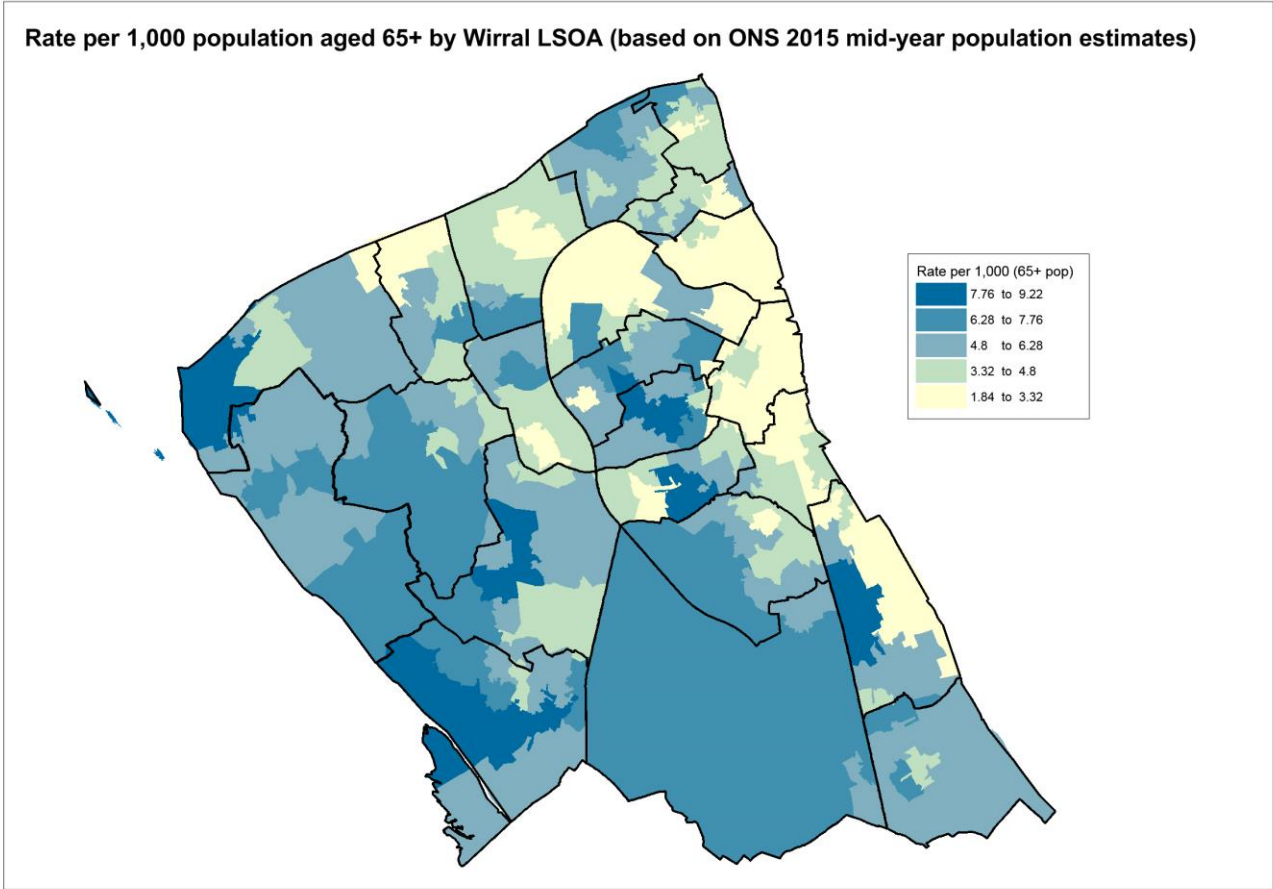
References

1. [Falls: assessment and prevention of falls in older people](#). NICE clinical guideline 161. June 2013.
2. Health Evidence Network: Evidence for Decision makers. How should interventions to prevent falls be implemented? WHO Europe 2004.
3. Gilbert, R, et al. *Socio-demographic factors predict the likelihood of not returning home after hospital admission following a fall*, Journal of Public Health, 2009, Available at: <http://jpubhealth.oxfordjournals.org/content/32/1/117>
4. Feder, G, et al. Guidelines for the prevention of falls in older people. BMJ, 2000, 321: 1007-1011.
5. Bath, P.A. and Morgan, K. (1999) *Differential risk factor profiles for indoor and outdoor falls in older people living at home in Nottingham, UK*. European Journal of Epidemiology, 15 (1). 65 - 73.
6. Wickham Cet al. Muscle strength, activity, housing and the risk of falls in elderly people. Age and Aging. 1989, 18: 47-51;
7. Howson, C. Smith, K. (2014) *Care Homes – Medication and falls*, Bulletin 87, NHS Prescripp
8. Ray, W., Thapa, P., Gideon, P., Benzodiazepines and the risk of falls in nursing home residents. Journal of the American Geriatrics Society, 2000, 48:682-685
9. Lawlor DA, Patel, R., Ebrahim, S. Association between falls in elderly women and chronic diseases and drug use: cross sectional study. BMJ 2003, 327:712-717
10. Skelton, DA., Effects of physical activity on postural stability. Age and Aging, 2001, 30, S4: 33-39
11. Gillespie LD et al, 2012. Interventions for preventing falls in older people living in the community. The Cochrane Library
12. Skelton et al, 2005. 'Tailored group exercise (Falls Management Exercise — FaME) reduces falls in community-dwelling older frequent fallers (an RCT)'. Age and Ageing (November 2005)
13. Van Doorn, C., et al. Dementia as a risk factor for falls and injuries among nursing home residents. Journal of the American Geriatrics Society, 2003, 51,9: 1213-1218
14. Lord, SR, Dayhew, J., Howland, A. Multifocal glasses impair edge-contrast sensitivity and depth perception and increase the risk of falls in older people. Journal of the American Geriatrics Society, 2002, 50, 11: 1760-1766
15. Lord, SR., Bashford, GM., Shoe characteristics and balance in older women. Journal of the American Geriatrics Society, 1996, 44: 429-43
16. Lord, S.R., Sherrington, C., Menz, H.B., Falls in older people: risk factors and strategies for prevention. Cambridge University Press, 2000.
17. Dean E, Ross J, Relationships among cane fitting, function and falls. Physical Therapy, 1993 73:494-504;

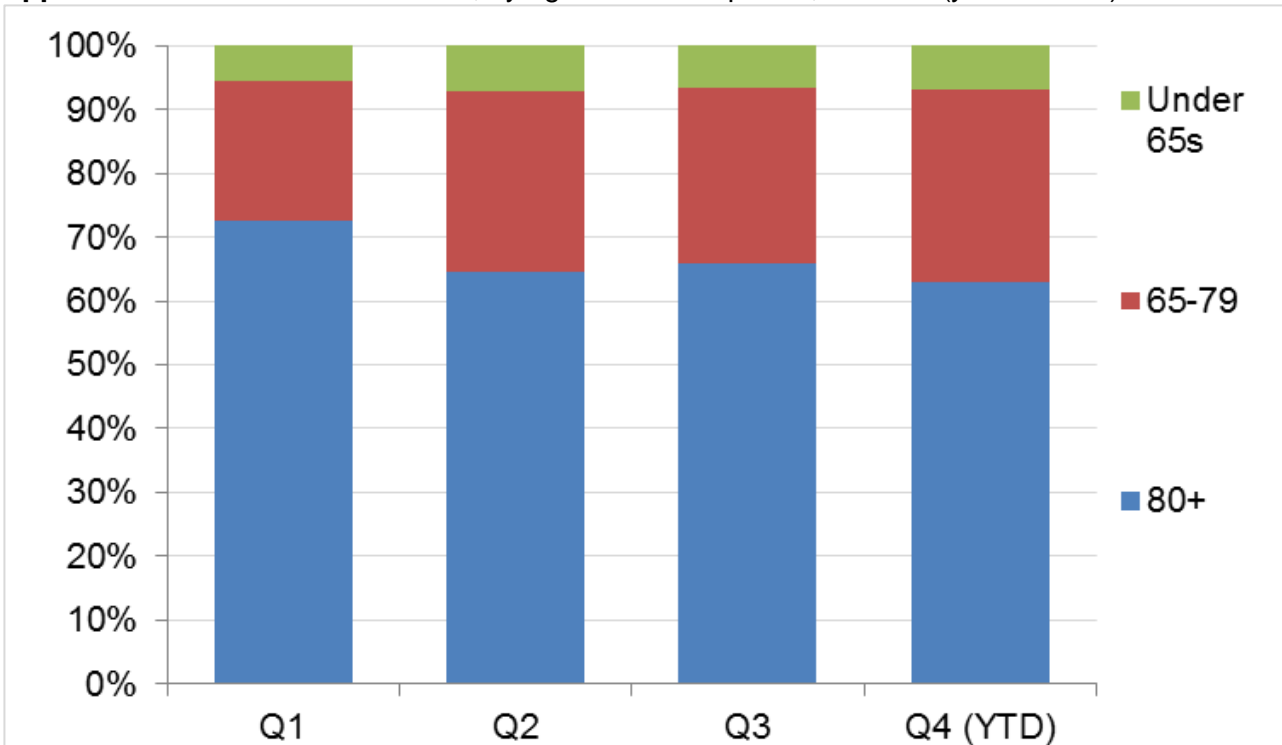
18. Centre for Clinical Effectiveness. Effectiveness of fall prevention strategies for older patients in institutional settings, Southern Health Care Network/Monash Institute of Public Health & Health services Research, Clayton, 2000, www.med.monash.edu.au/publichealth/cce
19. Help the Aged, 2008. *Spotlight Report 2008*.
20. One Person, One Team, One System. Report of the Independent Commission on Whole Person Care, chaired by John Oldham. February 2014
http://www.yourbritain.org.uk/uploads/editor/files/One_Person_One_Team_One_System.pdf
21. El-Khoury, F. et al, The effect of fall prevention exercise programmes on fall induced injuries in community dwelling older adults: systematic review and meta-analysis of randomised controlled trials, *British Medical Journal*, 2013, 347:f6234.
22. Gangavati, A., Hajjar, I., Quach, L., Jones, R. N., Kiely, D. K., Gagnon, P. and Lipsitz, L. A. (2011), Hypertension, Orthostatic Hypotension, and the Risk of Falls in a Community-Dwelling Elderly Population: The Maintenance of Balance, Independent Living, Intellect, and Zest in the Elderly of Boston Study. *Journal of the American Geriatrics Society*, 59: 383–389. doi:10.1111/j.1532-5415.2011.03317.x
23. Department of Health (2014) Drug Safety Update May 2010 vol. 3 issue10:3 Accessed: January 2017, Available at: <https://www.gov.uk/drug-safety-update/antidepressants-risk-of-fractures#conclusions-of-the-review>
24. Public Health England (2015) Falls: apply All Our Health, Accessed at: January 2017, Available at: <https://www.gov.uk/government/publications/falls-applying-all-our-health/falls-applying-all-our-health>
25. WHO Global Report on Falls Prevention in Older Age, 2007, World Health Organisation, Accessed at: January 2017, Available at: http://www.who.int/ageing/publications/Falls_prevention7March.pdf
26. Shen, S. He, T. Chu, J. He, J. Chen, X. (2005) Uncontrolled hypertension and orthostatic hypotension in relation to standing balance in elderly hypertensive patients Accessed at February 2017. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4455870/>
27. Falls Prevention Economic Model (2006) Chartered Society of Physiotherapists Accessed at January 2017, Available at: <http://www.csp.org.uk>
28. Department of Health (2001) [National Service Framework for Older People \(NSF\)](http://www.gov.uk) Available at: www.gov.uk
29. Khanom, S. Falls Risk and Medication Bristol City Council & Bristol Community Health Accessed: January 2017, Available at: <https://www.bristol.gov.uk/documents/20182/759292/Falls+risk+and+medication/1b7e13eb-1d77-4981-ad9f-a9d571b5c8c2>
30. The Wirral Partnership (2016) *Ageing Well Strategy*, Wirral Council, Accessed: April 2017, Available at: <https://www.wirral.gov.uk/sites/default/files/all/About%20the%20council/Wirral%20Plan/Ageing%20Well%20Strategy.pdf>

Appendices

Appendix 1: Population (rate per 1,000) of persons aged 65 and over in Wirral, by LSOA, 2015



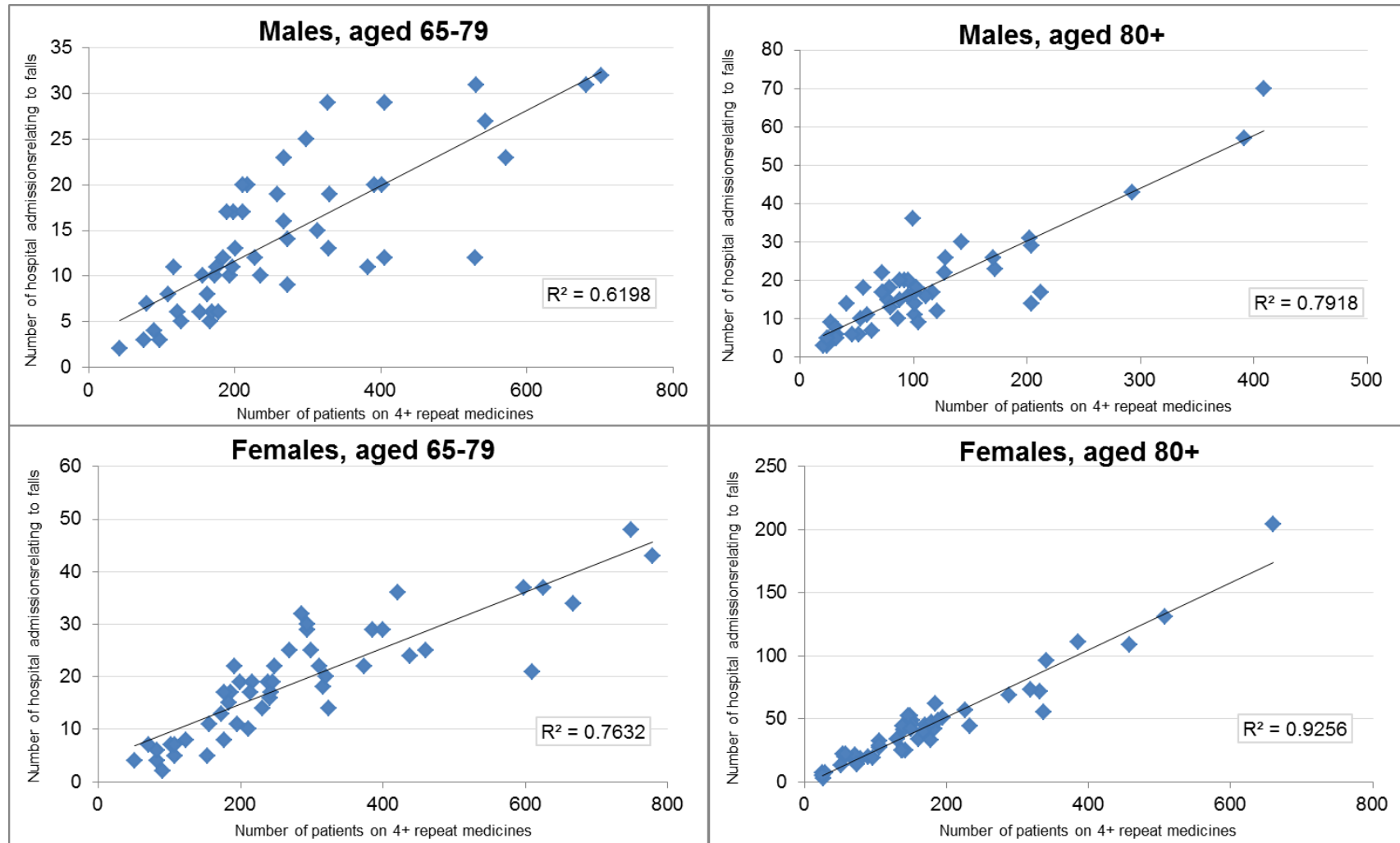
Appendix 2: Falls Service Referrals, by age-band and quarter, 2016/17 (year-to-date)



Source: Wirral Falls Service, February 2017

Note: Quarter 4 data contains figures from January only.

Appendix 3i-3iv:



The four scatterplots show that each age-band and gender split provides a strong positive correlation between the two factors; the strongest relationship is seen in females aged 80 and over, which is consistent with other findings within this report.

Appendix 3v

Methodology: The number of practices used in these calculations was 49; four Wirral practices are currently not data sharing. From these 49 practices, data was only extracted relating to patients who have not opted out of data sharing.

Drugs included as a risk factor for falls (list checked with Susan Maire, Senior Medicines Optimisation Lead for Wirral, Midlands and Lancashire CSU):

Central Nervous System

- Hypnotics & Anxiolytics
- Drugs Used in Psychoses and Related Disorders
- Antidepressant Drugs
- Opioid Analgesics
- Drugs Used in Parkinsonism and Related Disorders
- Antiepileptic medication(s)
- Drugs Used in Nausea and Vertigo
- Drugs Used in Dementia

Cardiovascular System

- Diuretics
- Antihypertensive medication(s)
- Cardiac Glycosides
- Nitrates, other vasodilators and calcium channel blockers
- Anticoagulants and Protamine

Respiratory System

- Sedating Antihistamines

Gastro-Intestinal System

- Laxatives

Endocrine System

- Insulins
- Oral Hypoglycaemic Agents

Genito-urinary drugs

- Urinary frequency, Nocturnal Enuresis and Incontinence

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