

# Merton Falls Health Needs Assessment



Health Needs Assessment 2014/15  
Public Health Merton  
London Borough of Merton

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## 1. Executive Summary

### Background

The Falls Health Needs Assessment (FHNA) was commissioned as part of the Merton Model workstream of the Merton CCG Better Care Fund for the purpose of analysing current and future falls prevention needs, identifying health inequalities and providing information for the development of a falls prevention pathway (from reactive intervention to proactive management). The FHNA will also inform the Merton CCG Falls Prevention Strategy.

### Aims, objectives and methodology

The FHNA aims to:

- Describe the size and nature of the issue of falls in Merton in the 65 and over age group
- Describe the nature and extent of health inequalities in both uptake of and access to Falls Prevention Services (FPS)
- Identify evidence-based interventions and best practice for falls prevention in older people in the community
- Describe current health and social care provision and how this compares with best practice interventions
- Identify gaps in service provision and make recommendations about how to address them particularly in relation to reducing health inequalities

The FHNA includes an in-depth data analysis of epidemiological data, consultations with services users, service providers, and a review of the literature.

### Why assess needs relating to falls in older people?

Falls are a major public health problem; they are preventable, costly, deadly and can be devastating. They often are caused by the interaction of many risk factors and lead to substantial morbidity and mortality in the older population (that is those aged 65 and above). A significant number of falls are never the result of a single reason but often a complex interaction of risk factors. The more risk factors a person has, the greater their chances of falling. Intrinsic risk factors include age gender, previous falls, muscle weakness, gait and balance problems. Extrinsic risk factors include dim lighting, slippery or uneven surfaces, improper use of assistive devices and obstacles or slipping hazards. The incidence of hip fractures increases exponentially with aging.

### Evidence Based Interventions and Best Practice Regarding Falls

There is evidence that the most important consideration when it comes to commissioning and delivering falls prevention exercise is that there is no 'one-size fits all' solution. Programmes must be tailored to the individual in order to be effective, which means the exercise must be pitched at the right level and enable participants to progress. The National Institute of Clinical Excellence (NICE) as best practice for falls prevention for older people in the community recommends:

- Case/risk identification, multifactorial assessment and multifactorial interventions

- The recommended evidence-based exercise interventions include OTAGO exercise programme, Tai Chi, Moving for balance, FaME (Falls Management Exercise) and Postural Stability Instructor (PSI)

The Department of Health (DH) recommends that a systematic approach to falls and fracture prevention at a population level entails having four objectives aimed at four groups namely:

- **Objective 1-** Improving outcomes for hip fracture patients
- **Objective 2-** Responding to the first fracture by preventing the second in non-hip fragility fracture patients
- **Objective 3-** Early intervention for individuals at high risk of fragility fractures and;
- **Objective 4-** Keeping older people healthy, preventing frailty and reducing accidents

### **The Older Population of Merton**

Overall the health of people aged 65 and over in Merton is better than the England average based on proxy measures such as Disability Free Life Expectancy (DFLE) at 65. Older people make up 12.3% of the population of Merton. The proportion of people aged 65 and over in Merton is predicted to grow by 14.7% in the next 10 years in line with the outer London growth rate of older people. The increase in older people represents an increase in demand for falls prevention services as well as health and social care resources to deal with the issue of falls. Of people aged 65 and older 44% are men and 56% are women, there are more older people in the west than the east of Merton but those in the east are more deprived.

### **Falls Prevention Services and Initiatives in Merton**

In Merton there is a specialist falls services. This is an NHS led Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS) that accepts referrals from health and social care professionals only. There are a range of fall prevention initiatives in the form of keep fit and exercise classes provided by the voluntary sector namely Age UK Merton, Merton and Morden Guild of Social Service, and Wimbledon Guild. There are two Leisure Centres (Canons and Wimbledon Leisure Centre) and a pool Morden Park Pool which all provide concessionary membership fees for people of retirement age depending on the membership. There are initiatives provided by Merton Council as part of the strategy entitled "Celebrating Age – Valuing Experience" a strategy for people aged 50 and above including increasing physical activity in older people. There is currently no overarching falls prevention pathway or strategy in Merton.

### **How big is the Issue of Falls in Merton?**

It is difficult to give an exact number of total falls that occur in Merton in a year as some go unreported, and falls are captured in different health and social care systems as different things i.e. in some cases only the injury and not the fall is coded. Therefore, various proxies are used to gauge the incidence such as hospital admissions and fractures. Hip fractures are often used as a proxy measure for falls as they are associated with higher cost and mortality than fractures of other sites. Projecting Older People Population Information (POPPI) estimates that that a total of 6579 falls occurred among older people in Merton in 2014. The Chartered Society of Physiotherapy (CSP) gives a conservative estimate of a total of 2714 falls that occurred during 2013/14 of which 1272 were mild and required no treatment, 1103 were moderate and required a GP appointment or outpatient attendance and 339 were



severe and required an inpatient admission or care home referral. Modelled prevalence based on the Age UK model bring the estimated number of falls in Merton to at least 6922 and this estimate is closer to the POPPI estimate. Using CSP modelled falls prevalence in Merton it is estimated that falls cost the CCG and Local Authority in excess of £3.3 million pounds.

### **Key points:**

#### **Where Merton is doing well:**

- Merton's rate of emergency admissions for a broken hip in 2012/13 is the 13th lowest of 32 CCGs in London
- The rate for Merton residents who return to their usual place of residence following admission for a hip fracture (a proxy measure for availability and quality of community care and home-support services) is not significantly different to the London and England rate and similar to most of the comparators<sup>1</sup>

#### **Where Merton is not doing so well:**

- The falls-related mortality rate in the people aged 75 and older for both men and women is second highest to all the 11 comparators<sup>2</sup>
- Merton is slightly below the national average in terms of the osteoporosis QOF indicator on the percentage of patients aged between 50 and 74 years, with a fragility fracture, in whom osteoporosis is confirmed on DXA<sup>3</sup> scan, who are currently treated with an appropriate bone-sparing agent
- The Merton rate for admissions into care homes (a proxy measure for delaying dependence and preventing frailty) is higher than similar local authorities<sup>4</sup> and the London rate. A lower rate is desirable. Delaying dependence and preventing frailty is part of a systematic approach to prevent falls at a population level
- Merton has a significantly higher rate of older people, older women and those aged 80 and above being admitted to hospital for falls related injuries compared to the England average
- The mortality rate from falls in women is higher than most geographical neighbours and all the statistically similar boroughs (actual numbers are very small; so caution should be observed when making inferences from the falls-related mortality data)

### **Other local trends in falls:**

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<sup>1</sup> Merton Comparators are a Geographical neighbouring boroughs i.e. South West London (SWL) boroughs namely: Wandsworth, Croydon, Sutton, Kingston and Richmond and the ONS Statistical cluster which is a cluster of boroughs that been classified into clusters based on similar characteristics <http://www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/ns-area-classifications/index/cluster-summaries/health-areas/index.html>

<sup>3</sup> A DEXA scan is a special type of X-ray that measures bone mineral density (BMD).DEXA stands for "dual energy X-ray absorptiometry". This type of scan is also often known as DXA, or "dual X-ray absorptiometry". It's also sometimes referred to as a bone density scan or a bone densitometry scan

<sup>4</sup> The ASCOF develops a list of similar Local Authorities. Comparable local authorities are selected according to the Chartered Institute of Public Finance and Accountancy (CIPFA) Nearest Neighbour Model, which identifies similarities between authorities based upon a range of socio-economic and demographic indicators. Further information about the Nearest Neighbour Model can be found on the CIPFA website <http://www.cipfastats.net/resources/nearestneighbours/>

1. A significant majority of falls occur at home in Merton and such falls have been progressively increasing from 2009 to 2013
2. The second frequent location of falls is on the street or highway suggesting that at a population level environmental risk factors play a key role
3. The third frequent location of falls is in care homes and residential institutions suggesting that any falls prevention strategy would need to incorporate tackling falls in these settings

#### **Key points for health inequalities:**

##### **There is an east and west divide**

- a. There is a higher rate of older people being referred to the SMCS FPS in the west when compared to the rate of older people being referred to the SMCS FPS
- b. There is a higher rate of people attending A&E for a fall from the east part of Merton when compared to the west part of Merton
- c. In the east of Merton 7 out of 10 wards have a higher rate of falls related A&E attendances in 2013 when compared to the ward rate for referrals into the FPS in 2013. On the other hand in the west of Merton only 2 out of 10 wards have a higher rate of falls related A&E attendances when compared to the ward rate for referrals into the FPS in 2013
- d. More men in the east make a fall- related ambulance call out than the west
- e. All the above point suggest that there is greater need for fall prevention input in the East of Merton

##### **Gender differences**

- a. There are more women (in terms of population numbers) than men. There are 13,740 women as opposed to 10,983 men aged 65 and over in Merton. There is a higher prevalence of osteoporosis in women than in men therefore there is a greater need for falls prevention services for women in Merton
- b. There is a higher rate of falls in women than men shown by a higher rate of women than men who presented to A&E for falls between 2011-2013
- c. Abbey, Raynes Park, Merton Park and Dundonald are the only wards with a higher rate of men falling to women
- d. The rate of men falling in East Merton is higher than the rate of men falling in west Merton

##### **There are identified hotspots and areas of greater need**

- a. Abbey ward and Figges' Marsh were the wards with the highest rates of falls-related A&E attendances in older people in 2013
- b. The table below shows the areas that had a higher rate of falls-related A&E attendances in older people compared to referrals into the FPS in 2013 respectively. The table also includes wards with the higher rates of older people living alone. These are therefore deemed to be the areas of greater need:

<b>East Merton Wards</b>	<b>West Merton Wards</b>
Graveney Lavender Cricket Green Colliers Wood Longthorn Pollards and Figges' Marsh Abbey <sup>5</sup>	Lower Morden Village Hillside <sup>6</sup>

**There is considerable variation between wards (health inequalities between wards)**

- a. The rate of falls-related ambulance call outs varies markedly between wards
- b. The referral rates of Merton residents into the Sutton and Merton Falls Prevention Service also varies markedly between some neighbouring wards with similar concentrations of older people which suggests inconsistency of access opportunities

**Other areas relating to health inequalities**

- a. It was not possible to determine if there was proportionate ethnic representation in terms of accessing the SMCS FPS because the numbers were small and any rates would have been skewed
- b. The incidence of falls is higher in white women than other ethnic groups
- c. There is no correlation between deprivation and A&E attendances for falls suggesting that risk factors such as (living alone and gender) have a stronger association to A&E attendance than deprivation

**Key findings from consultations with Service users**

Three broad themes that emerged from consultations with service users were:

- Service users' understanding of the determinants of falls
- The Merton falls pathway
- Barriers to accessing falls prevention services

**Service users' understanding of the determinants of falls**

- There was generally good understanding of the determinants of falls in the older people of Merton attending falls prevention services across Merton
- Environmental risk factors were seen as the most influential risk factor to falls. There was a felt need for rigorous control of environmental hazards that lead to falls such as clearer or even paths and pavements and the availability of public seating or benches for elderly people to rest when they are out and about. This is in spite of the data showing that a greater number of older people in Merton fall at home than other locations.

**The Merton Falls Prevention Approach**

- There currently is no Merton Falls Prevention Pathway. There are elements of primary prevention being carried out by voluntary sector organisations, there is a specialist falls prevention service and a Fracture Liaison Service (FLS) but older people are not always

<sup>5</sup> Ward with higher rates of older people living alone

<sup>6</sup> Wards with higher rates of older people living alone

aware of the various Falls prevention services that are available in Merton which is a possible reason for the inconsistent access

- The case-finding approach (of people at risk of falls and in need of falls prevention interventions) is not proactive enough as often the triggers for referral are falls
- There was positive feedback on the quality of existing falls prevention services from those who had accessed the services. Where negative feelings were expressed, they tended to relate to a desire for longer access to falls prevention classes and the need for “step down” services following the conclusion of the allocated sessions in the specialist falls prevention service
- The provision of a comprehensive range of services that identify individuals at the earliest possible opportunity and provide on-going support beyond the prescribed length of current services was identified as the most pressing issue among service users
- The need for a greater focus on primary prevention and a more strategic approach to case-finding was also expressed by service users

### **Barriers to accessing falls prevention initiatives**

- Transport issues such as the unavailability of subsidised taxis and varying levels of reliability on dial-a-ride were cited as barriers to accessing fall prevention initiatives/ services
- Reduced mobility and isolation for house bound patients was also cited as a potential barrier to accessing services
- Psychological barriers including the acceptance of falls as an inevitable part of aging and variation in motivation to participate in health seeking behaviour were also cited as barriers to accessing fall prevention initiatives i.e. the falls primary falls prevention services provided by Voluntary sector organisations

### **Key Findings from consultations with Service Providers**

The overarching themes that emerged from the interviews were:

- Primary prevention and shared ownership of the issue of falls
- The referral process into the SMCS FPS
- Collaborative working and true integration

### **Primary prevention and shared ownership of the issue of falls**

- Providers identified a pressing need for more collaborative working across sectors to facilitate a whole systems approach to falls prevention. This approach would serve to raise the profile of falls as a priority among professionals who have contact with the older population and would increase opportunities both for case finding and referral between services. Primary prevention would also entail robust health promotion and encouraging physical activity among older people
- There is insufficient case finding particularly in Primary Care with only 30% of referrals into SMCS FPS coming from General Practitioners (GPs) whereas in neighbouring boroughs such as Wandsworth referrals from GPs are 60%

### **The referral process into the SMCS FPS (the specialist falls service)**

- Barriers to accessing the SMCS FPS cited include the lack of a self – referral route, and the referral forms being “complicated and requiring a considerable amount of falls risk assessment at the point of referral”

### **Collaborative working and true integration**

- As falls are the result of the interaction of multiple risk factors, the issue of falls prevention needs to be “de-medicalised” and a joint and integrated approach needs to be taken by the CCG and the Local Authority to promote physical activity among older people, to provide health promotion and preventing frailty and accidents (Objective 4 of the DH systematic approach to fall prevention at a population level)
- There is a need to strengthen links with the Fracture Liaison Service (FLS) that provides an opportunity for secondary prevention and avoiding the next fracture; particularly for those with fragility non- hip fractures which tend to precede hip fractures

See the following tables below:

- The Merton Falls Prevention Landscape and ;
- Falls Prevention Standards and Guidance, Merton Gaps and Recommendations

## THE MERTON FALLS PREVENTION LANDSCAPE

<p><b>THE MERTON FALLS PREVENTION LANDSCAPE IN TERMS OF</b></p> <p>1. PRIMARY</p> <p>2. SECONDARY AND;</p> <p>3. TERTIARY PREVENTION SERVICE AND INITIATIVES AVAILABLE</p> <p>N.B. Some services provide both primary and secondary prevention, and secondary and tertiary prevention. The categories are not mutually exclusive</p>	<p><b>PRIMARY PREVENTION</b> - predominantly concerned with keeping older people fit and health. Services in Merton include:</p> <ul style="list-style-type: none"> <li>• Keep fit classes provided by voluntary sector providers namely: <ul style="list-style-type: none"> <li>○ Wimbledon Guild of Service</li> <li>○ Age UK Merton</li> <li>○ Merton Vision</li> <li>○ The Merton &amp; Morden Guild of Social Service</li> </ul> </li> <li>• MASCOT Telecare</li> <li>• London Borough OF Merton has a Strategy for older people</li> <li>• The Adult Social Care Ageing Well Programme</li> <li>• Canons and Wimbledon Leisure Centre</li> <li>• Morden Park Pool</li> </ul>
	<p><b>SECONDARY PREVENTION</b> is principally concerned with preventing further falls, identifying those with previous falls and fragility fractures and ensuring risk factors are addressed. Services and initiatives in Merton include:</p> <ul style="list-style-type: none"> <li>• The NHS specialist service- Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS)</li> <li>• MILES: Merton Independent Living and Engagement Service</li> <li>• St George’s, St Helier and Kingston Hospital Fracture Liaison Services</li> <li>• General Practice Osteoporosis Quality and Outcomes Framework</li> <li>• SMCS Community Rehabilitation Team (CRT)</li> <li>• The Older People’s Assessment and Rehabilitation Service (OPARS) soon to be HARI-(Holistic Assessment and Rapid Investigations</li> </ul>
	<p><b>TERTIARY PREVENTION</b> is concerned with managing the complications of falls to prevent disability and aid rehabilitation. Services available to Merton Residents include</p> <ul style="list-style-type: none"> <li>• St. George’s fracture services, (Epsom and St. Helier South West London Elective Orthopaedic Centre) and Kingston Hospital fracture services</li> <li>• The above 3 Acute trusts’ Orthogeriatric services for older with hip fractures</li> <li>• SMCS CRT</li> <li>• SMCS FRS</li> <li>• SMCS OPARS</li> </ul>

## FALLS PREVENTION STANDARDS AND GUIDANCE, MERTON GAPS AND RECOMMENDATIONS

STANDARDS AND GUIDANCE PERTAINING TO	GAPS IN MERTON IN RELATION TO	HEALTH AND SOCIAL CARE RECOMMENDATIONS
<ol style="list-style-type: none"> <li>1. A POPULATION APPROACH TO FALLS PREVENTION AND;</li> <li>2. FALLS PREVENTION FOR OLDER PEOPLE IN THE COMMUNITY</li> </ol>	<ol style="list-style-type: none"> <li>1. A STRATEGIC/WHOLE SYSTEMS APPROACH TO FALLS PREVENTION</li> <li>2. GAPS IN SERVICES THAT ALREADY EXIST</li> <li>3. SPECIFIC AREAS FOR IMPROVEMENT IN MERTON</li> </ol>	
<p><b>A population approach to falls prevention</b></p> <p>Falls and Fractures: Effective Interventions in Health and Social Care (Department of Health provides commissioning best practice). The guidelines state that a systematic approach at a population level for falls and fracture prevention entails the following four objectives:</p> <ol style="list-style-type: none"> <li>1. Improving outcomes for hip fracture patients</li> <li>2. Responding to the first fracture by preventing the second in non-hip fracture fragility patients</li> <li>3. Early intervention for high risk individuals at high risk of fragility fractures and;</li> <li>4. Keeping older people healthy, preventing frailty and reducing accidents</li> </ol> <p>At the heart of any integrated Falls Prevention strategy lies promoting physical</p>	<p><b>Gaps in the strategic/whole systems approach to falls prevention</b></p> <ol style="list-style-type: none"> <li>1. There is currently no integrated falls prevention pathway in Merton. While there are elements of (primary, secondary and tertiary) falls prevention, there is no comprehensive falls care pathway showing where each of the services fall along the pathway</li> <li>2. There is a gap in collaborative working and stronger links across the services that provide elements of falls prevention</li> <li>3. There is a gap in a focus on proactive prevention and early detection</li> </ol>	<p><b>Consider developing an integrated, comprehensive falls prevention pathway in Merton</b> this would include the following steps:</p> <p>Step 1 – Ensure the existence of the function of overarching co-ordinator of falls prevention across health and social care</p> <p>Step 2 –Consider developing a directory of all available primary ,secondary and tertiary falls prevention services(i.e. all keep fit classes provided by the voluntary sector)</p> <p>Step 3 – Consider quality assuring and providing training for the primary falls prevention initiatives provided by primary care as well as bringing them under one banner of “Merton Falls Prevention”</p>

<p><b>Falls prevention for older people in the community</b></p> <p>NICE Assessment and Prevention of Falls in Older People (Guidance 161) states that a best practice pathway includes:</p> <ol style="list-style-type: none"> <li>i. Case/risk identification</li> <li>ii. Multifactorial assessment</li> <li>iii. Multifactorial interventions</li> <li>iv. Evidence-based exercise interventions include OTAGO exercise programme, Tai Chi, Moving for balance, FaME (Falls Management Exercise)/Postural Stability Instructor (PSI)</li> </ol>	<p><b>Gaps in services that already exist</b></p> <ol style="list-style-type: none"> <li>1. There is no directory of available primary and secondary falls prevention services</li> <li>2. There is no overarching lead function of an individual or service responsible for falls prevention across health and social care</li> <li>3. There is marked variation between wards in terms of referral rates to the SMCS FPS, A&amp;E attendance for falls and falls-related ambulance call outs</li> <li>4. There is no method for the London Ambulance Service (LAS) to refer directly to the SMCS FPS</li> <li>5. There is no self-referral route into the SMCS FPS</li> <li>6. There are no links between pharmacies (to provide Medicine Use Reviews MURs) and the primary falls prevention services provided by the voluntary sector.</li> </ol> <p><b>Specific areas for improvement in Merton</b></p> <p>1. The areas with greater need in Merton in terms of access to the SMC FPS and Variation in falls- related A&amp;E attendance are:</p> <table border="1" data-bbox="734 1061 1070 1361"> <thead> <tr> <th>East Merton Wards</th> <th>West Merton Wards</th> </tr> </thead> <tbody> <tr> <td>Graveney</td> <td>Lower</td> </tr> <tr> <td>Lavender</td> <td>Morden</td> </tr> <tr> <td>Cricket</td> <td>Wimbledon</td> </tr> <tr> <td>Green</td> <td>Village</td> </tr> <tr> <td>Colliers</td> <td>Hillside</td> </tr> </tbody> </table>	East Merton Wards	West Merton Wards	Graveney	Lower	Lavender	Morden	Cricket	Wimbledon	Green	Village	Colliers	Hillside	<p><b>Consider incorporating specific measures in the Falls Prevention Strategy to address the areas requiring improvement</b> that have been identified through the needs assessment namely :</p> <ul style="list-style-type: none"> <li>- The rates of older women and those aged over 80 and above being admitted into hospital</li> <li>- The falls-related mortality in women and men as we</li> <li>- Robust tackling of hazards in the home as that is the most frequent location of falls in Merton</li> <li>- Robust tackling of hazards in the environment as that is the second most frequent location of falls as well as tackling of falls in Care and residential institutions in Merton as this is the third most frequent location of falls in Merton</li> <li>- Consider incorporating into the Falls Prevention Strategy an approach to reduce the variation between wards in terms of referrals into SMCS FPS, falls-Related A&amp;E attendance, and falls-related ambulance calls out</li> </ul> <p><b>Consider making the following changes to the services that currently exist:</b></p> <ul style="list-style-type: none"> <li>- Allowing self referrals into the SMCS FPS to enable a more proactive approach to identifying those at risk of falls</li> <li>- Simplifying the referral form to the SMCS FPS to remove the barrier to some providers referring patients into the FPS and enabling direct referrals from the London Ambulance Service (LAS) to the SMCS FPS</li> <li>- Consider engaging with GPs to ensure continued improvement of the nationally reported osteoporosis QOF outcomes, to increase case finding particularly in the Merton hotspots and areas of higher need highlighted by the needs assessment</li> </ul> <p><b>Consider adopting simple and consistent falls screening questions that can be asked across health and social</b></p> <p><b>Consider quality assuring the current falls prevention initiatives</b></p>
East Merton Wards	West Merton Wards													
Graveney	Lower													
Lavender	Morden													
Cricket	Wimbledon													
Green	Village													
Colliers	Hillside													



	Wood Longthorn Pollards and Figges' Marsh Abbey	Trinity		<p><b>provided by the voluntary sector</b> and providing training to ensure they provide evidence based weight bearing exercises, furthermore bringing them under the barrier of “ Merton Falls Prevention” to ensure a consistent approach to falls prevention across Merton</p> <p>Consider embarking on a targeted opportunistic fracture risk assessment programme for all over 50s in Merton with Osteoporosis. (The costs of such a programme are in Appendix F) Costs can be reduced for such a programme by focusing on women over 65 and Men over 75 with osteoporosis.</p>
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## 2. Introduction

### Key Points:

- Falls are preventable, costly, deadly and can be devastating and contribute substantially to morbidity and mortality in older populations
- Falls are often caused by the interaction of many risk factors
- Fractures occur most commonly in the hip, spine and wrist. Vertebral fractures due to osteoporosis can cause loss of height, curvature of the spine and chronic back pain

Falls among people aged 65 and older are a significant public health problem and one that is expected to increase as the population ages. Fall-related injuries are a significant cause of morbidity and mortality in older populations; they are also a leading cause of loss of independence. According to NICE guidelines, people aged 65 and older have the highest risk of falling, with 30% of people older than 65 and 50% of people older than 80 falling at least once a year. The World Health Organisation (WHO) Global report on falls prevention in older people defines a fall as:

An event, which results in a person coming to rest inadvertently on the ground or other lower level<sup>7</sup>

Another definition of a fall is:

“A sudden, unintentional change in position causing an individual to land at a lower level, on an object, the floor, or the ground, other than as a consequence of a sudden onset of paralysis, epileptic seizure, or overwhelming external force”<sup>8</sup>

The sequelae from falls are costly to the NHS and local government with approximately half of the costs linked to inpatient fracture management and almost as much with long term residential or nursing care provision. Long hospital stays are a significant contributory factor to the high costs. The consequent injuries from falls can range from bruising and lacerations to serious head injuries and fractures. Even ‘minor’ falls can be very debilitating; individuals can lose confidence and become nervous about falling again. A fall can precipitate an admission to long term care or premature nursing home admissions. Falls cost the NHS more than £2.3 billion per year and also have a knock-on effect on productivity in terms of carer time and absence from work<sup>9</sup>. Research by the National Patient Safety Agency (NPSA) has found that even a fall (or falls related incident) that results in only minor injury is responsible for an extended patient stay of 1-2 days<sup>10</sup>. Often, fall-related fractures are in the person's hip, pelvis, spine, arm, hand, or ankle with hip fractures being one of the more serious types of fall-related injury. Falls can result in pain, disability, loss of independence,

<sup>7</sup>World Health Organization. (2008). *Global Report on Falls Prevention in Older Age*. Geneva: World Health Organization. [http://www.who.int/ageing/publications/Falls\\_prevention7March.pdf](http://www.who.int/ageing/publications/Falls_prevention7March.pdf)

<sup>8</sup>Tinetti, M.E., & Speechley, M. (1989). Prevention of falls among the elderly. *New England Journal of Medicine*, 320(16):1055-9.

<sup>9</sup>Snoods H, Cheung WY, Gwini SM, Humphreys I, Sanchez A, Sirwardena N (2011). ‘Can older people who fall be identified in the ambulance call centre to enable alternative responses or care pathways?’ *Emergency Medicine Journal*, vol 28, no 3,

<sup>10</sup>NHS Institute for Innovation and Prevention  
[http://www.institute.nhs.uk/building\\_capability/general/staying\\_safe\\_preventing\\_falls.html](http://www.institute.nhs.uk/building_capability/general/staying_safe_preventing_falls.html)

hospitalisation and, in some cases, death. Falling has an impact on quality of life, health and healthcare and social care costs.

### **The Objective of the Needs Assessment**

Merton Borough Council Public Health is supporting Merton Clinical Commissioning Group (CCG) to profile the population of Merton through epidemiological, qualitative, and comparative methods. This is in order to describe the issue of falls and consequent injuries, to identify health inequalities, to determine priorities, forecast demand and design a holistic pathway from reactive intervention to proactive management. In summary, the aims of this needs assessment are:

- To identify gaps in provision and make recommendations on how to address health inequalities
- To provide information for the development of the Falls Prevention Strategy for Merton CCG
- To provide information for the development of a falls prevention pathway (from reactive intervention to proactive management)

As the risk of falling and fall-related problems increases steadily with advancing age, the focus of this needs assessment is in the older population of Merton that is those aged 65 and over. There will also be a focus on community falls prevention as the incidence of falls, in community settings is rising and there is limited information on the many people who fall outside hospital or institutional settings. It is the goal of this analysis to provide commissioners across health and social care a better understanding of the whole-system issue of falls and this information will form the basis of the Merton CCG Falls Prevention Strategy.

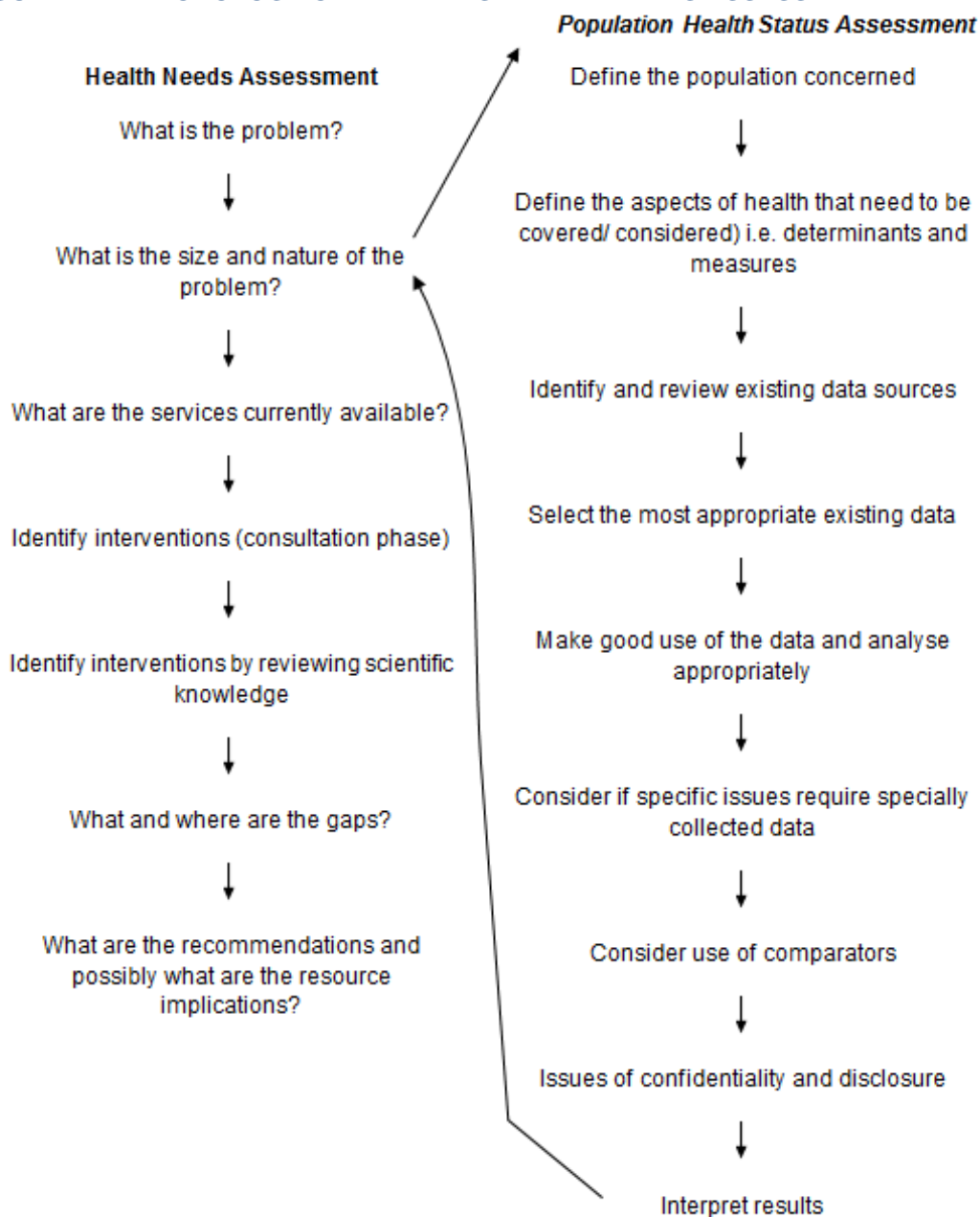
### **Methodology**

Multiple methods were used in the health needs assessment including analysing quantitative data i.e. Primary care QOF data, Secondary Users Services (SUS) and London Ambulance Service (LAS) data from the past five years (2009-2013) relating to falls in people aged 65 and over in Merton to establish historical patterns and identifiable risk factors. Routinely collected national data were obtained from HSCIC (Health and Social Care Information Centre), POPPI (Projecting Older People Population Information), and the Public Health Outcomes Framework (PHOF). Ad-hoc local data sets for the past five years were obtained from the main local provider Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS); this comprised of demographic data on the service users, the referral sources, gender, age and treatment provided for the service users.

Focus groups were conducted with users of falls prevention classes provided by Wimbledon Guild, Merton and Morden Guild of Social services, Age UK Merton and the SMCS FPS. Semi-structured interviews with falls prevention service providers were also conducted. Mapping out current provision of falls prevention services was carried out to assess how well the falls prevention needs of people aged 65 and over in Merton are met and also to identify any gaps. Triangulation (combining different research methods) to explore the issue of falls was beneficial in that it providing deeper insight because multiple viewpoints and data sources provide greater accuracy. The methodology based on the traditional model of

epidemiological, corporate and comparative healthcare needs assessment developed by Stevens and Rafferty<sup>11</sup> is illustrated in Figure 1.

**FIGURE 1: METHODOLOGY OF THE FALLS HEALTH NEEDS ASSESSMENT<sup>12</sup>**



<sup>11</sup> Stevens A. Rafferty J. Health Care Needs Assessment: The Epidemiologically Based Needs Assessment Reviews, Vol. 1. Oxford: Radcliffe Medical Press

<sup>12</sup> Stevens A. Rafferty J. Health Care Needs Assessment: The Epidemiologically Based Needs Assessment Reviews, Vol. 1. Oxford: Radcliffe Medical Press

This needs assessment incorporated demographic data on Merton, projected population changes in the next fifteen years, prevalence and incidence of osteoporosis and other risk factors associated with an increased likelihood of falling. A population health perspective was used to provide an evidence base for the setting of priorities regarding falls prevention services as well as evidence of best practice and what works well. The needs assessment also looked at the extent of health inequalities relating to falls.

### **Literature Review Methodology**

A review of the literature was undertaken to address the subject of risk factors associated with falls and best practice regarding community falls prevention programmes. A search of six databases; AMED, BNI, CINAHL, HMIC, Medline and the King's Fund Library was conducted to identify literature of risk factors associated with falls. There was also a review of National Institute of Clinical Excellence (NICE) guidelines and guidelines from the WHO on falls prevention.

### **Qualitative Data: Methodology**

Qualitative work was undertaken to gather information on the experiences and perceptions of over 65 year old falls prevention services users and providers in Merton. Unfortunately the perceptions of carers were not able to be obtained due to poor attendance to the Carer Focus Group. The research took place between September and October 2014 and utilised two qualitative methods of enquiry; in-depth, semi-structured one-to-one interviews and focus group discussions.

### **Data Analysis**

Thematic analysis was undertaken by two researchers, informed by Ritchie and Spencer's<sup>13</sup> guidelines for framework analysis. Broad themes were identified from the data and individual responses were grouped and examined within these themes.

### **Limitations of the qualitative research**

There were some limitations to the research conducted, including the inability to elicit the views of carers due to poor attendance from the carer group. While demographic details were not formerly recorded, there was only one male participant in the service user groups meaning the views of males were limited nevertheless; the focus groups provided valuable insights into the perceived needs of the services users.

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<sup>13</sup> Lewis, J. and Ritchie, J. (2003) Generalising from qualitative research. In Ritchie, J. and Lewis, J. (eds.) Qualitative research practice: A guide for social science students and researchers. Sage: London; Thousand Oaks; New Delhi.

### 3. Risk Factors

#### Key Points:

- A significant number of falls are never the result of a single reason but often a complex interaction of risk factors
- The more risk factors a person has, the greater their chances of falling
- Examples of intrinsic risk factors include age gender, previous falls, muscle weakness, gait and balance problems
- Examples of extrinsic risk factors include dim lighting, slippery or uneven surfaces, improper use of assistive devices and obstacles or slipping hazards
- Osteoporosis is a key risk factor and is a condition characterised by a reduction in bone mass and density; it furthermore increases the risk of fragility fracture when an older person falls. Osteoporosis is a condition that can be effectively managed with antiresorptive drugs, and at less than the cost of managing a fracture
- Examples of other key risk factors include dementia, a previous fall, and limiting long term illness; living alone is one of the risk factors for serious injury or outcome following a fall
- Fracture of the hip is associated with higher costs and mortality than fractures of other sites. Evidence base for hip fracture care shows that prompt effective multi-disciplinary management can improve quality and at the same time reduce costs

#### Classification of Risk Factors

A significant number of falls are never the result of a single reason but often a complex interaction of risk factors. There is a complex causal interaction between risk factors and fall occurrence. The more risk factors a person has, the greater their chances of falling. There are numerous ways of classifying risk factors i.e. biological, behavioural, and environmental or socio-economical. The World Health Organisation (WHO) categorises them as intrinsic and extrinsic risk factors. **Intrinsic** factors are those (within the individual) and include both demographic (e.g. age and gender) and health factors (e.g. medical conditions and medications). **Extrinsic** factors on the other hand, involve either the physical environment (e.g. obstacles and tripping hazards) or socio-economic or environment (e.g. living alone and lack of support networks). According to WHO, falls among people under 75 years are more likely to be associated with extrinsic factors while intrinsic factors are more important among people aged 80 and over. The WHO risk factors are tabulated below:

**TABLE 1: WHO CLASSIFICATION OF RISK FACTORS ASSOCIATED WITH FALLS IN OLDER PEOPLE<sup>14</sup>**

<p><b>Intrinsic Risk Factors</b></p> <ul style="list-style-type: none"> <li>• A history of falls which is often a manifestation of impaired postural stability</li> <li>• Age as the incidence of falls increases with age</li> <li>• Gender as women older than 75 are more likely to incur fractures when they fall</li> <li>• Living alone as injuries and outcomes can be worse</li> <li>• Ethnicity- evidence from the United Kingdom and the United States suggests caucasian ethnic groups fall more frequently than other ethnic groups</li> <li>• Medicines: there is an increased risk of falling with the use of medications such as benzodiazepine, psychotropics, class 1a anti-arrhythmic medications, digoxin, diuretics and sedatives<sup>15</sup></li> <li>• Medical conditions such as circulatory disease including postural hypotension, chronic obstructive pulmonary disease, depression, urinary incontinence and arthritis and limiting long term illness</li> <li>• Impaired mobility and gait: the decline in strength and endurance after the age of 30 (10% loss per decade) and muscle power (30% loss per decade) result in physical functioning dropping</li> <li>• Sedentary behaviour- fallers tend to be less active and may inadvertently cause further atrophy of muscle around an unstable joint through disuse</li> <li>• Psychological status i.e. the fear of falling: up to 70% of recent fallers and up to 40% of those not reporting recent falls acknowledge fear of falling.</li> <li>• Nutritional deficiencies: a low body mass index and vitamin D deficiency is particularly common in older people in residential care facilities and may lead to abnormal gait, muscle weakness, osteomalacia and osteoporosis.</li> <li>• Impaired cognition: e.g. dementia and delirium. Dementia, irregardless of aetiology, is a strong predictor of falls; in part due to poor safety awareness.</li> <li>• Visual impairments: visual acuity, contrast sensitivity, visual field, cataract, glaucoma and macular degeneration all contribute to risk of falls. Research has shown that 75% of older adults who suffer a fall as a result of poor vision had a visual impairment that could have easily been corrected (WHO)</li> <li>• Foot problems: bunions, toe deformities, ulcers, deformed nails and general pain in walking increase balance difficulties and risk of falls</li> </ul>
<p><b>Extrinsic Risk Factors include:</b></p> <ul style="list-style-type: none"> <li>• Environmental hazards such as dim lighting, uneven surfaces, obstacles and tripping hazards such as moss/wet leaves on paths , hoses and pets</li> <li>• Home hazards such as poor lighting, unsafe bathrooms/toilets, loose mats/ holes in carpets, slippery floors due to water or powder</li> </ul> <p>According to WHO, some studies have reported that between 30% and 50% of falls among community dwelling older people are due to environmental causes.</p>

<sup>14</sup> Todd C, Skelton DA. What are the main risk factors for falls among older people and what are the most effective interventions to prevent falls? Copenhagen: WHO Regional Office for Europe; 2004. (Health Evidence Network Report).

<sup>15</sup> Tinetti M, Speechley M, Ginter S. Risk factors for falls among elderly persons living in the community. New England journal of medicine, 1988, 319:1701-1707



## **Falls Related Injuries and Fractures**

Fragility fractures (defined as a fracture occurring after a fall from standing height or less) are the commonest significant injury resulting from falls and are often the first clinical sign of osteoporosis which can remain undiagnosed for many years. Serious injuries that can occur following a fall include skull fracture, head injury, subdural haematoma (bleeding on the brain following a head injury), other fractures and soft-tissue injuries. Fragility fractures occur most commonly in the spine (vertebrae), hip (proximal femur) and wrist (distal radius). They may also occur in the arm (humerus), pelvis, ribs and other bones. Osteoporotic fragility fractures can cause substantial pain and severe disability, often leading to a reduced quality of life. Fracture of the hip is associated with higher cost and mortality than fractures of other sites and is often the turning point for older people requiring more continuing care from health and social care services. A hip fracture can be a debilitating condition – only one in three sufferers return to their former levels of independence. The sequelae to hip fractures includes hospitalisation, is fatal in 20% of cases and permanently disables 50% of those affected; only 30% of patients fully recover<sup>16</sup>. Projections suggest that, in the UK, hip fracture incidence will rise from 70,000 per year in 2006 to 91,500 in 2015 and 101,000 in 2020<sup>17</sup>. Fractured hip is often used as a proxy for the level of falls and can indicate the need for preventive measures. Identifying the risk factors for falling that are most prevalent in the Merton older population underpins the development of more effective and better targeted multifactorial assessments and interventions.

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<sup>16</sup> Kanis JA; Diagnosis of osteoporosis and assessment of fracture risk; Lancet. 2002 Jun 1; 359(9321):1929-36.

<sup>17</sup> Osteoporosis: assessing the risk of fragility fracture, NICE guidelines - CG146, August 2012



## 4. Falls Prevention Best Practice

### Key points:

#### Falls prevention for older people in the community

- NICE (Clinical Guidance 161) recommends :
  - Case/risk identification, multifactorial assessment and multifactorial interventions for falls prevention in older people as best practice for falls prevention for older people in the community
  - Evidence-based exercise interventions include OTAGO exercise programme, Tai Chi, Moving for balance, FaME (Falls Management Exercise)/Postural Stability Instructor (PSI)

#### A population approach to falls prevention

- The DH<sup>18</sup> provides commissioning best practice guidance on a systematic approach at a population level for falls and fracture prevention listing four objectives aimed at four groups namely:
  - **Objective 1-** Improving outcomes for hip fracture patients
  - **Objective 2-** Responding to the first fracture by preventing the second in non-hip fracture fragility patients
  - **Objective 3-** Early intervention for high risk individuals at high risk of fragility fractures and;
  - **Objective 4-** Keeping older people healthy, preventing frailty and reducing accidents
- At the heart of any integrated Falls Prevention strategy lies promoting physical activity (exercise) as it has a role on primary ,secondary and tertiary prevention of falls

### Nice Recommendations

NICE guidelines on the assessment and prevention of falls among people aged 65<sup>19</sup> and over advocate for a multifactorial risk assessment of both their hospital based and community based falls risk factors. The multifactorial risk assessment should be performed by a healthcare professional with appropriate skills and experience, normally in the setting of a specialist falls service and should identify the patient's individual risk factors for falling that can be treated, improved or managed. At present there is no universally accepted policy for population screening in the UK to identify individuals with osteoporosis or those at high risk of fracture and patients are identified opportunistically using a case-finding strategy on the finding of a previous fragility fracture or the presence of significant clinical risk factors. Below is an outline of the key NICE recommendations on preventing falls in older people in a community setting:

<sup>18</sup> Falls and Fractures: Effective Interventions in Health and Social Care, July 2009 [http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/@pg/documents/digitalasset/dh\\_109122.pdf](http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@pg/documents/digitalasset/dh_109122.pdf)

<sup>19</sup> Assessment and prevention of falls in older people , Issued: June 2013, NICE guidance number [guidance.nice.org.uk/CG161](http://guidance.nice.org.uk/CG161) , National Institute of Clinical Excellence

**TABLE 2: NICE KEY RECOMMENDATIONS ON PREVENTING FALLS IN OLDER PEOPLE<sup>20</sup>**

**a. Case/risk identification**

Older people in contact with healthcare professionals should be asked routinely whether they have fallen in the past year

**b. Multifactorial falls risk assessment**

Those identified as at risk should be offered a multifactorial falls risk assessment

**Multifactorial interventions**

Those identified as being at increased risk should receive **individualised** multifactorial interventions

**c. Community Setting**

An individually prescribed strength and balance training programme should be offered to older people living in the community identified as at risk of falls

**d. Home hazard and safety**

Home hazard assessments are effective only in conjunction with follow-up and intervention, and not in isolation

**e. Psychotropic medications**

Older people on psychotropic medications should have their medication reviewed, and discontinued if appropriate and possible to reduce their risk of falling

**f. Encourage participation in falls prevention programmes**

**g. Education and information** should be provided on how to prevent falls, modify risk factors and cope with a fall

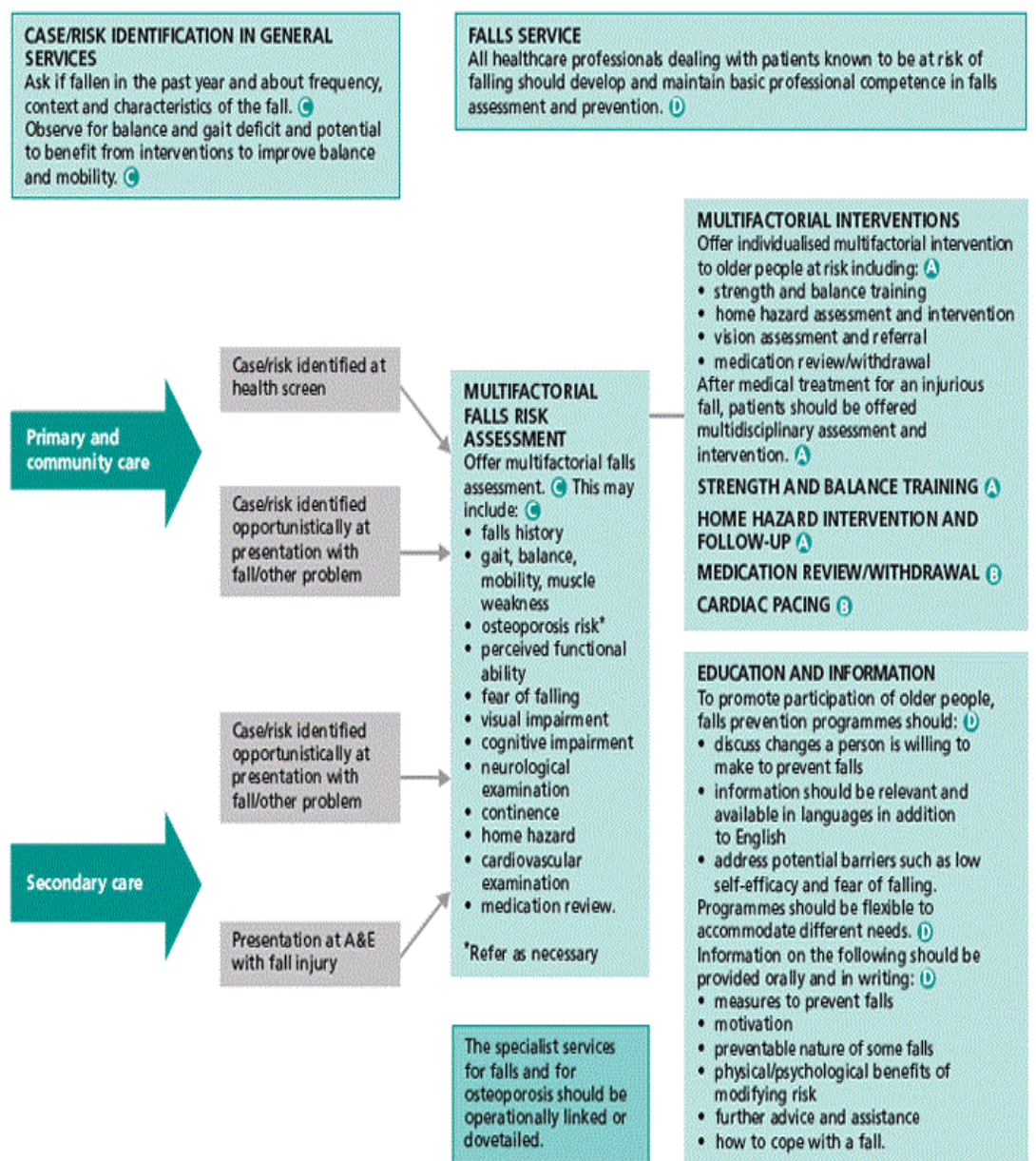
**h. The best practice pathway includes the promotion of bone health and prevention of osteoporosis through regular exercise throughout life**

<sup>20</sup> Assessment and prevention of falls in older people , Issued: June 2013, NICE guidance number [guidance.nice.org.uk/CG161](http://guidance.nice.org.uk/CG161) , National Institute of Clinical Excellence

The NICE best practice pathway for assessment and prevention of falls in older people is shown in Figure 2.

**FIGURE 2: THE NICE BEST PRACTICE PATHWAY FOR ASSESSMENT AND PREVENTION OF FALLS IN OLDER PEOPLE<sup>21</sup>**

**Patient referral and care pathway**



- (A) Multifactorial interventions
- (B) Evidence based interventions
- (C) Case or risk identification
- (D) Case-finding

<sup>21</sup> Assessment and prevention of falls in older people , Issued: June 2013, NICE guidance number guidance.nice.org.uk/CG161 , National Institute of Clinical Excellence

**FIGURE 3: COMMUNITY ELEMENTS OF THE BEST PRACTICE PATHWAY FOR THE ASSESSMENT AND PREVENTION OF FALLS IN OLDER PEOPLE<sup>22</sup>**



### **Falls Screening and an effective screening process**

Although clinical judgement of falls risk is considered one way to determine an older person's falls risk status, research has shown that this approach has limited accuracy when used in isolation. Falls risk screening provides a more scientific basis for identifying older people at increased risk of falls or fall-related injuries. The main advantages of an effective screening process are that it can be quickly applied, and repeated at regular intervals. Wandsworth borough has an agreed systematic method of screening patients using a set of simple questions that are asked to any older person that comes in contact with a health and social care professional in the borough as part of their falls prevention strategy

### **Evidence Based Exercise Interventions**

Age UK lists the OTAGO Exercise Programme<sup>23</sup>, Tai Chi, and Moving for Better Balance, FaME (Falls Management Exercise) and Postural Stability Instructor (PSI) as evidence based exercise interventions for falls prevention. The best practice principle of falls prevention exercise is to counter the effects of muscle deterioration, focussing on strengthening leg and ankle muscles. Balance impairment and muscle weakness are the most prevalent risk factors for falls and therapeutic exercise is the most effective component of a multifactorial intervention.

### **NICE Guidance (CG146)<sup>24</sup> on Osteoporosis and Assessing the Risk of Fragility Fractures**

NICE recommends considering assessment of fracture risk in all women aged 65 years and over and all men aged 75 years and over. The method of assessment recommended by the

<sup>22</sup> Assessment and prevention of falls in older people , Issued: June 2013, **NICE guidance number** [guidance.nice.org.uk/CG161](http://guidance.nice.org.uk/CG161) , National Institute of Clinical Excellence

<sup>23</sup> The programme was designed specifically to prevent falls. It consists of a set of leg muscle strengthening and balance retraining exercises progressing in difficulty, and a walking plan.

<sup>24</sup>Osteoporosis and assessing the risk of fragility fractures (CG146) Published date: August 2012

guidance includes estimating absolute risk when assessing risk of fracture (for example, the predicted risk of major osteoporotic or hip fracture over 10 years, expressed as a percentage). Using FRAX which is a WHO fracture risk assessment tool used for people aged between 40 and 90 years or QFracture, another fracture risk assessment tool used for people aged between 30 and 84 year. NICE further states that targeted risk assessment is not routine practice in primary care. A selective case-finding strategy for the prevention of falls in those at high risk of falling and fracturing is supported by a prospective randomised controlled trial from the United States<sup>25</sup> whereby a multi-dimensional assessment and intervention was offered to people identified as being at risk of falls. This achieved a reduction in annual fall incidence of 12% compared with a control sample. This strategy of selective case finding for patients at highest risk of osteoporotic fracture and initiation of appropriate treatment has been recommended by the WHO. There is a strong link between falls, osteoporosis and resulting fragility fractures. Therefore, to be effective, both falls and osteoporosis should be targeted together within the context of developing an integrated, falls service.

## **A Population Approach To Falls Prevention Commissioning Best Practice**

The Department of Health (DH) best practice guidance document entitled “Falls and Fractures: Effective Interventions in Health and Social Care”<sup>26</sup> states four areas for intervention that commissioners, ideally working collaboratively across health and social care for a systematic approach to falls and fracture prevention. These are listed below in order of impact and evidence-base and have a role for different risk groups:

- **Objective 1:** Improve patient outcomes and improve efficiency of care after hip fractures through compliance with core standards
- **Objective 2:** Respond to a first fracture and prevent the second – through Fracture Liaison Services in acute and primary care settings. According to the National Osteoporosis Society (NOS)<sup>27</sup>, the proportion of patients that present with a fragility fracture prior to the hip fracture is 45.3% representing an opportunity to try to prevent the second fracture. Systematic post fracture assessment for secondary prevention can be a cost-effective way of preventing further fractures.
- **Objective 3:** Early intervention to restore independence – through falls care pathways, linking acute and urgent care services to secondary prevention of further falls and injuries
- **Objective 4:** Prevent frailty, promote bone health and reduce accidents – through encouraging physical activity and healthy lifestyle, and reducing unnecessary environmental hazards

Figure 4 below shows which at risk group each of the objectives should be aimed at.

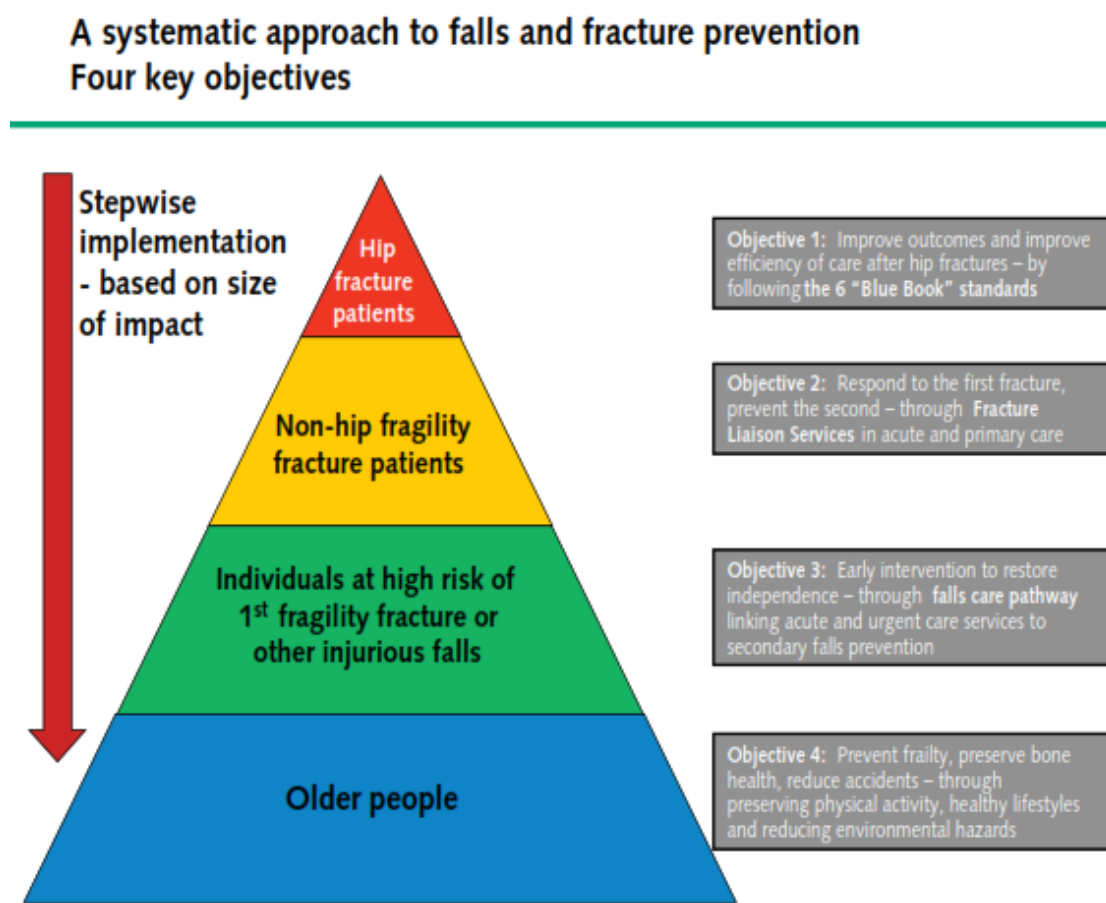
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<sup>25</sup> Tinetti ME, Baker DI, McAvay G, Claus EB, Garrett P, Gottschalk M et al. A multifactorial intervention to reduce the risk of falling among elderly people living in the community. *New England Journal of Medicine*.

<sup>26</sup> Falls and Fractures: Effective Interventions in Health and Social Care, July 2009  
[http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/@pg/documents/digitalasset/dh\\_109122.pdf](http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@pg/documents/digitalasset/dh_109122.pdf)

<sup>27</sup> National Osteoporosis Society(NOS) Key facts and figures <http://www.nos.org.uk/page.aspx?pid=328>

FIGURE 4: DEPARTMENT OF HEALTH GUIDANCE ON A SYSTEMATIC APPROACH AT A POPULATION LEVEL FOR FALLS AND FRACTURE PREVENTION<sup>28</sup>



\*The Blue Book<sup>29</sup> (mentioned in objective 1)

According to the DH best practice strategic approach to falls prevention, there are four key stages in an integrated approach to falls:

- i. Population approaches to the prevention of falls, including the promotion of healthy lifestyles, diet and exercise and the reduction of environmental risks
- ii. Screening groups of older people to identify individuals at high risk of falls or fracture
- iii. Assessment to identify risk factors and plan measures to address them and ;
- iv. Treatment to minimise the risk of falls and injury, and address underlying risk factors.

<sup>28</sup> Falls and Fractures: Effective Interventions in Health and Social Care, July 2009

[http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/@pg/documents/digitalasset/dh\\_109122.pdf](http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@pg/documents/digitalasset/dh_109122.pdf)

<sup>29</sup> In 2007, the British Orthopaedic Association (BOA) and British Geriatrics Society (BGS) published the second edition of the Blue Book on care of patients with fragility fracture. **British Orthopaedic Association, British Geriatrics Society.** The care of patients with fragility fracture 2007.



### **Interventions listed by NICE as having insufficient evidence of efficacy for falls prevention<sup>30</sup>**

- Low intensity exercise combined with incontinence programmes
- Untargeted group exercise- these are not discouraged as a means of health promotion, but there is little evidence that exercise interventions that are not individually prescribed for older people living in the community are effective in falls prevention.
- Cognitive/behavioural interventions – NICE states that here is no evidence that cognitive/behavioural interventions alone reduce the incidence of falls in older people living in the community who are of unknown risk status
- Referral for correction of visual impairment
- Vitamin D- NICE made no firm recommendation relating to Vitamin D stating that although there is emerging evidence that correction of vitamin D deficiency or insufficiency may reduce the propensity for falling, there is uncertainty about the relative contribution to fracture reduction, and the dose and route of administration required.

### **An integrated falls prevention strategy<sup>31</sup>**

At the heart of an integrated falls prevention strategy lies promoting physical activity (exercise) as it serves primary, secondary, and tertiary prevention of falls among older adults. Whether used as a stand-alone strategy or a core component of a multifactorial intervention approach, exercise constitutes an effective means by which to reduce fall risk and incidence rates. As the level of risk increases, however, more tailored and progressive exercise programs that target the physical risk factors associated with falls are more effective in lowering the risk of falls.

**Primary Prevention:** In its primary role, physical activity can prevent the onset of pathology and system impairments that lead to disability and increased risk for falls

**Secondary Prevention:** In secondary prevention of falls physical activity slows the progression of disease and system impairments

**Tertiary prevention** – in its tertiary role physical activity contributes to the restoration of function to a level that allows for more autonomy in the performance of essential activities of daily living.

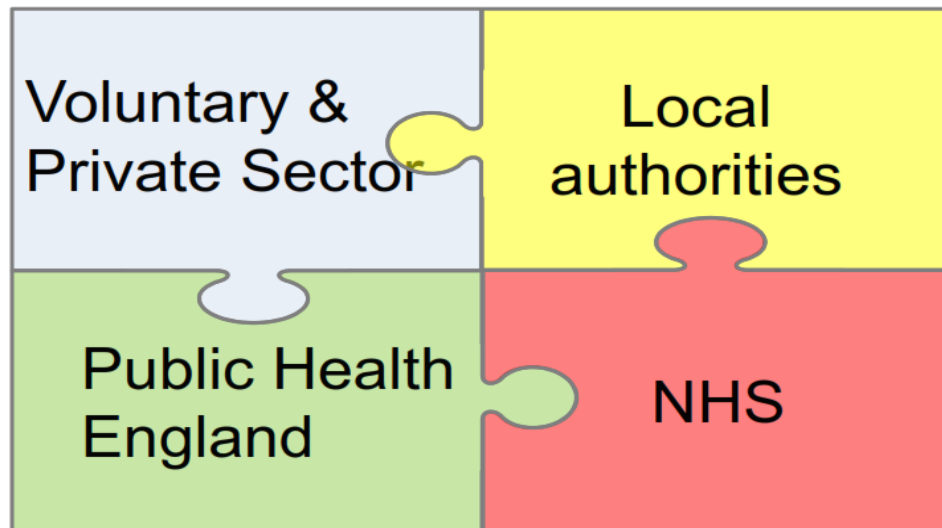
According to Public Health England (PHE) an integrated approach to falls prevention entails local authorities, the voluntary sector, Public Health England, NHS primary, community, acute care as well as social care working effectively together. This is illustrated below:

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<sup>30</sup> Assessment and prevention of falls in older people , Issued: June 2013, **NICE guidance number** [guidance.nice.org.uk/CG161](http://guidance.nice.org.uk/CG161) , National Institute of Clinical Excellence

<sup>31</sup>C. Pigford 2007 Developing an integrated falls prevention strategy, Nursing Times, vol: 103, issue: 41 <http://www.nursingtimes.net/nursing-practice/specialisms/public-health/developing-an-integrated-falls-prevention-strategy/266718.article>

FIGURE 5: AN INTEGRATED APPROACH TO FALLS PREVENTION<sup>32</sup>



<sup>32</sup> Adopted from slides presented at a PHE workshop on Falls and Fracture Prevention on the 4/12/2014

## 5. Current Falls Prevention Provision in Merton

### Key Points:

- Currently in Merton there are services that provide elements of primary, secondary and tertiary prevention **but there is no joined up falls prevention pathway**
- There is currently no directory of falls prevention services detailing the different services/initiatives available locally
- A holistic pathway for fall prevention entails:
  - Primary prevention which is predominantly concerned with keeping older people fit and healthy
  - Secondary prevention which is principally concerned with preventing further falls, identifying those with previous falls and fragility fractures and ensuring risk factors are addressed and;
  - Tertiary prevention which is concerned with managing the complications of falls to prevent disability and aid rehabilitation
- At the heart of all the prevention initiatives lies promoting physical activity
- The services currently in place in Merton are as follows
- **Primary Falls Prevention Services in Merton include:**
  - Keep fit classes and exercise classes provided by voluntary sector organisations namely, Wimbledon Guild, Merton and Morden Guild of Social Service, Age UK Merton and Merton Vision
  - London Borough of Merton has a strategy “entitled “Celebrating Age – Valuing Experience”<sup>33</sup> a strategy for people aged 50 and above including increasing promoting physical activity in older people and addressing environmental hazards that lead to falls
  - Merton Council Adult Social Care provides a reablement service, which is now part of Merton Independent Living and Engagement Service (MILES) which provides reablement to a range of clients including those discharged from hospital after fractures or falls
  - The General Practice Quality and Outcomes Framework (QOF) rewards GP practices for how well they care for patients, based on their performance against indicators. In 2012/13 QOF incorporated osteoporosis indicators to provide financial incentives for the diagnosis and treatment of osteoporosis
  - There are two Leisure Centres (Canons and Wimbledon Leisure Centre) and a pool (Morden Park Pool) which all provide concessionary membership fees for people of retirement age depending on the membership
- **Secondary Falls Prevention Services in Merton include:**
  - There is currently a falls specialist service. This is an NHS led Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS) delivered as a therapy based intervention, either as group exercise in a community setting or in a client’s home and receiving referrals from health or social care professionals only
- **Tertiary Falls Prevention Services in Merton include:**
  - Hospital fracture services in the 3 hospitals used by most Merton residents (St. Georges, Epsom and St. Helier and Kingston) as well as orthogeriatric care for older with hip fractures

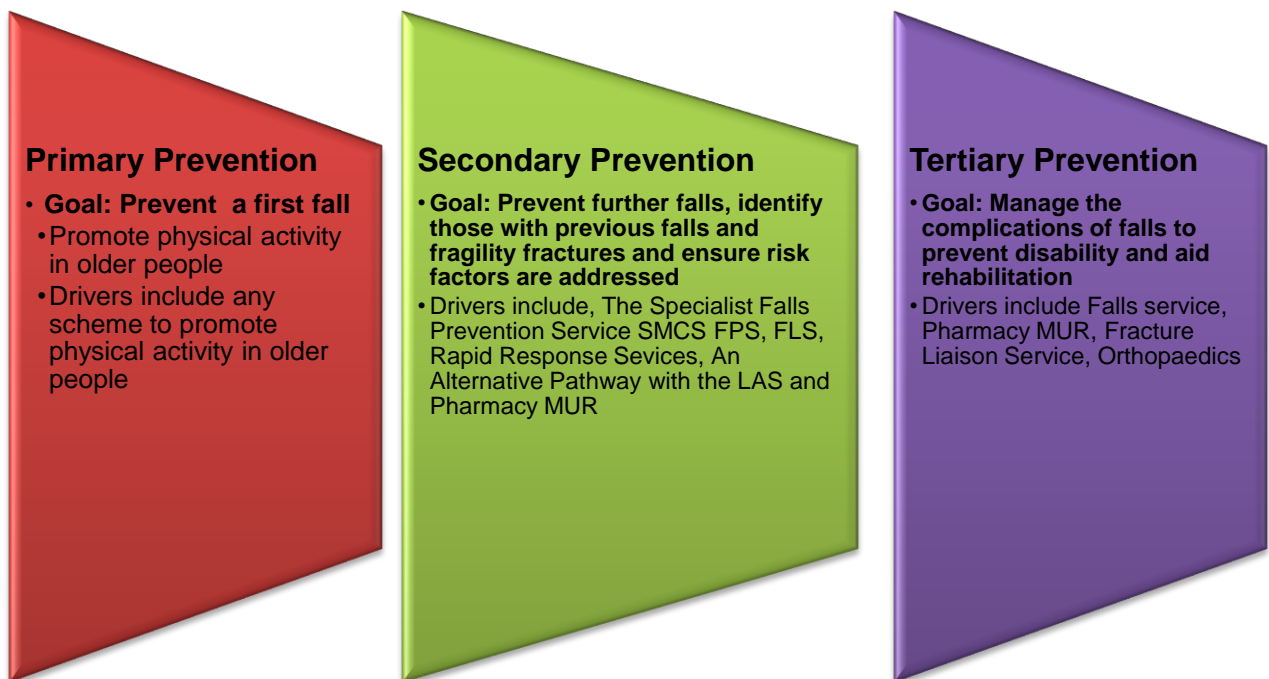
<sup>33</sup>Celebrating Age – Valuing Experience, (launched 10 September 2007) [http://www.merton.gov.uk/pdf-celebrating\\_age-3.pdf](http://www.merton.gov.uk/pdf-celebrating_age-3.pdf)

A holistic pathway for fall prevention entails:

- **Primary prevention** which is predominantly concerned with keeping older people fit and healthy
- **Secondary prevention** which is principally concerned with preventing further falls, identifying those with previous falls and fragility fractures and ensuring risk factors are addressed and;
- **Tertiary prevention** is concerned with managing the complications of falls to prevent disability and aid rehabilitation

Figure 6 shows a hypothetical holistic pathway for falls prevention.

**FIGURE 6: A HYPOTHETICAL HOLISTIC PATHWAY FOR FALLS PREVENTION**



The current Merton landscape in terms of service and falls prevention initiatives available is as follows:

**TABLE 3: THE MERTON LANDSCAPE IN TERMS OF FALLS PREVENTION SERVICES OR INITIATIVES**

Primary prevention	Secondary prevention	Tertiary prevention
<p>The Merton ageing Well programme contributes to the funding of keep fit classes provided by voluntary sector providers namely:</p> <ul style="list-style-type: none"> <li>• Wimbledon Guild of Service</li> <li>• Age UK Merton (including a handyman service)</li> <li>• The Merton &amp; Morden Guild of Social Service</li> <li>• Merton Vision falls prevention and exercise classes (specifically for those with visual impairment)</li> <li>• MASCOT Telecare</li> <li>• London Borough of Merton Strategy “Celebrating Age – Valuing Experience” includes increasing physical activity in older people and tackling environmental hazards that lead to falls</li> <li>• Canons and Wimbledon Leisure Centre and Morden Park Pool have concessionary memberships for older people</li> </ul>	<ul style="list-style-type: none"> <li>• The NHS specialist service- Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS)</li> <li>• MILES: Merton Independent Living and Engagement Service provide a reablement service</li> <li>• St George’s and Kingston Hospital Fracture Liaison Services</li> <li>• General Practice osteoporosis Quality and Outcomes Framework</li> <li>• Community Rehabilitation Team (CRT)</li> <li>• The Older People’s Assessment and Rehabilitation Service (OPARS) soon to be HARI-(Holistic Assessment and Rapid Investigation</li> </ul>	<ul style="list-style-type: none"> <li>• St. George’s fracture services, (Epsom and St. Helier South West London Elective Orthopaedic Centre) and Kingston Hospital fracture services</li> <li>• The above 3 Acute trusts’ Orthogeriatric services for older with hip fractures</li> </ul>

**Primary falls prevention services and initiatives in Merton**

The Merton Ageing Well programme is a joint preventive programme between Merton Council and the voluntary sector aimed at keeping people living in their own homes for as long as possible. The Ageing well programme contributes to the funding of a number of keep fit and exercise classes provided by voluntary sector organisations namely:

**Merton & Morden Guild of Social Service ‘Fit for Life’:** the ‘Fit for Life’ exercise programme delivers 20 exercise classes per week to older people of all abilities at venues throughout the borough (including one Tai Chi class). The classes are specific to particular abilities ranging from chair based to dynamic exercise and dance. All exercise classes include elements for falls prevention, the importance of remaining continent through exercise and information

**Merton Vision:** Merton Vision runs a falls prevention class and cardiovascular exercise classes which are specifically for people with a visual impairment as poor vision is one of the causes of falls. Merton Vision has worked with the SMCS FPS to provide visual awareness training for district nurses (among others), and information about the importance on how to access eye health checks.

**Age UK Merton:** Age UK provides keep fit classes for older people ranging from group exercise classes falls courses with physiotherapists, balance improvement, and zumba classes. They also provide a handy man service at a small cost to the service user that can be used to modify identified home hazards. The IAPT (Improving Access to Psychological Therapy) service provides classes run by a Cognitive Behavioural Therapist (CBT) on overcoming the fear of falling in conjunction with Age UK

**Wimbledon Guild of social welfare:** The Wimbledon guild provides a range of activities from Pilates, zumba gold to senior cinema club, bridge club and summer strolls. They also provide the handyman service in partnership with Age UK.

Outside of the Ageing well programme there are other services that contribute to primary falls prevention including:

#### **MASCOT Telecare**

MASCOT Telecare provide a range of initiatives enabling people to remain at home safely and independently. The service aims to help prevent unnecessary admissions to hospital and residential care. Services include a personal alarm service that connects older and vulnerable people to help when they need it, temperature extremes sensors, bed or chair occupancy sensors and fall detectors.

#### **London Borough of Merton (LBM) strategy “Celebrating Age – Valuing Experience”<sup>34</sup>**

LBM has a strategy entitled “Celebrating Age – Valuing Experience” a strategy for people aged 50 (launched 10 September 2007) and above including aims of increasing physical activity in older people. The strategy includes the following:

- **Increasing physical activity** the council states that it is working on ensuring more seating and wardens in local open spaces, ensuring the use of allotments and improving access to leisure facilities and commercial buildings.
- **Transport:** In the strategy the council states that it will continue to promote the range of travel modes used by older people, including measures to improve the accessibility, affordability and safety of public transport.
- **The Environment:** Older people consulted on and addressed in the guidelines which the council uses for land use and the built environments. The council offers a programme of Disabled Facilities Grants to enable some people to continue to live at home. A Street Design Guide was produced to improve the design quality of street works schemes and reduce clutter. The council is continuing to improve the accessibility of open spaces in

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<sup>34</sup> [http://www.merton.gov.uk/op\\_strategic\\_action\\_plan\\_update\\_sep\\_09\\_2\\_-5.pdf](http://www.merton.gov.uk/op_strategic_action_plan_update_sep_09_2_-5.pdf)

Merton, including footpaths and places to sit and well as working to resolve the problem around the use of pavements by cyclists and for parking

- There are two Leisure Centres Canons Leisure Centre and Wimbledon Leisure Centre and a pool Morden Park Pool which all provide concessionary membership fees for people of retirement age depending on the membership

## **Secondary Falls Prevention Services in Merton**

### **The specialist service- Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS)**

SMCS FPS is the specialist falls prevention service, NHS led and established in 2009. The overall aim of the service is to improve the health of the older person by preventing falls, fractures and unnecessary admissions to hospital. The service is delivered as a therapy based intervention, either as group exercise in a community setting or in a client's home. The service also provides multifactorial risk assessments carried out by physiotherapists in accordance with NICE guidelines. The contract for provision of community services is hosted by Merton Clinical Commissioning Group (CCG) on behalf of five commissioner organisations: Merton CCG; Sutton CCG; Sutton council; Merton council and NHS England. The service works in conjunction with the local older people community services i.e. Community Rehabilitation Team and Community Neurotherapy Team.

#### **The service functions in that it:**

- Accepts referrals from GPs and other health and social professionals only
- Provides Education and Information including adhoc telephone requests and telephone advice to various stakeholders across Merton
- Links with NHS secondary care through the Fracture Liaison Service, social services and voluntary sector
- Provide six 'staying steady' classes per week operating over 48 weeks per annum with two extra classes per week to provide flexibility for drop in, overflow, dementia and osteoporosis support. Classes are of eight week duration with a three month follow up telephone call to participants
- Provides OTAGO type home exercise plan for those unable to participate in group exercise. Those who are able to participate in group exercises receive multifactorial interventions including OTAGO

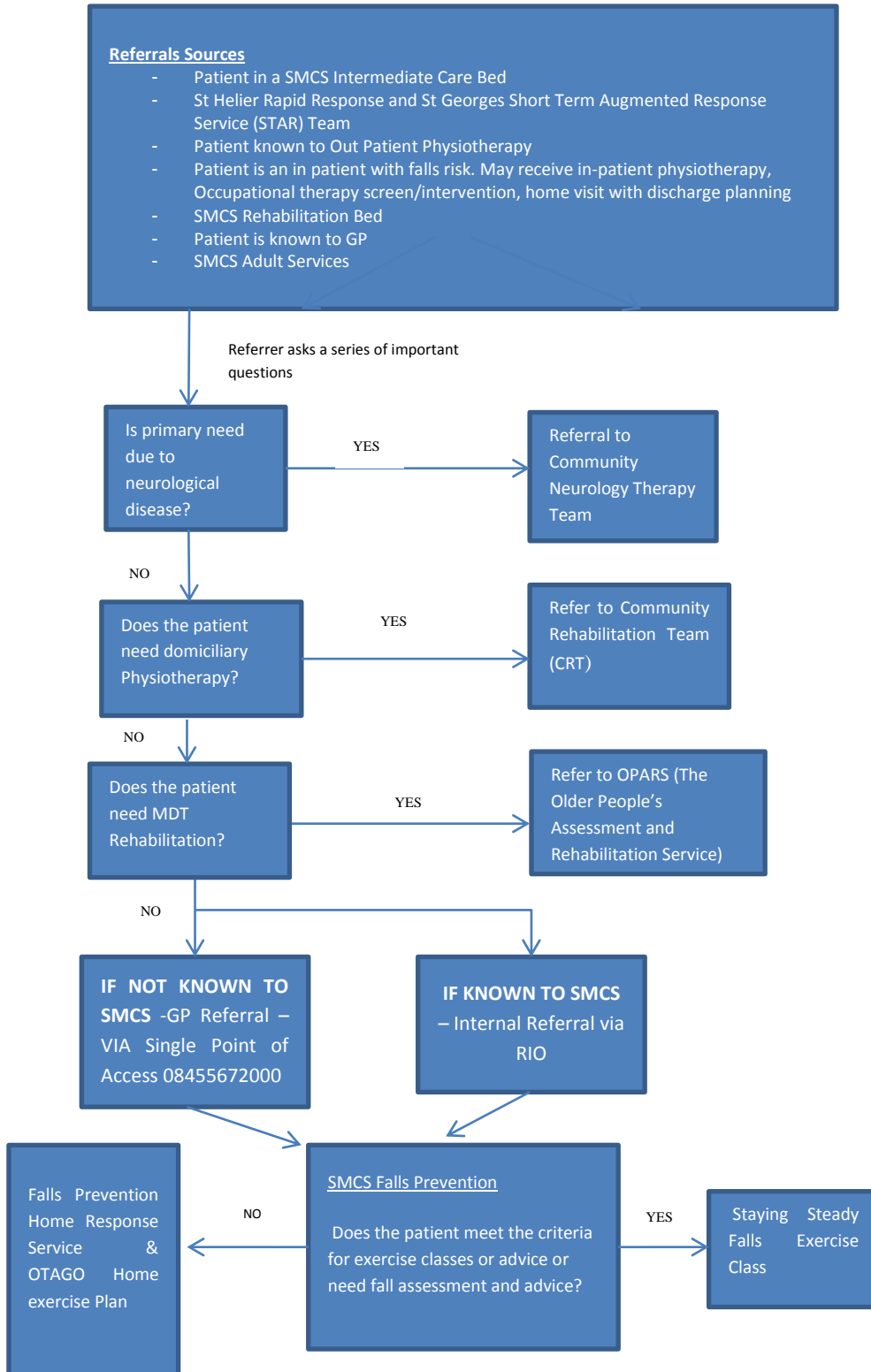
SMCS FPS consists of one Whole Time Equivalent (WTE) band 7 falls co-ordinator, 2 WTE band 6 physiotherapists, 1 WTE band 4 assistant practitioners and an exercise therapist (bank staff) working 5 hours per week. There is no permanent administrative support. The classes are run in four venues across Sutton and Merton. The four venues are Morden Baptist Church (Morden), Holy Trinity Church (Wimbledon), Granfers Community Centre (Sutton), and Trinity Church (Sutton). The venues are selected for accessibility, particularly good public transport links. All the venues are community based with suitable facilities for the classes. There are two high ability classes per week and six intermediate ability classes per week. High classes have a maximum of 15 bookings and intermediate classes 10 bookings. This allows for 'drop outs' to bring class size to the optimum i.e. 6-8 participants for the intermediate class. The data collected from the SMCS FPS is listed in Appendix A.

A rapid review of falls prevention services was carried out in June 2014 that found that the SMCS FPS was in line with NICE best practice. The SMCS services works closely with the SMCS Community Rehabilitation Team (CRT) and the Older People's Assessment and Rehabilitation Service (OPARS) that is going to be widened to support a wider age group of those having complex needs and called the Holistic Assessment and Rapid Investigation (HARI) service. The CRT and OPARS play a key role in enabling the falls prevention service to deliver its service as they often refer patients to the specialist falls service after they've completed their rehabilitation with CRT or OPARS. CRT and OPARS also carry out multifactorial falls risk assessments.

A simplified pathway into the specialist falls prevention service SMCS FPS is shown in Figure 7 and a more detailed pathway is shown in Appendix B.



**FIGURE 7: SIMPLIFIED PATHWAY INTO THE SPECIALIST FALLS PREVENTION SMCS FPS**



### **Community Rehabilitation Team (CRT)**

The service aims to improve a patient's mobility and independence with activities of daily living to enable them to return to their own homes, with further rehabilitation and/or social support as required. A therapist will undertake a detailed assessment of rehabilitation needs and develop a personal rehabilitation plan in agreement with the patient, e.g. mobility, stair practice, personal care, meal preparation. The rehabilitation beds are located within nursing or residential homes, with daily therapy available on weekdays. Patients are able to participate in a personal rehabilitation programme, are motivated to regain their independence, and are able to achieve their goals for discharge back to their own home within three to six weeks.

### **The Older People's Assessment and Rehabilitation Service (OPARS<sup>35</sup>)**

The Older People's Assessment and Rehabilitation Service (OPARS) is a specialist outpatient service for older people. The aim is to assess and rehabilitate those people who have a physical / medical condition which affects their functional ability, e.g. walking, balance, hand function. The objective of the service is to provide medical, nursing and rehabilitation to older people to improve or maintain their health and wellbeing and enable them to remain independent within their own home. The OPARS service is going widened to support a wider age group of those having complex needs and called the Holistic Assessment and Rapid Investigation (HARI) service.

### **Adult Social Care**

Merton Council provides a reablement service, which is part of MILES: Merton Independent Living and Engagement Service. The team comprises of occupational therapists, social workers, reablement staff and care workers who provide a service for up to six weeks to help people with poor physical or mental health to accommodate their illness by learning or re-learning the skills necessary for daily living. Some of these people will be people who have sustained injuries due to falls although the service doesn't specifically code those referred to them for falls related health needs. The views of an occupational therapist were incorporated into the qualitative data from service providers collected on falls prevention in Merton.

There are a lot of services and initiatives that all contribute to falls prevention by keeping older people fit and healthy but there is no central repository of information on what the initiatives are or a clear pathway showing how all of the above services contribute to falls prevention in Merton.

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<sup>35</sup> Soon to be HARI-(Holistic Assessment and Rapid Investigation)

## 5. A description of the older population<sup>36</sup> in Merton

### Key Points:

- Generally the older people of Merton are healthier than the England average
- The proportion of people aged 65 and over in Merton is 12.3% which is lower than the proportion of people aged 65 and over in England which is 16.4%
- Of people aged 65 and older 44% are men and 56% are women
- There are more older people in the west than the east of Merton and the older people in the east are more deprived
- The two wards with the highest concentration of older people are Cannon Hill and Wimbledon Village

### Gender Composition of Older People in Merton

Based on 2013 GLA projections<sup>37</sup>, the proportion of people aged 65 and older in Merton in 2014 is 12.3%, (the actual number is 24,723). The England average of people aged 65 and over is 16.4%<sup>38</sup>. There are 10,983 males accounting for 44% of the Merton population of older people, while there are 13,740 females accounting for 56% of the older population. The ratio of men to women in the older population is 0.8. There is a greater number of older men and women in the west of the borough and the demographic composition of Merton in terms of gender is shown in Figure 8. Table 4 shows the distribution of older people in terms of east and west of Merton, showing that there are older people in the west than the east.

**TABLE 4: DISTRIBUTION OF OLDER PEOPLE IN MERTON IN 2013**

Distribution of older people in Merton	Male	Female	TOTAL (Proportion of overall Merton population as a percentage)
East Merton <sup>39</sup>	5,059	6,384	11,443 (5.6%)
West Merton <sup>40</sup>	5,924	7,356	13,280 (6.7%)
Merton Total	10,983 (5.5%)	13,740 (6.8%)	24,723 (12.3%)

Source: 2013 GLA, SHLAA-based population projection

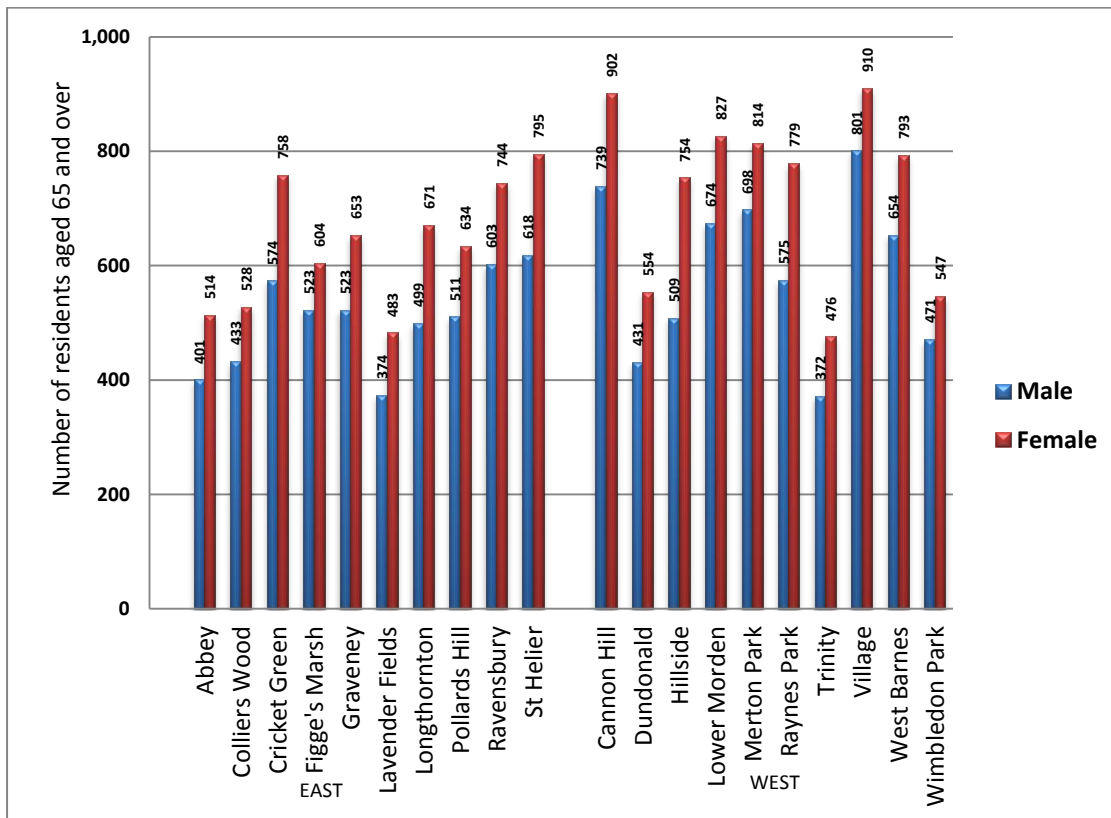
<sup>36</sup> Source: GLA (Ward: 2013 round capped SHLAA-based population projections) <http://data.london.gov.uk/dataset/gla-2013-round-population-and-household-projections>

<sup>38</sup>(WMPHO) Older Peoples Health and Well Being Atlas, Theme 1 Population Profile (Merton proportion of people aged 65 and over compared to England proportion of people aged 65 and over ) <http://www.wmpho.org.uk/olderpeopleatlas/Atlas/atlas.html>

<sup>39</sup> East Merton Wards are Graveney, Lavender Fields, Cricket Green, St Helier, Ravensbury, Colliers Wood, Longthornton, Pollards Hill, Abbey, Figge's Marsh

<sup>40</sup> West Merton Wards are West Barnes, Dundonald, Raynes Park, Wimbledon Park, Cannon Hill, Hillside, Merton Park, Lower Morden, Village, Trinity

**FIGURE 8: POPULATION OF MEN AND WOMEN (AGED 65 AND OVER) IN MERTON WARDS, 2014**

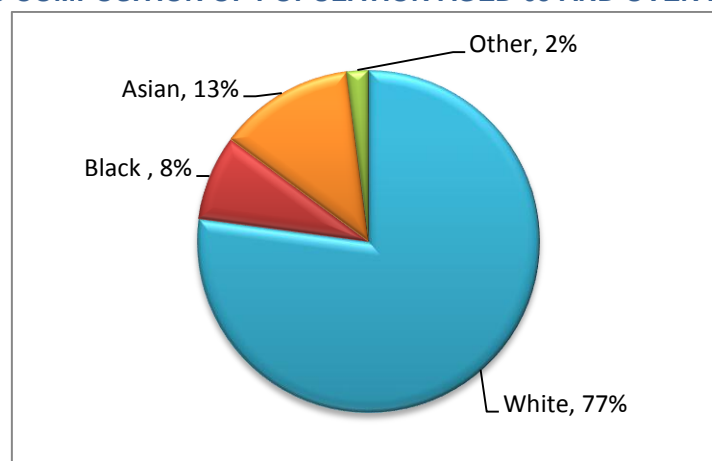


Source: Greater London Authority (GLA), Ward- 2013 round capped SHLAA-based population projections<sup>41</sup>

### Ethnic Composition of older people in Merton

The ethnic composition of the older people in Merton using broad ethnic group categories is illustrated in Figure 9. The ethnic group 'other' includes all people of mixed race.

**FIGURE 9: ETHNIC COMPOSITION OF POPULATION AGED 65 AND OVER IN MERTON, 2014**



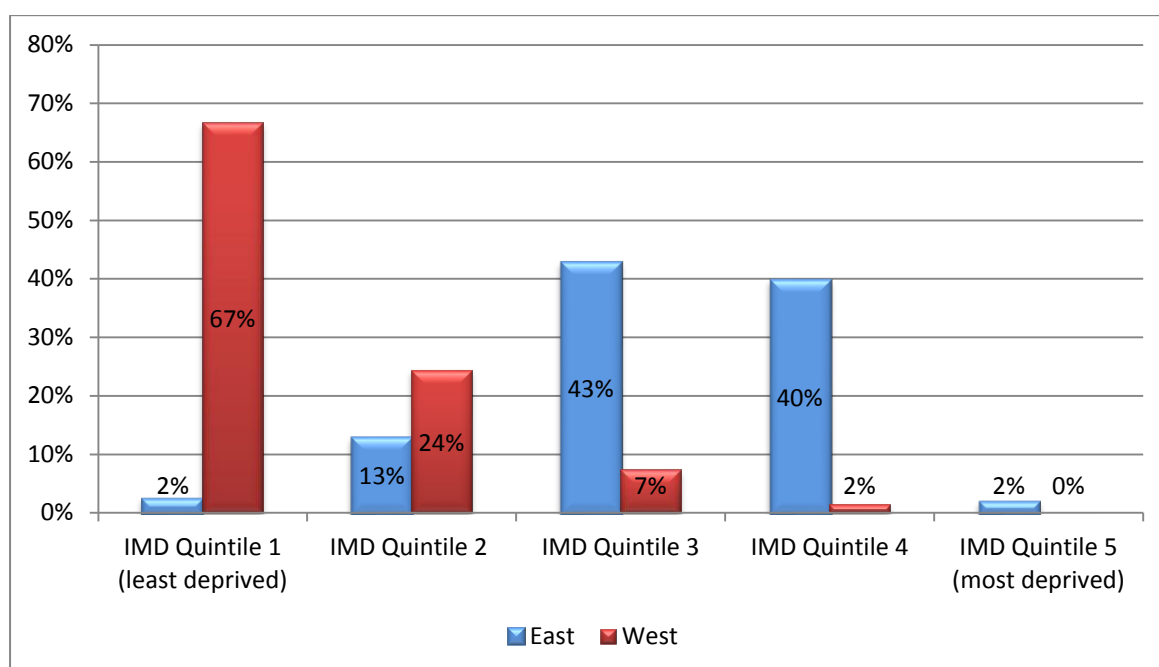
Source: GLA SHLAA Capped Household Size-based ethnic group projections.

<sup>41</sup> <http://data.london.gov.uk/dataset/gla-2013-round-population-and-household-projections>

### What is the distribution of deprivation?

Deprivation is very important when assessing the health needs of a population; it is a major determinant of health and is linked with poor health outcomes, it is therefore important to understand the Merton distribution of deprivation in the 65 and over age group. Figure 10 shows the difference between the east and west of the borough in terms of which Index of Multiple Deprivation (IMD) quintile<sup>42</sup> the 65 and over population fall in. Additionally, it shows that in the east of the borough there are more people in quintiles 3 and 4 indicating more deprivation when compared to the west of the borough that has more people in quintile 1 and 2 indicating less deprivation therefore, there is a greater number of older people in the west but those in the east are more deprived. As poor health outcomes tend to be intrinsically linked with more deprivation, this would suggest that there would be greater need in the east, however as falls are complex and often caused by many factors, this hypothesis is tested further in the document when assessing for health inequalities.

**FIGURE 10: PROPORTION OF 65 AND OVER MERTON POPULATION BY (IMD) DEPRIVATION QUINTILE**



Sources: Population: 2012 ONS MYE, LSOA Level<sup>43</sup>, Deprivation Quintile: LSOA Lookup Code<sup>44</sup>

<sup>42</sup> The Indices of Multiple Deprivation (IMD) 2010, part of the English Indices of Deprivation is a model of measuring deprivation in an area. It is underpinned by separate dimensions of deprivation; these dimensions are weighted and an overall deprivation score is given. Quintiles are ranked by deprivation with Quintile 1 containing the 20% most deprived data zones and Quintile 5 containing the 20% least deprived data zones

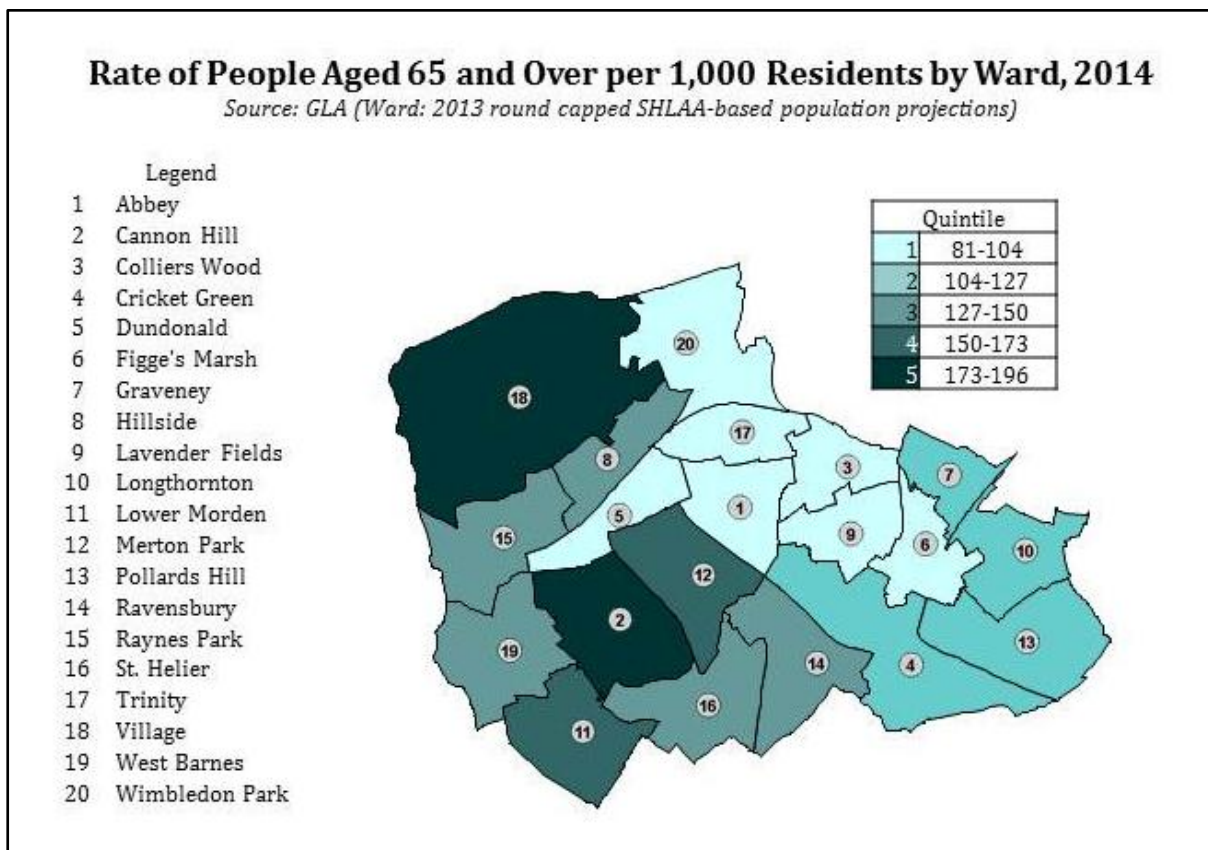
<sup>43</sup> Office of National Statistics (ONS) Population – Lower Super Output Area level Mid-Year Population Estimate 2012 <http://www.ons.gov.uk/ons/rel/sape/soa-mid-year-pop-est-engl-wales-exp/mid-2012/stb---super-output-area---mid-2012.html>

<sup>44</sup> Deprivation Quintile-English Indices of Deprivation 2010 - deprivation category lookups and average scores for Lower Super Output Area <http://www.apho.org.uk/resource/view.aspx?RID=125886>

### Where are the older people concentrated?

Using the rate of people aged 65 and over (per 1,000 residents by ward), we see that the two wards with the highest concentration of older people are Wimbledon Village and Cannon Hill (both of which are in the west of Merton). The rate of people aged 65 and over per 1,000 was used instead of the crude number of older people in each ward to take into account that bigger wards will have more people and therefore more 'older people' than smaller wards. Figure 11 shows the concentration of older people in Merton. This same data is shown in a table in Appendix C. As the likelihood of falls increases with age, we would expect that the greater need for falls prevention would be in the wards where there are older people.

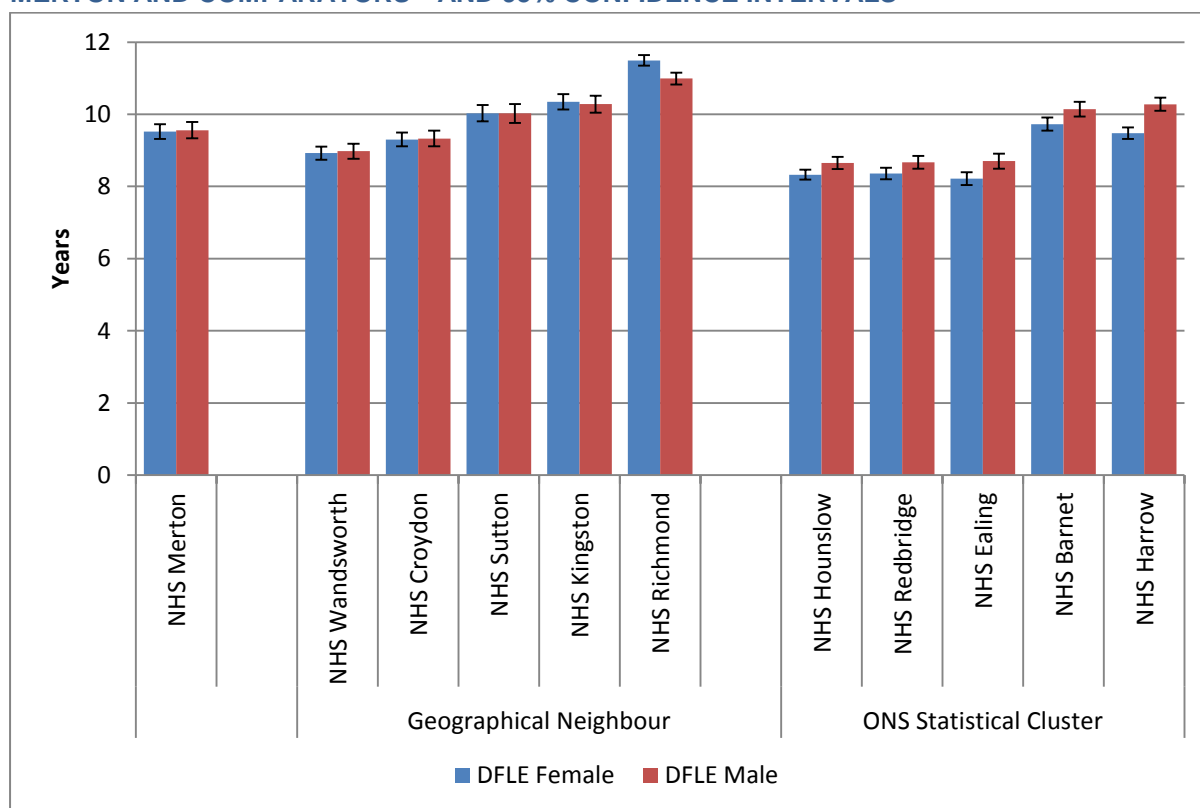
**FIGURE 11: WARD RATE OF OLDER PEOPLE (PER 1,000)**



### Disability Free Life Expectancy (DFLE) as a proxy measure for health at 65

Figure 12, shows the (2010-12) Disability-Free Life Expectancy (DFLE) at age 65, of Merton and comparators. When compared to geographical neighbours (South West London) boroughs, the DFLE in people at age 65 is similar; when compared to statistically similar boroughs (ONS Statistical Cluster), the DFLE is significantly higher than 3 boroughs and similar to the other two. DFLE is an estimation of the length of time that an individual can expect to live free from a limiting long-standing illness or disability, and therefore adds a qualitative dimension to measures of life expectancy. This indicator helps to put into context the general health of the older people in Merton.

**FIGURE 12: FEMALE AND MALE DISABILITY-FREE LIFE EXPECTANCY AT AGE 65, 2010-12, MERTON AND COMPARATORS<sup>45</sup> AND 95% CONFIDENCE INTERVALS\***



Source: Office of National Statistics (ONS)<sup>46</sup>

\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

### **Proxy for measuring Merton's Interventions to restore independence and delay dependency**

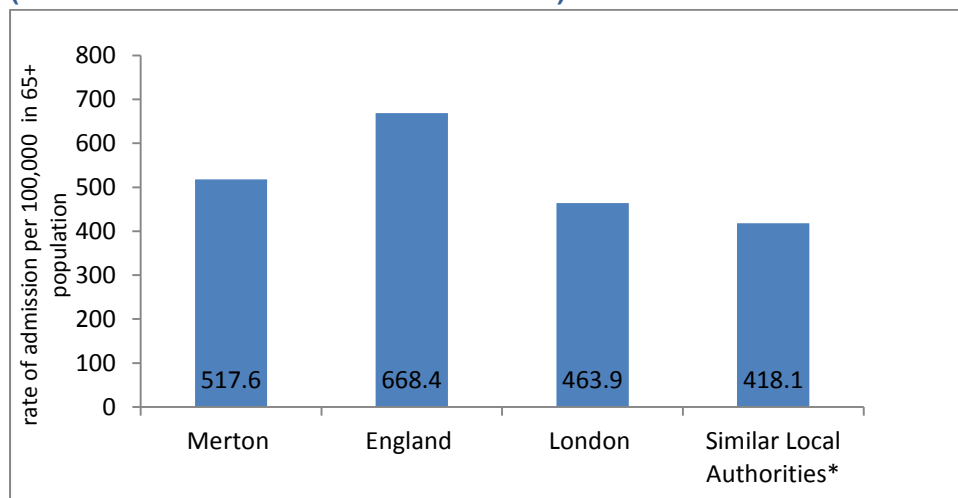
A useful indicator in assessing objective 3 of the DH systematic approach to falls and fractures at a population level (Early intervention to restore independence), outlined in the commissioning best practice section is the proportion of people aged 65 and over admitted to supported permanent residential and nursing care per 100,000 of the older population. This is an outcome influenced by many factors and conditions but it provides a good indication for how the borough generally delays dependency. Figure 13 shows that Merton is lower than England but higher than London and local authorities deemed to be similar according to the Chartered Institute of Public Finance and Accountancy (CIPFA) model. As Merton has a higher rate to similar local authorities there is room for improvement in

<sup>45</sup> **Merton Comparators** are a Geographical neighbouring boroughs i.e. South West London (SWL) boroughs namely: Wandsworth, Croydon, Sutton, Kingston and Richmond and the ONS Statistical cluster which is a cluster of boroughs that been classified into clusters based on similar characteristics

<sup>46</sup> ONS DFLE <http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/sub-national-health-expectancies/disability-free-life-expectancy---subnational-estimates-for-england--2008-10/stb---disability-free-life-expectancy.html>

delaying dependency and a robust falls prevention strategy would impact the this outcome although it is not possible to quantify to what degree.

**Figure 13: ADULTS AGED 65 AND OVER ADMITTED TO RESIDENTIAL AND NURSING CARE HOMES PER 100,000 OF THE POPULATION, MERTON AND ASCOF COMPARATORS 2013-14 (A LOWER RATE IS CONSIDERED BETTER)**



Source: Adult social Care Outcomes Framework (ASCOF) & Health and Social Care Information Centre. \*Similar Local Authorities<sup>47</sup>

### **Proxy for availability and quality of community care and home-support services**

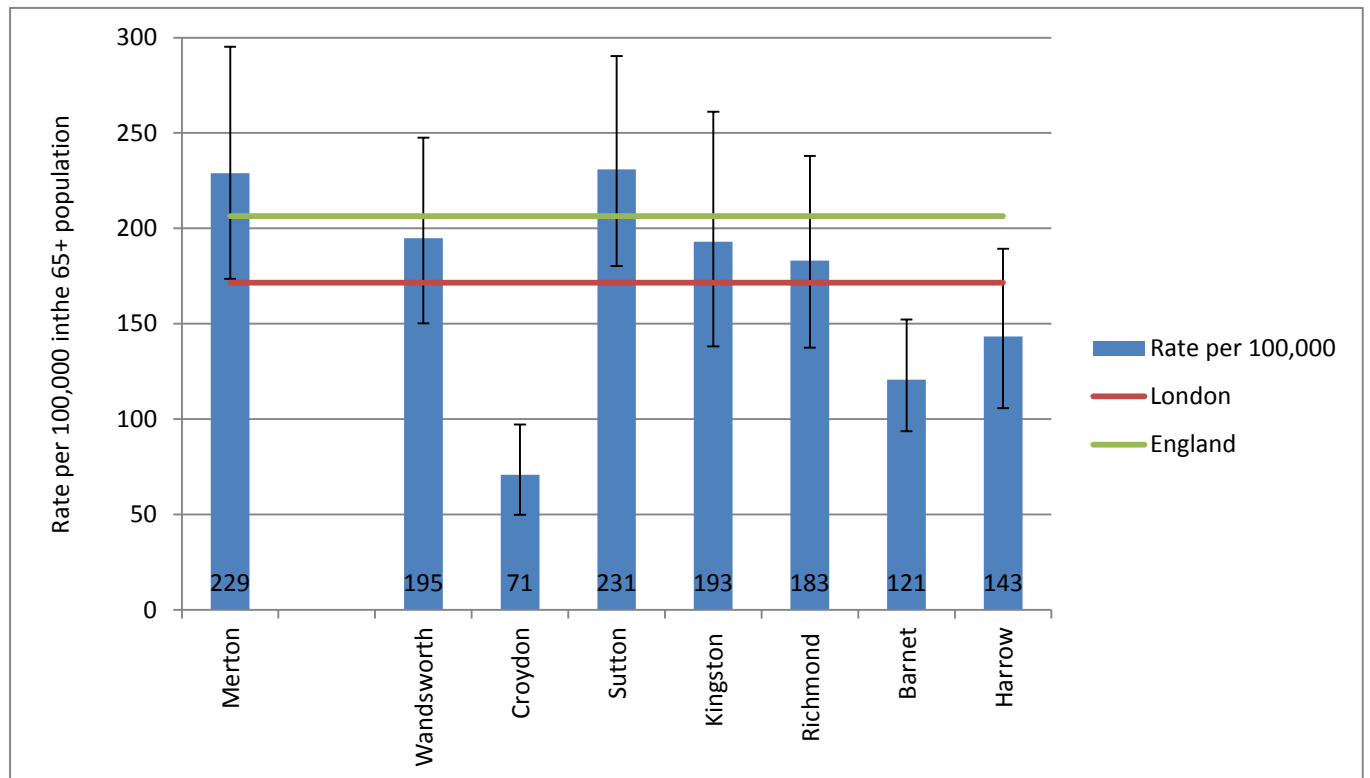
Another useful proxy measure is the directly standardised rate of patients admitted for hip fracture who return to their usual place of residence on discharge per 100 000, in the older population (Figure 14). This is a useful measure for commissioners reviewing the local availability of services to support the timely discharge of people back to their usual place of residence after an acute hip fracture episode. The Merton rate is not significantly different to the London and England rate and similar to most of the comparators except Croydon and Barnet that are significantly lower. A higher rate is desirable. Although this outcome too is affected by a number of factors, it is a useful proxy measure to indicate to what degree the borough is preventing frailty and delaying dependency. A change in category of accommodation may suggest an important change in functional ability and health status. This is also a good outcome measure for objective 1 (Improving outcomes for hip fracture patients) of the DH systematic approach to falls and fracture prevention at a population level outlined in the section on Commissioning Best Practice.

<sup>47</sup> The ASCOF develops a list of similar Local Authorities. Comparable local authorities are selected according to the Chartered Institute of Public Finance and Accountancy (CIPFA) Nearest Neighbour Model, which identifies similarities between authorities based upon a range of socio-economic and demographic indicators. Further information about the Nearest Neighbour Model can be found on the CIPFA website <http://www.cipfastats.net/resources/nearestneighbours/>



Figure 14 shows the directly standardised rate per 100 000 of older people admitted for a hip fracture who return to their usual place of residence, in Merton from 2008-2010 with confidence intervals.

**FIGURE 14: DIRECTLY STANDARDISED RATE OF PATIENTS ADMITTED FOR HIP FRACTURE WHO RETURN TO THEIR USUAL PLACE OF RESIDENCE (WITH 95% CONFIDENCE INTERVALS\*)**



Source: Older People's Health and Well Being Atlas

\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>



## 6. How big is the issue of falls and what are the projected changes?

### Key Points:

#### The size of the issue:

- It is difficult to determine the number of falls that occur because some go unreported and they are recorded in health and social care systems differently with some systems coding the injury instead of the fall therefore proxies such as the hip fracture incidence, falls-related A&E attendances and inpatient admissions can be used to gauge the size of the problem
- Numerous models have been used to model the prevalence of falls i.e. The Age UK model, The Chartered Society of Physiotherapy (CSP) and Projecting Older People Population Information (POPPI) and each of these shows a different number for Merton
- Using the Age UK model it is estimated that a minimum of 6922 falls occurred in people aged 65 and above in 2013/14 and POPPI estimated that the total number of falls that occurred in Merton in 2014 was 6579. The CSP estimated a total of 2714 falls that occurred during 2013/14 of which 1272 were mild and required no treatment, 1103 were moderate and required a GP appointment or outpatient attendance and 339 were severe and required an inpatient admission or care home referral.
- Merton has a significantly higher rate of older people, older women and those aged 80 and above being admitted to hospital for falls related injuries compared to the England average
- Merton's rate of emergency admissions for a broken hip in 2012/13 is the 13th lowest of 32 CCGs in London, is not significantly different to the England average and similar to SWL boroughs and statistically comparable boroughs
- The mortality from falls rate in women is higher than most geographical neighbours and all the statistically similar boroughs.
- The falls-related mortality rate in the people aged 75 and older for both men and women is second highest to all the 11 comparators<sup>48</sup>
- The mortality from falls rate in men is higher than that of the mortality from falls rate for women even though the incidence of falls is higher in women suggesting that older men don't fall as often as women but when they do they are more deadly

#### The Projected Changes:

- The proportion of people aged 65 and over in Merton is predicted to grow by 14.7% in the next 10 years
- The projected numbers of older people who will experience a fall will increase considerably
- The projected number of non-elective hospital admissions for falls will increase markedly between 2014 and 2030 according to POPPI projections and the group that is at highest risk of non-elective hospital admission for falls is the group aged 75 and

<sup>48</sup> **Merton Comparators** are a Geographical neighbouring boroughs i.e. South West London (SWL) boroughs namely: Wandsworth, Croydon, Sutton, Kingston and Richmond and the ONS Statistical cluster which is a cluster of boroughs that been classified into clusters based on similar characteristics

- The projected number of older people in Merton who have dementia is on a steep upward trajectory
- The risk factors will increase therefore there will be increased demand on health and social care resources

### What is the Prevalence of Falls in Merton?

It is difficult to give an exact number of total falls that occur in Merton in a year as some go unreported, and falls are captured in different health and social care systems as different things i.e. in some cases only the injury and not the fall is coded. Therefore, various proxies have been used to gauge how big the size of the problem of falls is in Merton. Table 5 below shows Age UK's estimation of the proportion of people who experience a fall each year in the UK by age.

**TABLE 5: UK ESTIMATED PERCENTAGE OF PEOPLE WHO EXPERIENCE A FALL BY AGE<sup>49</sup>**

>65 years	>75 years	Institutional Care	Recurrent Fallers	Healthy Elderly
28–35%	32–45%	>50%	60–70%	15%

Using the lower end of the ranges presented in table 5, the estimated (minimum) number of people who experience a fall in Merton is shown in table 6:

**TABLE 6: ESTIMATED NUMBER OF OLDER PEOPLE IN MERTON WHO EXPERIENCED A FALL 2013-14**

	(2014) Merton population aged >65 years	(2014) Merton population aged >75 years
Merton population	24,723*	11,579*
Age UK range for proportion of older people who experience a fall	28–35%	32–45%
Estimated older people who experience a fall	Using the lower limit: 6922 Using the upper limit: 8653	Using the lower limit: 3705 Using the upper limit: 5210

\* Source: GLA (Ward: 2013 round capped SHLAA-based population projections)

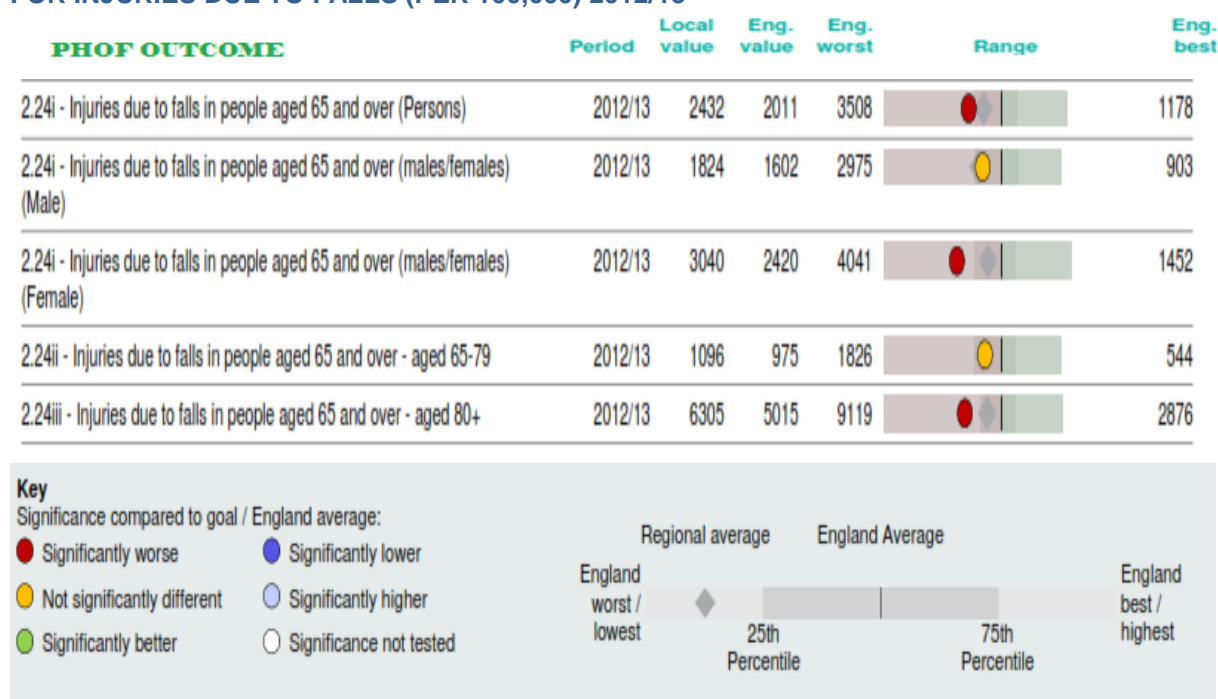
The estimated number of falls in the population aged over 75 is a subset of the estimated falls in those aged over 65.

<sup>49</sup> Age UK, Later Life in the United Kingdom, November 2014. [http://www.ageuk.org.uk/Documents/EN-GB/Factsheets/Later\\_Life\\_UK\\_factsheet.pdf?dtrk=true](http://www.ageuk.org.uk/Documents/EN-GB/Factsheets/Later_Life_UK_factsheet.pdf?dtrk=true)

## Reported Emergency Hospital Admissions for Injuries Relating to Falls

Hospital admissions<sup>50</sup> relating to falls can be used as a proxy for the prevalence of falls injuries although it should be noted that these are only the tip of the iceberg in relation to the overall health burden of falls as inpatient hospital admissions are a proportion of falls incidents, more may present to A&E and GPs and not all will lead to hospital admission. Figure 15 shows the Age-sex standardised rate of emergency hospital admissions for injuries due to falls in the population aged 65 and over. The spine chart shows the emergency admissions rate for men aged 65 and above, women aged 65 and above, older people aged 65-79 and people aged 80 and above per 100,000 of the Merton population. Merton has a significantly higher rate of older people, older women and those aged 80 and above being admitted to hospital for falls related injuries compared to the England average. The injuries in older men and in people in the 65-79 age groups are similar to the England.

**FIGURE 15: THE AGE-SEX STANDARDISED RATE OF EMERGENCY HOSPITAL ADMISSIONS FOR INJURIES DUE TO FALLS (PER 100,000) 2012/13**



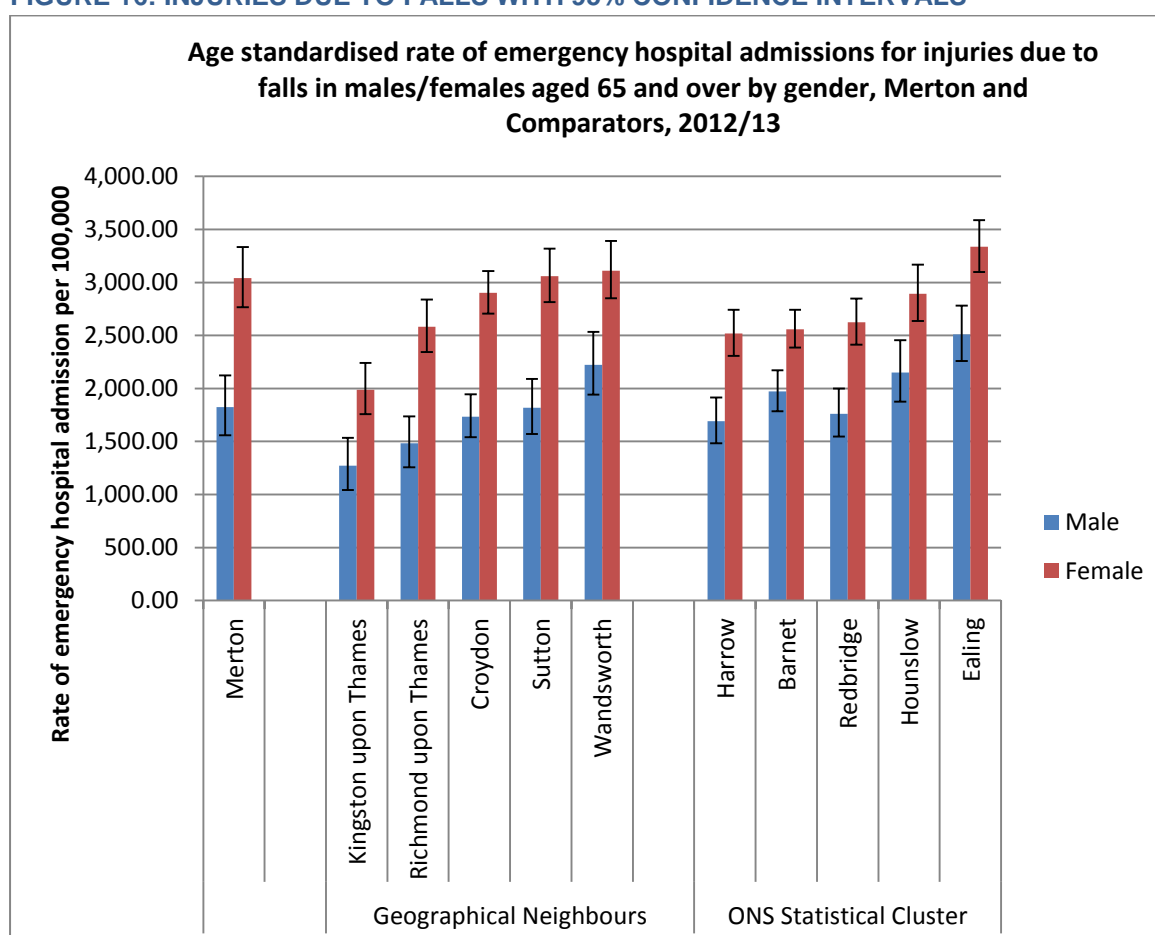
Source: Public Health Outcomes Framework

<sup>50</sup> Emergency admissions for falls injuries classified by primary diagnosis code (ICD10 code S00-T98) and external cause (ICD10 code W00-W19) and an emergency admission code. Age at admission 65 and over.

## Reported Emergency Hospital Admissions for Injuries relating to Falls by Gender in Merton and Comparators

Figure 16, shows the age-sex standardised rate of emergency hospital admissions for falls related injuries by gender. In Merton, the rate of emergency admissions in women is significantly higher than men. Figure 16 also shows that the rate of emergency admissions in women is almost double that of men. The Merton rate of emergency admissions in women when compared to Kingston (a geographical neighbour) is significantly higher, however with the rest of the comparators, both geographic and statistical there is no significant difference. This suggests that there is greater need for falls preventive services particularly for women in Merton. Figure 16 shows that the emergency admission for women in Merton's rate is second from the highest when compared to the ONS statistical cluster. When considering the rate of emergency hospital admissions for falls related injuries in men, Merton is similar to all the South West London boroughs as well as the ONS statistical cluster however; there is still room for improvement.

**FIGURE 16: INJURIES DUE TO FALLS WITH 95% CONFIDENCE INTERVALS\***



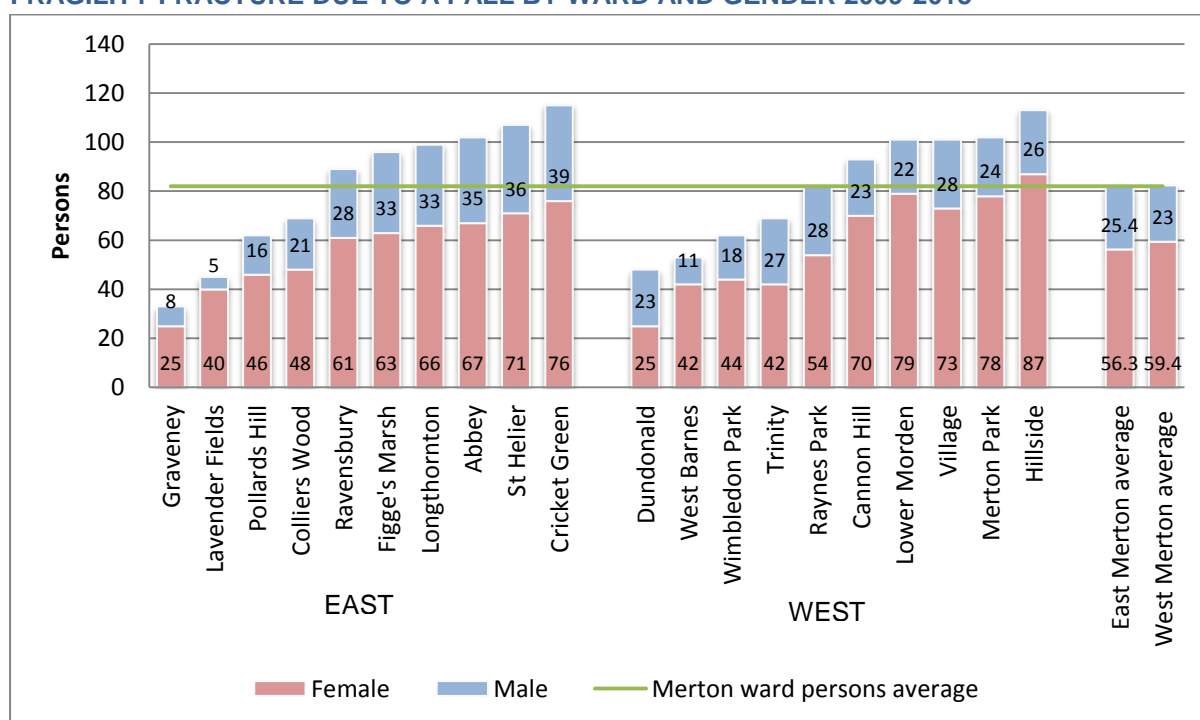
Source: Public Health Outcomes Framework

\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

### Older people in Merton attending A&E with a falls related fragility fracture

The Secondary Uses Service (SUS) is the single, comprehensive repository for healthcare data in England which enables a range of reporting and analyses to support the NHS in the delivery of healthcare services. SUS data includes Hospital Episode Statistics (HES) showing hospital admissions for different conditions categorised using healthcare Resource Groups (HRGs). SUS data was used to assess the trend in older people attending A&E with fragility fractures in Merton. Figure 17 below, shows the total number of falls in Merton (by ward and gender) from 2009-2013 and the falls are measured by those who've presented to A&E with a fragility fracture on any part of their body as a result of a fall. This is aggregated data over five years. The data shows that more women fall than men and that the majority of wards have falls in that are above the Merton average number of falls per ward. The "raw numbers"<sup>51</sup> are 817 falls from the east of Merton, 824 from the west. Overall the total falls are 1641. The number of falls in women is 1157 and in men are 484. These raw data are further analysed and converted into rates for each ward to take into account the variations in each ward in terms of population composition and to allow comparability between the wards.

**FIGURE 17: MERTON NUMBER OF PEOPLE AGED 65 AND OVER ATTENDING A&E WITH A FRAGILITY FRACTURE DUE TO A FALL BY WARD AND GENDER 2009-2013**



Source: SUS data

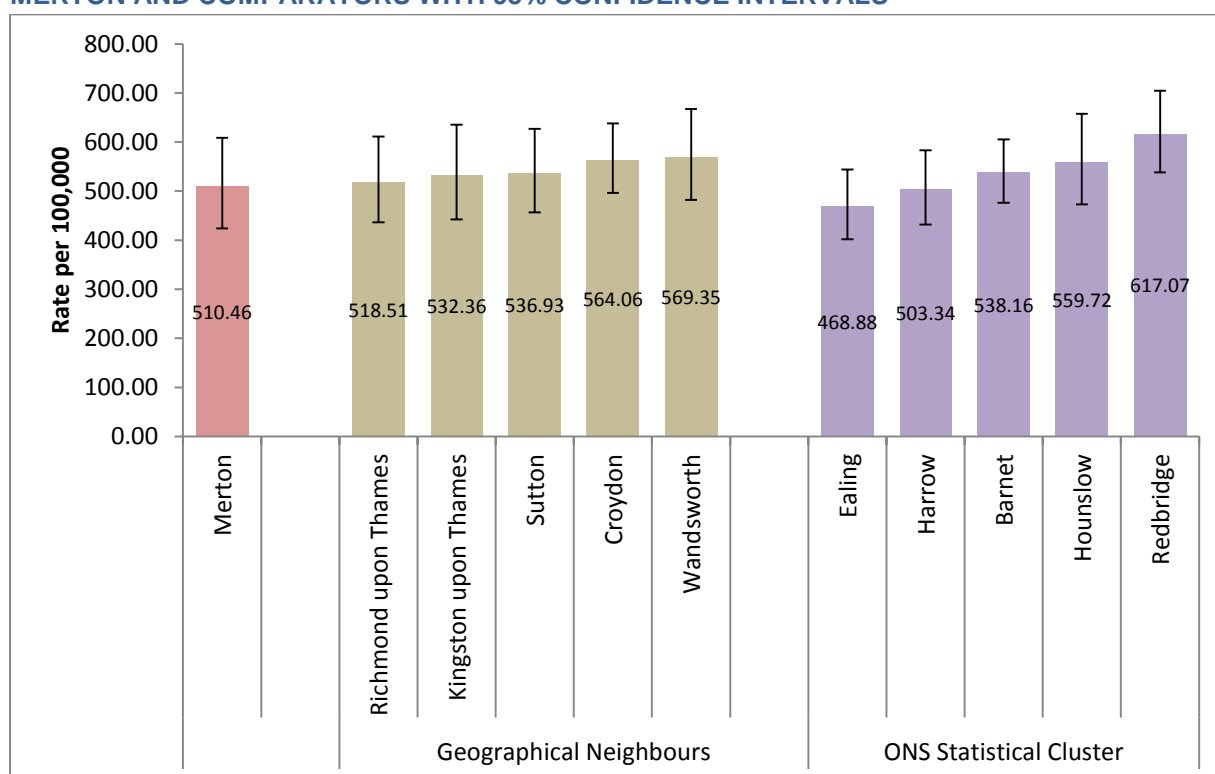
<sup>51</sup> Not taking into account the distribution and differences in the concentration of people aged 65 and above in different wards in Merton. Unprocessed data, just the crude number of falls, not adjusted for sex, age or deprivation.



## Age Standardised Rate of Emergency Admissions for Fractured Neck of Femur

More than 95% of hip fractures in adults aged 65 and older are caused by a fall making admissions for fractured neck of femur a good proxy for falls incidence and an indicator of the need for falls preventive services. The incidence of hip fractures increases exponentially with age; postmenopausal women suffering earlier non-hip fractures have an increased risk of later hip fracture. For many older people it is the event that forces them to leave their homes and move into residential care. Figure 18 shows Merton's age and sex standardised rate of emergency admissions for fractured Neck of Femur, per 100,000 population aged 65 and over in 2012/13 in comparison to the SWL neighbours and Boroughs that are statistically comparable with Merton. Merton's rate is the 13<sup>th</sup> lowest of 32 CCGs in London and is not significantly different to the England average. When compared to SWL and statistically comparable boroughs the rate is similar.

**FIGURE 18: DIRECTLY AGE AND SEX STANDARDISED RATE OF ADMISSIONS FOR FRACTURED NECK OF FEMUR, PER 100,000 POPULATION AGED 65 AND OVER, 2012/13, MERTON AND COMPARATORS WITH 95% CONFIDENCE INTERVALS\***



Source: Public Health Outcomes Framework<sup>52</sup>

\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

<sup>52</sup> Public Health Outcomes Framework (PHOF) , Emergency admissions for fractured neck of femur classified by primary diagnosis code (ICD10 S72.0 Fracture of neck of femur; S72.1 Proximal femoral fracture and S72.2 Subtrochanteric fracture) and an emergency admission method

### The mortality from falls rate

The mortality from falls rate in men aged 65-74 is higher than most of the geographical neighbours and statistical comparator boroughs and also significantly higher than the London average. The falls-related mortality rate of men aged 75 and older is higher than all the comparators in Table 6. It is interesting that the falls-related mortality rate for men is higher than women even though the incidence of falls and falls related injuries is lower. This suggests that although the older men don't fall as often as women, when they do, the impact is significant.

The Merton mortality from falls rate in women is higher than most geographical neighbours and all the statistically similar boroughs. The falls-related mortality rate in people aged 75 and older for both men and women is second highest when compared to all the 11 comparators including the London average. Table 6 shows the age specific crude death rates for 2010-12. Merton is markedly higher than most of the comparators therefore this suggests that there is a lot of room for improvement regarding mortality from falls in both men and women and in both the age ranges (65 to 74) and (those aged 75 plus). It should be noted however that this is the crude death rate not adjusted for sex, deprivation and the actual numbers are very small; so caution should be observed when making inferences from the falls-related mortality data.

**Table 7: MORTALITY FROM ACCIDENTAL FALLS AGE SPECIFIC CRUDE DEATH RATE PER 100,000 (2010-12)**

		65-74			75+		
		Males	Females	Persons	Males	Females	Persons
<i>per 100,000 population</i>							
Merton		23.5	0.0	11.1	125.3	59.0	85.6
Geographical Neighbours	Sutton LB	10.1	0.0	4.7	31.3	24.3	27.1
	Kingston upon Thames LB	0.0	0.0	0.0	25.3	42.8	36.0
	Richmond upon Thames LB	10.5	0.0	5.0	91.3	30.9	54.2
	Croydon LB	9.2	2.6	5.7	38.0	26.3	31.1
	Wandsworth LB	24.8	8.4	15.9	87.7	74.3	79.6
ONS	Barnet LB	18.0	2.6	9.7	45.5	34.9	39.1
	Ealing LB	10.7	3.2	6.8	33.3	23.5	27.6
Statistical Cluster	Harrow LB	4.0	7.2	5.7	29.4	35.1	32.7
	Hounslow LB	23.6	8.7	15.8	39.4	27.5	32.4
	Redbridge LB	0.0	0.0	0.0	15.2	16.7	16.1
LONDON		8.4	3.9	6.0	48.3	30.0	37.4

Source: Health and Social Care Information Centre

The actual numbers are quite small (see table below):

**TABLE 8: THE ACTUAL NUMBER OF DEATHS FROM 2011-12**

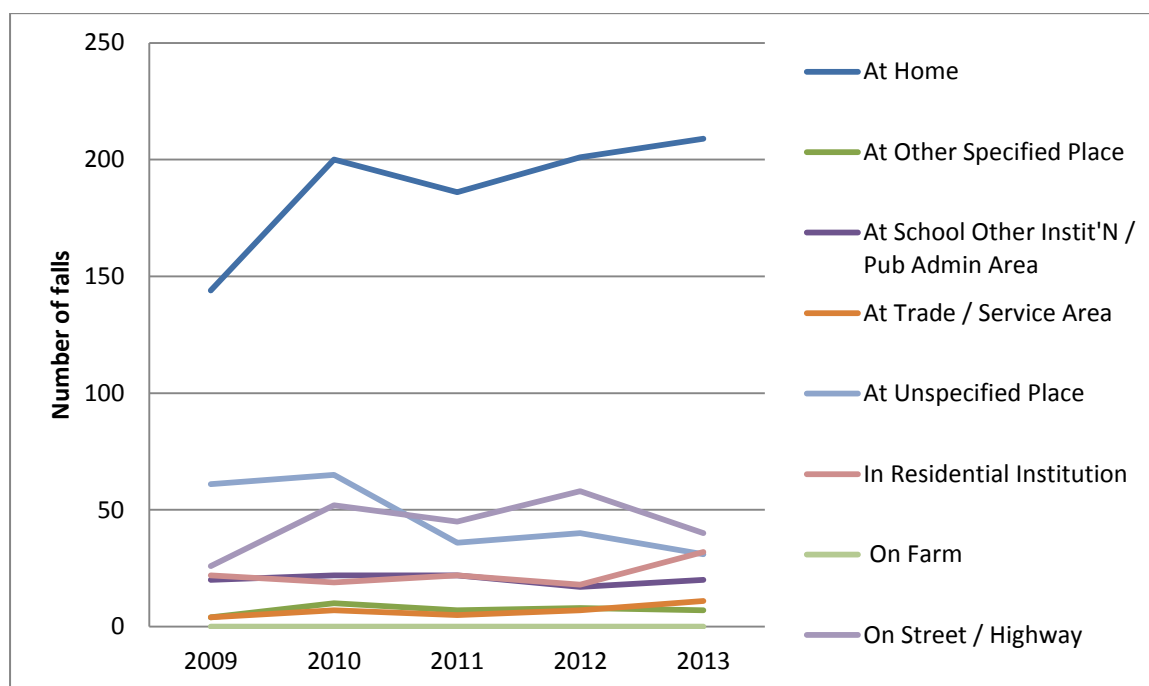
	People aged between 65-74		People aged 75 and over	
	Males	Females	Males	Females
Mortality from falls	24	0	125	59

The all cause mortality “raw number” in the same time period in the population aged 65 and over was 461 men and 599 women in Merton.

**Where do most people in Merton Fall?**

Figure 19 shows that a significant majority of falls occur at home in Merton and they have been progressively increasing from year to year. Falls on the street and highway are the next frequent location of falls and the third frequent location is residential institutions (care home and residential homes). Many factors can contribute to this heightened risk in residential institutions, such as physical frailty, the presence of long term conditions, physical inactivity, taking multiple medications and the unfamiliarity of new surroundings.

**FIGURE 19: MERTON LOCATION OF FALLS BY YEAR, 2009-2013 IN OLDER PEOPLE**

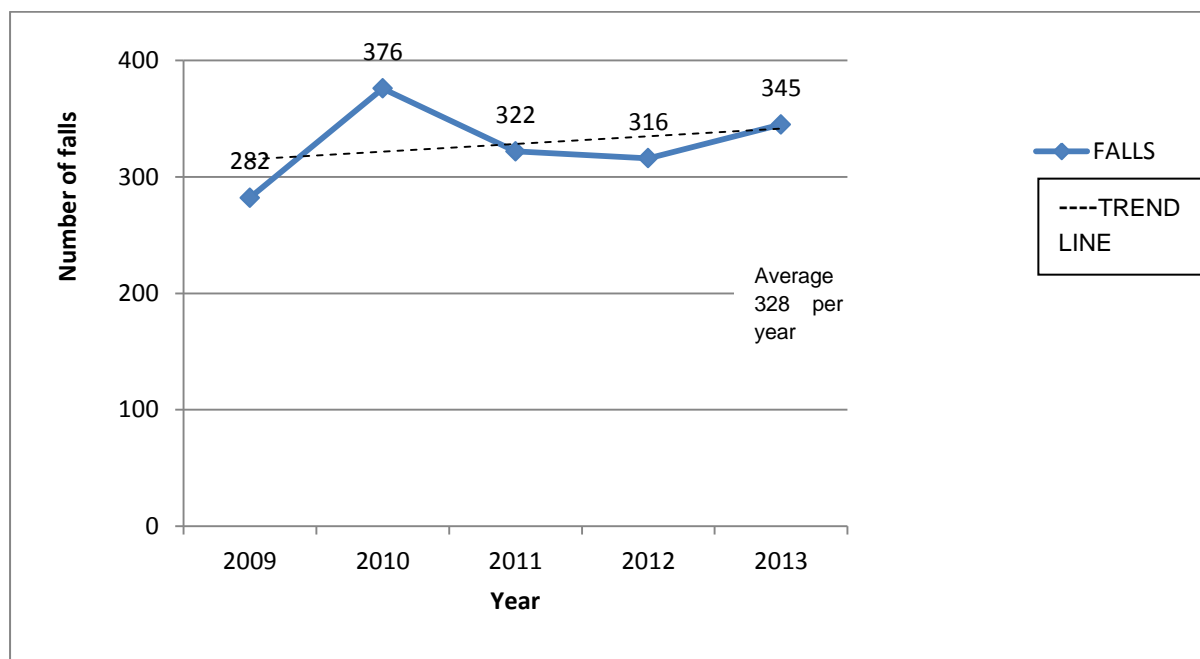


Source: SUS Data

### Five Year trend in A&E attendances for falls-related fragility fractures

Figure 20 shows that falls peaked in 2010, then reduced over the following two years; in 2012 they took an upwards trajectory. The number of falls are measured by attendances to A&E for a fragility fracture in any part of the body in people aged 65 and over of Merton. The Health and Safety Executive<sup>53</sup> report that there is seasonal variation regarding falls and that slips and trips tend to peak in the winter, probably reflecting adverse weather conditions, such as slippery ground surfaces resulting from snow, rain and ice. The trends analysis below did not consider seasonal variation as but aggregate annual data therefore; Figure 20 shows the changing trend in falls from a year to year basis.

**FIGURE 20: FIVE YEAR TREND IN FALLS MEASURED BY ATTENDANCES TO A&E FOR A FRAGILITY FRACTURE IN THE POPULATION AGED 65 AND OVER**



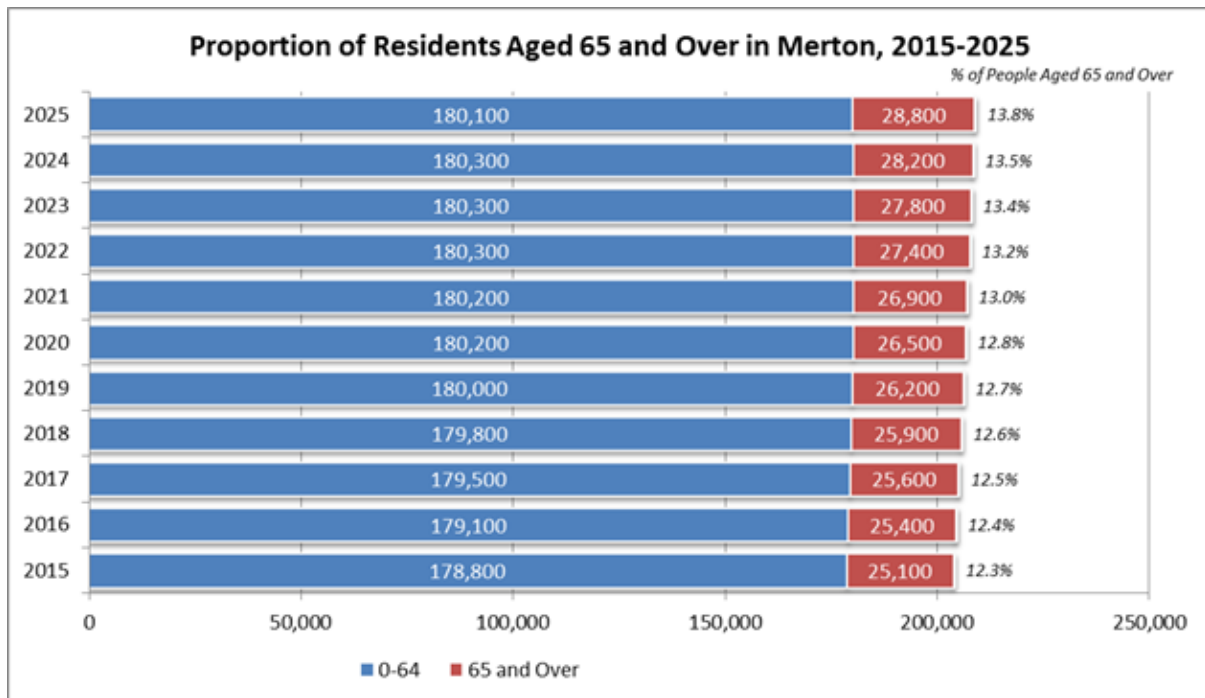
Source: SUS Data

<sup>53</sup> HSE , Slips & trips and falls from height in Great Britain, 2014 <http://www.hse.gov.uk/statistics/causinj/slips-trips-and-falls.pdf>

**What are the projected changes to the population aged 65 and above?**

The proportion of people aged 65 and over is predicted to grow by 14.7% in the next 10 years in Merton according to GLA projections. This percentage growth has been calculated based on the fact that in 2014 there are 25,100 people aged 65 and over. In 2025 there will be 28,800 older. The growth of 3700 people as a percentage of the original number (25,100) shows a projected percentage growth (14.7%) that is markedly high. Figure 21 shows that the proportion of older people will increase progressively over the next 10 years. The projections show that there will be a marked increase in terms of absolute numbers of people aged 65 and over indicating that there will be an increase in demand for falls prevention services as the risk factors of falling increase with age. This increase in demand in falls prevention also represents an increase in demand for health and social care input, therefore services will need to take into account the need to factor growth to keep in line with the changes in the population. The projected growth rate of the population aged 65 and over in Merton is mostly in line with the Outer London rate. In both Merton and Outer London, the growth rate of older people is slightly lower than the England growth rate. This is shown in Appendix G.

**FIGURE 21: THE PROJECTED GROWTH IN MERTON RESIDENTS AGED 65 AND OVER FROM 2015-2025.**



Source: GLA 2013 Round SHLAA-Based Age-Range Creator

### What are the predicted numbers of older people expected to have a fall in the future?

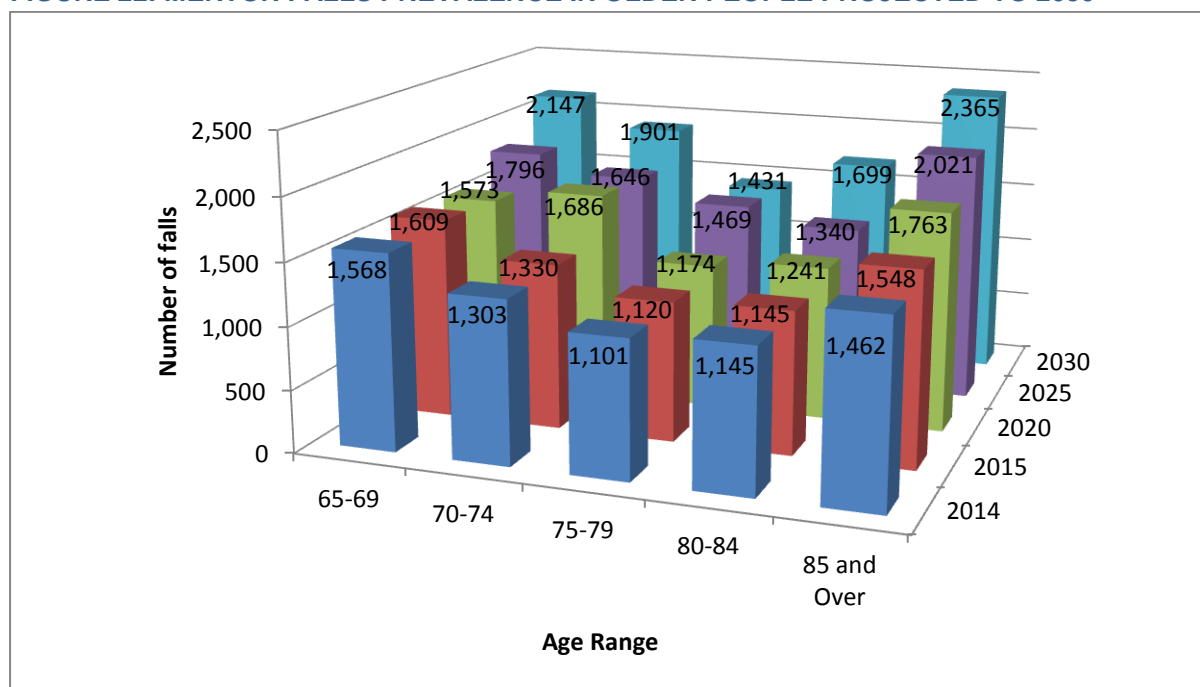
Table 9 shows the people in Merton aged 65 and over predicted have a fall, by age and projected to 2030. The Projecting Older People Population Information (POPPI) number for older people estimated to experience a fall in 2014 (6,579) is similar to the estimated number of older people who experience a fall in Merton (6,922) calculated using the Age UK model. The POPPI projections in Figure 22 are based on prevalence rates obtained from the Health Survey for England (2005) that are then applied to ONS population projections of the 65 and over population to 2030. The graph shows a steady increase on a year to year basis in total number of falls. This projected falls prevalence is shown in table format too (table 9) showing the total number of falls for each (2014, 2015, 2020, 2025, 2030).

**TABLE 9: MERTON FALLS PREVALENCE IN OLDER PEOPLE PROJECTED TO 2030**

Ages	2014	2015	2020	2025	2030
65-69	1,568	1,609	1,573	1,796	2,147
70-74	1,303	1,330	1,686	1,646	1,901
75-79	1,101	1,120	1,174	1,469	1,431
80-84	1,145	1,145	1,241	1,340	1,699
85 and Over	1,462	1,548	1,763	2,021	2,365
<b>Total</b>	<b>6,579</b>	<b>6,752</b>	<b>7,437</b>	<b>8,272</b>	<b>9,543</b>

Source: Projecting Older People Population Information (POPPI)<sup>54</sup>

**FIGURE 22: MERTON FALLS PREVALENCE IN OLDER PEOPLE PROJECTED TO 2030**



Source: Projecting Older People Population Information (POPPI)<sup>55</sup>

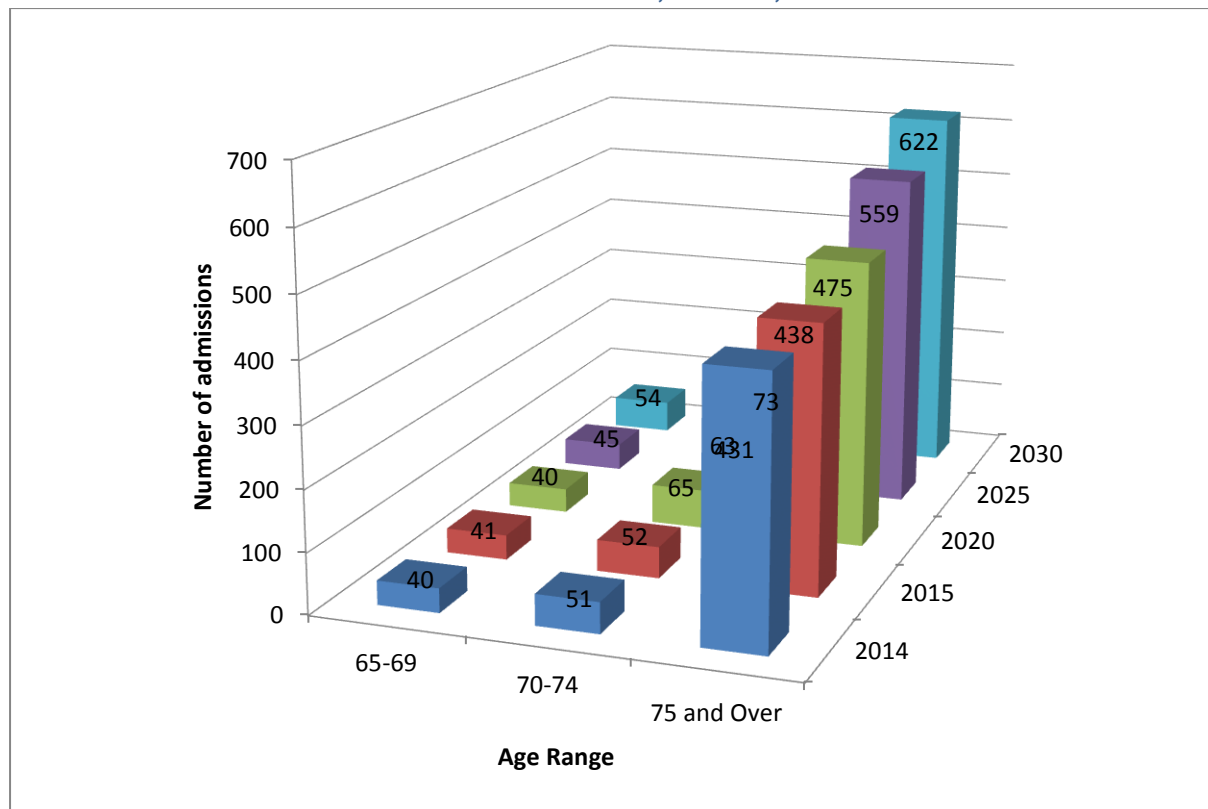
<sup>54</sup> www.poppi.org.uk

<sup>55</sup> www.poppi.org.uk

**What are projected numbers of non-elective hospital admissions in people aged 65 and above as a result of a fall and the projected costs?**

Using a study of 647,721 A&E attendances and 204,424 admissions to hospital for fall related injuries in people aged 60 years and over and applying prevalence rates to ONS population projections of the Merton population aged 65 and over, POPPI developed numbers for predicted emergency admissions for falls in the older population projected to 2030. These are shown in Figure 23, which also shows that the group that is at highest risk of non-elective hospital admission for falls in the group aged 75 and above. The new requirements by GPs to carry out health checks in the over 75s could make a positive impact in that it may increase the number of people at risk of falls and referred for proactive intervention to prevent falls. The over 75s health checks present an opportunity to improve falls prevention.

**FIGURE 23: MERTON NUMBER OF PEOPLE AGED 65 AND OVER PREDICTED TO BE ADMITTED TO HOSPITAL AS A RESULT OF FALLS, BY AGE, PROJECTED TO 2030**



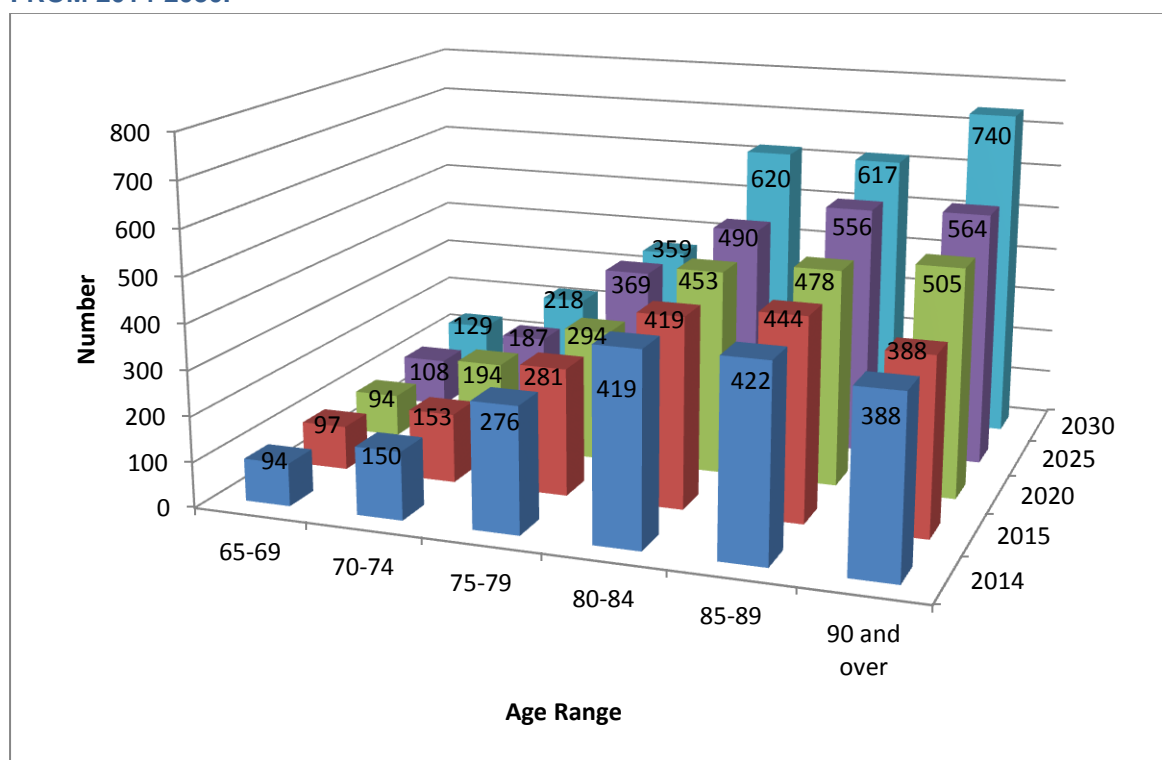
Source: POPPI<sup>56</sup>

<sup>56</sup> www.poppi.org.uk

**What are the projected changes in an important risk factor such as dementia prevalence?**

People with dementia suffer more falls, more fractures and higher post-fracture mortality than those without dementia, yet they are under-assessed for falls risk factors and are less likely to receive treatment for osteoporosis<sup>57</sup>. Falls and fracture patients have a high prevalence of dementia and cognitive impairment, yet do not routinely receive cognitive assessment and, consequently, miss an opportunity for a diagnosis of dementia to be made. Consideration of this puts into context the scale of the opportunity for improved care that an integrated approach to dementia, falls and fractures could realise. Furthermore, the 2011 National Hip Fracture Database Report<sup>58</sup> suggests that up to 21,700 of the 70,000 patients presenting with hip fracture annually in England, Wales and Northern Ireland could be suffering from dementia and/or delirium. Falls and fractures are the most common reason for dementia sufferers to be admitted to hospital<sup>59</sup>. In light of the above, Dementia is an important risk factor regarding falls and also a strong predictor of falls. Figure 24 shows the POPPI number of people aged 65 and above predicted to have dementia in Merton from 2014 to 2030. Again, we see an upward trajectory indicating that there will be an increased demand on resources for fall prevention services. There is also scope for improved care through integrating dementia and falls care.

**FIGURE 24: PEOPLE AGED 65 AND OVER PREDICTED TO HAVE DEMENTIA IN MERTON FROM 2014-2030.**



Source: POPPI<sup>60</sup>

<sup>57</sup> Mitchell and Bateman 2014, Dementia, falls and fractures :Integrated approaches to improve quality and reduce costs, Synthesis Medical and Novartis,

<sup>58</sup> British Orthopaedic Association, British Geriatrics Society, Healthcare Quality Improvement Partnership. The National Hip Fracture Database: National Report 2011. 2011.

<sup>59</sup> **Alzheimer's Society**. Counting the cost: Caring for people with dementia on hospital wards. 2009.

<sup>60</sup> www.poppi.org.uk



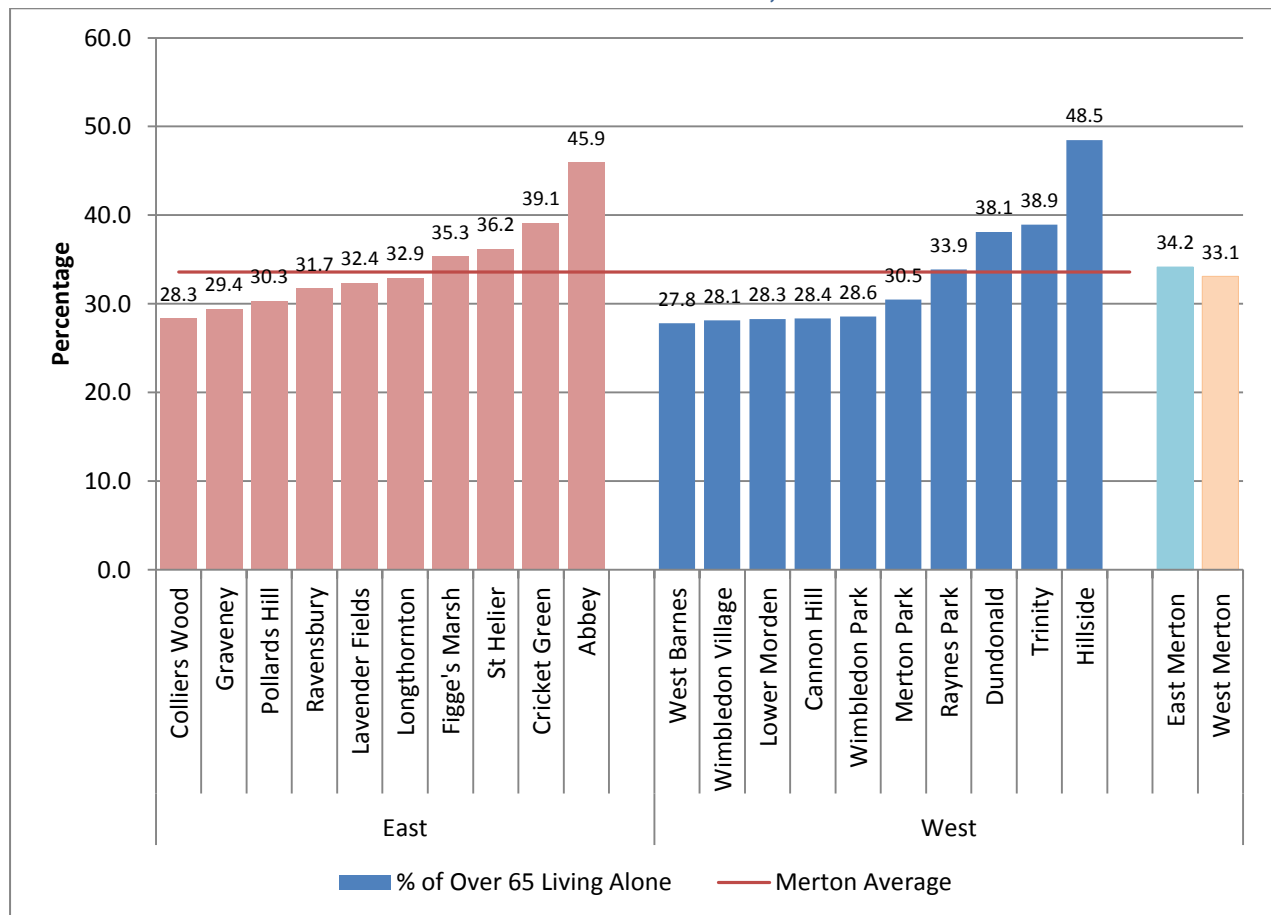
## 7. What is the size or distribution of some of the risk factors?

### Key Points:

- East Merton has a higher rate of older people living alone than west Merton.
- The two wards in the east with the highest rates of older people living alone are Abbey and Cricket Green and the two wards in the west with the highest rates are Hillside and Trinity
- Prevalence of osteoporosis in Merton is 20% and similar to the England average
- The percentage of Merton GP patients aged between 50 and 74 years, with a fragility fracture, in whom osteoporosis is confirmed on DEXA<sup>61</sup> scan, who are currently treated with an appropriate bone-sparing agent is 95% and slightly below the national average of 97%

### What is the distribution of Older People Living alone in Merton?

FIGURE 25: RATE OF PEOPLE AGED 65 AND OLDER PER 1,000 LIVING ALONE BY WARD



Source: Census 2011

Figure 25 shows the wards with the higher rates of people aged 65 and older living alone. There are 7/20 wards with older people living alone above the Merton average. Living alone

<sup>61</sup> A DEXA scan is a special type of X-ray that measures bone mineral density (BMD). DEXA stands for "dual energy X-ray absorptiometry". This type of scan is also often known as DXA, or "dual X-ray absorptiometry". It's also sometimes referred to as a bone density scan or a bone densitometry scan

is associated with increased risk of complication following a fall, a higher rate of hospital admission and a psychological factor (fear of falling) when compared to those living with someone. East Merton has a marginally higher rate of older people living alone than west Merton. The two wards in the east with the highest rates of older people living alone are Abbey and Cricket Green and the two wards in the west are Hillside and Trinity. There are slightly more people living alone in the east than the west, this supports the premise that there is greater need in the east.

### **Estimated Osteoporosis Prevalence in Merton**

Prevalence of osteoporosis increases markedly with age after menopause. By age 60, approximately 15% of women have osteoporosis, and this figure increases to over 25% by the age of 80<sup>62</sup>. Fragility fractures are often linked to osteoporosis. The prevalence of osteoporosis in Merton in people aged 50 and over is 20% and exactly the same as the QOF reported England average rate which is also 20%. Attention is now increasingly focused on the identification of people at high risk of fracture rather than the identification of people with osteoporosis as defined by Bone Mineral Density (BMD) alone. Although osteoporosis is defined in terms of BMD and micro architectural deterioration of bone tissue, BMD is just one component of fracture risk. Accurate assessment of fracture risk should ideally take into account other proven risk factors that add information to that provided by BMD such as physical inactivity, a sedentary lifestyle and impaired neuromuscular function.

General Practice Quality and Outcomes Framework (QOF) rewards GP practices for how well they care for patients, based on their performance against indicators. In 2012/13 QOF incorporated osteoporosis indicators to provide financial incentives for the diagnosis and treatment of osteoporosis. The indicators include incentives for:

- OST1: Patients aged 50-74 with a recorded fragility fracture and osteoporosis confirmed on DEXA scan
- OST1: Patients aged 75 years and over with a recorded fragility fracture
- OST2: Patients aged 50-74 years, with a fragility fracture, in whom osteoporosis is confirmed on DEXA scan, receiving bone sparing therapy and;
- OST3: Patients aged 75 years and over with a fragility fracture, receiving bone sparing therapy

Bone sparing agents are indicated to reduce subsequent fracture risk for the secondary prevention of osteoporotic fragility fractures. This introduction of osteoporosis indicators into QOF is likely to result in an increased number of people at risk of fracture being identified as well as secondary prevention of fragility fractures. Table 10 shows the estimated osteoporosis prevalence as well as the outcome of the 2012/13 QOF indicators as reported on the National General Practice Profiles<sup>63</sup>

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<sup>62</sup> National Osteoporosis Society(NOS) Key facts and figures <http://www.nos.org.uk/page.aspx?pid=328>

<sup>63</sup> <http://fingertips.phe.org.uk/profile/general-practice>

**TABLE 10: REPORTED OSTEOPOROSIS PREVALENCE IN MERTON AND 2012/13 OUTCOMES OF QOF OSTEOPOROSIS INDICATORS REPORTED ON THE NATIONAL GENERAL PRACTICE PROFILES**

<b>Indicator</b>	<b>Prevalence from GP Practice Registers<sup>64</sup></b>	<b>England Average</b>
Osteoporosis prevalence in population aged 50 and older	20%	20.0%
OST 1: The percentage of patients aged between 50 and 74 years, with a fragility fracture, in whom osteoporosis is confirmed on DXA scan, who are currently treated with an appropriate bone-sparing agent	95%	97.1%
OST3 <sup>65</sup> : Patients aged 75 and over with a fragility fracture treated with a bone-sparing agent.	84.8%	84.4%

<sup>64</sup> QOF Prevalence from National General Practice Profiles, (crude rate)

<http://fingertips.phe.org.uk/profile/general-practice>

<sup>65</sup> This indicator does not require that in people aged over 75 with a fragility fracture a diagnosis of osteoporosis confirmed by DXA scan is made



## 8. What are the health inequalities?

### Key Points:

- **Inequalities in Access**
- There was marked variation between wards in referral rates of Merton residents into the SMCS FPS in 2013, the variation was also evident in some cases between wards with similar concentrations of older people or between wards in the same locality
- **Variation in falls-related ambulance call out rates and falls-related A&E attendances**
- There is marked variation between wards in falls-related A&E attendances and Abbey ward and Figges' Marsh are the wards with the highest rates of A&E attendance in 2013 and therefore the falls "hot spots"
- There is also marked variation in falls-related ambulance call out rates between wards
- **Areas of Greater need**
- The areas that have a higher rate of 2013 falls-related A&E attendances in older people compared to referrals into the SMCS FPS and thereby deemed to be areas of higher need are:

East Merton Wards	West Merton Wards
Graveney	Lower Morden
Lavender	Village
Cricket Green	Hillside <sup>67</sup>
Colliers Wood	Trinity
Longthorn	
Pollards and Figges' Marsh	
Abbey <sup>66</sup>	

- Included in the areas of greater need are the wards with the higher rates of people living alone Abbey and Cricket Green in the east and Trinity and Hill side in the west

### Gender inequalities

- There are higher rates of women falling to men generally in Merton
- Abbey, Raynes Park, Merton Park and Dundonald are the only wards with a higher rate of men falling to women

### Inequalities pertaining to levels of deprivation

- There was no correlation between deprivation and A&E attendances for falls suggesting that risk factors such as (living alone and gender) have a stronger linear relationship to A&E attendance than deprivation

### There is an east Merton versus west Merton divide

- There is a higher rate of people attending A&E for a fall in the east of Merton than the west
- In the east of Merton 7 out of 10 wards have a higher rate of falls related A&E attendances to referral rate to the SMCS FPS whereas in the west of Merton only 2 out of 10 wards have a higher rate of falls related A&E attendance to referral rate to

<sup>66</sup> Ward with higher rates of older people living alone

<sup>67</sup> Wards with higher rates of older people living alone

the FPS

- There is a higher rate of older people being referred to the SMCS FPS in the west when compared to the referral rate in the east

#### Proportionate representation of ethnic groups

- It was not possible to determine if there was proportionate ethnic representation in terms of accessing the SMCS FPS
- The incidence of falls is higher in white women than other ethnic groups

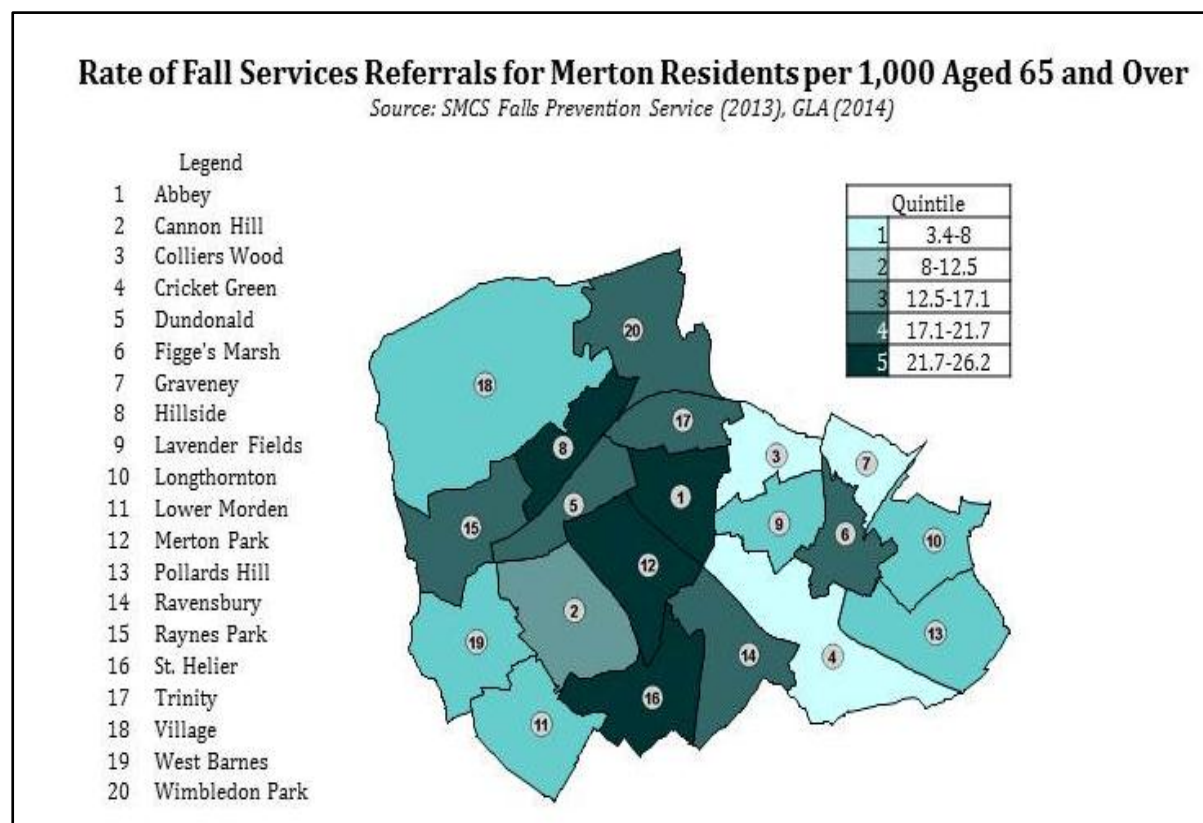
#### Where are the variations between wards and therefore small area health inequalities?

Generally rates take into account the size of the population, so comparisons can be made across different population groups. Therefore rates were obtained for each individual ward for different variables to allow comparisons to be made. 2013 data was used for the rates in order to compare the variables in the same time frame. Small area inequalities were detected in terms of variations in Merton residents referred into the SMCS FPS and variations in falls-related A&E attendances.

#### What are the variations in Merton residents referred into the SMCS FPS?

Figure 26 shows the variation on a ward level of referrals into the SMCS FPS using the ward rate of referrals per 1,000 in the population aged 65 and over in 2013. The darker the shade the higher the referral rate to the FPS. Figure 26 shows that there is significant variation in referral rates between wards that are in the same localities. One older person living a few streets away from another will live in an area with a different referral rate into the SMCS FPS even though they may be in the same locality

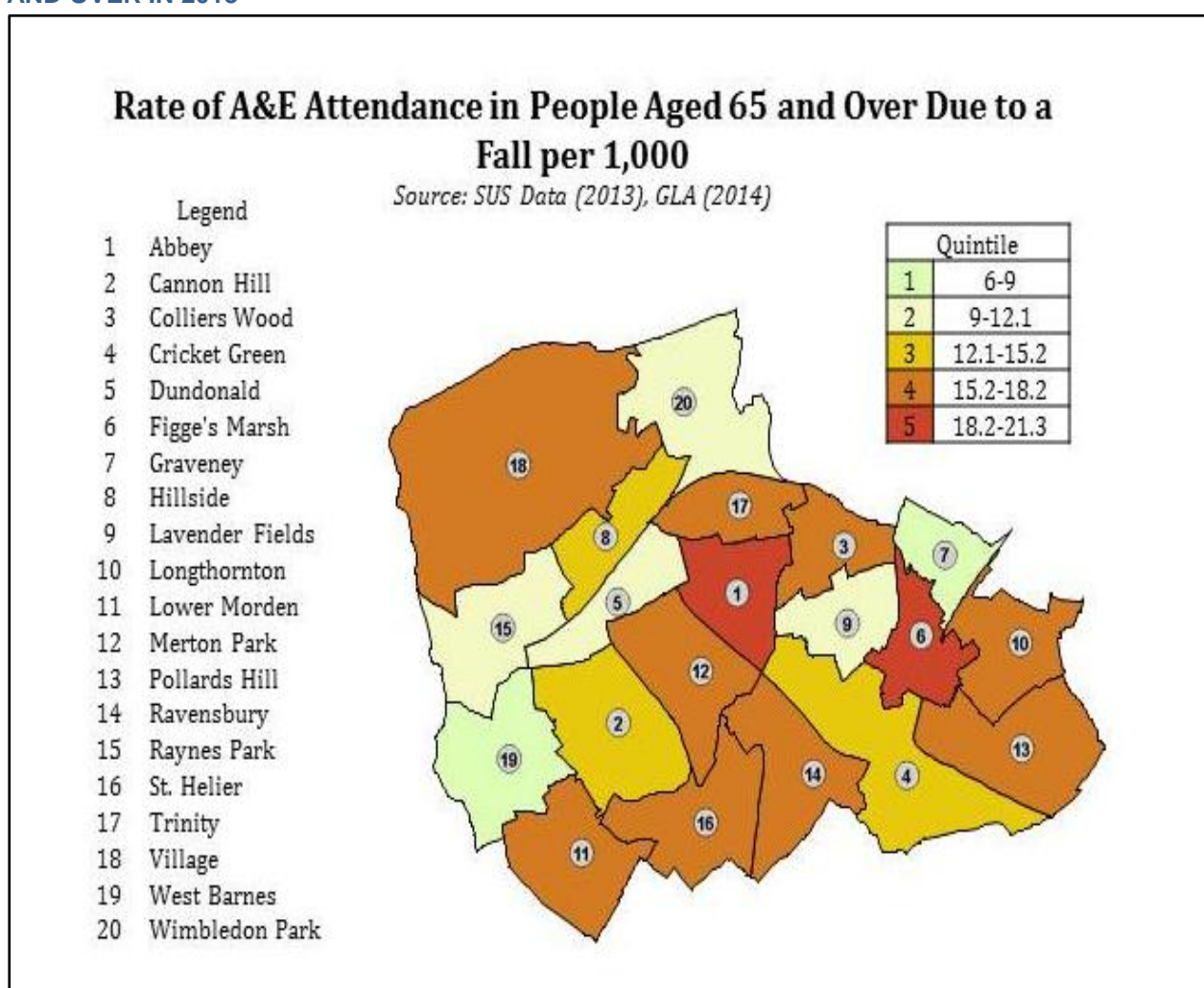
**FIGURE 26: THE RATE OF REFERRALS PER 1,000 IN THE POPULATION AGED 65 AND ABOVE IN MERTON 2013**



### What are the variations in Falls Related A&E Attendance?

Figure 27 shows the ward rates of fall-related A&E attendances in the population aged 65 and above and once again there is significant variation between the wards in A&E attendance. Abbey ward and Figges' Marsh are the wards with the highest rates of A&E attendance. Abbey and Figges Marsh have high rates of people attending the Falls Prevention Service too. The areas with the higher rates of falls-related A&E attendance are the areas for greater falls prevention input and there remains a need for effective targeting to ensure the resources are targeted to the need. Engagement with GPs to increase referral rates from the hotspots could be considered as a way of targeting and increasing case finding in the areas of greater need.

**FIGURE 27: THE WARD RATE<sup>68</sup> OF FALLS-RELATED A&E ATTENDANCE IN PEOPLE AGED 65 AND OVER IN 2013**



<sup>68</sup> **A&E Attendance Rate:** The numerator is the number of people who attended A&E with a falls-related fragility fracture on any part of the body Aged 65 and over in the ward and the denominator it the number of people aged 65 and over in that ward.

**Which are the wards of greatest need or areas requiring targeting?**

The wards of greatest need or wards requiring targeting were defined as the wards that had a higher rate of people attending A&E for falls when compared to the ward rates of people referred to the SMCS FPS. This was the criteria that was used based on the available data to work out the wards where there was more that could be done in terms of preventing falls. The table below shows that wards that met the above defined criteria and were therefore deemed to be areas with greater need to prevent falls.

**TABLE 11: AREAS WITH GREATER NEED ASSESSED BY HAVING A GREATER RATE OF FALLS RELATED A&E ATTENDANCE TO REFERRAL INTO THE FPS IN 2013**

<b>East Merton Wards</b>	<b>West Merton Wards</b>
Graveney Lavender Cricket Green Colliers Wood Longthorn Pollards and Figges' Marsh Abbey*	Lower Morden Wimbledon Village Hillside* Trinity*

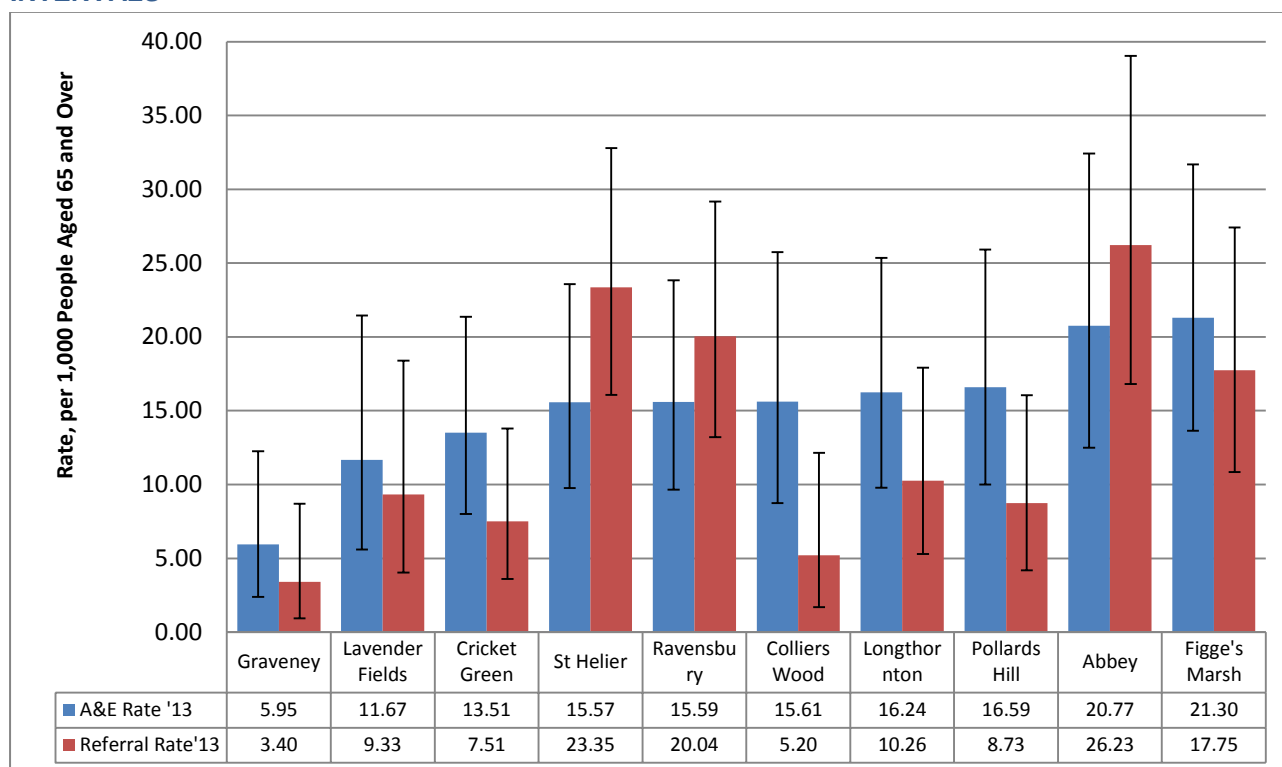
\*Included in the areas of greater need are the wards with the higher rates of people living alone i.e. Abbey in the east and Trinity and Hillside in the west.

**Which are the wards in East Merton deemed to have a greater need for preventing falls?**

Figure 28 shows east Merton wards and their 2013 rates (per 1,000 in the older population) of falls-related A&E attendances and the referral rates (per 1,000 in the older population) into the SMCS FPS. Figure 28 also shows that in 2013; in the east of Merton 7 out of 10 wards have a higher rate of older people attending A&E for a falls related matter than the rate of people being referred into the SMCS FPS.



**FIGURE 28: EAST MERTON WARDS AND THEIR RATES OF A&E ATTENDANCE FOR FALLS AND REFERRAL RATES<sup>69</sup> TO SMCS FPS BY WARD, 2013 WITH 95% CONFIDENCE INTERVALS\***



Source: SUS Data, SMCS FPS Data

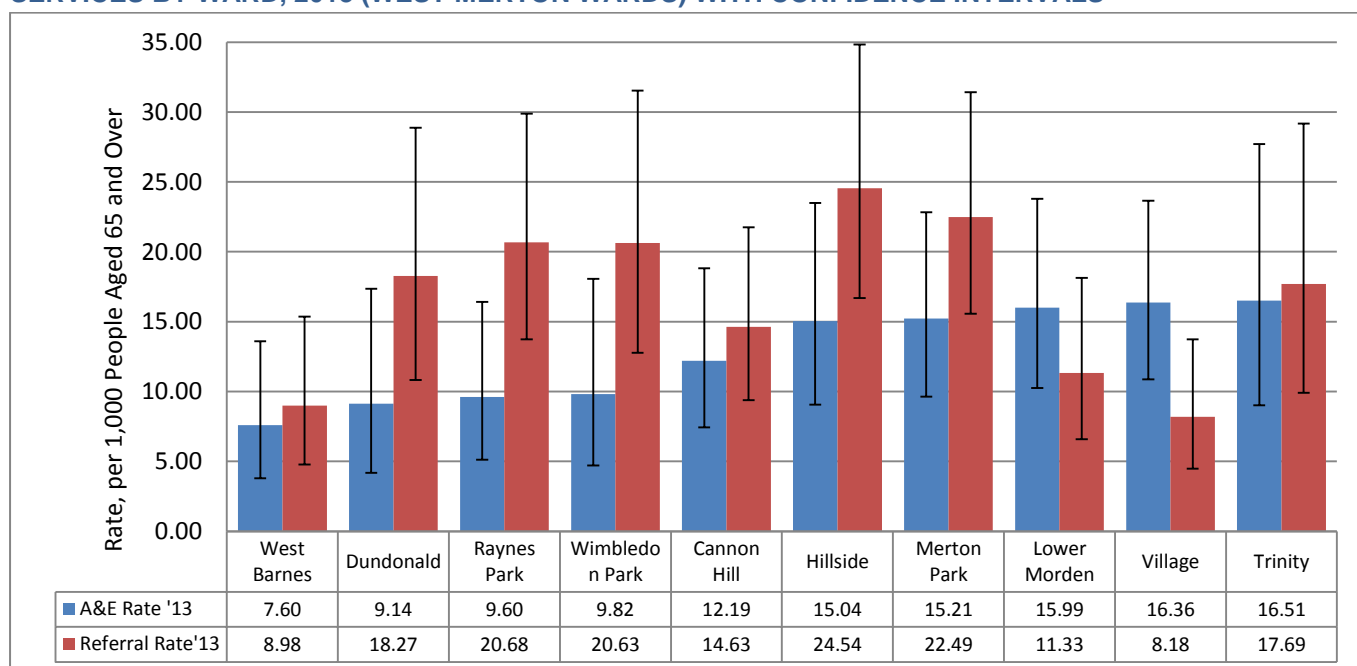
\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

### **Which are the wards in East Merton deemed to have a greater need for preventing falls?**

In contrast to Figure 28, Figure 29 shows that in 2013, in the west of Merton only 2 out of 10 wards had a higher rate of falls related A&E attendance when compared to the rate of referrals into the SMCS FPS. This suggests that there is better prevention of falls in the west of Merton than the east. Areas with a higher rate of people attending A&E than those being referred to the FPS have been deemed to be the areas that have greater need and could benefit from robust engagement with GPs to increase case-finding thereby increasing referrals into the FPS. These areas with greater need for preventing falls are shown in the Table 11.

<sup>69</sup> Referrals from all sources

**FIGURE 29: RATE OF A&E ATTENDANCE AND REFERRALS TO FALLS PREVENTION SERVICES BY WARD, 2013 (WEST MERTON WARDS) WITH CONFIDENCE INTERVALS\***



Source: SUS Data, SMCS FPS Data

\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

### Is there a difference between the east and west?

The average rates for both east and west for A&E attendance and referrals are shown in the table below. The table shows that there is a divide between the east and the west. There are more people attending A&E for falls in the east yet there are more referrals to the SMCS FPS from the west. Significance testing was not carried out with these rates therefore an inference from the difference in the rates is limited.

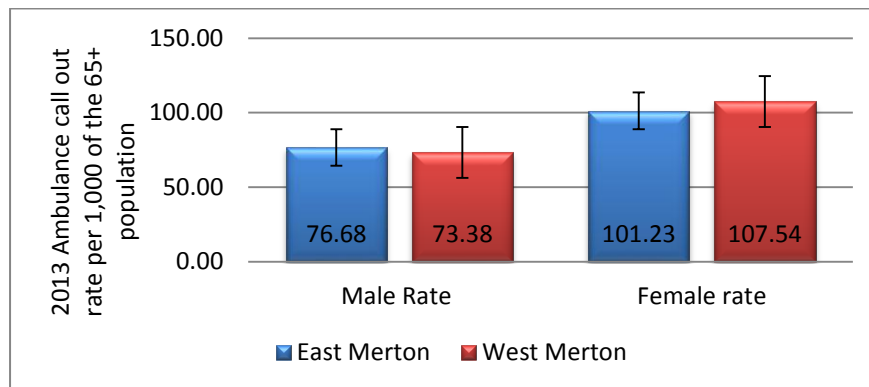
**TABLE 12: COMPARISON OF 2013 EAST AND WEST MERTON FALLS-RELATED A&E ATTENDANCE RATES AND REFERRALS INTO THE SMCS FPS**

	2013 Average Rate of falls-related A&E attendance per 1,000 of the population aged 65 and over	2013 Average Rate of Referral per 1,000 of the population aged 65 and over into the SMCS FPS
East Merton	15.28	13.18
West Merton	12.75	16.74

### Is there variation in ambulance call out rates between the east and west?

Figure 30 shows that there were more men in the east of Merton than the west who made a falls-related ambulance call out in 2013 however the differences are not statistically significant.

**FIGURE 30: 2013 FALLS RELATED AMBULANCE CALL OUT RATE PER 1,000 IN THE POPULATION AGED 65 AND ABOVE BY GENDER WITH 95% CONFIDENCE INTERVAL**



Source: LAS and GLA projections<sup>70</sup>

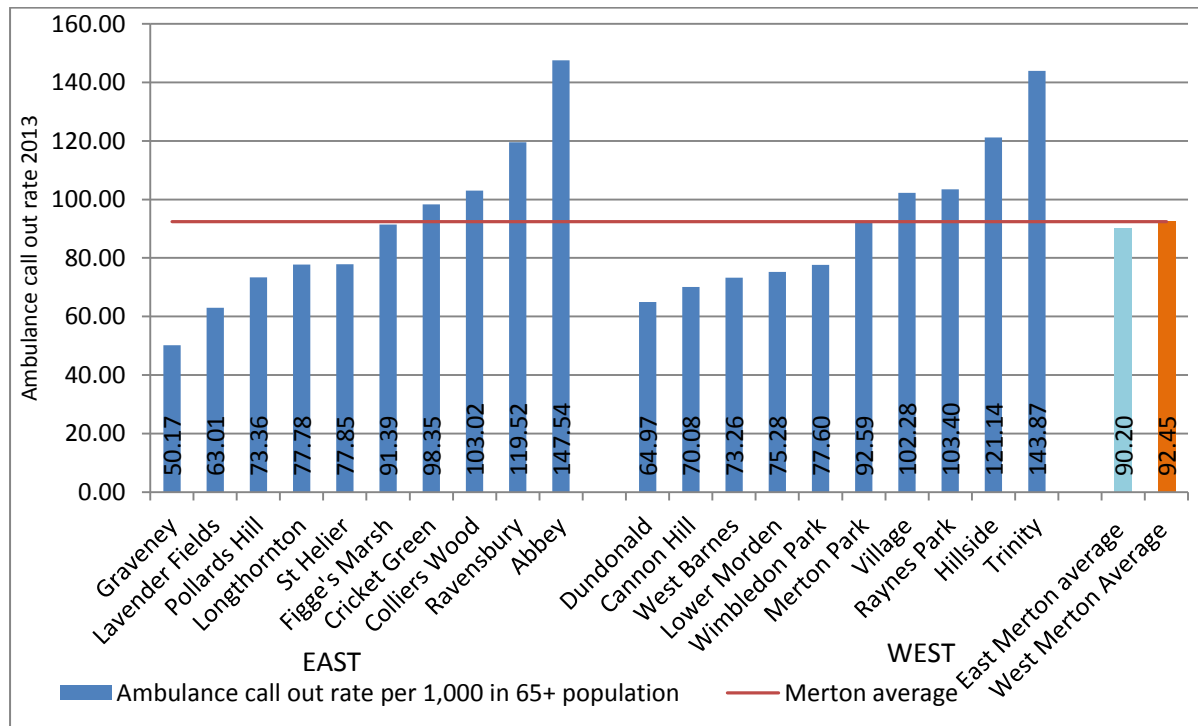
\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies - the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

### What are the variations in falls-related ambulance call out rates?

The London Ambulance Service (LAS) is often the first point of contact when an older person falls. The King's Fund (2013) states that falls account for around 40 per cent of all ambulance call-outs to the homes of older people and are a leading cause of older people's use of hospital beds. The areas where there are high rates of ambulance call outs could be used as a proxy for areas with a high incidence of falls and where there is more need for prevention services input. A year's data from LAS was used to calculate the rate of falls related ambulance call outs per 1,000 people aged 65 and over in and Figure 32 shows the falls related ambulance call out rate by ward. Details of individual ward rates of people aged 65 and over (per 1,000) can be found in Appendix C. The interesting thing about the data shown in Figure 32 is the variation between the wards particularly neighbouring wards with similar concentrations of older people for example Trinity (143/1,000) and Wimbledon Park (77.60/1,000). These wards have similar rates of older people (see Figure 11) but the ambulance call out rate in Trinity is almost double those of Wimbledon Park. Any falls prevention strategy would need to tackle and gain a deeper understanding of these small area differences.

<sup>70</sup><http://data.london.gov.uk/dataset/gla-2013-round-population-and-household-projections>

**FIGURE 31: MERTON 2013, FALLS-RELATED AMBULANCE CALL OUT RATE PER 1,000 IN THE POPULATION AGED 65 AND OVER**

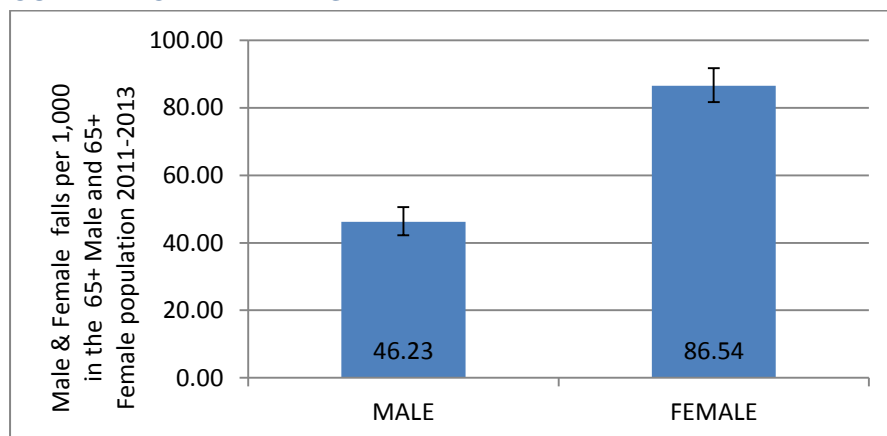


Source: Safe Stats<sup>71</sup>

**What are the gender inequalities?**

Figure 33 represents the rate of falls in women and men based on SUS data from 2011-2013 on people who presented to A&E for falls. It shows that the rate of falls in women is significantly higher than the rate of falls in men.

**FIGURE 32: MERTON FALLS RATE IN WOMEN AND MEN FROM 2011-2013 WITH 95% CONFIDENCE INTERVALS\***



Source: SUS

\* 95% **Confidence Intervals** (CI) indicate the precision with which the percentages are calculated. They also indicate the range of values in which there is a 95% likelihood that the true value for the patient population lies -

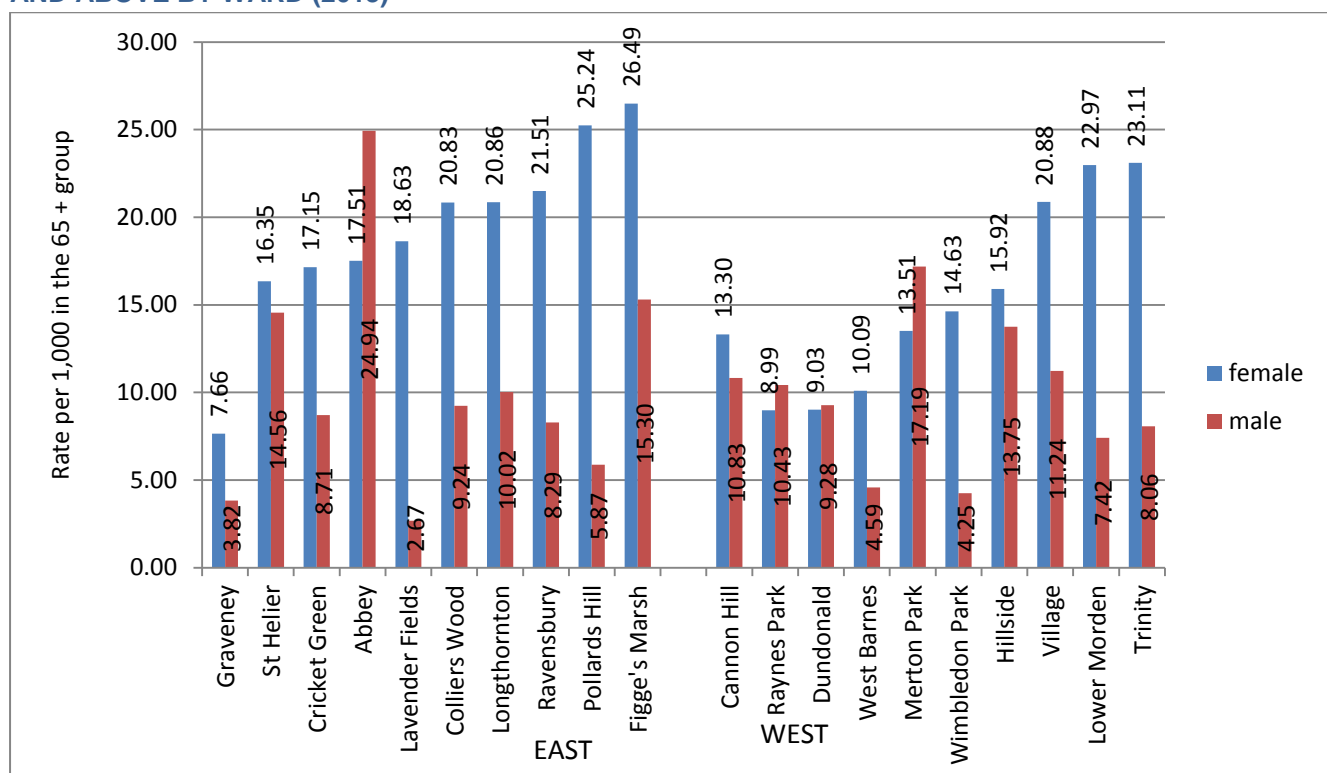
<sup>71</sup> Safe Stats is London's free data hub for crime analysts and community safety professionals. It hosts data from police, emergency services and other agencies, and it brings that data to life with interactive web-based tools. <https://www.london.gov.uk/priorities/policing-crime/safestats>

the narrower the range, the more precise the calculation. The intervals are the widest for the smaller sample sizes. These are shown by the vertical lines at the top of the bar graphs. When the percentages are compared, if the CI intervals do not overlap this represents a statistically significant difference. Source: NHS Information Centre, HSCIC <https://indicators.ic.nhs.uk/webview/>

### What are the falls rates in men and women at ward level?

There are marked differences from ward to ward in the rate of women to men who fall. Abbey, Raynes Park, Merton Park and Dundonald are the only wards with a higher rate of men falling to women. Figure 34 shows the male and female falls rate per 1,000 of the population aged 65 and over at ward level based on 2013 data.

**FIGURE 33: FALLS RATES IN MEN AND WOMEN PER 1,000 OF THE POPULATION AGED 65 AND ABOVE BY WARD (2013)**

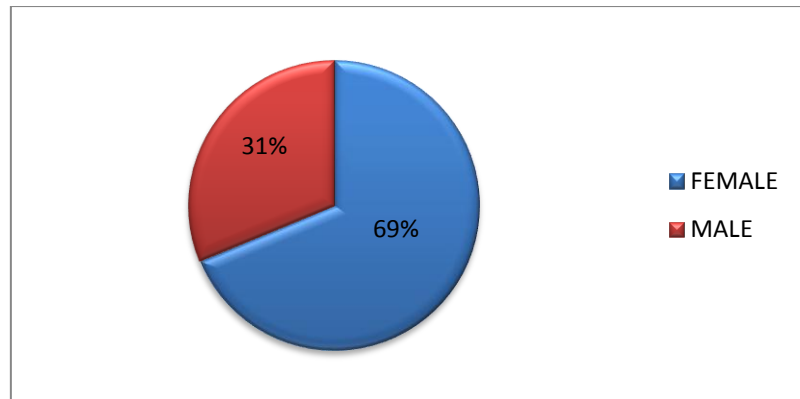


Source: SUS Data

### Is there a difference in referrals into SMCS FPS by gender?

Males make up 44% of the population of people aged 65 and above in Merton but account for 31% of referrals into the FPS using 3 years' worth of referral data. Women make up 56% of the population of people aged 65 and above in Merton and they account for 69% of referrals into the FPS. This is shown in the pie chart below. This is not alarming and does not necessarily suggest that men are underrepresented as the rate of women who fall is higher than men.

**FIGURE 34: MALE, FEMALE PROPORTION OF REFERRALS INTO THE SUTTON AND MERTON FALLS PREVENTION SERVICE FROM JANUARY 2011-DECEMBER 2013**



Source: SMCS FPS

### Is there proportional representation of ethnic groups?

Evidence from the United Kingdom and the United States suggests Caucasian ethnic groups fall more frequently than Afro-Caribbeans, Hispanics or South Asians<sup>72 73</sup>. The trend in Merton is in line with this evidence. Figure 36 shows three pie charts; the first represents the underlying ethnic composition of the Merton population of people aged 65 and above, the second represents the ethnic composition of older people attending A&E for falls between 2011-2013 and the third shows the ethnic composition of people referred into the falls Prevention service between 2011-2013. 2011-2013 data was used in order to take a snapshot from the same time period thereby improving comparability. It should be noted that the ethnic group "other" includes mixed, Chinese, not known and not stated meaning that it could be anyone from any of the broad ethnicity categories therefore any inferences from these data is limited.

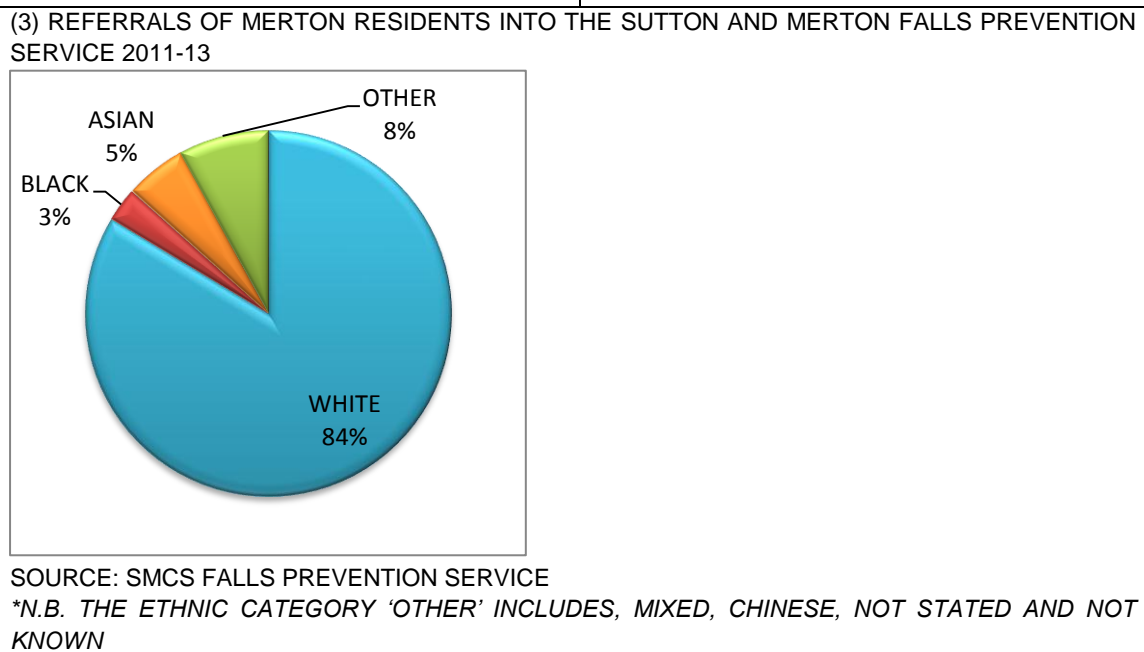
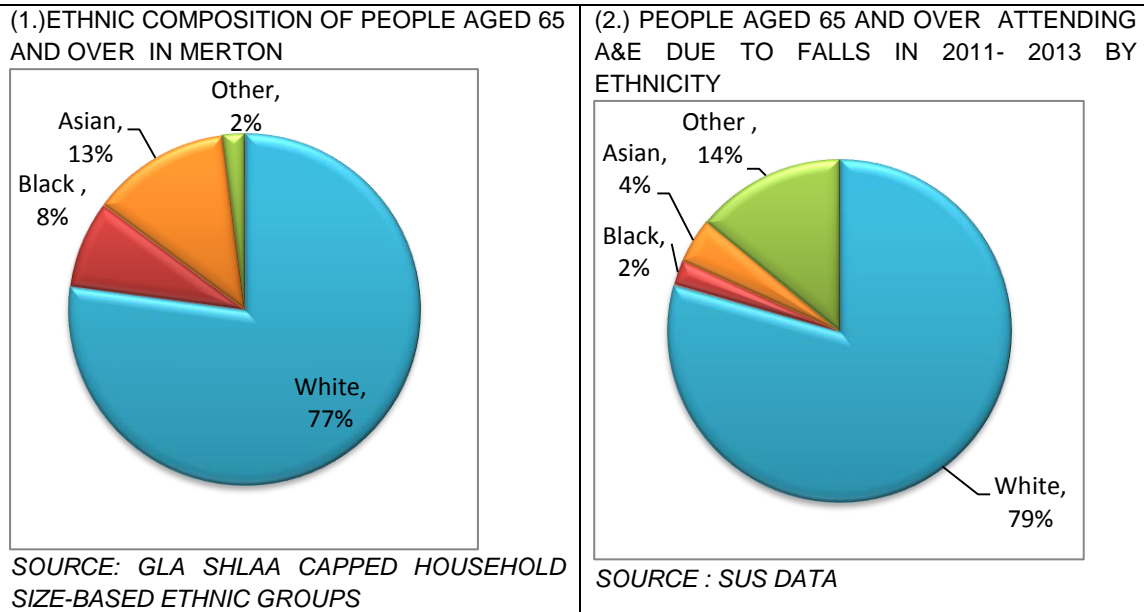
Pie chart (2) suggests that there is a higher prevalence of falls in the white ethnic group and that given the slightly higher prevalence of falls among the white ethnic group, in Pie Chart (3) there is a higher proportion from the white ethnic group referred into the falls prevention service. This is as expected. There was no analysis of observed over expected ratios as the numbers of A&E attendees were small numbers and this would have skewed any ratios. It is difficult to determine if there is proportionate representation of ethnic groups in terms of access to the FPS because any analysis on proportionate representation would need to take into account the incidence of falls in different ethnic groups. A falls rate for each ethnic group

<sup>72</sup> Nevitt M et al. Risk factors for recurrent non syncopal falls. Journal of the American Medical Association, 1989, 261:2663-2668.

<sup>73</sup> Friedman SM et al. Falls and fear of falling: which comes first? A longitudinal prediction model suggests strategies for primary and secondary prevention. Journal of the American Geriatrics Society, 2002, 50, 8:1329-1335

would have been misleading because the numbers were small in terms of the numbers of people attending A&E and there was a considerable proportion of people who attended A&E for a fall whose ethnic group was unstated and therefore labelled as “other”.

**FIGURE 35: ETHNIC COMPOSITION OF MERTON POPULATION, FALLS-RELATED A&E ATTENDEES AND REFERRALS INTO THE SMCS FPS**







## 9. What Does the Analysed Data Show?

### Key Points:

Summary of observed trends from analysed data on Merton Demographics, Falls-related A&E attendance, and referrals into the Specialist FPS

- There are more women than men in Merton and there is a higher prevalence of osteoporosis in women than men therefore there is a greater need to target falls prevention services towards women in Merton
- As the concentration of people aged 65 and above living alone increases, the rate of falls-related A&E attendances increases to some extent showing that living alone is an important risk factor
- The falls related A&E attendances and referrals of older people to the SMCS FPS did not appear to increase with an increase in concentration of people aged 75 and above at ward level, and this is not surprising as falls are influenced by an interaction of a number of risk factors of which age is only one

### Pearson Product-moment Correlation Coefficient (PPMCC): A Method used to analyse some of the data

PPMC is a statistical measure that enables us to establish if there is a relationship between two factors or areas of interest for example between deprivation and fracture rates for different wards in Merton. Correlation ( $r$ ) can be a value between +1 and -1. The stronger the association of the two factors or areas of interest, the closer  $r$  value will be to either +1 or -1. PPMC was used to gauge the relationships between the datasets on falls in Merton, to see if there any specific trends in Merton that would need to be taken into account or prioritised in the Falls Prevention Strategy. The data was plotted on scatterplots (graphs of plotted points that show the relationship between two sets of data) and the results of this analysis are detailed below. If a correlation is positive and strong, the value  $r$  will be higher than 0.7 and this means that as one factor or area of interest increases, the other also increases significantly. If a correlation is negative it means as one factor or area of interest increases, the other decreases. If the value  $r$  is 0 this means there is no correlation between the factors or areas of interest.

**Table 13: HOW TO INTERPRET CORRELATION COEFFICIENT**

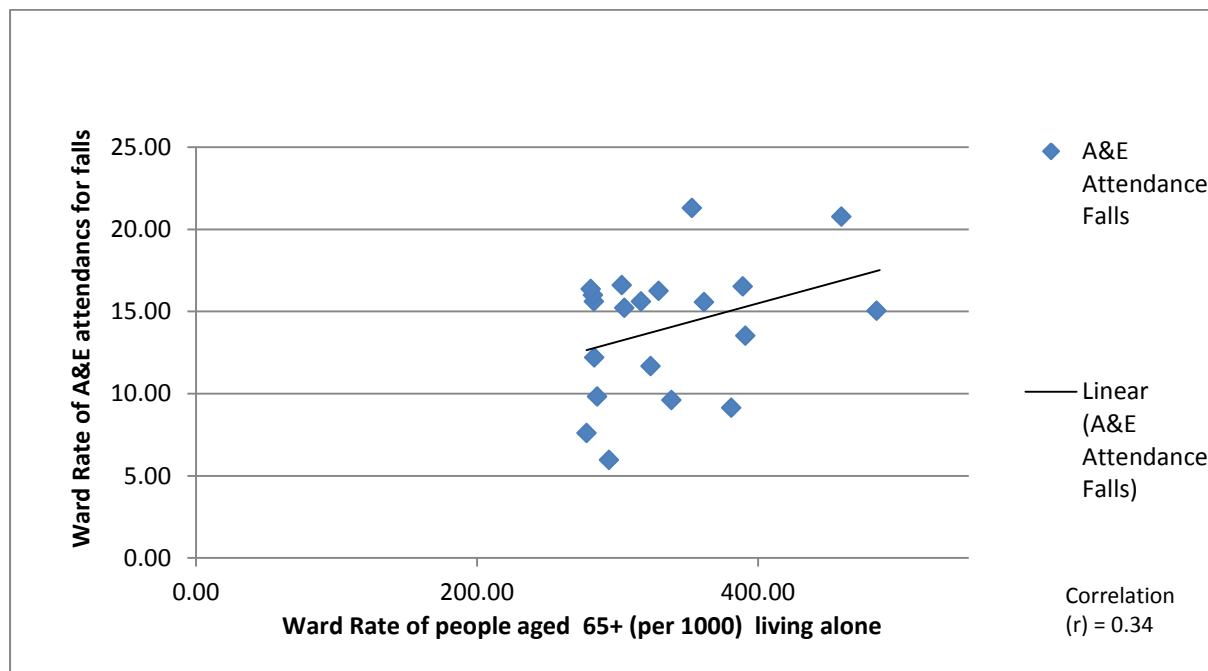
Correlation Coefficient	Meaning
Exactly +1	A perfect correlation
>0.7	A strong correlation
+0.30 to + 0.5 <sup>74</sup>	A weak to moderate correlation meaning the two variables tend to increase together
0	The two variables do not vary together at all
-0.3 to -0.5	A weak to moderate negative correlation (meaning as one increases, the other decreases)
<-0.7 to -0.9	A strong negative correlation
Exactly -1	Perfect negative or inverse correlation

<sup>74</sup> The ranges provided are approximations

**What is the relationship between the wards with the higher concentration of older people living alone and falls –related A&E attendances in Merton?**

PPMC was used to measure the relationship between the wards with the higher concentration of older people living alone and A&E attendances for falls in Merton. Figure 37 shows the two datasets (ward rate of people aged 65 and over living alone, 2013) against the (ward rate of falls-related A&E attendances, 2013) and the correlation was 0.34 meaning that there is a positive but weak association between these two areas of interest. The correlation shows that as the number of people living alone in a ward increase, the number of people attending A&E increases (slightly). Although we observe a relationship whereby the falls-related A&E attendees increase (slightly) in the wards with more people living alone, the cause of the A&E attendances is not people living alone. As the correlation is weak this suggests although we know that living alone is a risk factor to falls, but in terms of the trend in Merton in 2013 based on those two datasets, living alone was not a prominently influential risk factor to A&E attendance. It is also useful to bear in mind that correlation does not imply causation but measures association. However as there is a positive correlation, the falls prevention strategy would need to incorporate measures to take for older people living alone given that we also know the wards with the higher rates of people living alone. Figure 37 shows that as the rate of people aged 65 and over living alone in an area increases, (ever so slightly) the rate of A&E attendance for falls increases.

**FIGURE 36: 2013 A&E ATTENDANCE RATE (PER 1,000) IN THE 65+ AGE GROUP AGAINST WARD RATE OF 65+ LIVING ALONE**

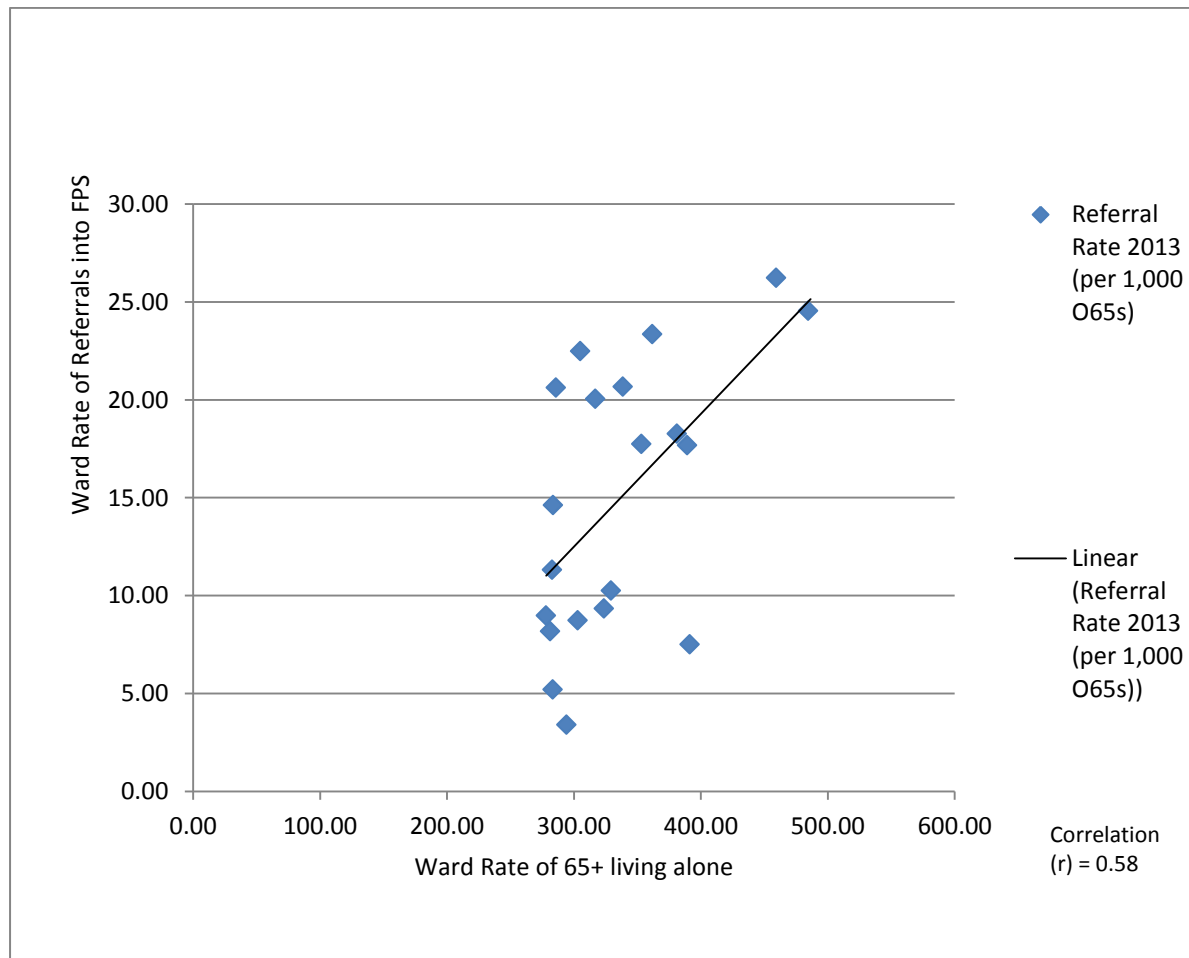


Source: SUS and Census 2011

**What is the relationship between the ward rate of referrals of Merton residents into the SMCS FPS and the wards with a higher concentration of older people living alone?**

Figure 38 shows that there is a moderate positive association between the rate of referrals of Merton residents into the Sutton and Merton Falls Prevention Service (FPS) and the wards with a higher concentration of older people living alone. This means in the wards where there are more people living alone, there are more people being referred into the SMCS FPS. There are many possible causes for this trend including that older people living alone have a higher chance of falling and therefore a higher chance of being referred into the service following a fall. Another possible explanation for this observation is that there is good targeting of older people living alone by referrers.

**FIGURE 37: 2013 REFERRAL RATE (PER 1,000) INTO SMCS FPS AND THE 2013 WARD RATE OF PEOPLE AGED 65 AND OVER LIVING ALONE**

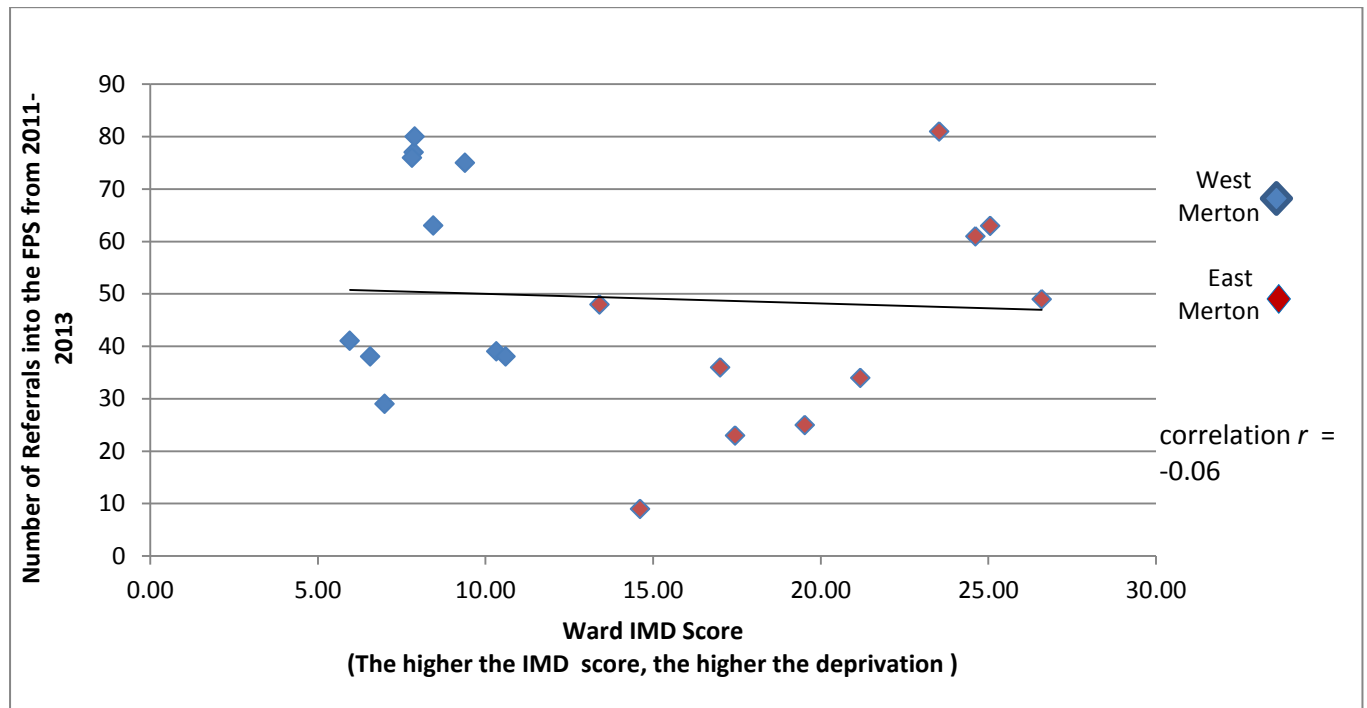


Source: SMCS FPS and Census 2011

### Does level of Deprivation influence access to the SMCS FPS?

Using the Index of Multiple Deprivation (IMD) score of the LSOA from which the referral came from into the SMCS FPS over the course of three years (January 2011- December 2013) Figure 39 was plotted to ascertain if there were any trends.

**FIGURE 38: NUMBER OF REFERRALS INTO THE FPS BY WARD IMD SCORE FROM JANUARY 2011- DECEMBER 2013**



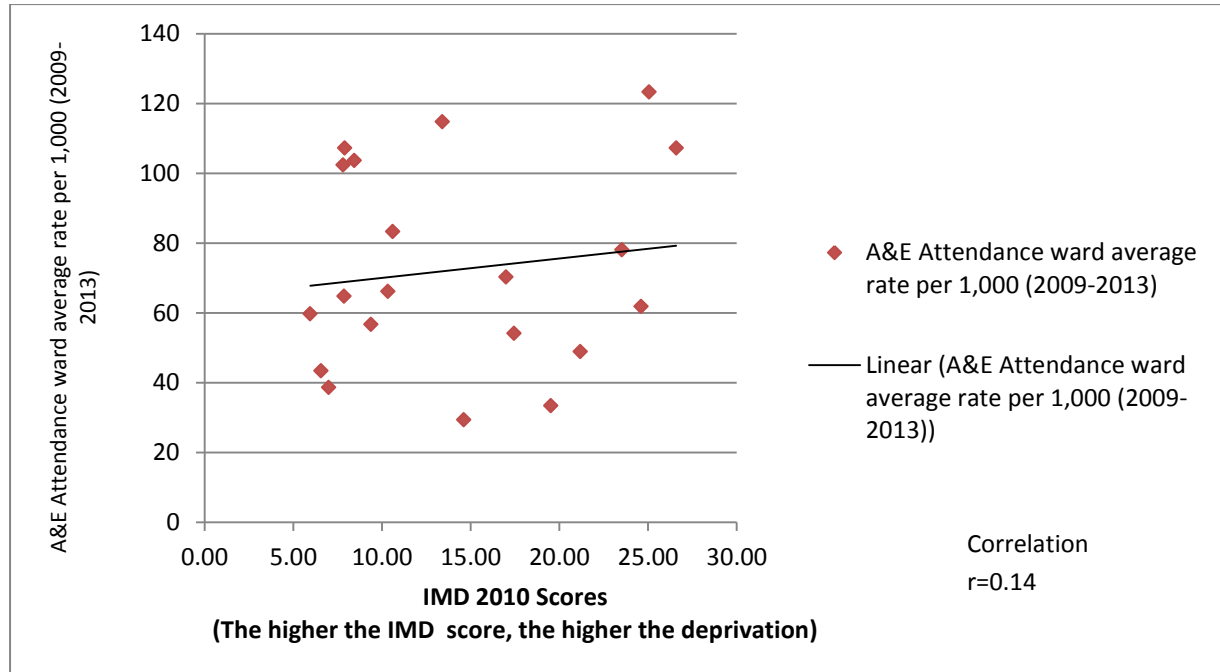
Source: SMCS FPS Service user post codes and English Indices of Multiple Deprivation 2010

There was no correlation (-0.06) between ward IMD score and the number of referrals into SMCS FPS from that same ward meaning that the level of deprivation in an area did not have an association with the number of referrals into the FPS from that area. There is therefore, no evidence to suggest inequity of access on the grounds of deprivation.

### How strong is deprivation as a risk factor to attending A&E for falls?

In order to see if there was a relationship between deprivation and A& E attendances for falls, data from 2009-2013 on falls-related A&E attendances was analysed to determine the ward the individuals came from.

**FIGURE 39: WARD IMD SCORES AND WARD RATE OF A&E ATTENDANCE,**



Source: SUS and the English Indices of Multiple Deprivation 2010

The average IMD score for each ward was then plotted against average rate of A&E attendance during 2009 to 2013 for that ward to see if there was a correlation between A&E Attendance and IMD score (see Figure above). The correlation 0.14 indicates no association between deprivation and A&E attendance for falls, the two (deprivation and falls related A&E attendance) do not increase together. There is therefore, limited evidence to suggest that the more deprived you are the more likely you are to attend A&E for falls, although deprivation affects health outcomes, the data suggest that perhaps other risk factors such as age, osteoporosis, living alone, medications etc. play a stronger role on influencing falls-related A&E attendance.

### Relationships between other variables

Other relationships were tested using PPMC such as the concentration of people aged 75 and above (those considered to be at higher risk) and falls-related A&E attendance or referrals in to the SMCS FPS. PPMC analysis was carried out to see if there was a correlation between ward IMD and the rate of ambulance call out and there was no significant correlation found. These are shown in Appendix H.



## 10. What are the costs related to falls in Merton?

### Key Points:

- Using the Chartered Society of Physiotherapy (CSP) model, there are an estimated total of 2714 falls that occurred during 2013/14 of which 1272 were mild and required no treatment, 1103 were moderate and required a GP appointment or outpatient attendance and 339 were severe and required an inpatient admission or care home referral. The CSP modelled prevalence of falls are much smaller numbers when compared to the Age UK modelled prevalence or the POPPI projections. Unfortunately costings could not be carried out using the Age UK or POPPI modelled prevalence as they did not indicate what proportion of the falls were mild, moderate or severe. The implication is that the CSP costs are the minimal costs and could be considerably more were we to use POPPI or Age UK estimated falls prevalence
- The CSP estimates that the total cost of falls to Merton CCG in 2013/14 is £3,320,388.00; this does not include the costs to LBM social care residential long-term care
- There were 1,489<sup>75</sup> non-elective admissions for falls in Merton in 2012/13. Using NHS reference costs, this amounted to a cost of £945,515. These costs exclude any excess bed days which cost £273 per day for each individual. The costs also exclude the Market Forces Factor (MFF) for any for any of the three acute trusts used by most Merton residents which are Epsom and St Helier Hospital, St. Georges Hospital and Kingston Hospital. If these were applied, the actual costs would be more.
- The actual number of hip fractures in Merton 2012/13 was 135. The cost of a hip fracture excluding residential care is estimated to be £5,393; if the patient goes into residential care for a year the cost increases significantly to £37,893. If the patient requires nursing care the costs increase further

### Chartered Society of Physiotherapy (CSP)<sup>76</sup> Modelled Falls Prevalence in Merton

The CSP have an economic model of falls prevention in which they provide an estimation of the number of falls that occur in Merton based on 2013/14 demographic data. The CSP further provide an estimation of which category the falls will fall under based on a complex algorithm called a Fall Outcome Tree<sup>77</sup> and transition probabilities (Appendix D). The estimated falls and costs are tabulated in the table below.

<sup>75</sup> The inpatient tariff would vary from hospital to hospital because of Market Forces Factor (MFF) applied to each national tariff by each individual hospital to account for differences in rates and expenditure. The three hospitals used by the majority of Merton Residents and their MFF are (St George's Healthcare NHS Trust- 21.25%), (Epsom and St Helier University Hospitals NHS Trust- 19.22%), (Kingston Hospital NHS Trust- 20.75%)

<sup>76</sup> Chartered Institute of Physiotherapy Falls Prevention Economic Model <http://www.csp.org.uk/documents/falls-prevention-economic-model>

<sup>77</sup> A deterministic decision tree which drives the expected outcome of a fall. More details can be found at : <http://www.csp.org.uk/professional-union/practice/your-business/evidence-base/cost-falls>

**TABLE 14: MERTON CCG EXPECTED FALLS IN 2013/14 BASED ON CSP FALLS PREVENTION ECONOMIC MODEL<sup>78</sup>**

Expected Falls	Number of Falls	Average Cost	Total Cost
Mild (No treatment)	1,272	£345.00	£438,795
Moderate (GP or Outpatient referral)	1,103	£453.00	£500,135
Severe (Inpatient or Care Home referral)	339	£7024.00	£2,381,458
<b>Total Expected Spend in Merton</b>			<b>£3,320,388</b>

Using the CSP model the elements relating to falls costs are calculated as follows:

**TABLE 15: ESTIMATED COSTS RELATING TO FALLS<sup>79</sup>**

Costs relating to falls:	
A&E Attendance	£115.00
Ambulance Journey	£230.07
GP Consultation	£43.00
Outpatient Attendance	£108.22
Inpatient Attendance	£1,383.00
Long-term Care (Annual Cost)*	£38,272.00

\*The long term residential care costs vary significantly depending on whether it includes nursing care or not. (Appendix E) shows the estimated costs of a hip fracture including and excluding long-term care. Other proxies that can be used to give an indication of the size of the problem include hospital admission rates for hip fractures and A&E attendances for falls related injuries.

### **What is the estimated cost for non-elective admissions for injuries due to falls?**

Using NHS reference costs 2012/13, the average cost per individual of a non-elective inpatient short and long stay combined excluding excess bed days is £1,489<sup>80</sup>. The number of hospital admissions for injuries due to falls in 2012/13 in Merton is 635<sup>81</sup>; therefore applying these reference costs, the estimated cost of these emergency hospital admissions is **£945,515**. This is excluding any excess bed days which cost £273 per day for each

<sup>78</sup> Chartered Institute of Physiotherapy Falls Prevention Economic Model <http://www.csp.org.uk/documents/falls-prevention-economic-model>

<sup>79</sup> Source is the PSSRU Unit Costs of Health and Social Care, 2013: <http://www.pssru.ac.uk/project-pages/unit-costs/2013/>

<sup>80</sup> The inpatient tariff would vary from hospital to hospital because of Market Forces Factor (MFF) applied to each national tariff by each individual hospital to account for differences in rates and expenditure. The three hospitals used by the majority of Merton Residents and their MFF are (St George's Healthcare NHS Trust- 21.25%), (Epsom and St Helier University Hospitals NHS Trust- 19.22%), (Kingston Hospital NHS Trust- 20.75%)

<sup>81</sup> Public Health Outcomes Framework (PHOF)



individual. The costs also exclude the Market Forces Factor (MFF) for any for any of the three acute trusts used by most Merton residents which are Epsom and St Helier Hospital, St. Georges Hospital and Kingston Hospital. The actual costs would be more.

### Cost of hip fractures

The actual number of hip fractures in Merton 2012/13 was 135<sup>82</sup>. The cost of a hip fracture excluding residential care is estimated to be **£5,393**; if the patient goes into residential care the cost increases significantly to **£37,893**. If the patient requires nursing care the costs increase further (See Appendix E) for estimated cost of a hip fracture including and excluding long-term residential care costs.

### Projected Costs for Falls in the Future

Using NHS reference costs 2012/13, the average cost per individual of a non-elective inpatient short and long stay combined excluding excess bed days is £1,489. Table 14 shows a very crude estimate of the projected costs of these hospital admissions using 2012/13 NHS reference costs which are bound to increase therefore these cost are significantly less than the actual costs will be. The costs also exclude excess bed days and MFF.

**TABLE 16: CRUDE ESTIMATE OF PROJECTED COSTS OF FALLS RELATED HOSPITAL ADMISSIONS**

Year	Number of POPPI Projected falls related non-elective hospital admissions	Average Cost of Non- elective admission £1,489*( Using 2012/13 NHS Reference costs)
2014	521	£775,769
2015	531	£790,659
2020	580	£863,620
2025	668	£994,652
2030	749	<b>£1,115,261</b>

These costs are gross under estimates because they exclude excess bed days and are based on 2012/13 reference costs which will inevitably increase therefore, the real costs will be considerably more.

<sup>82</sup> Public Health Outcomes Framework (PHOF) , Emergency admissions for fractured neck of femur classified by primary diagnosis code (ICD10 S72.0 Fracture of neck of femur; S72.1 Pertrochanteric fracture and S72.2 Subtrochanteric fracture) and an emergency admission method



## 11. Summary of findings from consultations with service users

The consultations with the service users and providers were solely for the purpose of the Health Needs assessment and not to conduct a service review or performance review on any of the falls prevention initiatives in Merton or the SMCS FPS.

### Key Points

- There was positive feedback on the quality of existing falls prevention services from those who had accessed the services, where negative feelings were expressed, they tended to relate to a desire for longer access to falls prevention classes and the need for step down services following the conclusion of the allocated sessions
- Environmental risk factors were seen as the most influential risk factor to falls. There was a felt need for rigorous control of environmental hazards that lead to falls such as clearer paths and pavements and the availability of public seating or benches for elderly people to rest when they are out and about. This is in spite of the research showing that more older people in Merton fall at home than other locations.
- The provision of a comprehensive range of services that identify individuals at the earliest possible opportunity and provide on-going support beyond the prescribed length of current services was identified as the most pressing issue among service users
- The need for a greater focus on primary prevention and a more strategic approach to case finding was expressed. This change in focus would enable services to reach individuals before they begin to fall, however it was acknowledged that additional resources would be required to meet the increased demand that would likely result from improved case finding

### Three broad themes that emerged from Consultations with Service Users were:

- Service Users Understanding of the Determinants Of Falls
- The Merton Falls Services
- Barriers to Accessing Falls Prevention Initiatives

#### Service Users Understanding of the Determinants of falls

Discussions around the determinants of falls generated three sub-themes regarding participants' awareness of measures to reduce the risk of falling, knowledge and views on the likely causes of falls.

##### *Sub-theme 1: How individuals can minimise the risk of falling*

Some participants had good awareness of the various measures that can be employed to prevent falls, such as walking techniques, improving strength and stability, getting eyesight tested and knowing your medications and getting them reviewed. This knowledge was generally disseminated by the individual conducting the exercise classes. Participants appeared highly reliant on the people conducting the exercise or falls classes for information on individual techniques to minimise the risk of falls. The expertise of the staff was greatly valued by service users, who generally felt that they received a personalised service that took their individual circumstances into account.

A number of participants perceived falls as accidents that are unpreventable and increasingly inevitable with age. While they saw great benefits in attending exercise classes from a fitness and well-being perspective, they believed that ultimately falls were a natural part of the ageing process and could not be fully prevented. Despite awareness existing among the services users of many risk factors for falls, the most common theme raised by participants was that of environmental factors being the most significant cause of falls. Consequently, the most important perceived need is that of the need to alter the environment, ensure even pavements and surfaces, reducing hazards in the home etc. to prevent falls.

*Sub-theme 2: Environmental risk factors*

Participants shared concerns over a number of factors in the local environment that they believed posed the greatest hazard to those at risk of falling. These included, but were not limited to: uneven pavements; problems with snow and leaves being cleared; the lack of railings and seats in public areas to provide an opportunity for support and rest. The risks encountered when travelling by bus were raised on several occasions, with participants experiencing difficulties with buses pulling away before they have been able to sit down, or not pulling in close enough to the pavement when they disembarked. The use of individually-held information cards to alert bus drivers to the need for extra caution was mentioned, but there was a general perception that these were not effective. These risk factors were repeatedly identified by participants as being the most significant reason for people experiencing falls. One participant shared how she loves going shopping but struggles with parking and finding areas to rest when she is out and about.

***“I like coming to Morden but I can never find parking and after walking for a while, I need to sit down to rest but there aren’t enough places for me to sit and rest especially when I fell my legs giving way. This is what discourages me from coming out”***

*Sub-theme 3: Handy Man Services and Practical help*

Participants also expressed a need for services that provide practical help with tasks that could pose a risk for someone who is unsteady, creating a safer home environment. There were several reports of individuals going beyond their physical limits to undertake tasks because there was no one available to help them. One such incident resulted in a fall and significant related injuries. While some had knowledge of the handyman service provided by Age UK, others were unaware of this or did not use it due to cost. Barriers such as costs, availability and lack of awareness of handy man services also need to be tackled in order to make a shift to proactive prevention.

**Important finding on service users perspectives of risk factors :**

Intrinsic risk factors such as gender, living alone, medicines, medical conditions, impaired mobility and gait, visual impairments and fear of falling did not appear to rank as highly as environmental factors. Falls were seen as something that happens as a result of external forces and this suggests that more needs to be done about raising awareness about intrinsic risk factors as well as how to mitigate these. The mind-set that falls are an inevitable part of aging needs to be tackled.

## **The Merton Falls Prevention Services**

Participants' views of falls prevention initiatives highlighted three sub-themes of interest namely:

- Awareness of Services
- Case Finding and
- On-Going Support

### *Sub-theme 1: Awareness of services*

Information and awareness of services that provide elements of falls prevention in Merton generally came through word-of-mouth, with social networks being a vital source of information. While individuals using SMCS FPS classes had been referred by a health professional into the service, most other participants (from the classes provided by the voluntary sector) were unaware that this service existed. The vast majority of those using voluntary sector services did so because the service had been recommended by a friend.

***“After I was discharged from hospital and rehabilitation with the physiotherapist following my fall and knee injury, I wasn’t aware of anything out there to help me continue with the exercise the physiotherapist had recommended. It was only after a while I heard from my neighbour about the classes here at the Morden Guild that I started attending and felt my confidence increasing”***

Many participants spoke of a need for increased advertising and signposting to services particularly primary prevention services that promote physical activity. While some GP surgeries were felt to have good levels of information, others participants reported a lack of leaflets and posters on relevant services. There was a need expressed for comprehensive information on what is available within the borough in order to encourage access to services that individuals could benefit from but may not seek out themselves. In terms of primary prevention that is carrying out Objective 4- (Preventing frailty, Preserving bone health, reducing accidents through preserving physical activity, healthy lifestyles and reducing environmental hazards) of the DH systematic Approach to Falls prevention at a population level (section “Commissioning Best Practice”). There is a real need for information to be available to referrers and service users on what is available in Merton.

### *Sub-theme 2: Case finding*

Concerns were raised that people should be encouraged to access services before they experienced a serious fall, not as a result of one. Individuals who had experienced falls talked of the substantial impact of a fall, including loss of independence and confidence, and spoke of the importance of services reaching people before they get to this stage. Different opinions of the role of GPs and other health care professionals were expressed, with some participants believing that their GP was too busy to discuss problems such as concerns over potentially falling during the 10 minute consultation which is the usual time allowed for a GP appointment. Other participants reported being impressed with the assessments being introduced by GP surgeries for individuals aged 75 years and over. These individuals valued the input and holistic assessment of their needs, but expressed concerns that the age limit will cause many people who can benefit from falls prevention services to be missed i.e. those under 75 but at risk of falls.

### *Sub-theme 3: On-going support*

The most common concern for those who had used the SMCS FPS was the lack of a “step down” service following the period of support. Participants expressed a desire to have access to the falls prevention service for a longer period of time other than the 8 weeks, or for a similar service to be available to enable them to consolidate the good practice and level of strength and mobility gained through the classes. Some participants expressed that it would be helpful if at the point of discharge from the FPS, they were then informed of various keep fit activities provided by third sector and other organisations in the borough.

### **Barriers to Accessing Falls Prevention Initiatives**

Regarding access to falls prevention classes, three sub- themes emerged

- Transport
- Mobility & isolation and;
- Psychological barriers.

### *Sub-theme 1: Transport*

While the timing and location of services seemed to be acceptable, problems with parking were mentioned by several participants. For those needing organised transport, Dial-a-Ride was reported to have varying levels of reliability and limitations were noted on the frequency with which individuals can use this service to enable them to attend keep fit classes across the borough.

### *Sub-theme 2: Mobility and Isolation*

Difficulties in access for those who are house-bound or isolated were raised as barriers to accessing various primary prevention activities such as keep fit classes or walking groups etc. Many participants knew neighbours who had mobility issues which limited their ability to attend classes. The importance of an individual’s social network to hear about relevant services was identified by informants as a potential barrier for those who are living alone. As noted in the limitations, this research did not capture the views of less mobile and housebound individuals, therefore conclusions cannot be drawn regarding this. Nevertheless it is useful to note the importance placed by participants on enabling access to falls prevention services for individuals who are isolated and may not hear about services through an informed network of friends and family particularly regarding primary prevention that is the point at which someone has not yet had a fall but may be at risk of falling due to the presence of a number of risk factors.

### *Sub-theme 3: Psychological barriers*

Another issue raised was the personal challenge in accepting the growing limits to one’s functional ability and being able to adapt accordingly. They identified this as a significant barrier to accessing falls prevention services, citing the denial of increasing personal limitations and the desire to avoid seeing themselves as ‘old people’ who were losing their capabilities as reasons that they delayed seeking help.

## 12. Summary of findings from consultations with providers service

### Key points:

- Providers identified a pressing need for more collaborative working across sectors to facilitate a whole systems approach to falls prevention. This approach would serve to raise the profile of falls as a priority among professionals who have contact with the older population and would increase opportunities both for case finding and referral between services

Other gaps identified through the consultations include:

- Insufficient case finding particularly in Primary Care
- A poor link with the Fracture Liaison Service that provides an opportunity for secondary prevention and avoiding the next fracture, particularly for those with fragility non- hip fractures that tend to precede hip fractures.
- A lack of a direct means for the London Ambulance Service to refer into the SMCS FPS without having to refer to the GP who will then refer to the FPS
- Barriers to accessing the SMCS FPS include the lack of a self – referral route, and the referral forms being “complicated and requiring a considerable amount of falls risk assessment at the point of referral”.

The providers that participated in the semi-structured interviews encompassed NHS services, statutory and voluntary sector providers and GPs. The five overarching themes that emerged from the interviews were:

- i. Primary prevention and shared ownership of the issue of falls
- ii. The referral process into the SMCS FPS
- iii. Collaborative working and true integration
- iv. Barriers to access
- v. Motivation and health seeking behaviour

### *Primary prevention and Shared Ownership of the issue of falls*

Providers identified the continued need to raise awareness of falls as an issue, both among older people and among health and social care professionals coming into contact with older people. NICE best practice states that any older people who come into contact with any health or social care professional should be asked if they've had a fall in the past year, meaning that case identification should be owned by all health and social care professionals. Furthermore providers identified a need for increased knowledge of methods to prevent falls, in addition to the identification of early signs that might prompt someone to seek or refer for support. It was suggested that a greater focus on falls would serve to raise the profile of falling as a significant risk for older people so that falls are viewed with the same importance as other conditions such as obesity and diabetes. Providers were also not always aware of various primary prevention activities such as keep fit classes provided by the third sector to know where to signpost people who may have expressed a fear of falling but do not meet the referral criteria or threshold for the SMCS FPS. The current Merton falls pathway does not currently cover/highlight primary prevention in relation to bone health comprehensively.

### *The Referral Process into the SMCS FPS*

A need was identified for the referral process into falls prevention services to be as simple as possible, with opinions varying as to whether this was currently the case. The referral form is in Appendix I. The FLS at St. Georges explicitly stated that the requirements of the referral form to details the falls and fracture history as well as well as mobility needs of the patient were a barrier to them not referring some patients to the service as they do not always have access to this information. They reported that they refer to the GP with a recommendation of onward referral to the FPS this presents another stage to the falls pathway which is another opportunity for patients to “fall through the net”.

There was general consensus that services have tended to be reactive in the past, with a fall often being the trigger for intervention. However, providers emphasised the increasing need for proactive case finding and proactive prevention in individuals before their condition deteriorates. The “downward spiral” frequently experienced by individuals following a fall was recognised and provides expressed a pressing need to identify people before they reach this spiral. The Stop at One campaign was mentioned as an important aspect of this preventive approach, ensuring that individuals receive appropriate support following a non hip fragility fracture to prevent subsequent falls and fractures particularly hip fractures.

### *Collaborative Working and True Integration*

Under the new Health and Social Care Act (2012), the CCG and Local authority are responsible for the commissioning of falls prevention and management services. While individual organisations are providing highly valued services, there was a perception from a number of providers that links between services need to be strengthened in order to create a more cohesive pathway. It was believed that opportunities were being missed to signpost or refer people to relevant services due to a lack of awareness of what is available. In order to work collaboratively and make the most of the voluntary as well as statutory services, a more joined up way of working was needed to ensure that services complement each other. This includes better links with the Fracture Liaison Service and other support services such as IAPT, who provide ‘Fear of Falling’ classes, and voluntary sector providers of exercise classes. This potential model of collaborative working was recognised to include specialist support to care home staff and other teams involved in the care of the elderly. Examples of current work to this end included a new falls prevention exercise class being run in conjunction with the Dementia Hub for individuals with dementia and their carers. Making the most of new opportunities such as this was viewed as vital for the success of an effective falls prevention strategy. Joint allocation of resources would be an effective way to ensure true integration. An integrated approach to Dementia and falls could potentially improve care. An example of an integrated approach could be assigning dementia professionals to the falls pathway or another method could be the integration of falls risk and memory assessments into the dementia pathway at HARI



### *Barriers to Access*

Transport was mentioned as a significant barrier to access for falls prevention initiatives and was identified as one of the primary concerns voiced to GPs when individuals are referred to the services. One voluntary sector provider organises specific transport for individuals to and from their classes to overcome this barrier. Others acknowledge the reluctance of individuals to travel far to access services and discussed the limitations of transport services such as Dial-a-Ride and a lack of subsidised taxi schemes in enabling access for less mobile individuals. Providing satellite services in a wide range of locations was therefore believed to be important in reducing this barrier.

### *Motivation and health seeking behaviour*

A number of providers raised the issue of motivation among individuals, with some displaying reluctance to be referred. This lack of engagement was generally understood to be due to the challenges associated with self perception and accepting the need for additional support. It was noted that these psychological barriers are likely to have growing importance in the future as people's expectations of health into old age increase and individuals struggle to come to terms with the loss of functional ability. It was further acknowledged that while some individuals are highly motivated by the group environment of classes, others do not enjoy or respond well to this model of provision. Providers suggested that de-medicalising the issue of falls by focussing on keeping older people fit and active, in addition to ensuring provision of both individual and group services, would help in these regards and serve to increase engagement with falls prevention initiatives.

**Important finding regarding Service users perspective on what a good specialist FPS looks like:** When asked what a good specialist FPS would look like, high on the list of essential qualities was follow up after the 8 week to ensure the exercise and balanced training is maintained as well as being provided with "step down" services to maintain momentum with exercise and training.



### 13. What are the gaps and areas for improvement in Merton?

#### Key Points:

The Gaps identified were classified under the following themes:

- Gaps in the strategic/whole systems approach to falls prevention
- Gaps in services that already exist
- Specific areas for improvement in Merton

#### Gaps in the Strategic / Whole Systems approach to Falls Prevention

1. **There is currently no integrated falls prevention pathway in Merton.** While there are elements of a falls prevention pathway i.e. voluntary sector organisations providing primary falls prevention, A fracture Liaison service at St Georges Hospital, GPs and other health professionals in the community identifying some people at risk of falling as well as the specialist falls prevention service SMCS FPS, there is no comprehensive falls care pathways showing where each of the services fall along the pathway. An integrated falls prevention pathway would entail primary, community, acute and social care working effectively together.
2. **There is a gap in collaborative working and stronger links across the services that provide elements of falls prevention.** This includes services that provide primary prevention which is keeping older people fit and healthy, secondary prevention which is preventing further fractures after the first and the acute which provides care for those with hip and other fractures. Providers identified a pressing need for more collaborative working across sectors to facilitate a whole systems approach to falls prevention as well as joint ownership of the issue of falls thereby “de- medicalising” the issue of falls. There is a need to raise the profile of falls as a priority among professionals who have contact with the older population. There is a need to increase opportunities both for case finding and referrals between services across health, social care and primary care settings.
3. **There is a gap in a focus on proactive prevention and early detection** as the triggers to accessing services appear to be falling, fear of falling, concerns about falling and having fallen, a shift to proactive prevention would incorporate constant health promotion and encouraging physical activity in older people

## Gaps in services that already exist

- 1. There is no directory of available primary and secondary falls prevention services.**

There are a lot of services that contribute to falls prevention by keeping older people fit and healthy but there is no central repository of information on what the services and various initiatives are. There is no single place that an older person can go to learn about the different services, the eligibility criteria or cost of accessing the services such as the keep fit classes provided the voluntary sector and handy man services etc. There appears to be a lack of awareness of the various inter-related falls prevention initiatives taking place in Merton leading to inconsistency in how people get to know and access services.
- 2. There is no overarching lead function of an individual or service responsible for falls prevention across health and social care.** Although there is a specialist falls prevention service that provides some education to other service providers, the role of the specialist service is not across health and social care. The absence of an overarching falls lead function limits the extent to which falls prevention initiatives can be implemented strategically, systematically and in a co-ordinated manner. The absence of an overarching falls lead function also limits the extent to which universal ownership of the issue of falls prevention can be ensued.
- 3. There is marked variation between wards in terms of referral rates to the SMCS FPS.** This variation is found between wards in the east and west of Merton and also between the east of Merton and the west of Merton. There is also marked variation between wards in terms of falls-related ambulance call outs and falls-related A&E attendance
- 4. There is no method for the London Ambulance Service (LAS) to refer directly to the SMCS FPS.** Often the LAS is the first contact following a fall and therefore well placed to identify those at risk of falls and fractures or those falling repeatedly. The LAS having to refer to the GP who then refers to the FPS presents opportunities for patients to fall through the net.
- 5. There is no self-referral route into the SMCS FPS.** This means that those who are starting to lose their balance, gait or vision miss out on an opportunity for signposting to appropriate services if they do not meet the threshold for the specialist FPS. Self-referrals allow those that have identified that they are having issues with their gait and balance to proactively seek assistance before their condition deteriorates and before they sustain a fracture.
- 6. There are no links between pharmacies (to provide Medicine Use Reviews MURs) and the primary falls prevention services provided by the voluntary sector.** MURs are part of an integrated falls prevention approach and best practice. Robust review of medicines is effective as being on a number of medicines (poly pharmacy) is a known risk factor to falls.

### Specific areas for improvement in Merton

1. The areas of greater need are detailed in the table below. Recommendations to address these areas of greater need have been outlined in (Chapter 15 Health and Social Care Recommendations Section 3)

<b>East Merton Wards</b>	<b>West Merton Wards</b>
Graveney Lavender Cricket Green Colliers Wood Longthorn Pollards and Figges' Marsh Abbey	Lower Morden Wimbledon Village Hillside Trinity



## 14. Health and Social Care Recommendations

### Key Points:

The recommendations stem from the gaps identified in the previous section as well as approaching the issues of falls systematically through the DH systematic approach to falls prevention illustrated in Figure 4. The recommendations are directed towards all commissioners, health planners, service providers, the voluntary sector and other relevant professionals and organisations. The underpinning principles should be that given that the aetiology of falls is usually multifactorial, the most effective prevention of falls is likely to involve a multidisciplinary, holistic and patient-specific approach. The five recommendations can be summarized as:

1. Consider developing an integrated, comprehensive falls prevention pathway in Merton
2. Consider developing an integration approach to Dementia, Falls and Fractures
3. Consider incorporating specific measures in the Falls Prevention Strategy to address the areas of improvement that have been identified through the needs assessment
4. Consider making changes to the services that currently exist

1. **Consider developing an integrated, comprehensive falls prevention pathway in Merton.** This would entail detailing and drawing out which services provide which elements of falls prevention (i.e. primary, secondary and tertiary prevention) as well as how to access the services. This would be followed by a requirement to develop and strengthen links between the services ensuring a single point of access. The steps that are required currently in Merton to develop an integrated falls prevention pathway include:

Step 1: **Ensuring the existence of the function of overall falls coordinator across health and social care** to oversee the setting up of the falls prevention pathway and implementation of the Falls Prevention Strategy. The Falls prevention strategy would need to align with the council strategy “Celebrating Age and Valuing Experience” in order to facilitate collaborative working, partnership working and true integration and furthermore it would need to be jointly owned by Merton Council and Merton CCG.

Step 2: **Developing a directory of primary prevention services available in Merton** i.e. all voluntary sector keep fit classes, all local authority keep fit schemes, Leisure centre offers for older people so that Health and social care providers can make recommendations to older people to increase uptake and knowledge of the availability of these resources to older people and to ensure consistency across Merton of uptake and use of these resources. A directory of services could address the issue of inconsistency of uptake of health promotion and lifestyle intervention that encourage regular weight-bearing physical activity among older people. . Furthermore, a directory of services would address the gap of a lack of “Step down”

Step 3: **Quality assuring the current falls prevention initiatives provided by the voluntary sector** and providing training to ensure they provide evidence based weight bearing exercises. Consider bringing them all under one banner “Merton Falls Prevention” as a way of creating a coordinated falls prevention approach across Merton

2. **Consider developing an integration approach to Dementia, Falls and Fractures.** People with dementia suffer more falls, more fractures and higher post-fracture mortality than those without dementia and falls and fracture patients have a high prevalence of dementia and cognitive impairment, therefore there is scope for improved care and better targeting by adopting an integrated approach to both. An integrated approach would entail having falls screening as part of the dementia pathway and integrating falls screening and assessment in the to Holistic Assessment and Rapid Investigation Service (HARI) formally the Older People's Assessment and Rehabilitation Service (OPARS) which has now been widened to support a wider age group of those having complex needs.
  
3. **Consider incorporating specific measures in the Falls Prevention Strategy to address the areas requiring improvement that have been identified through the needs assessment i.e.**
  - a. Merton has a significantly higher rate of older people, older women and those aged 80 and above being admitted to hospital for falls related injuries compared to the England average
  - b. The falls-related mortality rate in women is higher than most geographical neighbours and all the statistically similar boroughs. The falls-related mortality rate in the people aged 75 and older for both men and women is second highest to all the 11 comparators. At a population health level more evidence is required regarding the root cause of the higher than comparators rate of mortality from falls particularly for men
  - c. Robust tackling of hazards in the home that lead to falls. The most frequent location of falls in Merton is in the home and the falls at home have been progressively increasing over the years. This indicates that at a population level, Merton needs to ensure systematic falls prevention at home as that is the area where most falls in Merton are occurring
  - d. Robust tackling of environmental hazards that lead to falls as the second most frequent location of falls is in the street or highway at home increasing progressively
  - e. Robust tackling of falls in Care and Residential institutions as the third most frequent location of falls in Merton is Care and Residential institutions
  - f. An approach to reduce the variation between wards in terms of referrals into SMCS FPS, falls-Related A&E attendance, and falls-related ambulance calls out as well as the hotspots for falls in older people in Merton.
  
4. **Consider making the following changes to the services that currently exist:**
  - a. Allowing self referrals into the SMCS FPS to enable a more proactive approach to identifying those at risk of falls. If the individuals does not meet the threshold of the specialist service they can then be signposted to an appropriate service
  - b. Simplifying the referral form to the FPS to remove the barrier to some providers not referring patients into the FPS
  - c. Consider engaging with GPs to ensure continued improvement of the nationally reported osteoporosis QOF outcomes, to increase case finding particularly in the Merton hotspots and areas of higher need highlighted by the needs assessment
  - d. Enabling direct referrals from the London Ambulance Service to the SMCS FPS
  - e. Consider adopting simple and consistent falls screening questions that can be asked across health and social care and among health and social care frontline staff to ensure shared ownership of the issue of identifying those at risk of falling as well as a consistent approach to case-finding
  - f. Consider embarking on a targeted opportunistic fracture risk assessment programme for all over 50s in Merton with Osteoporosis. Costs can be reduced



for such a programme by focusing on women over 65 and Men over 75 with osteoporosis. The overall cost of embarking on a targeted opportunistic fracture risk assessment programme in Merton for people aged 50 and over with osteoporosis are circa **£854,700**. The details of the costs can be found in Appendix F. The costs of such a programme may appear great but are economical as they equate to the cost of treating 23 people with hip fractures that have a year of residential care as a consequence of the hip fracture.

### **Falls Prevention in Merton in a Nutshell:**

See the following tables below:

- The Merton Falls Prevention Landscape and ;
- Falls Prevention Standards and Guidance, Merton Gaps and Recommendations

## THE MERTON FALLS PREVENTION LANDSCAPE

<p><b>THE MERTON FALLS PREVENTION LANDSCAPE IN TERMS OF</b></p> <p>1. PRIMARY</p> <p>2. SECONDARY AND;</p> <p>3. TERTIARY PREVENTION SERVICE AND INITIATIVES AVAILABLE</p> <p>N.B. Some services provide both primary and secondary prevention, and secondary and tertiary prevention. The categories are not mutually exclusive</p>	<p><b>PRIMARY PREVENTION</b> - predominantly concerned with keeping older people fit and health. Services in Merton include:</p> <ul style="list-style-type: none"> <li>• Keep fit classes provided by voluntary sector providers namely: <ul style="list-style-type: none"> <li>○ Wimbledon Guild of Service</li> <li>○ Age UK Merton</li> <li>○ Merton Vision</li> <li>○ The Merton &amp; Morden Guild of Social Service</li> </ul> </li> <li>• MASCOT Telecare</li> <li>• London Borough OF Merton has a Strategy for older people</li> <li>• The Adult Social Care Ageing Well Programme</li> <li>• Canons and Wimbledon Leisure Centre</li> <li>• Morden Park Pool</li> </ul>
	<p><b>SECONDARY PREVENTION</b> is principally concerned with preventing further falls, identifying those with previous falls and fragility fractures and ensuring risk factors are addressed. Services and initiatives in Merton include:</p> <ul style="list-style-type: none"> <li>• The NHS specialist service- Sutton and Merton Community Services (SMCS) Falls Prevention Service (FPS)</li> <li>• MILES: Merton Independent Living and Engagement Service</li> <li>• St George’s, St Helier and Kingston Hospital Fracture Liaison Services</li> <li>• General Practice Osteoporosis Quality and Outcomes Framework</li> <li>• SMCS Community Rehabilitation Team (CRT)</li> <li>• The Older People’s Assessment and Rehabilitation Service (OPARS) soon to be HARI-(Holistic Assessment and Rapid Investigations</li> </ul>
	<p><b>TERTIARY PREVENTION</b> is concerned with managing the complications of falls to prevent disability and aid rehabilitation. Services available to Merton Residents include</p> <ul style="list-style-type: none"> <li>• St. George’s fracture services, (Epsom and St. Helier South West London Elective Orthopaedic Centre) and Kingston Hospital fracture services</li> <li>• The above 3 Acute trusts’ Orthogeriatric services for older with hip fractures</li> <li>• SMCS CRT</li> <li>• SMCS FRS</li> <li>• SMCS OPARS</li> </ul>

## FALLS PREVENTION STANDARDS AND GUIDANCE, MERTON GAPS AND RECOMMENDATIONS

STANDARDS AND GUIDANCE PERTAINING TO	GAPS IN MERTON IN RELATION TO	HEALTH AND SOCIAL CARE RECOMMENDATIONS
<p>1. A POPULATION APPROACH TO FALLS PREVENTION AND;</p> <p>2. FALLS PREVENTION FOR OLDER PEOPLE IN THE COMMUNITY</p>	<p>4. A STRATEGIC/WHOLE SYSTEMS APPROACH TO FALLS PREVENTION</p> <p>5. GAPS IN SERVICES THAT ALREADY EXIST</p> <p>6. SPECIFIC AREAS FOR IMPROVEMENT IN MERTON</p>	
<p><b>A population approach to falls prevention</b></p> <p>Falls and Fractures: Effective Interventions in Health and Social Care (Department of Health provides commissioning best practice). The guidelines state that a systematic approach at a population level for falls and fracture prevention entails the following four objectives:</p> <ol style="list-style-type: none"> <li>5. Improving outcomes for hip fracture patients</li> <li>6. Responding to the first fracture by preventing the second in non-hip fracture fragility patients</li> <li>7. Early intervention for high risk individuals at high risk of fragility fractures and;</li> <li>8. Keeping older people healthy, preventing frailty and reducing accidents</li> </ol> <p>At the heart of any integrated Falls Prevention strategy lies promoting physical</p>	<p><b>Gaps in the strategic/whole systems approach to falls prevention</b></p> <ol style="list-style-type: none"> <li>4. There is currently no integrated falls prevention pathway in Merton. While there are elements of (primary, secondary and tertiary) falls prevention, there is no comprehensive falls care pathway showing where each of the services fall along the pathway</li> <li>5. There is a gap in collaborative working and stronger links across the services that provide elements of falls prevention</li> <li>6. There is a gap in a focus on proactive prevention and early detection</li> </ol>	<p><b>Consider developing an integrated, comprehensive falls prevention pathway in Merton</b> this would include the following steps:</p> <p>Step 1 – Ensure the existence of the function of overarching co-ordinator of falls prevention across health and social care</p> <p>Step 2 –Consider developing a directory of all available primary ,secondary and tertiary falls prevention services(i.e. all keep fit classes provided by the voluntary sector)</p> <p>Step 3 – Consider quality assuring and providing training for the primary falls prevention initiatives provided by primary care as well as bringing them under one banner of “Merton Falls Prevention”</p>

<p><b>Falls prevention for older people in the community</b></p> <p>NICE Assessment and Prevention of Falls in Older People (Guidance 161) states that a best practice pathway includes:</p> <ul style="list-style-type: none"> <li>v. Case/risk identification</li> <li>vi. Multifactorial assessment</li> <li>vii. Multifactorial interventions</li> <li>viii. Evidence-based exercise interventions include OTAGO exercise programme, Tai Chi, Moving for balance, FaME (Falls Management Exercise)/Postural Stability Instructor (PSI)</li> </ul>	<p><b>Gaps in services that already exist</b></p> <ol style="list-style-type: none"> <li>7. There is no directory of available primary and secondary falls prevention services</li> <li>8. There is no overarching lead function of an individual or service responsible for falls prevention across health and social care</li> <li>9. There is marked variation between wards in terms of referral rates to the SMCS FPS, A&amp;E attendance for falls and falls-related ambulance call outs</li> <li>10. There is no method for the London Ambulance Service (LAS) to refer directly to the SMCS FPS</li> <li>11. There is no self-referral route into the SMCS FPS</li> <li>12. There are no links between pharmacies (to provide Medicine Use Reviews MURs) and the primary falls prevention services provided by the voluntary sector.</li> </ol> <p><b>Specific areas for improvement in Merton</b></p> <p>1. The areas with greater need in Merton in terms of access to the SMC FPS and Variation in falls- related A&amp;E attendance are:</p> <table border="1" data-bbox="734 1059 1070 1361"> <thead> <tr> <th>East Merton Wards</th> <th>West Merton Wards</th> </tr> </thead> <tbody> <tr> <td>Graveney</td> <td>Lower</td> </tr> <tr> <td>Lavender</td> <td>Morden</td> </tr> <tr> <td>Cricket</td> <td>Wimbledon</td> </tr> <tr> <td>Green</td> <td>Village</td> </tr> <tr> <td>Colliers</td> <td>Hillside</td> </tr> </tbody> </table>	East Merton Wards	West Merton Wards	Graveney	Lower	Lavender	Morden	Cricket	Wimbledon	Green	Village	Colliers	Hillside	<p><b>Consider incorporating specific measures in the Falls Prevention Strategy to address the areas requiring improvement</b> that have been identified through the needs assessment namely :</p> <ul style="list-style-type: none"> <li>- The rates of older women and those aged over 80 and above being admitted into hospital</li> <li>- The falls-related mortality in women and men as we</li> <li>- Robust tackling of hazards in the home as that is the most frequent location of falls in Merton</li> <li>- Robust tackling of hazards in the environment as that is the second most frequent location of falls as well as tackling of falls in Care and residential institutions in Merton as this is the third most frequent location of falls in Merton</li> <li>- Consider incorporating into the Falls Prevention Strategy an approach to reduce the variation between wards in terms of referrals into SMCS FPS, falls-Related A&amp;E attendance, and falls-related ambulance calls out</li> </ul> <p><b>Consider making the following changes to the services that currently exist:</b></p> <ul style="list-style-type: none"> <li>- Allowing self referrals into the SMCS FPS to enable a more proactive approach to identifying those at risk of falls</li> <li>- Simplifying the referral form to the SMCS FPS to remove the barrier to some providers referring patients into the FPS and enabling direct referrals from the London Ambulance Service (LAS) to the SMCS FPS</li> <li>- Consider engaging with GPs to ensure continued improvement of the nationally reported osteoporosis QOF outcomes, to increase case finding particularly in the Merton hotspots and areas of higher need highlighted by the needs assessment</li> </ul> <p><b>Consider adopting simple and consistent falls screening questions that can be asked across health and social</b></p> <p><b>Consider quality assuring the current falls prevention initiatives</b></p>
East Merton Wards	West Merton Wards													
Graveney	Lower													
Lavender	Morden													
Cricket	Wimbledon													
Green	Village													
Colliers	Hillside													

	Wood Longthorn Pollards and Figges' Marsh Abbey	Trinity		<p><b>provided by the voluntary sector</b> and providing training to ensure they provide evidence based weight bearing exercises, furthermore bringing them under the barrier of “ Merton Falls Prevention” to ensure a consistent approach to falls prevention across Merton</p> <p>Consider embarking on a targeted opportunistic fracture risk assessment programme for all over 50s in Merton with Osteoporosis. (The costs of such a programme are in Appendix F) Costs can be reduced for such a programme by focusing on women over 65 and Men over 75 with osteoporosis.</p>
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## **15. Appendices**

### **Appendix A: Data Collected by SMCS FPS**

- Number of accepted referrals per month by category i.e. home response, falls classes, OTAGO home exercise programme
- Percentage attendance at class
- Percentage of home response referrals offered first face to face appointment within two working days
- Percentage of patients offered a falls class within eight weeks of acceptance of referral
- Percentage of patients discharged showing an improvement in an outcome measure, between assessment and discharge
- Percentage of patients within the 3 months following discharge who have not befallen and Demographic data of services users i.e. gender, ethnicity and GP practice

## **Appendix B: SMCS FPS detailed pathway**

(See supplementary document attached - SMCS FPS detailed pathway )

## Appendix C: Concentration of people aged 65 and above by ward (from highest to lowest)

Source GLA Ward 2013 round capped SHLAA- based population projections

	Ward	Rate of people aged 65 and over per 1,000	Rate of men aged 65 and over per 1,000	Rate of women aged 65 and over per 1,000
1	Village	196.06	187.98	203.76
2	Cannon Hill	173.60	157.00	190.05
3	Lower Morden	161.24	145.26	177.13
4	Merton Park	155.76	144.07	167.42
5	West Barnes	142.81	131.38	153.86
6	Hillside	136.98	112.39	160.73
7	Raynes Park	136.04	119.57	151.44
8	St Helier	133.10	118.75	146.90
9	Ravensbury	131.84	118.49	145.09
10	Graveney	116.99	99.43	136.27
11	Cricket Green	113.33	102.79	122.87
12	Longthornton	112.32	98.56	125.33
13	Pollards Hill	107.11	99.20	114.46
14	Dundonald	102.90	91.45	114.02
15	Figge's Marsh	97.29	91.83	102.56
16	Wimbledon Park	88.99	84.06	93.73
17	Abbey	86.92	77.49	96.04
18	Colliers Wood	86.03	75.55	97.08
19	Trinity	84.92	74.53	95.30
20	Lavender Fields	81.01	72.55	89.05
	<b>Average</b>	<b>151.94</b>	<b>137.21</b>	<b>166.26</b>



## Appendix D: CSP Falls Outcome Using Transition Probabilities

<u>Transition Probabilities</u>					
Fall (Male):					
		60-64	65-69	70-74	75+
Fall		0.0273 5	0.0287 3	0.0367 9	0.0945 3
No Fall		0.9726 5	0.9712 7	0.9632 1	0.9054 7
Fall (Female):					
		60-64	65-69	70-74	75+
Fall		0.0273 5	0.0287 3	0.0367 9	0.0945 3
No Fall		0.9726 5	0.9712 7	0.9632 1	0.9054 7
A&E Outcomes:					
		60-64	65-69	70-74	75+
No treatment required		0.6380	0.5060	0.3720	0.3730
Referred to outpatient		0.1690	0.2710	0.3220	0.2640
Referred to GP		0.1730	0.1770	0.1610	0.1330
Referred to inpatient and discharged immediately with no treatment		0.0048	0.0061	0.0347	0.0426
Referred to inpatient and discharged immediately to GP		0.0038	0.0061	0.0253	0.0205
Referred to inpatient and discharged to outpatient		0.0114	0.0339	0.0726	0.1040
Referred to inpatient and transferred to long-term care		0.0000	0.0000	0.0125	0.0630
Multiple Fall Risk:					
		60-64	65-69	70-74	75+
Male		0.2648	0.4981	0.3742	0.4912
Female		0.3169	0.2089	0.3511	0.2973

## Appendix E: Estimated Current Cost of Hip Fracture

The University of York (2000) model used the following costs and estimated that at that time, the cost of treating one hip fracture was **£25,424**. The model estimated the cost of a single hip fracture patient assumed to survive following the fracture and spending a year in long stay residential care:

### Cost of Hip Fracture in 2000 based on University of York Model<sup>83</sup>

Category of Care	Cost
Hospital Care ( 20 days)	£4,760
Ambulance	£171
Long Stay Residential Care	£20,010
GP Use	£164
Outpatient Use	£319
<b>Total Cost</b>	<b>£25,424</b>

Using the same elements of the model and the latest available reference costs:  
Estimated cost of Hip Fracture in 2014:

Category of Care	Cost
Hospital Care of 19.6 days <sup>84</sup> at a cost of £242 <sup>85</sup> per bed day	£4410
Ambulance call out <sup>86</sup>	£242
Long Stay Residential Care <sup>87</sup> (1year)	£32,500
GP Use <sup>88</sup>	£327
Outpatient Use (Hip replacement rehabilitation post discharge) <sup>89</sup>	£414
<b>Total Cost</b>	<b>£37,893</b>

<sup>83</sup> The Economic Cost of Hip Fracture in the UK, the University of York, June 2000. Available from: <http://www.berr.gov.uk/files/file21463.pdf>

<sup>84</sup> England Mean length of Stay for hip fracture (15.6 days acute plus 4 days post acute) Source: National Hip Fracture Data Base, National Report 2013

<sup>85</sup> NICE, National costing report: Hip fracture (June 2011). Cost of bed stay on an orthopaedic ward

<sup>86</sup> National Audit Office

<sup>87</sup> Using London regional average ,Laing & Buisson Care of Older People, UK Market Report 2013/14

<sup>88</sup> Based on University of York research stating Hip fracture patients have 9.1 GP consultation at a cost of £36/consultation

<sup>89</sup> NHS Reference Costs 2012/13, the defined clinical pathway for post discharge activity for primary non-trauma total hip replacements comprises 7 nurse/physiotherapist appointments, 1 occupational therapy appointment and 2 consultant-led clinic visits. The tariff given represents the funding for this pathway of rehabilitation

## Appendix F: Costing Of Targeting of Opportunistic Risk Assessment Based on Estimated Osteoporosis's Prevalence in over 50+ Population in Merton

Based on Nice Guidelines CG146 and Osteoporosis fragility fracture: costing report 06 August 2012

### Given:

- Estimated prevalence of osteoporosis in 50 + Merton population based on QOF registers in Merton 11,100
- There are no costs to use the FRAX and QFracture risk assessment tools
- The cost of a GP consultation is £36.00 for a surgery consultation lasting 11.7 minutes. The Nice Costing guidelines considered that the time to undertake either assessment would be the same
- The risk assessment could be carried out by other suitably qualified healthcare professionals, for example, practice nurses. This would reduce the cost of a consultation; for example, the cost of a consultation with a practice nurse is £51.00 per hour, so a 10-minute consultation would cost £8.50 (Curtis 2011)
- The cost of a DXA scan payable by commissioners is £69.00. The latest available reference costs for a DXA scan incurred by providers in 2010/11 is £77.00 (Department of Health, National Tariff 2012-13)
- Therefore the maximum additional cost per person is £105.00 – the cost of a GP consultation plus the cost of a DXA scan. (This would decrease to £77.00 if the risk assessment was carried out by a practice nurse) and would be reduced further if the assessment could be undertaken on an opportunistic basis).

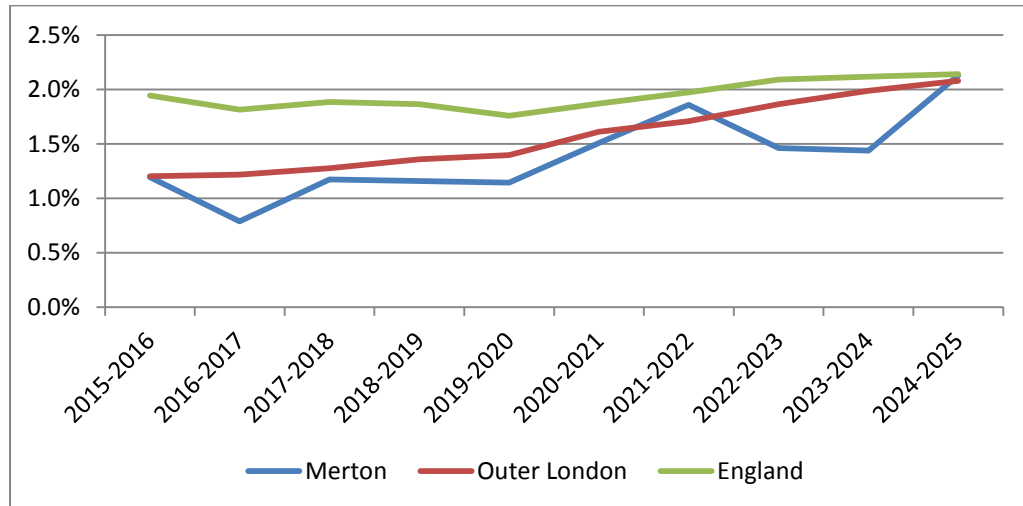
Activity	Cost
Clinician time -10 minutes	£36.00
DXA Scan	£77.00
Cost of assessment	£105.00
Estimated Prevalence in in 50+ population	11,100
Cost of Targeting Osteoporosis risk assessment	<b><u>£854,700.00</u></b>

Costs can be reduced by targeting women over 65 and men over 75 and the consultations being carried out by a practice nurse instead of a GP.

The overall cost is the same as the cost of 23 hip fractures in Merton, based on the cost for hip fractures (Appendix E)

## Appendix G: Merton Population Changes in Older People Compared To Outer London and England 2012-2025

### MERTON POPULATION CHANGES IN OLDER PEOPLE COMPARED TO OUTER LONDON AND ENGLAND 2012-2025



Source: GLA (Ward: 2013 round capped SHLAA-based population projections)

## Appendix H: PPMC Testing Of Other Variables

The fact that the falls related A& E attendances or referrals to the FPS did not appear to increase with an increase in concentration of people aged 75 and above is not surprising as falls are influenced by an interaction of number of risk factors of which age is only one. Further analysis was carried out to see if the data could reveal any other relationships and the correlation coefficients are shown in table 12 below:

**TABLE 17: RELATIONSHIPS BETWEEN OTHER VARIABLES**

<b>Variables</b>	<b>Correlation <i>r</i></b>	<b>Analysis</b>
The rate of people aged 75 and older per 1,000 by ward and the rate of referrals into the Falls Prevention Service by ward in 2013 (in the older population)	0.11	No linear relationship between the concentration of people aged 75 and above and referrals into the FPS suggesting that factors other than the concentration of older people (those at higher risk) influence referrals into the FPS
The rate of people aged 75 and older per 1,000 by ward and rate of falls-related A&E attendance in people aged 65 and above	-0.05	No linear relationship between the concentration of people aged 75 and over and A&E attendance for falls suggesting that factors other than the concentration of people aged 75 and over in a ward influence the rate of A&E attendance

Further analysis of the ambulance call out data was carried out including using Pearson's product-moment correlation coefficient see if there was a strength and direction of a linear relationship with the following data sets and the results are tabulated below in table 14.

**TABLE 18: FURTHER ANALYSIS TO SEE IF THERE ARE ANY RELATIONSHIPS**

<b>Variables</b>	<b>Correlation (<i>r</i>)</b>	<b>Analysis</b>
2013 Ambulance persons call out rate by ward and referral rates to Sutton and Merton Falls prevention service by ward	0.50	There is a low positive correlation between ambulance call out rates and referrals rates into the SMCS FPS suggesting that there is no strong linear relationship between the two
2013 Ambulance persons call out rate by ward and 2013 falls-related A&E attendance rate per ward	0.59	There is a low positive correlation between the rate of ambulance call outs and the rate of A&E attendance for falls suggesting that naturally as more people ring ambulances for falls related incidences, more people will present to A&E for falls
2013 Ambulance persons call out rate by ward by IMD Index of Ward	0	There is no link with the IMD score and ambulance call outs suggesting that there is no linear relationship between deprivation and ambulance call out rates by ward. Therefore other factors influence ambulance

		call outs more strongly to deprivation
2013 Ambulance persons call out rate by ward and 2014 rate of older people per ward	-0.13	There is no link between ambulance call outs and the concentration of older people in a ward meaning that other factors could have stronger links with ambulance call out rates than concentration of older people in each ward

## Appendix I: The Numbers of Older People in Each Ward 2014

Source: GLA (Ward: 2013 round capped SHLAA-based population projections)

Year		2014		
	Wards	Male	Female	All
<b>EAST</b>				
	Abbey	401	507	908
	Colliers Wood	433	518	951
	Cricket Green	574	744	1,318
	Figge's Marsh	523	600	1,123
	Graveney	523	639	1,162
	Lavender Fields	374	452	826
	Longthornton	499	663	1,162
	Pollards Hill	511	617	1,128
	Ravensbury	603	743	1,346
	St Helier	618	807	1,425
<b>WEST</b>				
	Cannon Hill	739	881	1,620
	Dundonald	431	566	997
	Hillside	509	800	1,309
	Lower Morden	674	830	1,504
	Merton Park	698	826	1,524
	Raynes Park	575	834	1,409
	Trinity	372	497	869
	Village	801	958	1,759
	West Barnes	654	804	1,458
	Wimbledon Park	471	540	1,011
<b>EAST MERTON</b>		5,059	6,290	11,349
<b>WEST MERTON</b>		5,924	7,536	13,460
<b>MERTON</b>		10,983	13,826	24,809
		44%	56%	

## Appendix J: List of Acronyms and Abbreviations

A&E	Accident and Emergency Hospital Department
ACP	Alternative Care Pathway
CBT	Cognitive Behavioural Therapist
CCG	Clinical Commissioning Group
CI	Confidence Interval
CSP	Chartered Society of Physiotherapy
FLS	Fracture Liaison Service
FPS	Falls Prevention Service
LA	Local Authority
LAS	London Ambulance Service
LBM	London Borough of Merton
MUR	Medicines Use Review
NHS	National Health Service
OPWBA	Older People's Health and Well Being Atlas
PHE	Public Health England (PHE)
PHOF	Public Health Outcomes Framework
POPPI	Projecting Older Peoples Population Information
SMCS	Sutton and Merton Community services
SUS	Secondary Users Service