Attach 4

NHS Wandsworth
Falls Prevention, Management and Bone Health Strategy and Needs Assessment
June 2010

Attach 4

Table of contents

1. INTRODUCTION

The purpose of this document is to set out the strategic intentions of NHS Wandsworth for the commissioning of services for the prevention and treatment of falls and fractures and the maintenance of bone health in older people.

It describes the national and local picture of services for the prevention, diagnosis and treatment of people with poor bone health and of people have fallen. It concludes with a number of recommendations based on national policy guidance and feedback from local stakeholders.

The strategy aims to:

- Minimise the risk of falls by enhancing the knowledge of staff and patients
- Raise awareness of falls prevention
- Reduce the occurrence of falls and fractures
- Ensure appropriate evidenced based services are in place targeted at those at most risk within restraints of the resources available
- Ensure effective links between different services and agencies
- Reduce anxiety and fear of falling
- Improve patient / user experience of services
- Improve / maintain independence and quality of life
- Ensure compliance with national guidance.

The strategy will be underpinned by evidence based practice as detailed in national guidance documents, feedback from local stakeholders and a joint services needs assessment which informs a local service gap analysis.

The views of stakeholders have been key to shaping this strategic document, resulting in the following stakeholder engagement activities:

- Stakeholder Workshop held 20.05.09
- Meeting with Community services Wandsworth older people management team 17th June 2009
- Meeting with patient / member of NOS
- Individual meetings with clinicians
- Completed questionnaires received from : John Crowe (sheltered housing), Older peoples care group management team (Community services Wandsworth), therapists at St Georges Hospital and South West London and St Georges Mental Health Trust
- Focussed needs assessment project – in partnership between Amanada Cranston (Public Health NHS Wandsworth and Bernadette Kennedy (Integrated Falls Sertvice CSW) and rewritten draft Feb 2010 – May 2010

2. DRIVERS FOR CHANGE

2.1 Summary of Wandsworth performance as shown in the National Audit Report.

The Royal College of Physicians (RCP)National Falls and Bone Health Organisational Audit Report - 2009 (see appendix 1) showed that the results for Wandsworth were:

"generally good with most being in the upper quartile. Of special note were 'structure and staffing' and 'training and audit' that scored the maximum of 100. The only domain that was unsatisfactory was that of 'local strategies and commissioning".

A similar report is available for St George's Hospital but their results are generally close to the middle of the range with the exception of training and audit where they are in the top10%.

The Audit Report 2009 recommended that all PCTs should develop commissioning strategies that include:

- Improved case finding systems to identify high risk fallers
- Adherence to NICE treatment guidelines with monitoring by local audit
- Reporting on the number and rate per 100,000 of both hip fractures and other fragility fractures
- Identifying clinical leaders including a consultant with a job plan commitment
- The establishment of a fracture liaison service
- Widespread and accessible evidence-based exercise programmes
- Ensuring that validated home safety measures are used and targeted.

In addition the Audit Report recommended that the Department of Health should review how it can best support these developments by:

- Provision of advice on commissioning
- Strengthening incentives and
- Provision of useful metrics for falls, fractures and osteoporosis treatments.

Prior to the Audit Report NHS Wandsworth had identified a number of local services that aimed to reduce the incidence of falls through the assessment and management of individuals who have fallen or who are at risk of falls. The PCT recognised the range of services that were available but felt that there was a need to improve the integration of these services through a clear pathway of referral, assessment, intervention and follow-up.

2.2. A Local health needs priority

Non-hip fractures have been increasing year on year since 2005-06 for both men and women. Considering that research shows that around 50% of people 65 and over that suffer a non-hip fragility fracture go onto have a hip fracture, this is an important factor pointing to the need for intervention strategies. Most recent data shows that admissions for fracture of neck of femur is continuing to increase and is likely to carry on due to non-hip fragility fractures increasing and the population changes expected in 20 years. Fracture (hip and non-hip) rates for post menopausal women (55-64 years old) follow the same trend as in the older age groups with year on year increases in fractures

2.3. National policy guidance – Falls

This chapter focuses on the evidence provided in national research and policy documents. People fall for many reasons. Most falls do not have serious consequences and it is better to have an active life than to prevent falls by not being up and about *(How can we help older people not to falls again? DH; 2003).* Falls, however becomes an issue when they:

- occur doing ordinary and necessary activities
- induce fear of falling, which restricts activity and leads to loss of independence
- keep happening ('recurrent' falls)
- cause injuries. *(Falls and Fractures, effective interventions in health and social care; DH;2009)*

Falls are not an inevitable consequence of old age; rather they are nearly always due to one or more underlying risk factors. The risk of falling increases as people get older and falls represent the most frequent type of serious injury in the over 65s age group and the commonest reason for hospital attendance. The most serious consequence of falling is hip fracture. The majority of fractures in older people occur as a result of a fall from standing height (fragility fracture).

Falling is associated with increased morbidity and mortality. It is the main cause of accidental death in people aged 85 and over (*DTI, 1997, 1999*). The resulting mortality is often as a consequence of sustaining a hip fracture as 30% of this patient group will die within the first year. For those that survive, up to 50% are no longer able to live independently, with 80% not regaining their pre-fracture level of function *(Poor et al, 1995).*

Since 50% of patients with a hip fracture have previously had a fragility fracture of another bone, this shows opportunities for secondary prevention (as set out by NICE) are being missed. (*National organisational falls and bone health audit; March 2009 HQIP*)

Falls in later life are also a common symptom of previously unidentified health problems which need to be identified and managed.

The *National Service Framework for Older People; 2001* made several key recommendations aiming to reduce the incidence of falls and their associated morbidity and mortality. National targets were set for the review of falls services and by April 2005, local health care providers were required to have established a fully integrated falls service.

Prevention of falls, particularly injurious falls, remains a key Department of Health policy focus, as emphasised by Professor Ian Philip in his progress report *Recipe for Care - Not a Single Ingredient, 2007.* This report states that putting in place fully integrated falls prevention services could prevent up to 400 hip fractures annually in each strategic health authority.

More recently, Alan Johnson, the Labour secretary of state for health, emphasised the need to do more to prevent the circumstances that lead to older people losing their independence in the first place, falls prevention being an example and he stated that falls services need to be a higher priority for PCT's. (*Prevention speech to the King's Fund, Old age is the new middle age, May 2008)*

In July 2009, the Department of Health published a number of guides relating to falls and fractures as part of the DH's prevention package "keeping well in later life". They highlight the prevention of falls in older people as a key challenge for the NHS and local authorities, most particularly as:

- Each year 35% of over 65's experience one or more falls.

- About 45% of people over 80 who live in the community fall each year. Between 10 and 25% of such fallers will sustain a serious injury.

- 7% of those who have fallen attending A& E, 4% resulting in serious injury and 3% being admitted to an in-patient bed.

The number of falls and their negative consequences can be reduced by up to 30% if local health and social care communities work together effectively to address falls.

2.4 The financial cost of falls

Not only are falls and fractures detrimental to the quality of life of older people (*Salkeld et al, 2000: Swift et al 2001*) they also have significant economic costs. In 2008 the Secretary for Health stated that the economic costs of hip fractures was £1.8 billion per year (*Johnson, 2008*) with 59% incurred by the NHS and the remainder by Social Services for long term care (*Scuffham, et al).* In 2004, the approximate cost to the NHS was £17,000 per hip fracture (*Clearnet, 2004*). People aged over 75 admitted to hospital after an accident stay, on average, 18 days (1997).

Professor Philip in *Recipe for Care 2007* and the international *Cochrane review* indicated that if all clinicians and services implemented a multi-factorial risk factor assessment and adopted an integrated falls and bone health service, it would lead to an estimated reduction of 400 hip fractures per SHA, with a net saving of £3 million per SHA.

2.5 The cost of falls to health and well-being

Most falls do not result in serious injury but falls can destroy confidence, leading to increased social isolation, deterioration in mental health and erosion of independence and thus increased dependency on carers' and services. The after-effects of even a minor fall will affect an older person's physical and mental health. Hypothermia is a significant risk as is pressure-related injury, especially when somebody who has fallen is unable to get up.

Falls of older people in hospitals and other care settings is an important area where appropriate systems and awareness can reduce risk particularly as 60% of those living in nursing homes will fall repeatedly (Cryer & Patel 2001 cited by DOH Developing a local Needs Strategy 2009). A patient falling in hospital is the most common patient safety incident reported to the National Patient Safety Agency (NPSA). The NPSA report *Slips, Trips and Falls in Hospital* highlights the dilemma that "achieving zero falls is not realistic, because rehabilitation always involves risk".

The *National Clinical Audit of Falls and Bone Health 2009* reported that falls are the commonest reason for an older person to attend Accident and Emergency (A&E) and for being admitted to hospital. Hip fractures are, the most frequent fragility fracture caused by falls, and the commonest cause of "accident" related death.

Good clinical practice, based on national standards and evidence based guidelines, can:

- reduce death and disability resulting from hip fractures
- prevent future falls and fragility fractures

The study further revealed that:

- 31% of operations for hip fracture are delayed beyond the 48hours target, and it is known that delay is associated with increased mortality
- Most patients returning home from A&E after a fragility fracture were not offered a falls risk assessment and only 22% were referred for exercise training to reduce future falls
- After 3 months, only a fifth of these patients were on appropriate treatment for osteoporosis
- Even after recovering from hip fracture surgery, less than 50% were on appropriate osteoporosis treatment
- For the minority of patients who attended a falls clinic, the falls and fracture risk assessments and treatment offered were better. Primary Care Trusts should consider commissioning, for example Falls clinics, to improve the care of their patients.

Fear of falling is the most commonly reported anxiety among older people (Skelton & Todd 2004). Yet older people can be resistant to lifestyle advice linked to the theme of 'falls', as the word has connotations for many of getting frail, and losing their pride in being upright and independent. Advice from Help the Aged in *Don't Mention the F word 2005* is that services should:

- focus on improving strength and balance, not falls
- encourage people to personally choose the advice and activities that suit them
- not focus on avoiding 'hazards' or physical restriction such as wearing hip protectors – this is perceived as overbearing.

2.7. The National Picture: Bone health and fractures

In developing a falls service consideration must be given to the impact of bone health on people who fall. See appendix 2 Osteoporosis, which is characterised by a reduction in bone mass and density, increases the risk of fracture when an older person falls. The NSF 2001 states that it is a common condition among older people which carries high economic and social costs.

One in three women and one in twelve men over 50 are affected by osteoporosis with almost half of all women experiencing an osteoporotic fracture by the time they reach the age of 70. However most fractures are caused by routine everyday activities such as bending or lifting light loads and are not caused by falls. 40% of patients diagnosed with a vertebral fracture will have constant pain and the majority will have difficulties with activities of daily living.

As Britain's population ages, osteoporosis will become increasingly prevalent. Currently, over three million people in the UK are affected, and the number of osteoporotic fractures is set to double within 50 years (*Royal College of Physicians, 1999)*. There are more than 60,000 hip fractures per year in patients with osteoporosis, costing an estimated £1.73 billion in treatment and social care (*National Osteoporosis Society, 2006).* Both hip and vertebral fractures are associated with substantially increased risk of mortality (*Cauley et al, 2000).*

The national guidelines for the management of bone health (*Osteoporosis NICE guidelines 2005*) indicate that nationally the uptake of this guideline is grossly limited as three months after having any fragility fracture only 20% of people are on appropriate therapy (*TCEHU, 2007*).

3. PREVENTION SERVICES

3.1. The role of exercise

Prevention of falls and deterioration of bone health depends on a number of health social care agencies working together as the risk factors to both are multi-factorial. One of the most important means of prevention is to improve muscular strength and power and deficiencies in gait and balance, through exercise training. (see appendix 3)

3.2. The ambulance service

Local ambulance services can play a key role in securing the patient care pathway for falls linking urgent care to secondary prevention. Nationally ambulance services receive around 700,000 calls annually concerning people who have fallen, 10% of total calls. Ambulance staff assess the need for patients to be conveyed to A&E departments of acute hospitals, and around 25%(nationally)are not conveyed(DOH). This assessment offers staff direct experience of a person's living conditions, including environmental safety and other risk factors.

3.3 A&E Multidisciplinary assessment and intervention

There is strong evidence to support a multidisciplinary assessment and intervention follow up after A&E attendance in the prevention of further falls

3.4. Fracture Liaison service

For patients with new fragility fractures a service model known as fracture liaison can target the highest risk group. Patients aged over 50, who are admitted to hospital or who attend outpatient clinics or A&E due to a low impact fracture, gained from a fall, slip or trip from a standing height or lower, are highlighted to the service, and assessed by a specialist osteoporosis nurse. For a 300,000 population the service would assess around 1000 older people with fragility fractures each year, and of these about half would be recommended for osteoporosis treatment

3.5 Scoping high risk target groups in risk assessment for falls and bone health

Niche groups within the population are at significantly higher risk for falls and fractures: namely women (starting with postmenopausal and increasing beyond age 80), those identified with osteoporosis and those with chronic underlying health problems such as diabetes,depression,osteoarthritis and neurological conditions. Srceening of risk by all health professional engaged with these client groups could enable early identification of high risk falls/fracture patients.

4. NEEDS ASSESSMENT - THE LOCAL PICTURE

4.1 Introduction

This section summarises the need around older people and falls in Wandsworth along with the associated risk factors. A detailed needs assessment is attached in Appendix 5.

4.2 Risk factors for falls

It is important to identify those people most at risk of falling in order to maximize the effectiveness of any proposed intervention. Most falls are associated with one or more identifiable risk factors (e.g. weakness, unsteady gait, confusion and certain medications), and research has shown that attention to these risk factors can significantly reduce rates of falling (Rubenstein 2006). A summary of risk factors are given below:

- Age
- History of falls
- Gender (older old women fall more often than men)
- Ethnicity (Caucasian ethnic groups fall more frequently)
- Burden of chronic disease
- Loss of muscular strength and power
- Sedentary behaviour
- Medicines (the risk of falling increases significantly in patients on four or more medications)
- Psychological status
- Nutritional deficiencies (low BMI & vitamin D deficiency)
- Visual impairments
- Lone living
- Foot problems

4.3 Osteoporosis

Underlying the risk factors for fracture following a fall is a common condition known as osteoporosis, which weakens bone strength. It is the most common bone disorder and is a skeletal disorder characterized by compromised bone strength, predisposing a person to an increased risk of fracture (North American Menopause Society 2010). It affects one in three women and one in 12 men aged over 50 (Department of Health 2009a). Osteoporosis particularly affects postmenopausal women. The incidence in both sexes rises rapidly as the population ages. Its onset is asymptomatic and it is often only recognised after a person falls and sustains a fragility fracture. Currently, almost half of all women and one in six men experience a painful and disabling fragility fracture in later life (Department of Health 2009a).

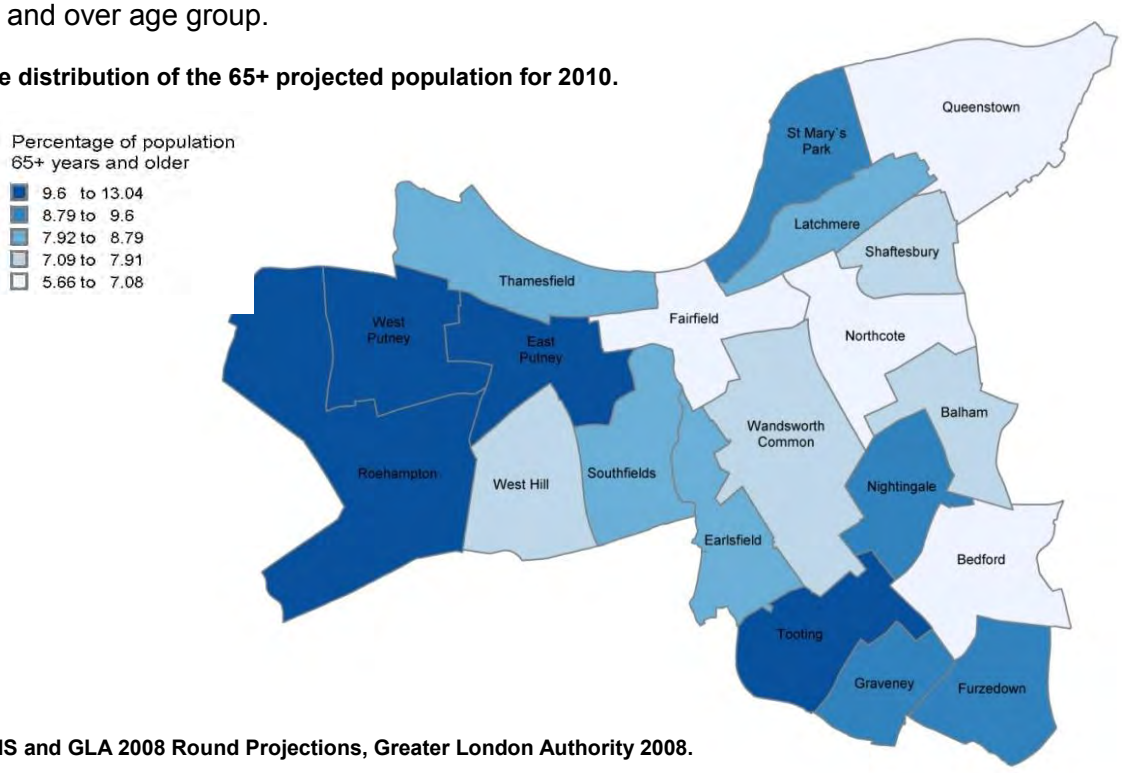
People who have experienced a fracture previously are at increased risk of a further fracture. Bone mass density decreases, and consequently the risk of osteoporosis increases with age. Women are at greater risk of osteoporosis as they have smaller bones and hence lower total bone mass. Additionally, women lose bone mass more quickly following the menopause, and typically live longer. Osteoporosis is less common in men but is still a substantial problem. There does appear to be a strong genetic component as parental hip fracture is a risk factor. Other significant risk factors are: Caucasian origin, early menopause, low BMI, smoking, sedentary lifestyle and long term steroid use.

Currently it is not possible to determine the number of people with osteoporosis in Wandsworth. Using the Department of Health's figures (2009) of 1:3 women and 1:12 men (over 50) suffering from osteoporosis, there are an estimated 12,276 (2,141 male and 10,135 women) over 50s with osteoporosis in Wandsworth (ONS and GLA 2008 Round Projections, Greater London Authority 2008).

4.4 The distribution of the 65+ years old projected population

The highest proportions of people (projected population) aged 65 years and older reside in the West of the borough (Map 1), specifically in the wards of Roehampton and, East and West Putney. Tooting is the other ward with the highest older population followed by Graveney and Furzedown. These areas are areas of high deprivation (Roehampton, Tooting, Graveney and Furzedown) and should be given particular attention. Graveney experiences higher than expected non-hip fragility fracture (2005-10) while Graveney and Furzedown also experience higher than average rates of hip fractures (2005-10). Furzedown also experiences significantly higher hip fracture rates compared to the PCT average in the 80 years and over age group.

Map 1: The distribution of the 65+ projected population for 2010.



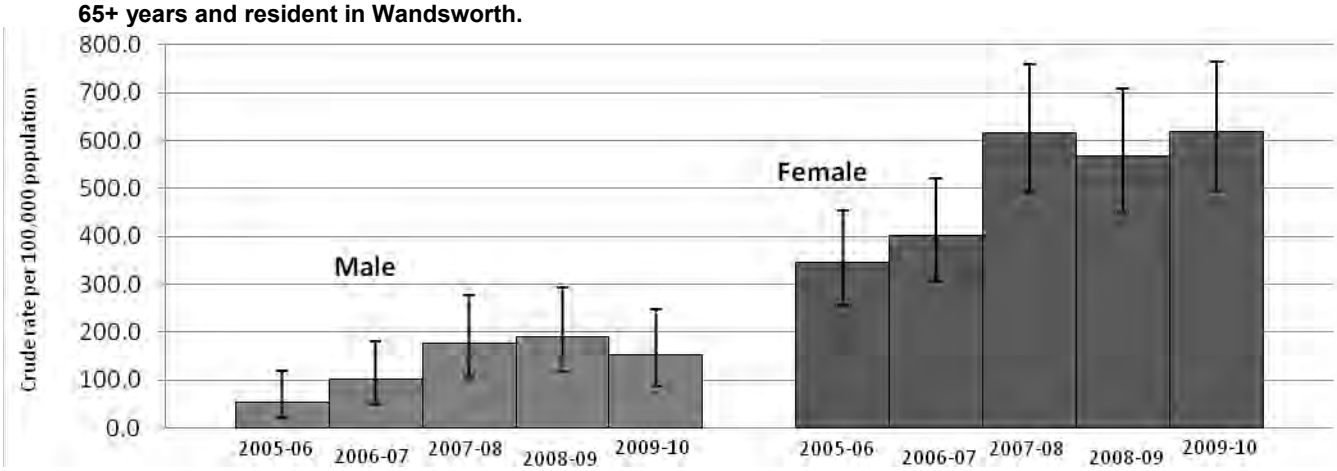
Source: ONS and GLA 2008 Round Projections, Greater London Authority 2008.

There are nearly a third more women over the age of 64 years than men projected to be resident now and in the future in Wandsworth. The total 65 and over population in Wandsworth is projected to increase steadily over the next 10 years and exponentially in some wards from 2020 to 2030. These wards include Thamesfield, Southfields, Queenstown and St. Mary's Park.

4.5 Non-hip fracture and hip fracture admissions

Overall in Wandsworth Non-hip fracture admissions in the 65 and over population have been increasing year on year since 2005-06 for both men and women (Figure 1). Considering that research shows that around 50% of people 65 and over that suffer a non-hip fragility fracture go onto have a hip fracture, this is an important factor pointing to the need for intervention strategies. A similar trend is seen for fractures of neck of femur (hip fracture) admissions (Figure 2).

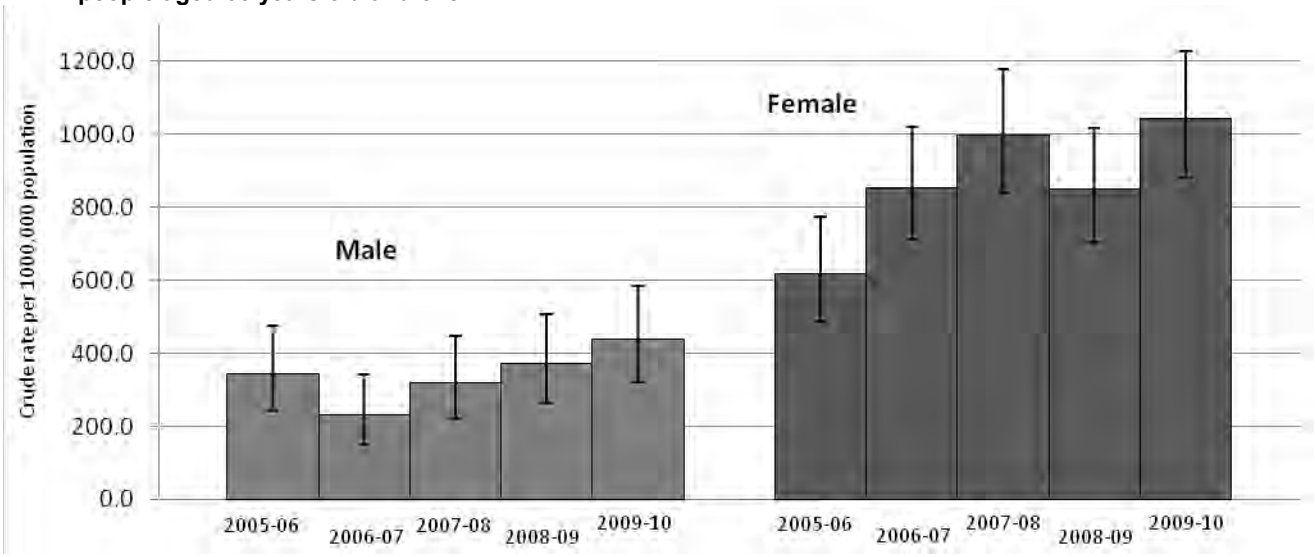
Figure 1: Crude rate per 100,000 population of non-hip fracture admissions (non-elective) for those aged 65+ years and resident in Wandsworth.



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

This trend is likely to carry on due to non-hip fragility fractures increasing and the population changes expected in 20 years. The wards of Bedford, West Hill, Wandsworth Common and Graveney experience higher than expected admissions of non-hip fractures, while West Hill also shows significantly higher rates of hip fractures compared to the PCT average. Fracture (hip and non-hip) rates for post menopausal women (55-64 years old) follow the same trend as in the older age groups with year on year increases in fractures. Again this has implications for a long term strategy as prevention strategies will need to be directed at this client group.

Figure 2: Wandsworth admissions (Crude rate per 100,000 population) for fractured neck of femur for people aged 65 years old and over.



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

4.6 Hospital location for admissions for fractured neck of femur (hip fracture) 65+ Years and older (Wandsworth GP registered)

Table 1 shows where people aged 65 and over who are registered to a GP in Wandsworth are admitted when they have broken their hip. The majority of hip fractures are admitted to St. George's hospital; however this has decreased in proportion of all hip fractures since 2006-07. In 2006-07, over 70% of all hip fractures were admitted to St. George's while this had decreased to half for 2009-10. During the same period admissions to Kingston hospital has increased in proportion by 13%.

Table 1: Breakdown of neck of femur fracture admissions by hospital admitted to (65+ age group).

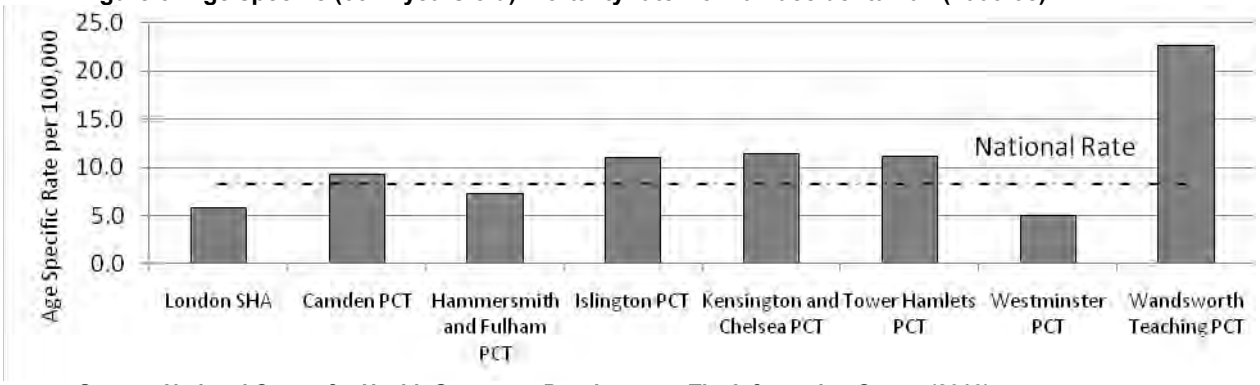
NHS Trust	2005-06		2006-07		2007-08		2008-09		2009-10	
	N	%	N	%	N	%	N	%	N	%
St. George's Healthcare	97	65.1	106	71.6	96	54.9	91	58.0	95	50.3
Kingston Hospital	24	16.1	16	10.8	44	25.1	34	21.7	45	23.8
Guy's and St. Thomas'	0	0.0	<5	2.0	<5	2.3	<5	1.3	11	5.8
Chelsea and Westminster	19	12.8	17	11.5	17	9.7	20	12.7	19	10.1
Hammersmith Hospitals	<5	2.7	<5	2.7	5	2.9	7	4.5	7	3.7
Other	5	3.4	<5	1.4	9	5.1	<5	1.9	12	6.3
Total	149	100.0	148	100.0	175	100.0	157	100.0	189	100.0

Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

4.7 Mortality from an accidental falls

For the period 2006-08, the mortality rate from an accidental fall in the 65-74 years age group in Wandsworth (22.6 per 100,000 population) was substantially higher than the national (8.3) and London (5.8) averages (Figure 3). It is also much higher than all other PCTs in Wandsworth's WCC cluster (PCTs of comparable populations).

Figure 3: Age specific (65-74years old) mortality rate from an accidental fall (2006-08).



Source: National Centre for Health Outcomes Development, The Information Centre (2010).

The same pattern is seen for the 75 years and older age group with Wandsworth's (129.9 per 100,000) mortality much higher than the national (53.2) and London (35.3) averages as well as the other cluster rates (33.7 – 78.2). In fact Wandsworth's mortality rate from accidental falls (75+ years) is two-thirds higher than that of the next highest cluster PCT, Westminster. The mortality rate for 65-74 year olds is the eighth highest in the country while the rate for those 75 years and older in Wandsworth is the 13th highest PCT in the country.

The other key points of the needs assessment are:

- Around one in ten people (65+) die while still in hospital after a hip fracture.

- Mortality from a fractured femur shows Wandsworth with a directly age standardised rate higher than all other similar (WCC cluster) PCTs. However, the rate is only significantly higher than the London average and Hammersmith and Fulham PCT.

- London ambulance service (LAS) conveyance for falls (2009-10) is highly correlated with where the largest proportion of the 65 years and over reside, despite the conveyance incidence being logged at the location of fall rather than the fallers home address.

5. CURRENT SERVICE PROVISION IN WANDSWORTH

Admission interventions

Admissions of falls and fracture patients is through A&E departments at: St Georges,C&W,St Thomas's,Imperial Trust(formerly charing cross) and Kingston. All of these hospitals can provide surgical intervention, medical wards and some geriatric orthopaedic beds.

4.1 Additional services available through St George;s Hospital

1.STAR (previously HIT) – STAR is a multidisciplinary team working in A&E and AMU that provide rapid therapy/social work assessment and intervention in order to prevent inappropriate admission and facilitate referral to community teams. This is a **9 – 5 service 5 days a week though pilots on extended weekday and weekend working are taking place.**

2.Fracture Liaison Service - FLS

Aims to identify patients patients who have been admitted and/or attend outpatient clinics who are high risk of fracture. This is a **part-time post based at St George's hospital**

A monthly healthy bones class - an educational session run by the osteoporosis staff, physiotherapy and dietetic departments discussing risk factors and the role of exercise and diet in bone health.

3

Trust Falls Policy

Each acute Trust will have this in place. St George's Trust Falls Policy: The Falls Forum is now called the Falls Prevention Committee. The STRATIFY tool is part of the nursing assessment on initial admission to the hospital. There is a MDT care plan for those patients at medium to high risk of falls. The focus within the Acute Trust is not to complete all the assessment of falls risk but to refer to community services for further assessment and intervention such as day hospital, IFS on discharge.

Queen Mary's Hospital:
Rehabilitation ward for older people (Mary Seacole) at Queen Marys Hospital, Roehampton

This service provides 42 rehabilitation and medical care beds for older people.
There is a WPCT Falls Trust Policy and staff are expected to complete and action a Ward version Falls Risk Profile as these patients are not acutely unwell.

4.2 Community based falls and bone health services

Day hospitals:

1. **St Johns Therapy Centre (St Georges)**

This service targets the population who live in the east of the borough.
This service targets people over 65 who have fallen or who are at risk of falls. Patients come to St Johns' Therapy centre to attend.Interventions include: physiotherapy led exercise classes, multidisciplinary assessment, one-to-one therapy intervention and a low level falls group provision for patients who are not at the level of independence required for community exercise participation. 9 – 5 service 5 days a week

1. **Brysson Whyte day hospital at Queen Mary's Roehampton CSW**

.This service targets the west of the borough
This service targets people over 65 who have fallen or who are at risk of falls. Patients come to the centre to attend. Interventions include: multidisciplinary assessment, one-to-one therapy intervention, a low level falls group provision for patients who are not at the level of independence required for community exercise participation and Physiotherapist led exercise classes. 9 – 5 service 5 days a week

Intermediate Care CSW and Night Service
This service provides both bed based and domiciliary care which aims to avoid prolonged or inappropriate acute hospital admissions and facilitate rapid hospital discharge.It has 24 hour provision and a 4 hour response rate for assessment. This team can provide a multidisciplinary assessment and then direct onto appropriate services once the patient is discharged from Intermediate Care. Dawes house (IC inpatient beds) staff routinely complete a Falls Risk Profile on those with a history of falling or those who have a fear of falls.

Virtual Ward GP sevice

- The Wandsworth Community Virtual Wards (CVW) project aims to reduce unscheduled admissions by integrating the medical, nursing and social services in the community.
- The key intervention has been to fund a full-time GP and an Administrator to support the existing community services in delivering proactive case management for patients indentified as being at significant risk of readmission.
- A multidisciplinary team 'ward round' chaired by the GP and attended by all relevant social and allied health services is held weekly to co-ordinate and monitor the care of the patients 'admitted' to the CVW.
- There are currently four GP's and four Clerk's employed and the Virtual Wards cover the majority of Wandsworth with the exception of parts of Balham, Putney and Battersea.

Primary Care Therapy Team/Community Neuro Team CSW

These teams complete Falls Risk Profiles and provide a multi-therapy provision for patients within their homes and community settings for rehabilitation. 9 – 5 service 5 days a week

Integrated Falls Service – IFS - Satellite falls and bone health clinics
This service initiated the Satellite Falls and bone health clinics to fill a gap in the current provision in addressing the needs of fallers who were not frail enough to require the other services or those who wanted to attend a non-health venue. It provides a multidisciplinary approach to the assessment and management of patients who have fallen or who are at risk of falling. Community clinics are run in non- clinical settings such as sheltered housing complexes and older people's centres, with the aim of case identification, assessing risk and making recommendations for referral to local health /social services/voluntary and leisure/recreation services. In addition an equitable service is available through clinics at St Johns' Therapy Centre and patients homes when required. All assessments require a Falls Risk Pofile as the starting point.

Additional funding has also enabled the launch in 2009 of the piggyback approach to providing a falls assessment to those people at risk who are attending secondary care appointments in bone health and orthopaedic fracture clinics. This has enabled the start of a truly integrated approach to falls and bone health alongside the part-time funded Specialist Osteoporosis nurse and Osteoporosis Consultant at St Georges Hospital.
An additional role of this team has been to try and influence the implementation of the Falls Risk Profile on the Wards at QMH and Dawes House.

Falls and Injuries Prevention Exercise Service (FIPES)
Run from Public Health Department (though with plans to handover to Community Services Wandsworth from the summer of 2010), the service provides fourteen weekly exercise classes at various sites around the borough. This service takes referrals from other teams but is not integrated into the other services.

Osteoporosis Exercise Class.
At present only one class specifically for patients with osteoporosis is run in by Public Health. This takes place weekly at the Balham Leisure centre. There are on average 7 patients attending the osteoporosis class.

Tai Chi
Several Tai Chi classes are run by WBC and NHS Wandsworth PH. This is used by some teams but it is directed at the more able patients – those who have not fallen or 1 non-injurious fall.

Sheltered housing based exercise classes.
A partnership between Wandsworth Housing Department, Vida Wellness and NHS Wandsworth PH has trained the majority of the Sheltered Housing Officers (SHOs) as instructors in the OTAGO exercise programme. This does not fit within an integrated approach and currently does not link with other providers or provide reports.

4.3 South West London and St Georges Mental Health Trust
There is a flow chart for the management of falls on a ward / day hospital for in patients. All patients admitted to wards have standard risk assessment documentation completed. FRASE (Falls Risk Assessment Scale for Older People – Cannard 1996) is applied. This tool identifies if people are at low, medium or high risk of falls.

There is a flow chart for the Management of falls in the community.
All patients under the care of an older people's CMHT have standard risk assessment documentation completed. There is a Multi Professional Screening Tool to identify Risk Factors for Falling. However many dementia patients are not managed by the CMHT (or have been discharged) There is a gap in the provision for these patients who currently come under PCTT.

4.4 Primary care (GPs)
GP's refer patients onto all of the existing services.

Directly Enhanced Services (DES)
32 out of the 47 Wandsworth GP practices have signed up to (DES) guidance for GMS contract 2008/09 for 2 years for osteoporosis. This information appears to be held locally.

4.4 Wandsworth Borough Council
START (Short Term Assessment and Reablement Team)
Wandsworth START is a short-term homecare service for those who need help with personal care and domestic routines.

Telecare / Community Alarm (WATCH)
Telecare is a passive monitoring system that provides reassurance to service users and their carer's, enabling them to remain independent and safe in their own homes for longer. It

consists of a range of sensors which, when activated, will send an alert to the 24-hour WATCH lifeline Control centre.

Wandsworth Home Improvement Service
The service helps older homeowners who need to repair, maintain, improve or adapt their home and any household with a disabled person who wants to remain living independently at home

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Fit For Life
A general exercise programme run by WBC targeting older people. The exercise prescription during each class will usually include strength and balance training as well as cardiovascular exercise.

Wandsworth Integrated Community Equipment Store (WICES). Joint funding provision of equipment through Social Services and CSW.
This service is integrated into community nursing, therapies ,St Georges and Wandsworth Social Services OT service to enable early appropriate access to equipment.

4.5 Third sector partners

Age Concern Wandsworth
Offers a number of services for older people in Wandsworth including;

- Out and about scheme - opportunity for those who are able but lack confidence to go out alone to be accompanied by a volunteer.
- Practical help at Home Service

6. SUMMARY OF KEY FINDINGS & GAP ANALYSIS FROM THE NEEDS ASSESSMENT

Recommendations from the needs analysis and services available:

The DOH recommends comparing needs and current services by:

1. **Quantity of service units against number in need**

The needs analysis shows that there are issues that need to be addressed around falls and fracture prevention. These include addressing the high mortality figures, addressing the data around non-hip fragility fractures to establish the scale of the problem and a review of resources, and addressing the engagement of all health professionals and multiagency staff in scoping for falls and fracture prevention and the role of the exercise services in an integrated delivery.

2. **Quality of available services with comparable services elsewhere**

This needs to be included in the work streams within the recommendations section particularly around processes for gathering data and information about non-admission fragility fractures.

3. **Location of service delivery against geographical base of need**

This issue is of particular relevance following the needs analysis as particular niche wards have presented requiring specific attention.

The Wards of Roehampton, Wandsworth Common and Nightingale are identified with particularly high density of older people – largely due to the care homes and residential homes. This client group require a delivery of service to their community venue integrated into their current service provision (i.e., may be around education and sharing good practice). Detailed independant interviews have identified the current provision of Satellite Falls and Bone Health Clinics as a successful model that meets the needs of service users by taking the service to the people(Staying upright - appendix 3).This model of service delivery could be rolled out to other services groups but with appropriate service teams to provide a virtual day hospital model – taking the day hospital MDT out to ensure that the complex needs of this group and the carers are addressed. An additional need for these teams may be pharmacy input.

In addition West Hill which has a higher than expected hip fracture rate needs further investigation – this would be best led by the Integrated Falls Service whose remit is around the less frail population and prevention.

4. **Range of service to meet all levels of need**

Once the full data picture is available the resources need to be reviewed again to ensure that the needs of all patients are being met.. At each level of patient classification from the independant older people to the totally dependant there needs to be a falls and osteoporosis screening programme for risk and an evidence based intervention programme including exercise.

5. Choice of services

Within the Falls Pathway patients are given the choice around which health professional and service they would like to have a falls and bone health completed by(appendix 4). However in reality not all professional groups are fully engaged. Recommendations are included below.

In addition around the delivery of services and choice of venue/groups or 1;1 there needs to be clear procedure to ensure that patients are given choice. Systems need to be put in place to capture this information and use it to allocate resources effectively to meet the need of the client group.

7. RECOMMENDATIONS

The importance of the recommendations is to translate the population needs captured into services that support individuals who have these needs.
The following recommendations are based on the objectives from DH guide; Falls and Fractures: effective interventions in health and social care (2009)

Objective 1 **Prevent frailty, promote bone health and reduce accidents through encouraging physical activity and health lifestyle and reducing unnecessary environmental hazards**.	
Recommendation 1	Occupational therapy professional group to ensure a validated home assessment tool is used across agencies. Ensure clarification of all of these pathways so that services are easily understood and accessible to patients/carers and cross agency groups – this will require engagement of service user groups by the professional group.

Objective 2 **Respond to a first fracture and prevent the second through liaison services in acute and primary care settings – integration potential**	
Recommendation 1	The implementation of a systematic case finding process for patients with new fragility fractures and those with a history of fragility fracture or identified at risk of osteoporosis. **i.** With an inadequate data base for non-hip fragility fractures (capturing only those requiring admission) the first stream of this work needs to be around implementation of data collection systems for non-admission fragility fractures . **ii.** The second stream of work is to pull together existing clinical services to review current case finding processes and find ways of overlapping this data with Primary Care data. At present case finding is opportunistic through the part time fracture liaison nurse at St Georges and the therapy teams engaged in using the Falls risk Profile (which assesses bone health risk as well).In addition some case finding has taken place through a pharmacy audit at GP practices. This work needs to be pulled together and led to ensure an embedded integrated approach to case finding high risk falls and bone health patients. There are resource issues around this as it will require clinical audit/management of processes alongside the leadership (see resource issues I and ii below). **iii.** The third stream of the work is to review the current resources directed at fracture prevention and the allocation within the borough to ensure an equitable service for all patients. The successful model of inreach run by the Integrated Falls Service to A&E St George's needs to be rolled out to other Acute providers to ensure scoping of falls and fractures .A review of the therapy rapid response team at St Georges (STAR) is recommended as the role of this team around falls and fracture screening needs clarification

	and data collection and the impact of a 9-5 weekday service needs to be analysed.. There may be resource issues around this. **iv.** The fourth stream of this work is the exercise intervention which needs to ensure that that a Physiotherapist assesses the patient and instructs and educates on an appropriate individually tailored programme to address falls prevention and bone health. There may be resource issues around this.
Recommendation 2	• A focussed multiagency workstream to complete a closer analysis of patients within West Hill Ward to address the high relative levels of hip fracture. This work requires project leadership and partnership across multiple agencies. It should aim to pull together some of the needs analysis data audits that are held locally within practices ie: DES and Pharmacy audit. • In addition the wards with older populations and high incidence of fractures will require a similar approach but may overlap with other recommendations around care homes. These are Wandsworth Common, Nightingale,West Putney ,Graveney, Furzedown and Bedford.
Recommendation 3	Integrated Falls Service Facilitator to look at implementation of the Falls Risk Profile on a wider scale so that all health professional including specialist nurses, matrons , community nurses and all therapies include it as a standard part of an assessment for patients who have fallen or are concerned about falling. This approach will enable active case finding for patients at risk of falls and fracture alongside and in-line with the systematic approach .Systems for electronic tagging and tracking will need to be considered .
Recommendation 4	• A separate work stream is required around integration and partnership working around falls prevention and management within hospital wards in Wandsworth including rehabilitation beds and Care Homes including mental health services. This requires a steering group with identified leadership to coordinate across different organisations and to implement appropriate screening tools and care pathways to engage carers in falls and fracture prevention and education. In addition it presents an opportunity to engage Day Hospitals in a more proactive in-reach model following the Satellite Falls and Bone Health Clinic model. Integrated working between different specialisms such as older people rehabilitaton services and mental health teams would support community dwellers in residential and care homes to increase uptake of appropriate bone health medication for residents plus provide training and guidance in falls prevention and intervention. This requires clear and regular reporting systems to be in place.

Objective 3 **Intervene early to restore independence through falls care pathways, linking acute and urgent care services to secondary prevention of further falls and injuries**	
Recommendation 1.	Review the data collection through urgent care pathways and Framework particularly around coding/diagnosis as further attention is required around identifying and implementing systems for tracking patients through services to enable clear communication and monitoring of risk assessments/interventions for falls and bone health. Further development of the single assessment process across Wandsworth and the shared patient notes (Framework) to enable all services to access database and in addition link up with EMIS (GP database) – to save time and prevent duplication. This has resource implications around the setting up of the process and clearly communicating this.
Recommendation 2.	Review current commissioned arrangements and existing capacity for geriatrician input and ensure that the falls agenda is considered as part of the integration of CSW with St Georges Acute Trust.
Recommendation 3.	Establish performance monitoring arrangement for the effectiveness of bone health and falls services across the organisations. In addition systems for capturing data from all services on a monthly basis including capturing the quality of services eg: Ensure that patients receive detailed clinical information (e.g. clinical letters and discharge reports) plus a written intervention plan.Quarterly patient forums to enable direct feedback.
Recommendation 4.	Work stream around LAS conveyance rates – admission avoidance but adequate pathways to address high risk non-conveyance due to the existing high mortality rate. Review referral pathways to LAS work including those involving visual acuity, cardiac status including basic ECG, syncope investigation in order to develop an algorithm / pathway for patient management.
Recommendation 6	Restructure the Falls and Injuries Prevention Exercise Service (FIPES) moving it out of Public Health and into the Integrated Falls Service, using Harmoni (for the remainder of their contract for 2010/11) as a single point for referral alongside direct access to services. The classes need to be reviewed and evaluated to measure their effectiveness and demand and this needs to take place as part of a review of all exercise services available for falls and bone health. Consideration should be given to whether re-marketing classes with a positive spin on them focusing on staying strong and steady rather than falls prevention would be of benefit and encourage take up. In addition with the recommendation for FIPES to transfer from PH to CSW a review of all exercise provisions across organisations is needed as provision by different agencies

	needs to be reviewed strategically to ensure that the range and demand is being adequately met.
Recommendation 7	A dedicated work stream within the Older People's Strategy / Steering Group to focus on the inadequacies around addressing Vitamin D deficiency.

Objective 4 **Improve patient outcomes and improve efficiency of care after hip fractures through compliance with care standards**	
Recommendation 1.	• Commissioning to access the National Hip Fracture Database (NHFD) regarding local Acute Trust participation and reports.
Recommendation 2	With regard to the high mortality rate and higher than average length of stay Commissioning to review services at all of the Acute Trusts managing Wandsworth hip fractures against the 6 key standards (in line with the National hip fracture database): *1. All patients with hip fracture should be admitted to an acute orthopaedic ward within 4 hours of presentation.* *2. All patients with hip fracture who are medically fit should have surgery within 48 hours of admission, and during normal working hours.* *3. All patients with hip fracture should be assessed and cared for with a view to minimising their risk of developing a pressure ulcer.* *4. All patients presenting with a fragility fracture should be managed on an orthopaedic ward with routine access to acute ortho-geriatric medical support from the time of admission.* *5. All patients presenting with fragility fracture should be assessed to determine their need for anti-resorptive therapy to prevent future osteoporotic fractures.* *6. All patients presenting with a fragility fracture following a fall should be offered multi-disciplinary assessment and intervention to prevent future falls.*

Objective 5 **Identify current and future health needs through data collection and analysis and ensure services meet the individual needs** Opportunities for linking systems and partnership working need to be further explored through this avenue eg:all teams need to have access to Framework and EMIS to get up to date information on the patients journey prior to intervention. It would seem that many falls patients are managed through multiple services (sometimes even happening at the same time) –and time is not being taken to reflect on the patients journey and to case manage appropriately.This requires a cross service IT working group.	
Recommendation 1	Include incidence of falls and fractures in the JSNA
Recommendation 2	*1.* As recommended in the RCP National Falls and Bone Health

	Clinical Audit PH to establish and report the number and rate per 100,000 of both hip fractures and other fragility fractures and provide reliable estimates of expected levels of falls and fractures based on local demographics. • Mortality rates for falls needs to be addressed through the Acute providers and fed back to a falls strategy group
Recommendation 3	Commissioners to examine the local data that has been made available from this report and identify weakness and put remedial programmes in place *t*o develop robust and reliable data (DOH 2009). A repeat National Audit of the Organisation will take place in 2010. • An improved system for integrated working between pharmacy services and the older people directorate to ensure that drug audits feed into other workstreams. • Implementation of a process for collection of data on falls/fractures within care homes in Wandsworth and any gaps in services, support and education to care homes. This could be done in line with CSW datix reporting for the wards. It will require some integrated working between current wards service and care homes to establish protocols for reporting,intervention and support and training.

Objective 6 **Improve patient experience by involving patients/ carer's in service review and development**	
Recommendation 1	Use a patient experience questionnaire to provide information about falls and bone health services .CSW PPI to help develop this.
Recommendation 2	Ensure further patient / carer's / public involvement in the development and implementation of this strategy For World Class Commissioning, need to be proactive in seeking out the views and experience of the public,patients, their carers and other stakeholders.

8. RESOURCE IMPLICATIONS

A 2010 RCP National Audit has been timetabled from September this year. This is a clinical and organisational audit.
In view of the significant amount of time dedicated to this project and the very detailed analysis it is imperative that the recommendations are acted on promptly and the passion and commitment driving this work is not lost. In view of this there are some short term resource implications which are focussed around the prevention of silo work and implementing clear strategies to facilitate integrated working.

Resource implications are around:

- Leadership of the whole Strategy and taking work streams forward .
  The leadership from Commissioning for this work has been disjointed and fragmented for a variety of reasons. Clear commitment for resource allocation and a work continuum needs to be made.
- Multiple complex workstreams have been recommended in order to truly address the strategic needs. This will require a falls strategy steering group to ensure that workstreams action and report appropriatelyProvision of clinical audit secondment to implement systems and data collection for the identified service gaps. This role could work alongside the Specialist leadership roll (as above)
- Provision of Consultant geriatrician time into community

9. NEXT STEPS

It is recommended that NHS Wandsworth lead a cross agency implementation / steering group to take forward the recommendations and develop an action plan following approval of the strategy.

It is proposed that this group will report to the Wandsworth Strategy Group for Older People (WSGOP) and to its sub group – health and healthy living dimension of the older people's strategy.

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Appendix 1.

National Audit of the
Organisation of Services
for Falls And Bone Health
of Older People
Commissioned by:
Healthcare Quality Improvement Partnership
Conducted by:
The Clinical Effectiveness and Evaluation Unit, Clinical Standards Department, Royal College of Physicians, London
Advised and approved by:
The Falls and Bone Health Steering Group

Report for
Wandsworth Teaching Primary Care Trust
(Site code 061391WWT)
March 2009
England, Wales and Northern Ireland
Organisation of care index and domain scores, nationally and for your site

Table 44	PCOs 2008	Maximum	One quarter of sites had a score equal to or less than	One half of sites had a score within	One quarter of sites had a score equal to or more than	Your site
Domain 1 (D1)	Local strategies & commissioning	100	26.7	26.7 to 60.0	60.0	17
Domain 2 (D2)	Case finding and referral	100	66.7	66.7 to 83.4	83.4	83
Domain 3 (D3)	Structure and staffing	100	33.3	33.3 to 66.7	66.7	100
Domain 4 (D4)	Specialist falls management	100*	56.9	56.9 to 85.3	85.3	71
Domain 5 (D5)	Service settings	100	39.4	39.4 to 75.8	75.8	88
Domain 6 (D6)	Training and audit	100	19.2	19.2 to 76.9	76.9	100
Index	(D1+D2+D3+ D4+D5+D6)	100	47.3	47.3 to 70.7	70.7	71

* - (scaled to take into account those with / without A&E / MIU facilities)

Appendix 2

National Institute for Health and Clinical Excellence (NICE) Clinical Guideline 21 “Falls: The assessment and prevention of falls in older people”, 2004 (NICE CG 21)

NICE Technology Appraisal Guidance 87, “Bisphosphonates (alendronate, etidonate or risedronate), selective oestrogen receptor modulators (raloxifene) and parathyroid hormone (teriparatide) for the secondary prevention of osteoporotic fragility fractures in post menopausal women”, 2005 (NICE TAG 87)

British Orthopaedic Association (BOA), “The Care of Fragility Fracture Patients” (Blue book), 2007

Appendix 3

'STAYING UPRIGHT'

AN EVALUATION OF THE SATELLITE FALLS AND BONE HEALTH CLINICS IN NHS WANDSWORTH

Matthew Whiting & Amy Scammell
R&D Unit
NHS Wandsworth

December 2009

Executive Summary

Who attended the Satellite Falls and Bone Health Clinics

- The SFBHCs successfully attracted the clients they aimed to attract: individuals with a history of falling and individuals at risk of falling in the future.
- The average age of attendees has decreased over the last three years since developing a working relationship with the Bone Health Clinics.
- The SFBHCs are now accessing at risk clients at an earlier stage in their 'falling career', with less clients already classified as multiple fallers prior to attending.

The impact of falling

- The SFBHCs were seen as promoting *both* physical and emotional wellbeing after a fall. Similarly, preventing future falls was a way of maintaining and supporting physical and emotional wellbeing within a potentially vulnerable client group.
- This multidimensional understanding of the impact of falling shaped the development of a service that was holistic and client centred.

Why was the service needed?

- The SFBHCs added an important preventive dimension to existing methods of treating falls within Wandsworth PCT – these preventive strategies were highly valued by both healthcare professionals and clients.
- The role of the SFBHC in serving as a one-stop shop for coordinating treatment to prevent falls greatly enhanced the care received by patients.

Reaching the Target Clients

- A proactive and open access referral system was successful in reaching many targeted clients.
- Raising awareness of the service amongst clients and relevant health and social care professionals was very important. Including a member of staff with marketing expertise was central to achieving this.
- Further scope remains for reaching more people in need of the service throughout the catchment area.

A holistic and client centred service

- The SFBHCs provided a comprehensive screening assessment (using a specifically designed 'falls risk profile' tool) that placed the client at the centre of the process. This was warmly received by clients who viewed it as an important opportunity to discuss their concerns in-depth with a health professional.

- The SFBHCs provided an opportunity for at risk clients to link in to a wide range of health and social care services (from physiotherapy and podiatry services to exercise classes and lunch clubs), reflecting the holistic approach taken to preventing falls.

- The positive attitude of SFBHC staff that emphasized helping clients to be as active and independent as possible contributed to making the service very successful in the clients' eyes.

A Multidisciplinary Team

- Building interdisciplinary relationships benefitted the patients by providing them with many relevant health professionals through one service and benefitted professionals through shared learning from other disciplines.

- The rotational nature of many SFBHC staff helped disseminate awareness of falling, but it also presented distinct challenges for maintaining a client-centred and flexible attitude within the team. A continuous post that brought human resources expertise was central to addressing this challenge.

The Impacts of the Service

- Measuring the short term impacts of a preventive service is extremely challenging. Its impacts must be measured in wider terms than merely a reduction in falls – although this remains an important indicator of success.

- Whilst the service was seen as preventing falls for some clients, this was not the case for all clients interviewed. Rather the ability to reduce the number of falls depended on the pre-existing severity of the condition of the client.

- In all cases other important impacts were reported, including identifying undiagnosed osteoporosis and other medical conditions, ensuring clients were receiving the correct medication, enhancing an understanding and awareness of falling, boosting confidence, helping clients link in to other relevant health and social services, and providing support for potential fallers and their families.

- The SFBHC may benefit from using additional broad measures of quality of life (such as the Short Form 36 or Short Form 12) in order to assess the wider impacts of the service.

Areas for Improvement/ Future Development

Some scope remains for the improvement and further development of the SFBHCs in the future and consideration should be given to the following:

1. The potential remains for the clinics to attract more clients by raising the profile of the service further.

2. Increased follow-ups of clients and clinics may be beneficial to attendees.

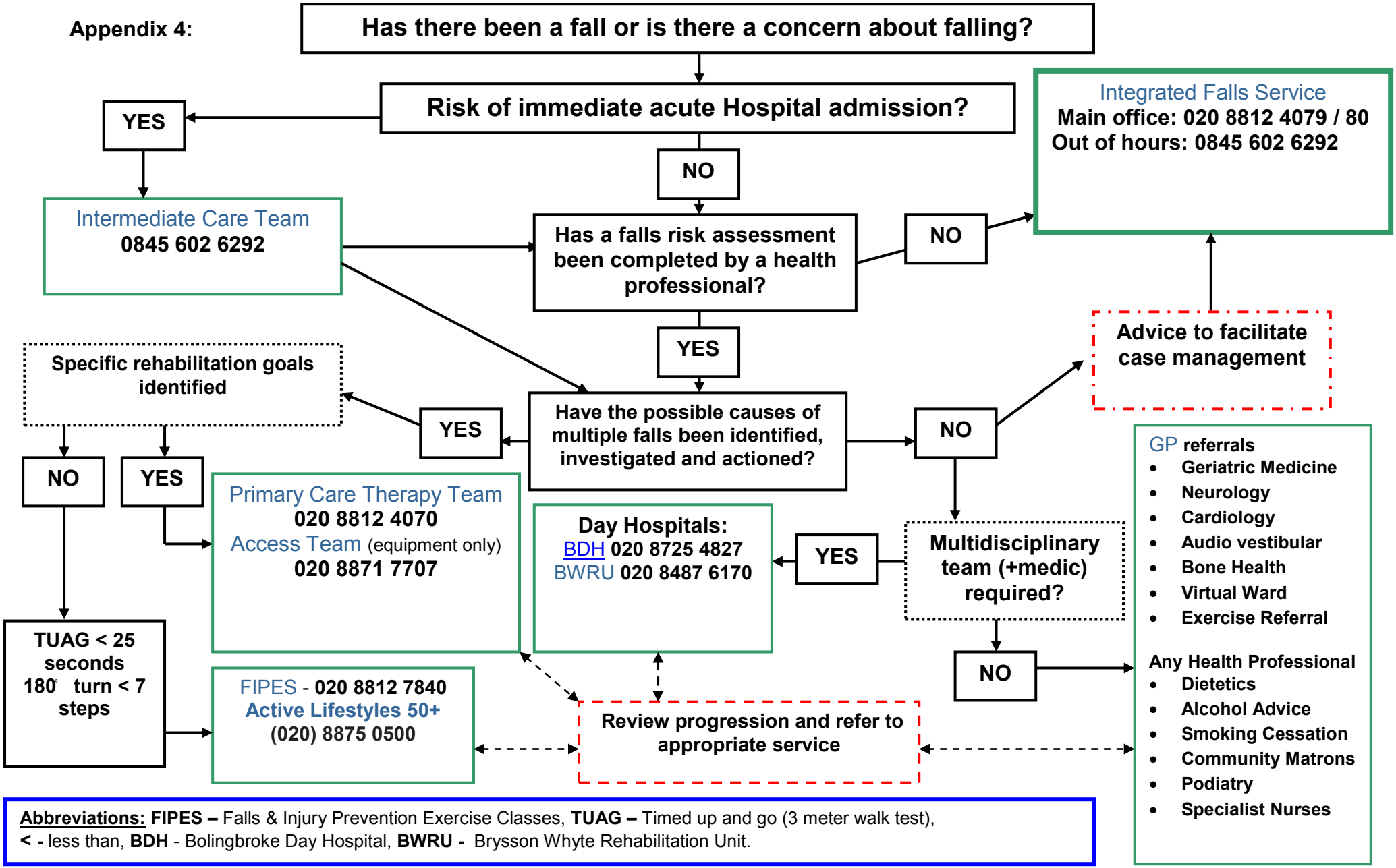
3. Building links with the Division of Geriatric Medicine at St George's Hospital may offer an important opportunity to provide additional training to SFBHC's staff, to screen fallers for certain disorders and to develop links with expert medical practitioners in the field of geriatric medicine.

4. Providing training to relevant health and social care practitioners to raises the profile of the SFBHCs and the Integrated Falls Service may prove a valuable way of highlighting the dangers of falling and increasing the number of relevant patients being referred to the service.

FALLS & BONE HEALTH PATHWAY – HEALTH PROFESSIONALS

Final Version

Appendix 4:



Abbreviations: **FIPES –** Falls & Injury Prevention Exercise Classes, **TUAG –** Timed up and go (3 meter walk test), **<** - less than, **BDH** - Bolingbroke Day Hospital, **BWRU** - Brysson Whyte Rehabilitation Unit.

Falls prevention, management and bone health needs assessment
Appendix 5

Dyfed Thomas, Public Health Project Manager, NHS Wandsworth
Bernadette Kennedy, Integrated Falls Service, NHS Wandsworth
Amanda Cranston, Consultant in Public Health, NHS Wandsworth

4.1. Introduction

This section describes the need around older people and falls in Wandsworth along with the associated risk factors. The risk of falling increases as people get older and falls represent the most frequent type of serious injury in the over 65s age group and the commonest reason for hospital attendance. The most serious consequence of falling is hip fracture. The majority of fractures in older people occur as a result of a fall from standing height (fragility fracture).

Falling is associated with increased morbidity and mortality. It is the main cause of accidental death in people aged 85 and over (DTI, 1997, 1999). The resulting mortality is often as a consequence of sustaining a hip fracture as 30% of this patient group will die within the first year. For those that survive, up to 50% are no longer able to live independently, with 80% not regaining their pre-fracture level of function (Poor et al, 1995).

4.2. Definitions

Fall - A fall is "an unexpected event in which the participants come to rest on the ground, floor or lower level". This is the most recent definition agreed by a work stream through ProFane (European special interest group in falls) (Lamb et al. 2005, Hauer et al. 2006).

Also within this needs assessment terms such as fragility fractures, non-hip fractures and neck of femur fractures will be referred to. Here we list their definitions.

Fragility fracture – fractures that result from a fall from standing height. This fact is not coded when a person with a fragility fracture enters hospital, only that the person has suffered a fracture will be recorded. Therefore, for analysis purpose we assume that all fractures for the following diagnoses in the over 65 are due to fragility fracture from falls:

- Fractured neck of femur
- Proximal humerus
- Wrist fracture (commonly referred to as smiths and colles fractures)
- Fractured pelvis
- Vertebral fracture (thoracic and lumbar only) (British Orthopaedic Association 2007 and Department of Health 2009a)

Non-hip fragility fractures - All of the above except a fracture of the neck of femur.

Neck of femur (the hip) – a short, constricted, strong bar projecting at an obtuse angle (about 125°) from the upper end of the shaft of the thigh bone and supporting its head.

4.3. Population profile

The Wandsworth PCT GP registered population at 31st October 2009 was 363,776. The projected resident population for 2010 is 287,964. The population is highly mobile, has a higher than London and England average of young adults (25 to 44 years) and is highly diverse in terms of ethnicity and socio-economic indicators.

The *National Audit of the Organisation of Services for Falls and Bone Health of Older People* (Healthcare Quality Improvement Partnership 2009a) refers to older people as being 65 years old and over. The projected number of people that are 65 years and older in Wandsworth for 2010 are 24,204 accounting for an estimated 8.4% of the resident borough population.

4.3.1. Resident population projections over the next five years

Table 1 shows the breakdown of the current projected resident 65 years and over population and its likely change over the next five years. The data is broken down into male, female and total population as well as age groups.

Table 1: Projected 65 years and older population in Wandsworth.

	65-74			75-84			85+			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
No. in 2010	5,998	6,848	12,845	3,418	4,633	8,051	1,056	2,252	3,308	10,472	13,733	24,204
No. in 2015	6,015	7,182	13,197	3,440	4,382	7,822	1,108	2,065	3,173	10,564	13,628	24,192

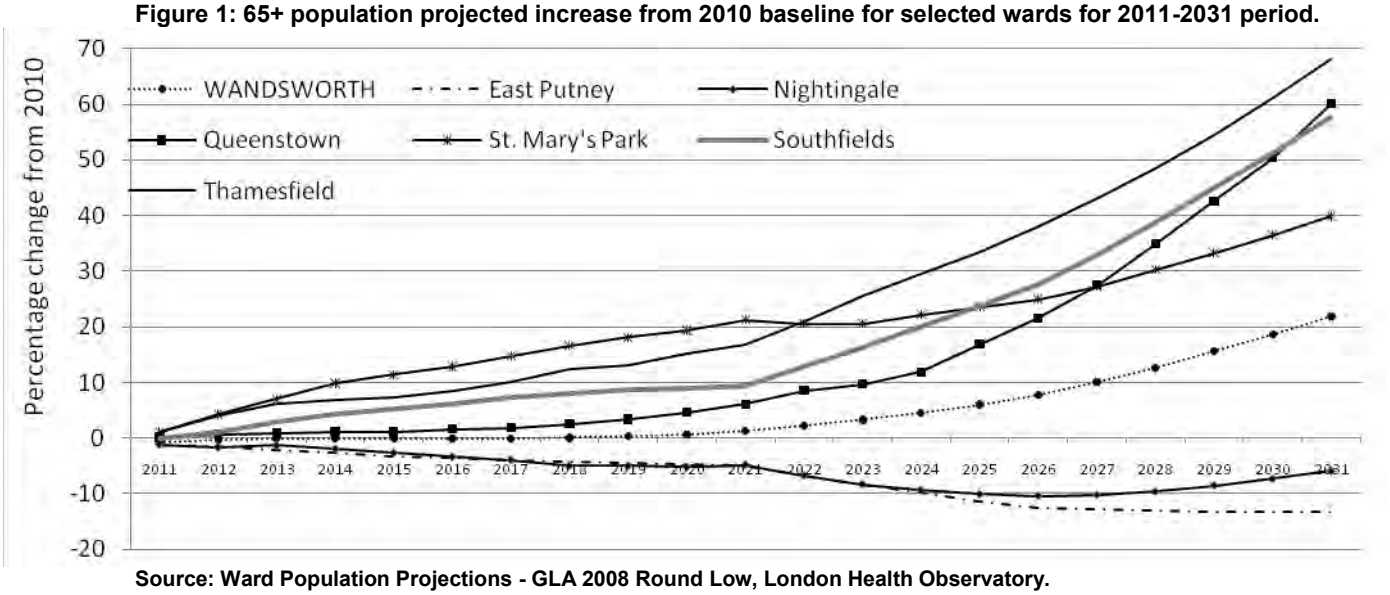
Source: GLA 2008 Round Projections, Greater London Authority, 2008

Over the next five years the older population in Wandsworth is projected to remain constant overall. By age group, the population is projected to rise by 2.7% in age group 65-74 years whereas in age groups 75-84 and 85+ the population is projected to decrease by 2.8% and 4.1% respectively.

Splitting by gender reveals that there are more women than men over the age of 64 living in Wandsworth. The proportional difference between genders will remain the same over the next five years. For 2010 it is projected that there are 24% less men aged 65 years or more compared to women residing in Wandsworth. In 2015 the projected difference is estimated to be 22%. Reflecting the fact that females experience a longer life expectancy than men, the difference in the number of females against males increase with age. For 2010 for example there are 12% more women than men in the 65-74 age group increasing to 53% in the 85+ age group.

Overall Wandsworth's 65 and over population is not projected to change largely until 2020 and beyond, however large increases will be experienced within specific wards (Figure 1). St. Mary's Park sees the largest proportional increase, 20% over the next 10 years, while by 2031 the 65 plus population in Thamesfield is projected to increase by 68%, followed by Queenstown and Southfields at 60% and 57% respectively. The majority of wards will witness a proportional increase of 12-45% over the next 20 years. Some wards such as Nightingale and East Putney will see a reduction in the older population, 6% and 13% for these two wards respectively.

Figure 1: 65+ population projected increase from 2010 baseline for selected wards for 2011-2031 period.

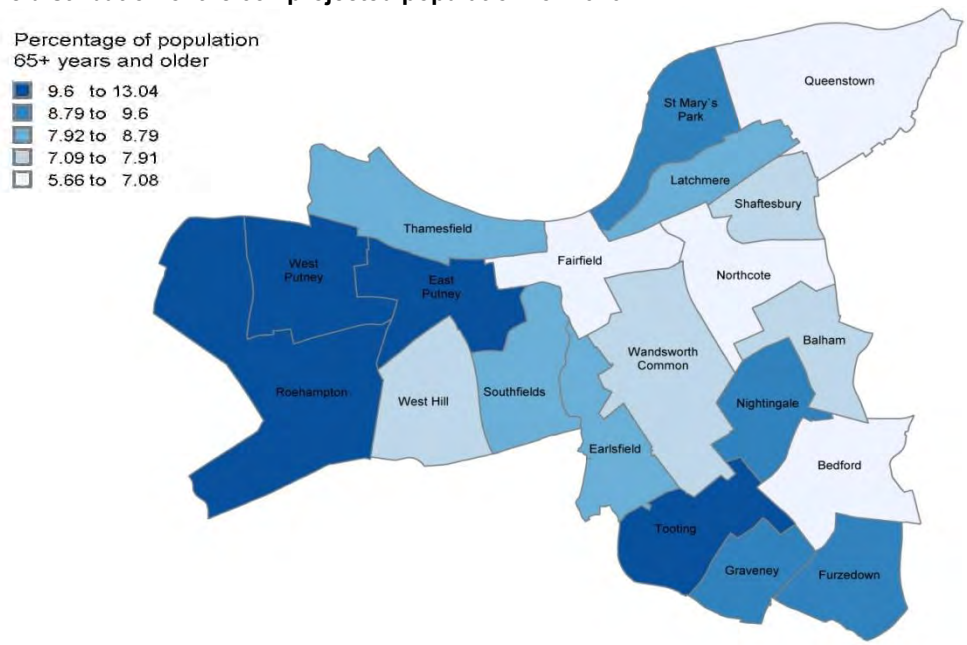


Source: Ward Population Projections - GLA 2008 Round Low, London Health Observatory.

4.3.2. The distribution of the 65+ years old projected population

As can be seen (Map 1) the highest proportions of people (projected population) aged 65 years and older reside in the West of the borough, specifically in the wards of Roehampton and, East and West Putney. Tooting is the other ward in the highest quintile (groups of 4 wards) of older population. Roehampton and Tooting are also considered to be in the group of wards which experience the most socio-economic deprivation in Wandsworth. Just over one in eight people in Roehampton are projected to be over the age of 64 years old and nearly one in ten in the ward of Tooting. The two other wards with the highest proportions of those aged 65 and over are not considered to be deprived. East and West Putney are shown to be of middle to low deprivation.

Map 1: The distribution of the 65+ projected population for 2010.

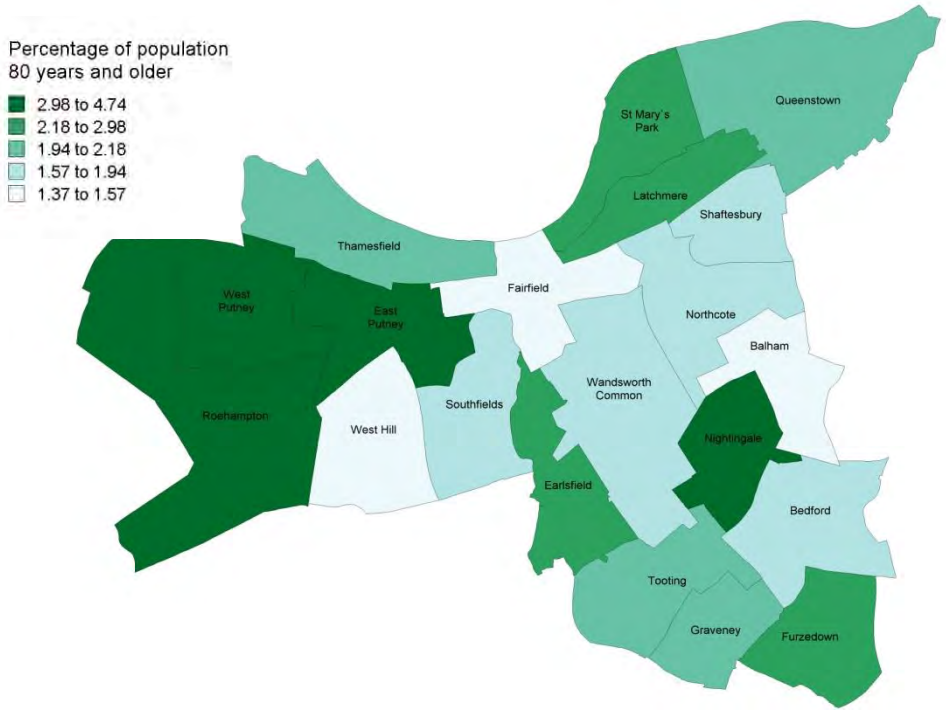


Source: ONS and GLA 2008 Round Projections, Greater London Authority 2008.

4.3.3. The distribution of the 80+ years old projected population

There are a projected 6,773 people (2,442 M, 4,331 F) aged 80 years and over residing in the borough of Wandsworth. West and East Putney, Roehampton and Nightingale have the highest proportions of the 80 years and older population (Map 2), similar to the 65 and over population. However, West Hill does not have a relatively high proportion of 80 plus population, meaning it has a greater proportion in the 65 to 79 age group. It is also worth noting that the high deprivation areas of Furzedown and Latchmere have a relatively high proportion of people aged 80 and over. In summary the population projection figures indicate that a two pronged population based strategy is required; a short term plan that covers the next 5 years and a long term plan that incorporates the significant changes to the older people population in the borough of Wandsworth over the next 20 years.

Map 2: The distribution of the 80+ projected population for 2010.



Source: ONS and GLA 2008 Round Projections, Greater London Authority 2008.

4.3.4. Ethnicity and older people

The latest projected population shows that the ethnic (non-white) 65 years and older population in Wandsworth for 2010 accounts for 21.5% of the 65+ population at 5,234 in number. Over the next five years the ethnic population of Wandsworth is not projected to vary much, with an increase in number to 5,556 which translates to an increase of 1.32% in the proportion of the borough population being non-white. The exact breakdown between ethnicities is shown in Table 2.

Table 2: Projected ethnicity population breakdown (65+ years old) in Wandsworth 2010 & 2015.

	Black Caribbean		Black African		Black Other		Indian		Pakistani		Bangladeshi		Chinese		Other Asian		Other	
	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015
Persons	1,940	1,794	595	680	230	230	999	1,084	437	479	82	84	184	251	490	536	278	417
Male	841	711	260	257	112	102	439	460	258	248	46	40	83	103	238	242	129	182
Female	1,099	1,083	334	423	117	128	560	624	179	231	35	44	101	149	252	294	150	235

Source: 4. Ethnicity Projections GLA 2007 PLP Low, London Health Observatory.

Besides “Other” the largest increase in number between 2010 and 2015 will be among the Chinese 65+ years old population with an increase of 36% in number over 5 years. The largest ethnic group, “Black Caribbean”, sees a drop of 7.5% in number while Indian, Pakistani and Bangladeshi experience an increase ranging from 2.4% to 9.6%.

However there are inherent difficulties around predicting migration rates of older relatives and ethnicity rates should be reviewed regularly.

4.3.5. Registered versus resident population

There is a differentiation between registered and resident population. The registered population refers to the population that are registered with a GP practice that is located in the Wandsworth borough. It can include people who do not live in Wandsworth but are registered with a GP in the borough as well as people who live and are registered in the

borough. The resident population refers to the population that live in the borough only. The projected figures in the previous section relate to resident population. The GP registered population total is higher than the resident population.

4.4. Falls

Falls account for the largest proportion of accidents in the UK and approximately 30% of people aged 65 and over fall each year, and for those over 75 the rates are higher (World Health Organisation 2004). A fall may be the first indication of an undetected illness. The prevention of falls is of major importance because they engender considerable mortality, morbidity and suffering for older people and their families, and incurs social costs due to hospital and nursing home admissions.

4.4.1. Risk factors for falls

It is important to identify those people most at risk of falling in order to maximize the effectiveness of any proposed intervention. Published studies have identified specific risk factors for falls and related injuries. However, direct comparison of studies is hampered by a number of methodological issues, including the use of different study populations, lack of clarity and consistency in definitions, variability in periods of follow up, and the inevitable difficulties of retrospective recall of events (Todd, Skelton 2004). However, most falls are associated with one or more identifiable risk factors (e.g. weakness, unsteady gait, confusion and certain medications), and research has shown that attention to these risk factors can significantly reduce rates of falling (Rubenstein 2006)

Risk factors for falls can be classed into three groups:

- intrinsic factors (non-modifiable)
- intrinsic factors (modifiable)
- extrinsic (exposure to risk).

<u>Intrinsic (Non-modifiable);</u>

- Age – the incidence of falls increases with age
- History of falls – associated with increased risk of falls.
- Gender – among the younger old, fall rates are similar between men and women but older old women fall more often than men
- Ethnicity – caucasian ethnic groups fall more frequently than African-Caribbeans, Hispanics or South Asians.
- Burden of chronic disease – conditions such as circulatory, COPD, depression, arthritis, diabetes (peripheral neuropathy) and impaired cognition are all associated with an increase risk of falling as is the general burden of long term conditions. The modifiable component of these conditions is the optimisation of the management.

<u>Intrinsic (Modifiable);</u>

- Loss of muscular strength and power, deficiencies of balance and gait – probably the most significant of modifiable risk factors
- Sedentary behaviour – those who are inactive fall more frequently

- Medicines – the risk of falling increases significantly in patients on four or more medications, regardless of the type of medication; Drugs such as psychotropics, class 1a anti-arrhythmics, digoxin, diuretics, and sedatives are all associated with increased falls risk.

- Impaired cognition can result in a lack of recognition of risk behaviour and inability to follow instructions (Tinetti et al. 1988).

- Psychological status – depression and fear of falling are associated with increased risk of falling; a decrease in physical activity which in turn increases muscle weakness.

- Nutritional deficiencies – a low BMI (suggesting malnutrition) and vitamin D deficiency are associated with muscle weakness, abnormal gait, osteomalacia and osteoporosis.

- Visual impairments – many forms of visual impairment lead to an increased risk of falls, as does the wearing of multifocal glasses.

- Lone living has been found to be an important predictor for falls (Kharicha et al 2007).

- Foot problems – many treatable foot problems and general pain on walking increase balance difficulties and risk of falls; worn or poorly fitting footwear may also increase risk.

Extrinsic.

The precise contribution of extrinsic factors such as poor lighting slippery floors, uneven surfaces to falls risk among community dwelling older people is uncertain (Todd, Skelton 2004). In addition considering only one risk factor ignores the role of confounding whereby one risk factor may explain another if evaluated through a multivariate approach.

4.4.2. Prevalence of falls

Falling is a serious and frequent occurrence in people aged 65 and over, however not all falls are recorded. The Department of Health (2009) estimates that each year, 35% of over-65s experience one or more falls and about 45% of people aged over 80 who live in the community fall each year. Between 10 and 25% of such fallers will sustain a serious injury.

Among older people, incidence rates of hip, proximal humerus, and vertebral fractures increase with age and most fractures of the hip, distal forearm, and proximal humerus in older people result from a fall (Kelsey and Samelson 2009). Frail people are likely to fracture their hip or proximal humerus whilst those who maintain a saving reaction with the upper limbs will be more likely to sustain a wrist fracture.

4.5. Osteoporosis

Underlying the risk factors for fracture following a fall is a common condition known as osteoporosis, which weakens bone strength. It is the most common bone disorder and is a skeletal disorder characterized by compromised bone strength, predisposing a person to an increased risk of fracture (North American Menopause Society 2010). It affects one in three women and one in 12 men aged over 50 (Department of Health 2009a). Osteoporosis particularly affects postmenopausal women. The incidence in both sexes rises rapidly as the

population ages. Its onset is asymptomatic and it is often only recognised after a person falls and sustains a fragility fracture. Currently, almost half of all women and one in six men experience a painful and disabling fragility fracture in later life (Department of Health 2009a).

Some of the main areas where fractures occur are in the hips and spine; additionally many wrist fractures occur. Although these are the three main areas of osteoporotic related fractures, it is possible for osteoporotic fractures to occur in any part of the skeleton. Incidence of osteoporosis is rising rapidly as the population ages but there is little recognition of the nature of osteoporosis as a long-term condition (British Orthopaedic Association 2007). Osteoporosis can be diagnosed using specialist bone density or DXA scans and treated with drugs, although many fragility fractures occur in people with a milder form of the disease, known as osteopenia.

4.5.1. Risk factors for osteoporosis

People who have experienced a fracture previously are at increased risk of a further fracture. Bone mass density decreases, and consequently the risk of osteoporosis increases with age. Women are at greater risk of osteoporosis as they have smaller bones and hence lower total bone mass. Additionally, women lose bone mass more quickly following the menopause, and typically live longer. Osteoporosis is less common in men but is still a substantial problem. There does appear to be a strong genetic component as parental hip fracture is a risk factor. Other significant risk factors are: Caucasian origin, early menopause, low BMI, smoking, sedentary lifestyle and long term steroid use.

Evidence shows that individuals can take steps throughout their lives to build and maintain healthy bones and reduce the risk of osteoporosis and fragility fractures (National Osteoporosis Society 2009). These include; taking weight bearing exercise, eating a healthy balanced calcium – rich diet and/or vitamin D supplement, avoiding smoking and drinking only a moderate amount of alcohol.

4.5.2 Osteoporotic drug use in Wandsworth

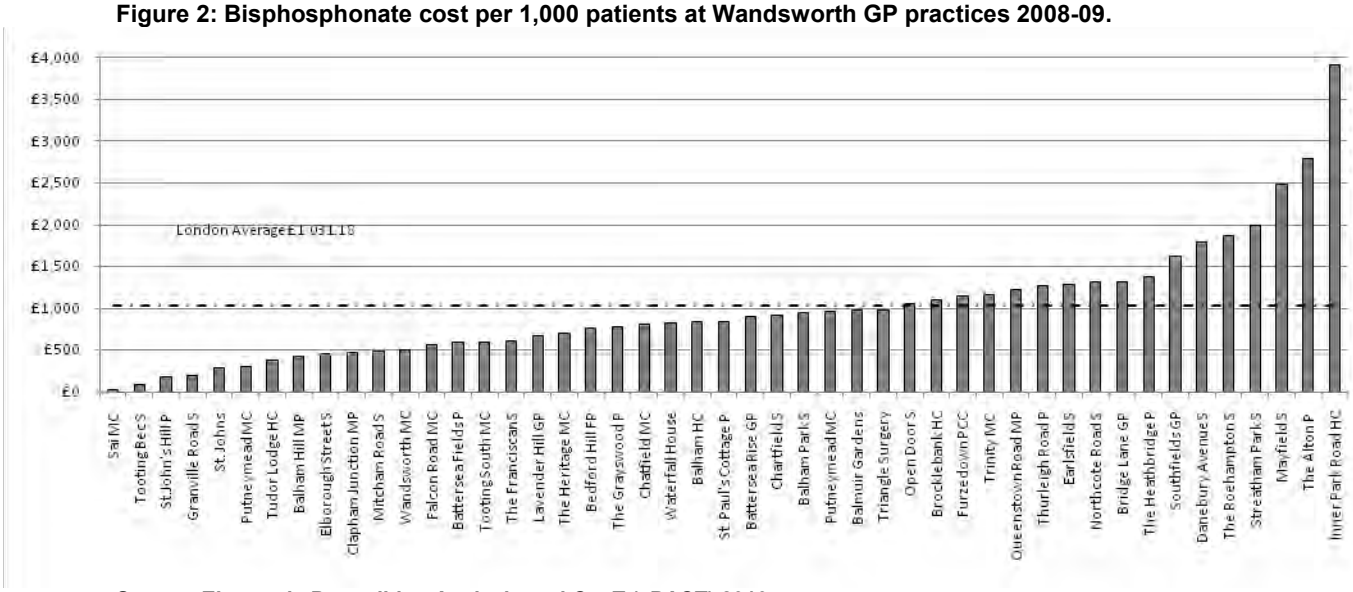
The gold standard for diagnosis of osteoporosis is bone density measurement by dual energy X-ray absorptiometry (DXA) scanning, although the availability of DXA facilities is variable across the UK (*SIGN, 2003*). For first-line pharmacological management of osteoporosis, current guidelines recommend a bisphosphonate in combination with calcium and vitamin D supplements (NICE 2008a, NICE 2008b, amended 2010). SIGN guidance and clinical evidence suggest that calcium/vitamin D supplementation is also beneficial if given on its own, in the absence of other osteoporosis treatments (*Chapuy et al, 1992; Chapuy et al, 1994; SIGN, 2003).* However the study populations were specific (eg:care homes) and this may not apply to the general population.

There are two main groups of drugs that are important. The first is the bisphosphonates and the second, is combined Calcium and Vitamin D preparations. NICE guidance has recommended that alendronate is the drug of choice in the bisphosphonates group (NICE 2010a, NICE 2010b). This advice is based both on cost and effectiveness grounds with a yearly cost for a non-proprietary version costing £1.28 per month (Department of Health 2010) and Vitamin D preparations costing between £2 and £8 per month (Department of Health 2010). Compliance is poor in relation to both bisphosphonates and the Calcium and Vitamin D preparations.

In 2008-09 there were 28,637 bisphosphonate and 48,683 calcium and vitamin D prescriptions issued by Wandsworth PCT practices (ePACT 2010). Figure 2 shows the cost per 1,000 patients for bisphosphonate drug prescription for each practice in Wandsworth.

The cost of bisphosphonates drug prescription varies across all GP practices in Wandsworth. The highest cost is attributed to Inner Park Road Health Centre at £3,912.09 which is nearly four times as high as the London average. The lowest cost is found at Sai Medical Centre at £21.58.

Figure 2: Bisphosphonate cost per 1,000 patients at Wandsworth GP practices 2008-09.



Source: Electronic Prescribing Analysis and CosT (ePACT) 2010.

Seventeen practices reveal costs which are higher than the London average.
This data is not standardised to account for the variation in the number of older people across practices. Inner Park Road Health Centre shows a cost (£3,912.09) which is much higher than all other practices in the borough. This could be due to prescribing high cost bisphosphonate drugs or could be due to a higher number of cases of osteoporosis registered at the practice. The next highest cost is much lower at £2,795.49 (Alton Practice). The location of the 17 practices which have costs higher than the London average are distributed across Wandsworth, with a third of practices (6 of 18) located in relatively high deprivation areas of Furzedown and Roehampton. Four of the practices are located in Roehampton.

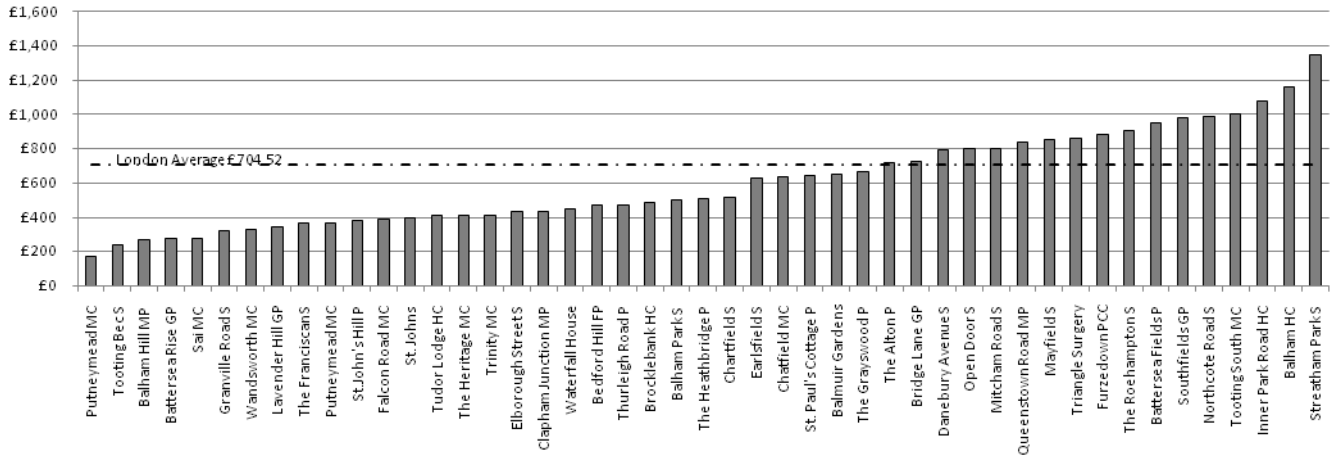
Figure 3 details the ranking of practices in accordance to the cost per 1,000 patients for Calcium and Vitamin D preparations. It must be noted that not all of these prescriptions will be in relation to osteoporosis or osteopenia treatment. However it is worth noting that this drug combination is used to address Vitamin D deficiency which has been identified as a risk for falling due to proximal muscle weakness and effect on bone. At this point it is appropriate to raise the issue of Vitamin D deficiency in the older population. The standard dose of 800 units (2x400 units daily) per day is adequate for maintenance of vitamin D levels however it may be insufficient for deficiency (Pearce and Cheetham 2010, Holick 2007). Once Vitamin D deficiency is identified from blood tests it needs to be addressed with the relevant dose of treatment – a minor deficiency requires at least 1000 units and Adcal D3 dose is 400 units (normally recommended to take 2 doses daily). A major deficiency requires 300,000 units in the format of intramuscular injection (or 10 000 IU calciferol daily or 60,000 IU calciferol weekly for 8-12 weeks). This is a national issue and may be worthy of consideration in the recommendations as it is a relevant factor in falls prevention due to proximal weakness and there needs to be some transparency about the ineffective pharmaceutical management. Within the strategic needs it is recommended that further work continues on this subject and alternative options for Vitamin D deficiency are explored.

The highest cost per 1,000 patients is seen at Streatham Park Surgery at £1,348.22 which is double the London average at £704.52. Inner Park Road Health Centre which has the highest bisphosphonates cost has the third highest calcium and vitamin D cost. Putneymead branch practice in Disraeli Road has the lowest cost per 1,000 patients at £173.48.

Seventeen practices have costs which are above the London average. Twelve practices feature with above average (London) costs for both bisphosphonates and calcium and vitamin D preparations. They are:

Streatham Park Surgery	Inner Park Road Health Centre
Northcote Road Surgery	Southfields Group Practice
The Roehampton Surgery	Furzedown Primary Care Centre
Mayfield Surgery	Queenstown Road Medical Practice
Open Door Surgery	Danebury Avenue Surgery
Bridge Lane Group Practice	The Alton Practice

Figure 3: Calcium and Vitamin D cost per Wandsworth GP practice 2008-09.



Source: Electronic Prescribing Analysis and CosT (ePACT) 2010.

The Pharmacy department at NHS Wandsworth has an agreement with pharmaceutical company, ProStrakan Group PLC to fund resources independent of the drug company to assist practices in an audit of patients who require calcium and vitamin D3. This work was agreed at no additional cost to the PCT and quarterly data reports were part of the original contract along with detailed practice data which was to be given to individual practices to link with the osteoporosis Directed Enhanced Services (DES). The audit has been ongoing since 2007, with an annual review. The audit aims to identify those patients who have experienced falls and who are most at risk of fracture to ensure they receive calcium and vitamin D3 supplements, when appropriate, as detailed in the agreed protocols. The criteria for example include patients with a diagnosis of osteoporosis currently untreated, patients currently treated with a bisphosphonate or strontium and not receiving calcium & vitamin D3. The protocol has been tailored to meet requirements of Std 6 of the NSF for older people, NICE TA 160, 161 and DES for Osteoporosis. Any possible assessment at practice level around prescribing should consult with this audit and the information collected should be made available to guide the best course of action. Currently only a sample of the data from ProStrakan has been provided to the Public Health Department, despite repeated efforts to obtain data from the previous 2 year's worth of audit. This needs to be pursued as the sample provided shows that this is a potential rich source of information.

4.5.3 Number of people with osteoporosis

Currently it is not possible to determine the number of people with osteoporosis. Using the Department of Health's figures (2009) of 1:3 women and 1:12 men (over 50) suffer from osteoporosis, there are an estimated 12,276 (2,141 male and 10,135 women) over 50s with osteoporosis in Wandsworth. There is a Directed Enhanced Services (DES) for osteoporosis, which aims to encourage practices to confirm the diagnosis and prescribe appropriate pharmacological secondary prevention in female patients over 65 with osteoporosis (NHS Employers 2008). Initially this was funded for two years, 2008/09 to 2009/10 and now it has been extended for a further year, 2010/11. The data for this register is not held centrally but is collected and stored at each participating GP practice, making access difficult. It is recommended in future this data should be held centrally by the Primary Care Directorate.

It is possible to estimate the minimum number of people receiving the most popular bisphosphonates prescriptions (specifically related to osteoporosis or osteopenia). These prescriptions include:

Alendronic Acid Tab 70mg (first line recommendation)
Fosamax Once Weekly Tab 70mg
Alendronic Acid 10mg (male population)
Risedronate Sod Tab 35mg (second line recommendation)

Strontium which is a third line recommendation has not been included as it is rarely used and would create a large error in the costings due to its significantly higher cost.
For the third quarter of 2009-10 (October – December 2009) it is estimated that 3,239 people were prescribed the above prescriptions. To arrive at this figure we have assumed that over a period of 12 weeks (October – December 2009) each prescription for a week's supply equated to one patient. Furthermore if we assume that all of these prescriptions were for people aged 50 years and above, then this figure accounts for around 5-6% of the 50 and over registered population of Wandsworth. It is believed that in any one quarter (e.g. Oct – Dec 2009) a person will be issued with their prescription only once, therefore choosing only a one year quarter for this analysis will minimise double counting. However, this figure (3,239) is well below the figures calculated in relation to the proportional estimates (12,276) stated by the Department of Health (2009). This suggests that a large number of people with osteoporosis are not receiving appropriate drug treatment. Estimating across all prescriptions related to osteoporosis is not possible as the distinction in regard of purpose is not made. For example, Calcium and Vitamin D prescriptions are not only given to people with osteoporosis or osteopenia.

The question that this data raises is whether the prescription of calcium and vitamin D for osteopenia and the combination of calcium and vitamin D with Bisphosponate for the management of osteoporosis is appropriately prescribed. It is very difficult to address the prevention treatment with the limited data; however the management of osteoporosis following fracture presentation can be partially addressed by comparing Figure 2 with data around hip fracture and non-hip fragility fracture in the subsequent sections of this document.

The structure of the document will follow a progressive journey from the postmenopausal female younger age group to the lesser fragility fracture, hip fracture and then mortality rates associated with falls and fractures.

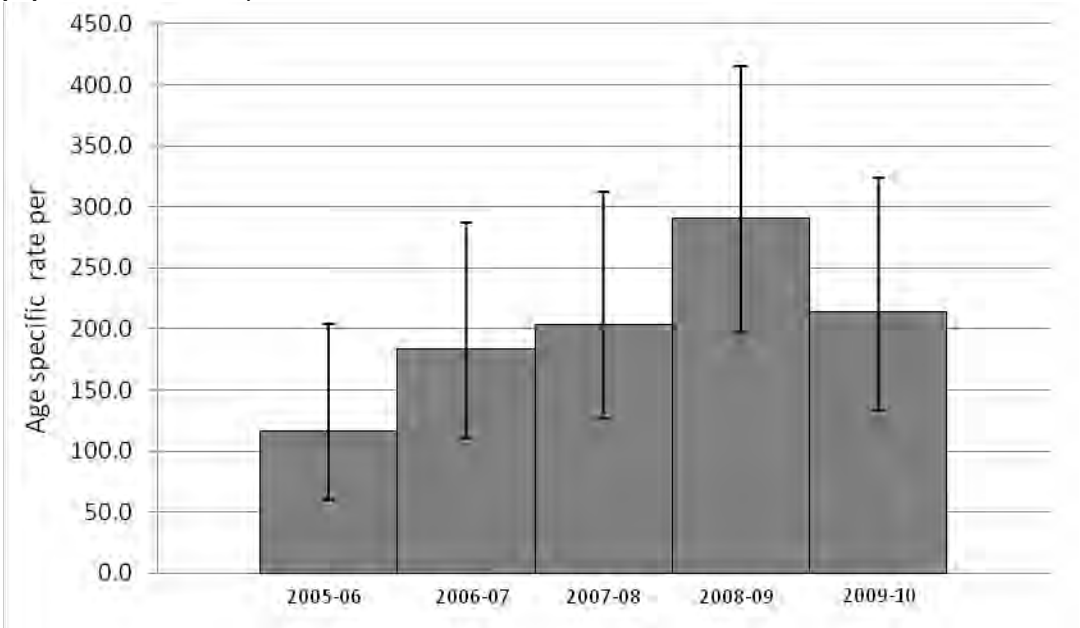
4.6. Post menopausal women prior to entering old age – 55 – 64 years old

This section looks at fractures to women in the 55 to 64 years old age group. The data available is only for fracture patients who were admitted to hospital and due to a small number of fractures overall, hip fractures and non-hip fragility fractures have been grouped. It is also not possible to provide analysis at GP or ward level due to the small number of fractures involved. In total there were 104 fragility fracture patients who required hospital admission over the five year period of 2005-10.The very low number perhaps reflects the high level of function of this group and therefore to a large extent non-hip fractures in this population will largely be the "walking wounded" who do not require admission and as such are lost to the current data collection.

Figure 4 shows that the trend of fragility fractures in women aged 55 to 64 years follows the same pattern as the hip fractures and non-hip fractures for the 65+ age group across the PCT (see sections 4.7 and 4.8). The age specific rate has increased year on year with a slight decrease for 2009-10. The 95% confidence intervals provide an indication of the possible variation from year to year.

Figure 4 shows an increase for 2008-09 in fractures for the female 55-64 age group, while for the 65 and over age group there was a decrease in both non-hip fragility fractures (Figure 5) and hip fractures (Figure 8). It is possible that due to the high functional activity levels of this client group, that environmental factors such as weather may play a more significant role in the yearly incidence figures.

Figure 4: Fragility fractures 55-64 years old women (Age specific (55-64 years) rate per 100,000 population 2005-2010).



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

With regard to the link with osteoporosis medication, all of this client group should have been referred as per NICE guidelines for a DEXA scan and then started on medication following the results. However the current systems in place do not enable tracking of this process. In addition this client group would not be identified from the DES (over 65).

In summary the information about this client group remains largely hidden in the current systems. Consideration needs to be given to ways of collecting data to enable analysis of fragility fractures for all patients who attend A&E – this data is not currently available.

4.7 Non-hip fragility fractures

On average 50% of people experiencing a non-hip fragility fracture will go on to sustain a hip fracture, this population group are a prime target for early intervention (Healthcare Quality Improvement Partnership 2009c). Non-hip fragility fractures considered are:

- Proximal humerus
- Wrist fracture (commonly ref to as smiths and colles fractures)
- Fractured pelvis
- Vertebral fracture (thoracic and lumbar only).

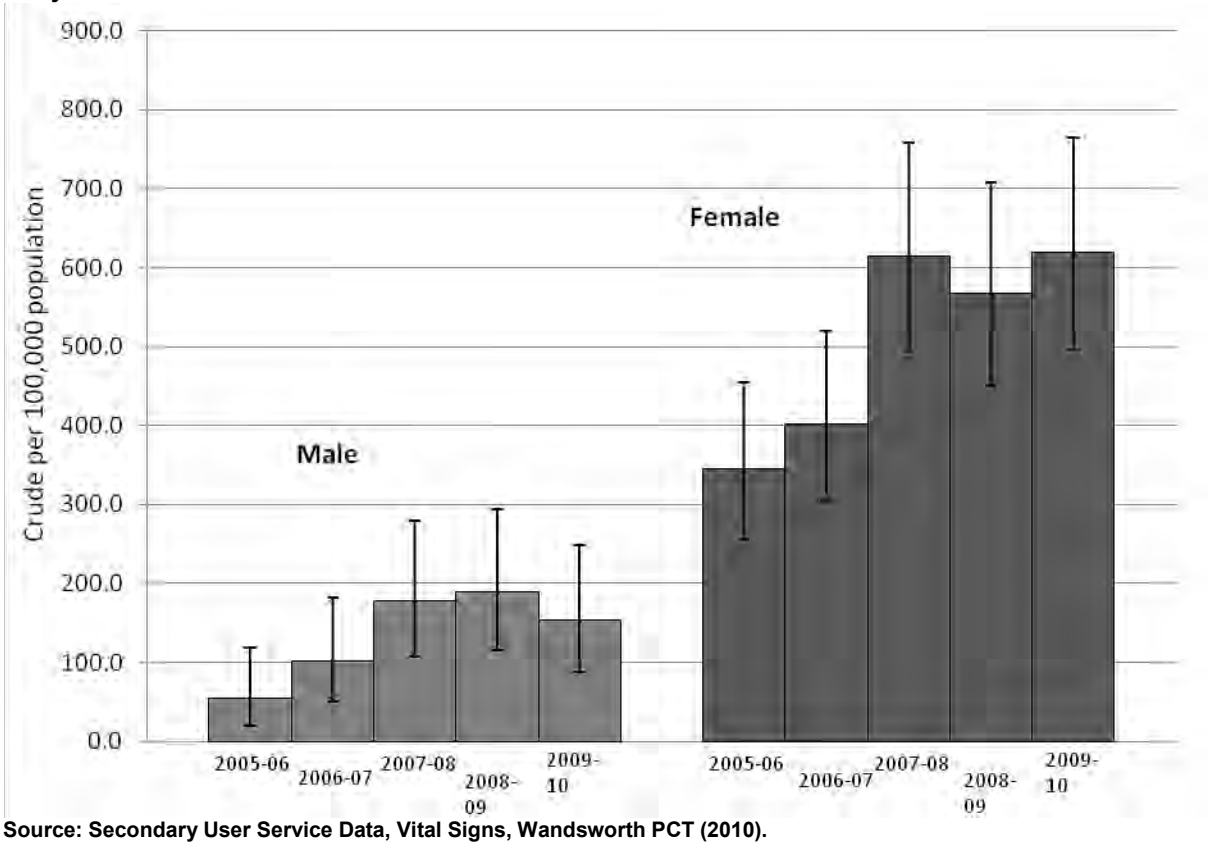
(Department of Health 2009a)

Non-hip fragility fracture admission data extracted are non-elective. The fracture data captured are purely admissions to hospital. Instances where patients attend hospital for treatment and are discharged on the same day are not available in an extractable format. As a result there are many fractures not included in this analysis, as evidenced by the number of fractures recorded for each year, e.g. 101 non-hip fragility fractures for 2009-10. For further details on this see Appendix A. It is recommended that this issue be resolved by addressing systems for data collection for non-admissions (i.e. all attendances).

Risk factors associated with fragility factors include diabetes, and for men, hospitalization for mental health issues and for women previous fractures (Naves et al. 2005, Holmberg et al. 2006). Figure 5 shows data on the incidence of low trauma fractures. The coding system does not reveal the causes of these trauma events i.e. whether they are falls from a standing height. Therefore the assumption is made that all fractures for the above diagnosis in the over 65 are due to falls from a standing height. Falls from a standing height are termed fragility fractures and include the above diagnosis as well as hip fractures (hip fractures are not included here). The crude rates generated in Figure 5 are for those registered with a GP in Wandsworth. Figure 5 shows that the crude rate of female non-hip fracture admissions are consistently higher than that for males. Since 2005-06 the overall trend has been an increase in fractures for both genders, except for 2008-09 for women and 2009-10 for men where slight decreases are seen. For the latest period, 2009-10, the crude rate was 618.95 per 100,000 for women accounting for 85 fractures, while the rate for men was 152.8 per 100,000 accounting for 16 fractures. While latest admissions data for hip fractures may be showing signs of levelling off (Figure 7 and Figure 8) this trend of increasing non-hip fractures in combination with the expected population increase in 20 years time are predictive of a substantial increase in the hip fracture rate as 50% of non-hip fractures in the over 65s result in hip fractures at a later date (Healthcare Quality Improvement Partnership 2009a).

Examining non-hip fractures admissions by ward shows that the wards of Bedford, West Hill, Wandsworth Common and Graveney experience higher than expected admissions that are significantly higher than the PCT average (Figure 6). West Hill also experiences significantly higher admissions for hip fractures compared to the PCT average. Queenstown and West Putney show non-hip fracture admission ratios that are significantly lower than the PCT average. They also have significantly lower admission ratios for hip fractures.

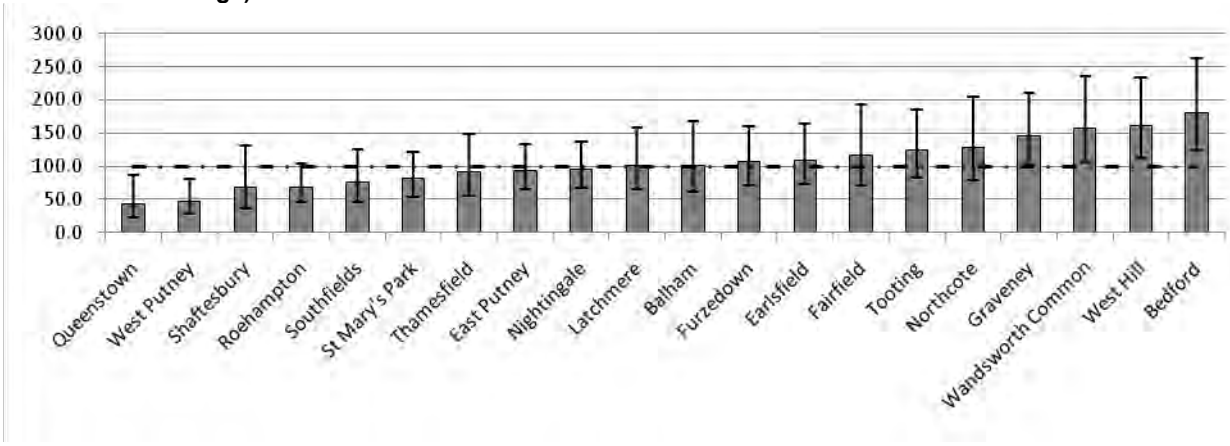
Figure 5: Crude rate per 100,000 population of non-hip fracture admissions (non-elective) for those aged 65+ years and resident in Wandsworth.



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

However, again it is worth reflecting on the client group – in order to require admission following a non-hip fragility fracture it is likely that the injury is a complex fracture or that there are underlying health problems/difficulties with activities of daily living. As such these people are likely to be at the frailer end of the spectrum. With this in mind the geography would indicate that the 3 Wards with the highest incidence may require more focused work to address prevention of admission post lesser fragility fracture. In fact a review of the care homes and residential accommodation in the Wandsworth wards shows the highest availability of nursing home beds are in Nightingale and West Putney. These wards do not have high admission rates. Wards with a low number of nursing homes do. This could possibly mean that admissions from these wards are more likely to be for lone household pensioners.

Figure 6: Standardised admission ratios for non-hip fractures, 2006-10. (Horizontal line equals NHS Wandsworth average)



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

From the National Audit 2009 the average number of non-hip fragility fractures presenting in A&E in the study period across England was 63% radius/ulna fractures. Locally 70% of patients at St Georges and 75% at Kingston hospital were radius/ulna fractures (Healthcare Quality Improvement Partnership 2009a). This type of fragility fracture is more suggestive of a less frail (more active) population group in comparison to humerus and hip fracture populations. This in itself would suggest that the data in Figure 5 and Figure 6 which only captures admissions are only portraying a very small part of the fragility fractures. Effective analysis and formation of strategies are needed to address low trauma fracture.

4.8. Neck of femur fractures (Hip fractures)

"Hip fracture is all too often the final destination of a 30 year journey fuelled by decreasing bone strength and increasing falls risk" (Department of Health 2009b).

Hip fractures account for 50% of injury related hospital admissions and 66% of bed days for people aged over 75 years (Department of Health 2007). Suffering a hip fracture can result in the loss of mobility, the permanent loss of the ability to live at home as well as bring pain, confusion and disruption. Due to the change in demographics generally the national picture shows that the number of hip fractures is increasing (Ahloborg et al. 2010), however in Wandsworth the 65+ population figures are projected to remain constant over the next five years but show an increase in 20 years.

Approximately half of those who were previously independent become partly dependent following a hip fracture, while one-third become totally dependent (Department of Health 2009a). The Falls and Bone Health Organisational Audit Report 2009 recommended that the PCT should report on the number and rate per 100,000 of both hip fractures and other fragility fractures (Healthcare Quality Improvement Partnership 2009a).

4.8.1. Risk factors for hip fracture

There are a number of risk factors associated with hip fracture, the obvious one being osteoporosis (Kanis et al. 2000, Benson et al. 2005, Stolee et al. 2009). Previous low trauma fractures after the age of 50 years is also a factor (Cummings 1993, Klotzbuecher et al. 2000), for example a study in the US found that white women suffering a proximal humeral fracture independently increased their risk of a subsequent hip fracture more than five times in the first year after the humeral fracture (Clinton et al. 2009). Another study states that an inability to rise from a chair was the most readily identifiable risk factor for a hip fracture (Bensen et al. 2005), an aspect that can be identified through risk assessments. Chronic inflammatory diseases such as rheumatoid arthritis and inflammatory bowel disease are considered to be risk factors (World Health Organization 2010). In addition immobility due to a stroke or multiple sclerosis is also a risk factor.

An important risk factor is low bone mineral density, particularly in the femoral neck of postmenopausal women aged 65 years or more (Cummings et al. 1995). Other factors include disorders with increased bone loss, untreated premature menopause and corticosteroid users (Peng et al 2006). Furthermore a variety of studies have identified smoking as a risk factor (Law & Hackshaw 1997, Law et al. 1997, Honkanen R et al. 1998).

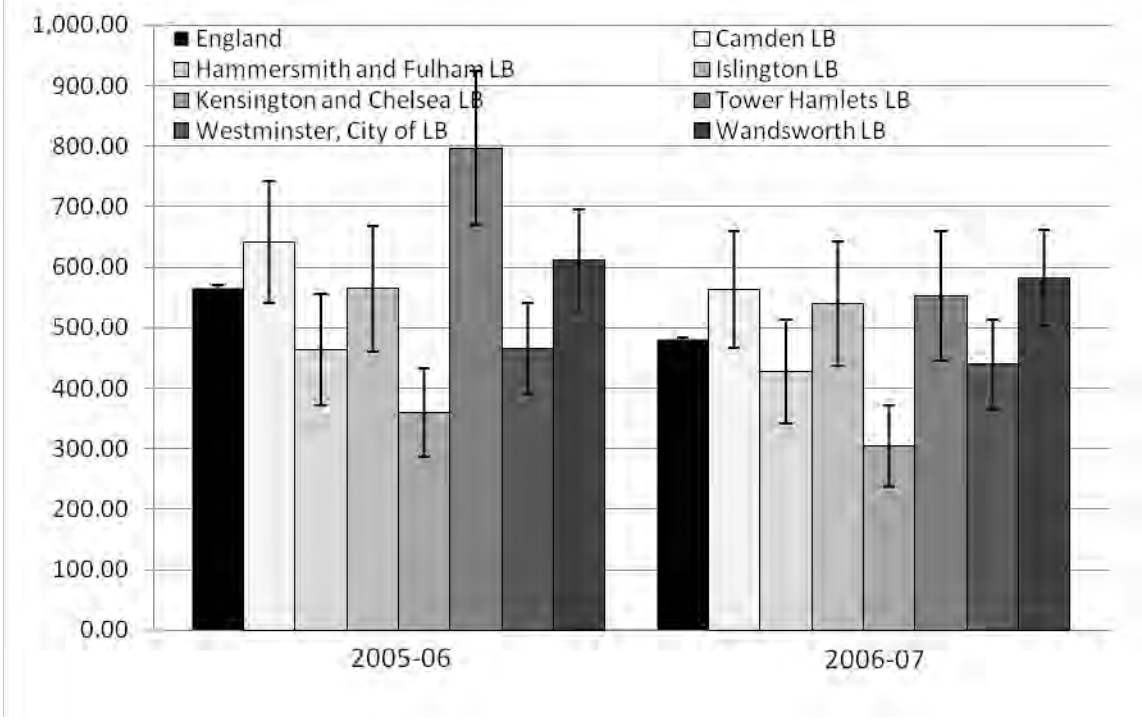
4.8.2. Admissions rates for fractured neck of femur (hip fracture) 65+ Years and older

For the year 2006-07 (latest data available) Wandsworth (581.5 per 100,000 population) experienced a significantly higher than the national rate (479.8) of admissions for fractured neck of femur in the over 65's (Figure 7). In relation to Wandsworth's WCC clusters (PCTs of comparable populations) the admissions rate for both years are not significantly different to other PCTs in the cluster except one. The admission rate for 2006-07 in Wandsworth is

significantly higher than Kensington and Chelsea LB. While admissions rates in Wandsworth are comparable to our cluster PCTs, they are higher than many other London PCTs indicating the need for a falls and bone health strategy in Wandsworth. Fractures include the following ICD-10 codes:

- S72.0 Fracture of neck of femur
- S72.1 Pertrochanteric fracture (World Health Organisation 2007)

Figure 7: Directly standardised admission rates for fractured neck of femur for people aged 65 years old and over.



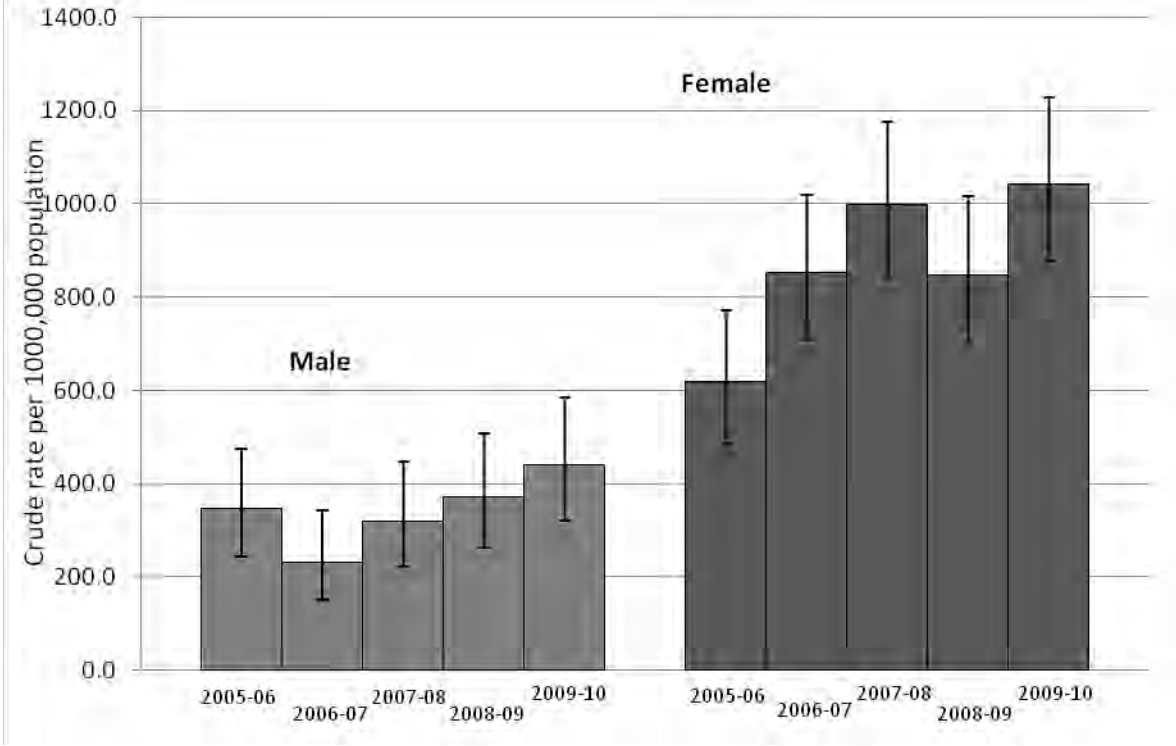
Source: London Health Observatory (2010)

Figure 7 shows data that allows comparisons between WCC cluster PCTs, however the data is not recent. Figure 8 shows more recent data but only for the Wandsworth borough where the rates displayed are crude rates and are not directly age standardised as the previous data are, and therefore not comparable. The figures extracted from the Wandsworth Secondary User Service (SUS) database (Figure 8 and Figure 9) are for non-elective admissions; those admitted for rehabilitation are not included.

The overall trend for both male and females is that the rate of hip fractures in the 65 years and older population is increasing, although the rate of increase is slowing down (Figure 8). Male rates experienced a decrease in 2006-07 but the trend has continued upwards since. Females experienced a decrease in 2008-09 but the latest figures show the rate has returned to an increasing trend. For 2009-10 an increase in the hip fracture rate from 848.3 per 100,000 to 1041.3 was seen for females. This represents a 23% increase in one year and an increase from 118 fractures per year to 143. For males the increase was not as much but still a rise of 18%, from 370.3 per 100,000 to 439.3 and from 39 fractures to 46. This refers to all patients registered with a Wandsworth GP.

The inequality between genders can be seen especially by looking at the latest year of data (2009-10) with the admission rate for females (1041.3 per 100,000) nearly three times that of males (370.3). In total there were 832 fractures of neck of femurs over the five year period for those aged 65 and over and registered with a Wandsworth GP. One hundred and eighty-six of these were male fractures and 646 were female.

Figure 8: Wandsworth admissions (Crude rate per 100,000 population) for fractured neck of femur for people aged 65 years old and over (SLA contracted only).



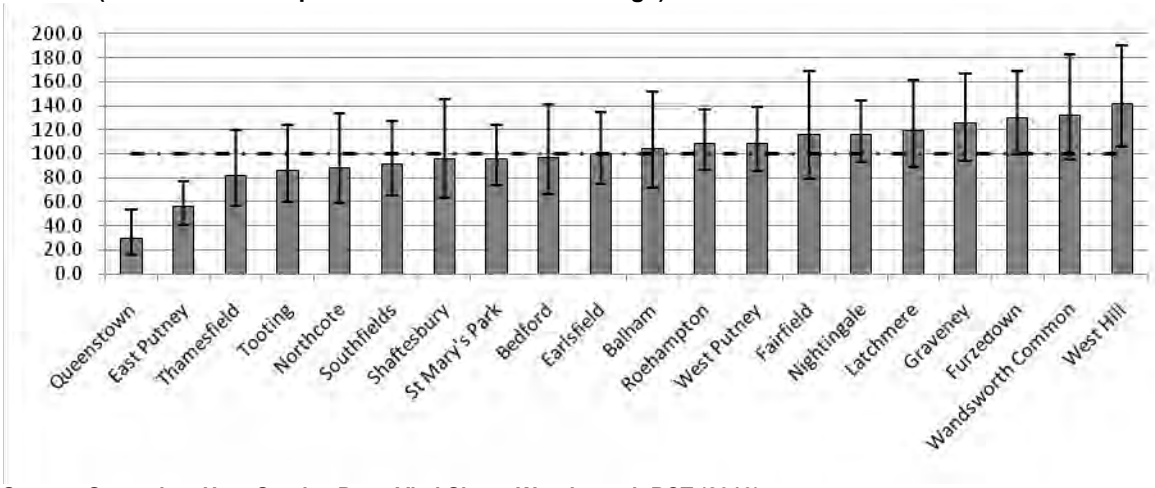
Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

It was not possible to obtain historical population figures for those registered with a Wandsworth GP practice (denominator population) in order to calculate standardised rates. However by extracting fracture information by ward of residence it is possible to calculate standardised admission ratios and examine within PCT variation. Figure 9 shows standardised admission ratios (SAR) for hip fractures by ward for the period of 2005-10. The SARs are presented in relation to the Wandsworth PCT average, whereby a SAR greater than 100 means that more admissions are seen than is expected. Where the 95% confidence intervals do not range across the Wandsworth average (100) there is a statistically significant difference.

The ward of West Hill is the only ward that experiences admission ratios that are significantly higher than the PCT average. There were 45 admissions for a hip fracture from this ward over the 5-year period. West Hill has a relatively low older population in residence but a higher than expected number of hip fracture admissions. There is only one care home (which would be considered a high risk population group) in West Hill. This is Park Lodge Care Home which has a small number of residents (population of 60).This is in comparison to some wards with a high density of nursing homes such as Nightingale which has a care home total population in excess of 300.This “hotspot” ward of West Hill does warrant further focussed work.

The wards of Graveney and Furzedown, both high deprivation wards, have higher than expected numbers of hip fractures. However the ratio is not significantly higher than the PCT average but very close. The highest numbers of hip fractures were recorded in Nightingale, Roehampton and West Putney at 80, 73 and 65 respectively over the 5-year period. This is to be expected as these wards have the highest proportion of older people residing in them and a high density of care homes. The wards of Queenstown and East Putney have significantly lower incidences of hip fractures compared to the PCT average. East Putney has one of the highest proportions of older people residing there but the number of fractures is lower than expected.

Figure 9: Standardised admission ratios for fracture of neck of femur in the 65+ years old population 2006-10 (Horizontal line equals NHS Wandsworth average)

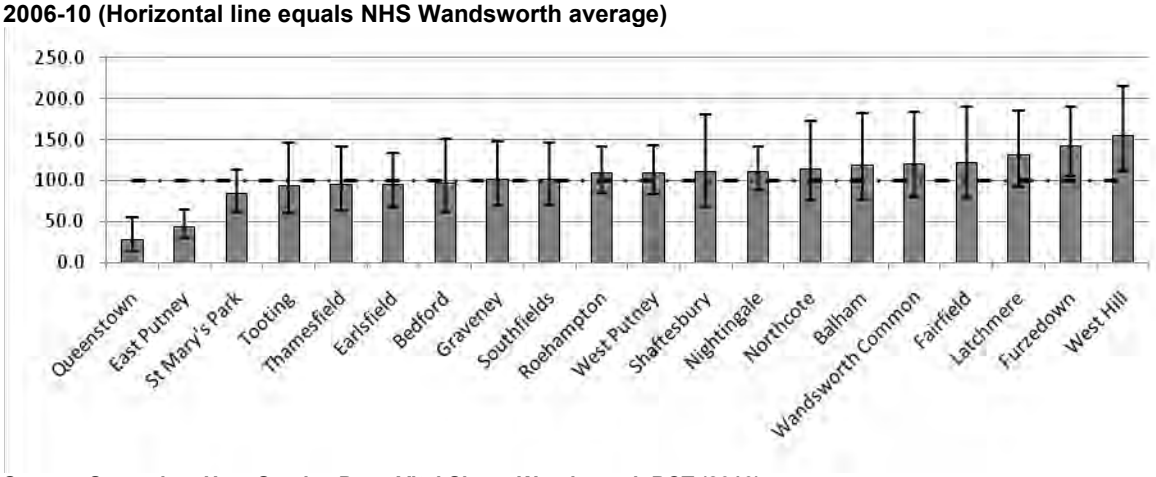


Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

In total there were 812 hip fractures over the 5-year period. In the analysis a second hip fracture is counted as two separate incidences.

Analysing hip fractures in the frailer population, those aged 80 years and over, reveals similar patterns with a few exceptions (Figure 10). Again West Hill has a higher than expected standardised admission ratio (SAR) in the over 80 population as well as over 65, however Furzedown a high deprivation area has a SAR for hip fractures which is significantly higher than the PCT average. Latchmere also a high deprivation area reveals a higher admission ratio, higher than when looking at the broader 65+ age group. However it is not significantly higher than the PCT average. All other wards show similar figures to the 65 and over age group.

Figure 10: Standardised admission ratios for fracture of neck of femur in the 80+ years old population 2006-10 (Horizontal line equals NHS Wandsworth average)



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

4.8.3. Hospital location for admissions for fractured neck of femur (hip fracture) 65+ Years and older (Wandsworth GP registered)

Table 3 shows where people aged 65 and over who are registered to a GP in Wandsworth are admitted when they have broken their hip. The majority of hip fractures are admitted to St. George's hospital; however this has decreased in proportion of all hip fractures since 2006-07. In 2006-07, over 70% of all hip fractures were admitted to St. George's while this has decreased to half for 2009-10. During the same period admissions to Kingston hospital has increased in proportion by 13%. Admissions to hospitals beyond those noted here

(Other) have also increased during this period, from 1.4% to 6.3% of all hip fractures. Chelsea and Westminster admit one in ten hip fractures of those registered in Wandsworth.

Reflecting on the current process in place around conveyance it would seem that LAS crews make the decision around the hospital that is closest to the call-out location. However this process may need to be challenged further as the speed of conveying the patient to the hospital is only one of the many variables involved in the final outcome (and hence mortality rates).The significant changes in conveyance and the optimum location for management will need to be explored further alongside mortality figures and data that will reflect upon the quality of care (shortly to be available from the National Hip Fracture Database http://www.nhfd.co.uk/). In this joint initiative between the British Orthopaedic Society and the British Geriatric Society it is acknowledged that "*delivering good care for patients with hip fracture is challenging and involves many health professionals including nurses, surgeons, anaesthetists, geriatricians and rehabilitation staff. The quality of that care varies considerably across the country*". Consideration of this issue on a local level will help to identify the optimum pathway for the patient.

Table 3: Breakdown of neck of femur fracture admissions by hospital admitted to (65+ age group).

NHS Trust	2005-06		2006-07		2007-08		2008-09		2009-10	
	N	%	N	%	N	%	N	%	N	%
St. George's Healthcare	97	65.1	106	71.6	96	54.9	91	58.0	95	50.3
Kingston Hospital	24	16.1	16	10.8	44	25.1	34	21.7	45	23.8
Guy's and St. Thomas'	0	0.0	<5	2.0	<5	2.3	<5	1.3	11	5.8
Chelsea and Westminster	19	12.8	17	11.5	17	9.7	20	12.7	19	10.1
Hammersmith Hospitals	<5	2.7	<5	2.7	5	2.9	7	4.5	7	3.7
Other	5	3.4	<5	1.4	9	5.1	<5	1.9	12	6.3
Total	149	100.0	148	100.0	175	100.0	157	100.0	189	100.0

Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

Hip fractures considered here are those ICD-10 codes; S72.0 Fracture of neck of femur and S72.1 Pertrochanteric fracture (the same codes in section 4.8.2).

4.9 Fracture neck of femur by GP practice and prescriptions

Section 4.5.2 presented data on osteoporotic drug prescription and the cost per 1,000 patients by GP practice, specifically bisphosphonates and calcium and vitamin D supplements. This section looks at this information in relation to the number of fractures of neck of femur for the year 2008-09 at each practice for the 65 years and older registered population. For a complete list of figures against practices see Appendix B. Crude rates have been generated as a basis for assessment against drug prescription. It is not appropriate to us these crude rates to assess change in fracture rates over time due to the small number of hip fractures occurring each year in each GP practice.

Simple correlation shows overall that high bisphosphonates costs do not equate to high incidence of hip fractures or low costs equating to high hip fracture incidence. Also many practices have low costs and no fractures recorded. However there are some practices to note. Five practices (see Group A in Table 4) show a below London average costs for both prescription types but show a relatively high rate of fractures, however two of the practices reveal less than 5 fractures over 2008-09. These five practices have high crude rates of hip fracture (7-13 fractures per practice) and the cost per 1,000 patients for bisphosphonates in the highest quartile. Brocklebank Health Centre (Group B) shows above average bisphosphonates costs, however, despite having the highest fracture rate in the borough the

bisphosphonates costs are not in the highest quartile. This could be a good example of cost effective prescribing.

The highest cost per 1,000 patients for bisphosphonates was at Inner Park Road Health (Group C) centre at £3,915.09 where no hip fractures were recorded for 2008-09. This could be due to other fractures or extensive primary prevention. This practice also had high calcium and vitamin D costs also, at £1,078.68 per 1,000 patients. Streatham Park surgery also had high bisphosphonates costs with a low fracture rate recorded. Twenty-five practices showed below average costs for bisphosphonates and calcium and vitamin D while recording less than 5 hip fractures. Sai Medical Centre had the lowest bisphosphonates costs per 1,000 patients at £21.58. This low figure may be due to only 90 people 65 years and older being registered at the practice, as it also has low calcium and vitamin D costs (£279.73). There were no fractures recorded for this practice for 2008-09 either.

To recap, given the small number of fractures, from the data available, across Wandsworth practices and that only one year's worth of data is presented, this section should be utilised as an indication of possible areas for further work. With this in mind the following GP practices are highlighted in Table 4 (For a list of all GP practices, see Appendix B).

It is possible that a low cost (Group A) may be due to a low older population registered or it may be due to under-performance in relation to NICE guidelines for osteoporotic drug prescribing or it may be due to the prescribing of low acquisition cost drugs. The analysis presented here alone cannot determine this and requires further investigation. Obtaining audit data collected by ProStrakan Group PLC (see section 4.5.2) would aid this process (despite not all GP practices being involved in the audit).

Table 4: Selected GP Practices showing hip fracture rates and osteoporotic drug prescribing (2008-09)

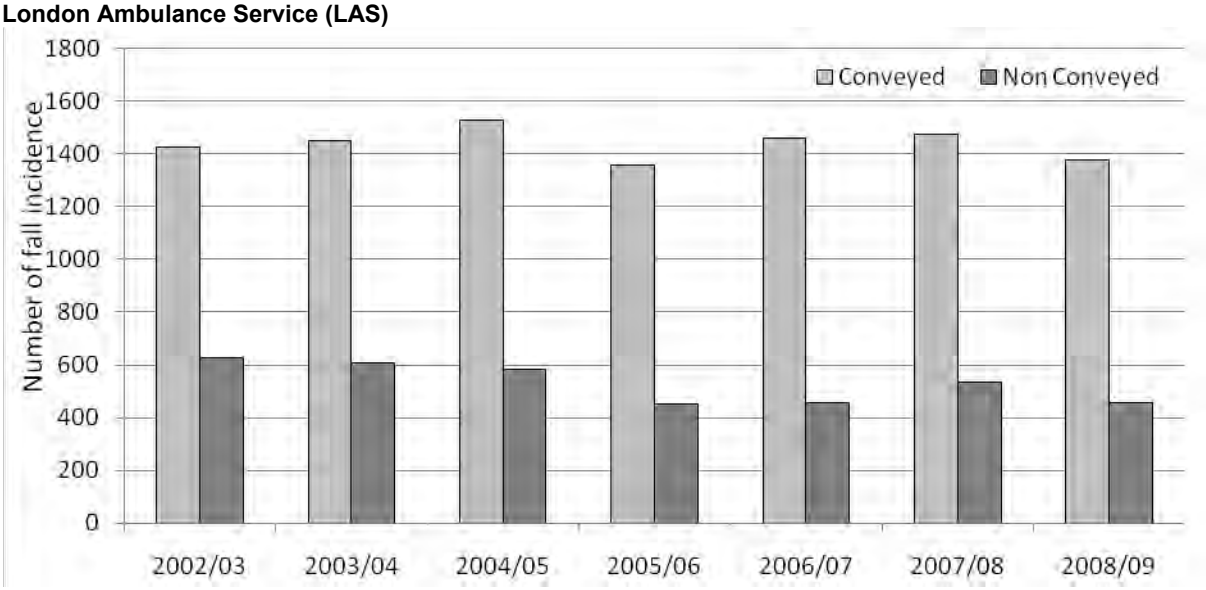
GP Practice	No. of fractures	Crude fracture rate per 100,000	Bisphosphonates cost per 1,000 patients (£)	Calcium & Vit D cost per 1,000 patients (£)	
The Falcon Road Medical Centre	6	374.53	561.76	389.6	**Group A** High fracture rate Low costs
Bedford Hill Family Practice	5	351.12	761.51	474.24	
Waterfall House	5	545.85	823.74	449.68	
Elborough Street Surgery	<5	397.74	461.45	431.29	
Putneymead MC (Disreali Street branch)	<5	409.84	310.83	173.48	
Brocklebank Health Centre	12	583.66	1,098.08	484.51	**Group B** High fracture rate High bisphosphonates costs
Mayfield Surgery	7	424.76	2,480.18	851.08	
Southfields Group Practice	8	286.12	1,626.75	978.94	
The Roehampton Surgery	13	567.19	1,867.32	904.56	
Earlsfield Surgery	8	346.62	1,292.24	629.19	
Bridge Lane Group Practice	7	262.76	1,319.58	728.65	
Danebury Avenue Surgery	<%	370.37	1,790.07	792.66	
Inner Park Road Health Centre	0	Fracture number too small to generate rate	3,915.09	1,078.68	**Group C** Low fracture rate High costs
Northcote Surgery Road	<5		1,315.96	985.83	
Thurleigh Road Practice	<5		1,273.56	474.53	
Streatham Park Surgery	<5		1,992.12	1,348.22	

Source: Electronic Prescribing Analysis and CosT (ePACT), provided by NHS Prescription Services (previously known as the Prescription Pricing Division or PPD), part of NHS Business Services Authority

4.10. Fractured neck of femur and London Ambulance Service (LAS) conveyance to hospital

A review of LAS data over a seven year period shows that there is a consistently high conveyance rate for fallers (Figure 11). In comparison data for 2003–4 for the whole of London shows 8% of all 999 calls in London were for older people who had fallen, with 40% not then conveyed to hospital (Snooks et al. 2006). Although the management of this issue will require some input around admission avoidance it must equally address the issues around the high risk of readmission and mortality around non-conveyance (Boyle et al. 2006, and (Snooks et al. 2006). This warrants some close partnership working between CSW, LAS and acute providers.

Figure 11: Number of fall incidences (65+ population) conveyed (to hospital) or not conveyed by the London Ambulance Service (LAS)



Source: London Ambulance Service (LAS).

A more detailed focus follows on current London Ambulance Service (LAS) conveyance (2009-10) for fall incidents in the 65 years and older population and hip fractures rates by electoral ward also for 2009-10. When comparing the data available around these two variables it is important to be clear about the different data collection sets:

- Fractured neck of femur data is patient identified and as such the address of the patient identifies the electoral ward.
- LAS data is based around the location of the fall – so somebody who lives in one ward may fall in another electoral ward. However older more frail members of the population are more likely to remain within the home and the immediate community, whilst the more mobile older people are likely to travel beyond their resident electoral ward during daily activity.

Two separate issues are considered in this section:

1. A high positive correlation (Pearson's coefficient 0.854 $p<0.01$) is seen between LAS conveyance by ward and the proportion of the population which is 65 years and older. This shows that where the 65s and over account for a relatively high proportion of the population there is a high proportion of conveyances for falls.
2. When looking at the conveyance rate it is expected that a substantial proportion are hip fractures rather than other diagnostic groups, as non-injurious falls where the patient is identified as medically stable and should

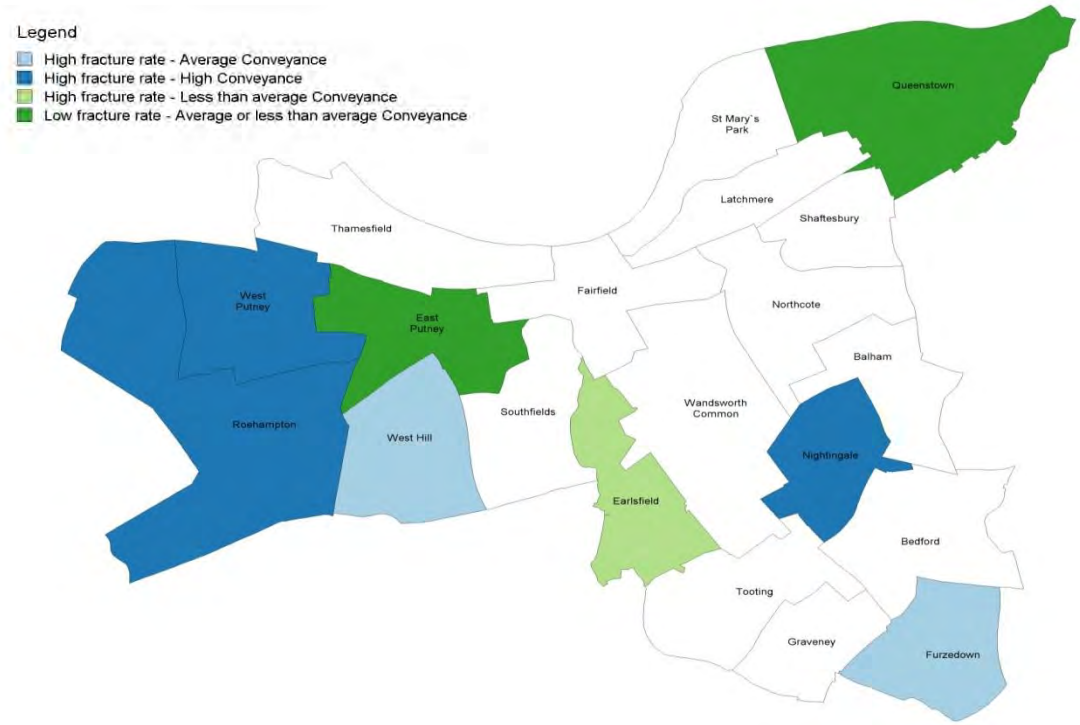
not require admission but may require immediate therapy intervention by ICT. In addition, falls identified due to treatable acute episodes such as urine infection should be managed by urgent community intervention services such as GP/ Virtual Ward – again these should not require conveyance to hospital.

With this in mind, closer observation of the map (Map 3) shows that some wards produce an expected picture such as Nightingale, West Putney and Roehampton: each experienced a high rate of fractures and conveyance in 2009-10 (Map 3). It is expected as these areas have relatively high proportions of the 65 years and older population residing in them with a particularly high number of care homes.

Queenstown and East Putney experienced low fracture and callout rates. The standardised admission ratios (SAR) for the 5-year period (2005-10) were also significantly lower than the PCT for these two wards. This is appropriate use of LAS conveyance. East Putney has a low number of fractures as well as a low rate of conveyance for falls despite being one of the wards with the highest proportion of older people residing in it. It is possible that this population are less sedentary and in addition have low falls risk factors. Less exposure to environmental risk is a possibility, i.e. high socio-economical groups who may drive their own cars and not use public transport/walk long distance on the streets. Again environmental factors may be important in that the condition of the streets may be better in this ward minimising the incidence of falls.

The wards of Furzedown and West Hill experienced high fracture rates for 2009-10 but only average rates of conveyance in the individual Wards. This may be affected by location of falls not matching up with location of residence of those suffering a hip fracture. The SAR for West Hill over 2005-10 is significantly higher than the PCT average. This would suggest that the populations within these two wards are more mobile and that people are moving beyond the immediate ward. Within some of the recommended workstreams it is suggested that more information around the location of fall is captured to identify environmental issues that may require cross organisational groups i.e. falls on public transport and falls on the street.

Map 3: Neck of femur fracture rates per 1,000 population and London Ambulance Service conveyance for calls by ward (2009-10)

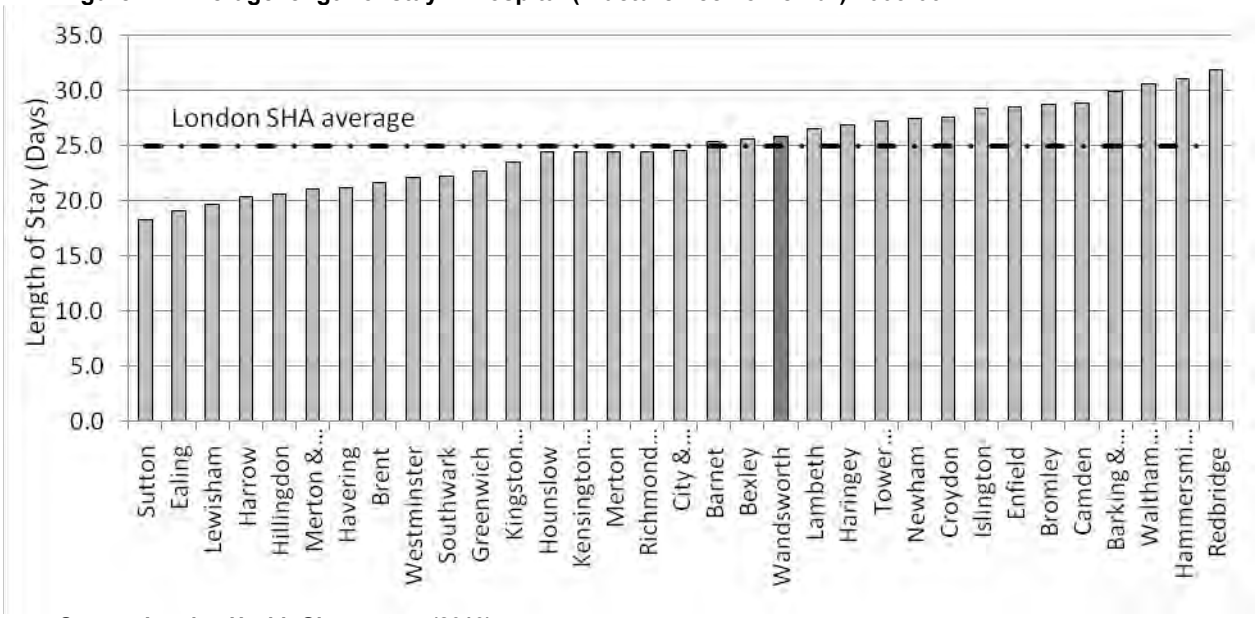


Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010) and London Ambulance Service (LAS).

4.11. Length of stay for people with fractured neck of femur.

Figure 12 shows the average length of stay in hospital as a result of a fractured neck of femur for the year 2005-06, the latest available data from the London Health Observatory. Wandsworth ranks in the middle (shaded bar) order of PCTs in London for length of stay as shown to its closeness to the London average. The Wandsworth average length of stay was 25.8 days and the London average was 25.0 days.

Figure 12: Average length of stay in hospital (Fracture neck of femur) 2005-06.



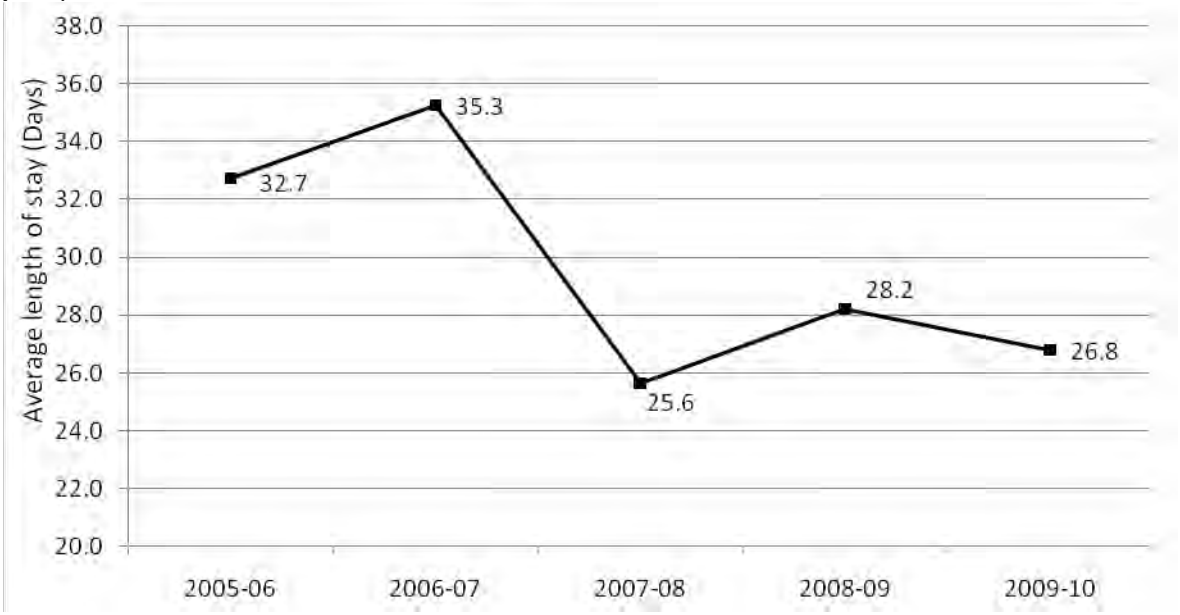
Source: London Health Observatory (2010)

Note that this dataset relates to patients of all ages, however the vast majority of people fracturing their femurs are older and in the 65 years and over age group. Furthermore, this data is 5 years old. Recent findings from the national audit (2009) reveal that St. George's hospital's average length of stay for a hip fracture is 36 days. The national average is 16 days. This large difference may be characteristic of a frail population and the delay in operating. However, length of stay figures may be influenced by lack of capacity from other services i.e. social services and community health services leading to a delayed discharge. More information would be required from the acute providers in order for the causes of delay to be analysed.

Sourcing data from the PCT's Secondary User Service (SUS) dataset shows that the average length of stay for the PCT for 2008-09 was 28.2 days (Figure 13) a substantial difference to that reported in the national audit (36 days). There may be a number of reasons for this large difference, amongst them but not restricted by them are; different case definition, different length of time period i.e. less than a year and different data collection method and processing.

The data (Figure 13) shows that the average length of stay has decreased substantially since a peak of 35.3 days in 2006-07. The latest figure, for 2009-10, reveals the average length of stay to be 26.8 days.

Figure 13: Average length of stay in St. George's hospital for fracture neck of femur (exact figure by each point).



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

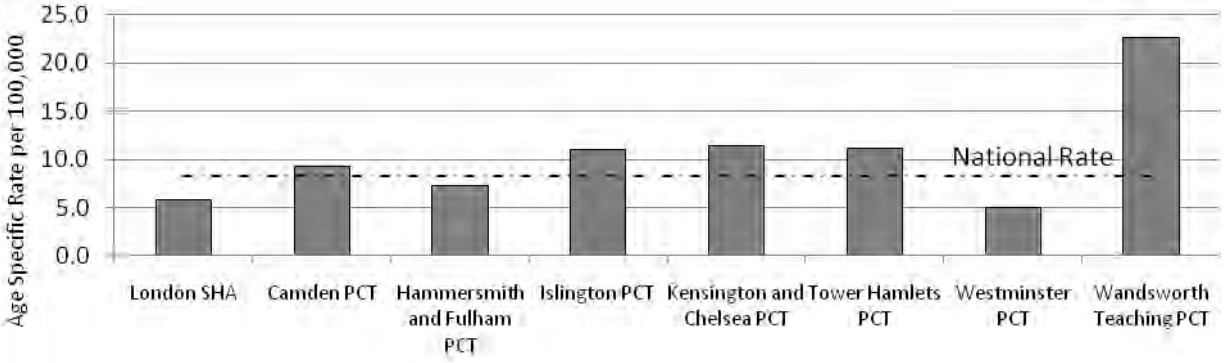
In addition a snapshot (April 2009 to January 2010) analysis by Dr. Foster Intelligence (NHS Wandsworth 2010) shows an average length of stay of 24.6 days at St. George's Healthcare NHS Trust. This is more in line with the data extracted from the SUS database which records 26.8 days for the same time period (plus 2 months) as the Dr. Foster Intelligence analysis.

4.12. Mortality from an accidental falls

In the 65 years and older population group of Wandsworth there were 17 deaths during the 2006-08 period due to an accidental fall, with 15 of these deaths in the 75 and over age group. Twelve of these deaths involved women aged 75 years and older. For the period 2006-08, the mortality rate from an accidental fall in the 65-74 years age group in Wandsworth (22.6 per 100,000 population) was substantially higher than national (8.3) and London (5.8) averages as well as being higher than all other PCTs in Wandsworth's WCC cluster (

Figure **14**).

Figure 14: Age specific (65-74years old) mortality rate from an accidental fall (2006-08).

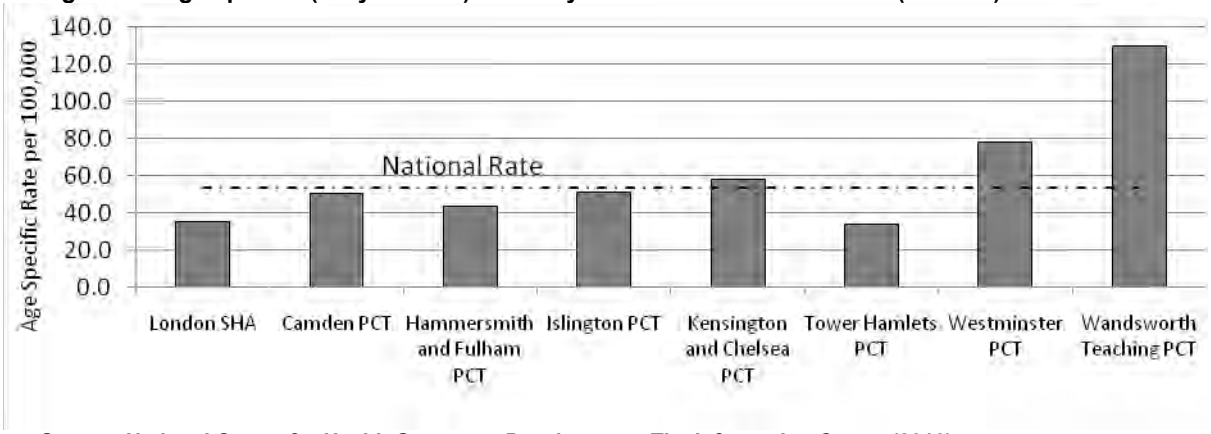


Source: National Centre for Health Outcomes Development, The Information Centre (2010).

The same pattern is seen for the 75 years and older age group (Figure 15) with Wandsworth's (129.9 per 100,000) mortality much higher than the national (53.2) and London (35.3) averages as well as the other cluster rates (33.7 – 78.2). In fact

Wandsworth's mortality rate from accidental falls (75+ years) is two-thirds higher than that of the next highest cluster PCT, Westminster. The mortality rate for 65-74 year olds is the eighth highest in the country while the rate for those 75 years and older in Wandsworth is the 13th highest PCT in the country. Projected population figures show that Wandsworth PCT has up to one third more females compared to males; this may be a higher proportional difference compared to the other PCTs and may account partly for the higher mortality rate. Additionally mortality has been associated to persons with reduced mental status, reduced somatic health and low physical ability (Fitzpatrick et al. 2001, Meyer et al. 2001, Hasegawa et al. 2007).

Figure 15: Age specific (75+years old) mortality rate from an accidental fall (2006-08).



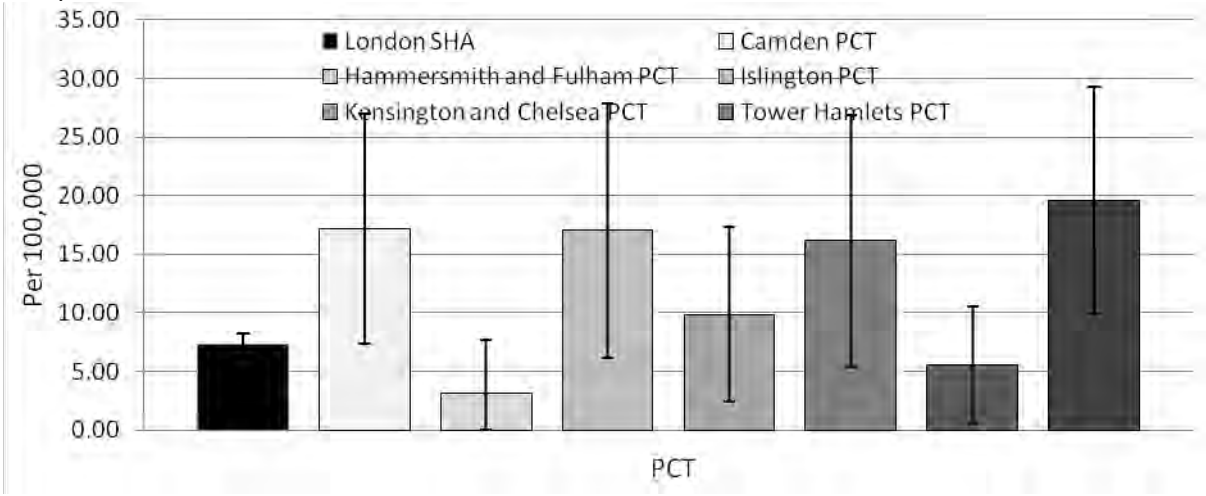
Source: National Centre for Health Outcomes Development, The Information Centre (2010).

Hip fractures remain the most serious consequence of a fall and the commonest cause of accident-related death in older people – 20% die within four months and 30% within a year (NHS Institute for Innovation and Improvement 2006).

4.13. Mortality from a fractured femur

The inequality between PCTs seen in admissions for fractured neck of femur (Figure 7) is also seen in mortality rates (directly standardized rates – DSR) from fractures of femurs, which are amongst the highest in London. Figure 16 shows that in Wandsworth PCT, for the period 2006-08, the mortality from a fractured femur for 65 to 84 year olds, is significantly higher than the London average. The graph also shows that the mortality rate in Wandsworth is significantly higher than in Hammersmith and Fulham PCT and while higher than all other PCTs, the rate is not significantly higher. Wandsworth mortality rate from a fractured femur is the 15th highest in the country.

Figure 16: Directly standardised rates for mortality from a fractured femur, age group 65- 84 years (2006-08).



Source: National Centre for Health Outcomes Development, The Information Centre (2010).

A similar pattern is seen in the 85 and older age group also. The directly standardised rate for Wandsworth for the period 2006-08 was 256.34 per 100,000 which is significantly higher than the London average (128.24) but not the national average.

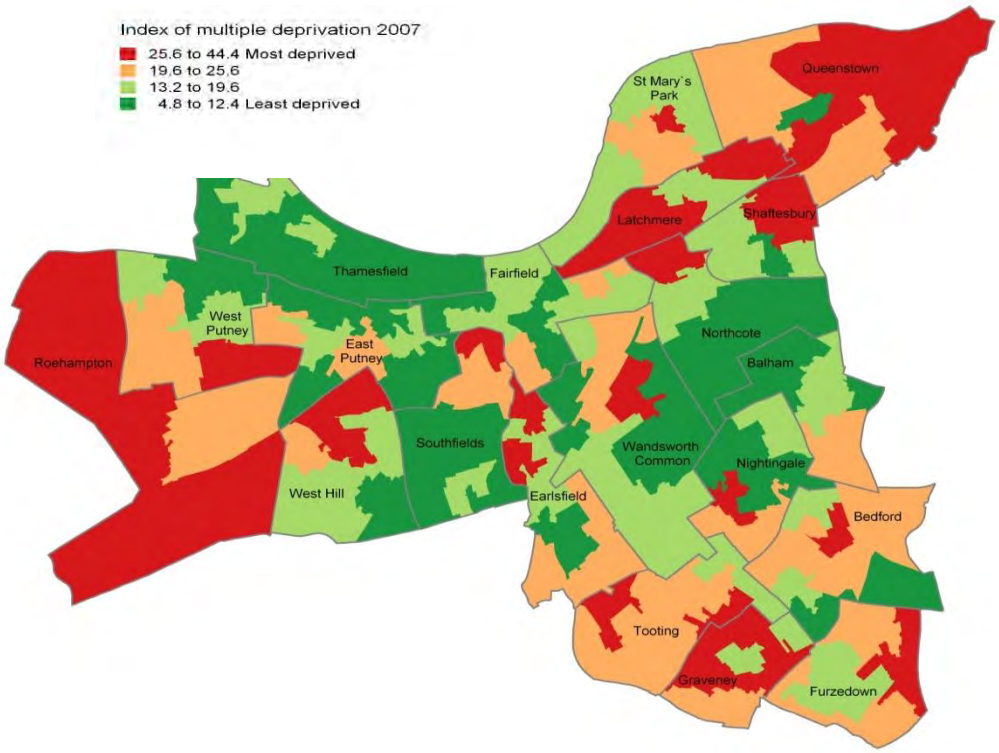
The information from the previous graphs around mortality indicates that some Trusts such as Camden have an average rate of mortality for falls with a large percentage due to hip fracture. However with Wandsworth there is a very high mortality rate for falls and a hip fracture mortality that has a lower proportional value. This may indicate that there is a high rate of mortality due to other conditions and falls is in effect the presenting symptom. This again warrants further data and analysis.

4.14. Related factors that contribute to mortality post hip fracture

Postoperative complications arising which can lead to increased mortality include chest infection and heart failure (Roche et al. 2005). These groups provide clear targets for specialist medical attention.

Environmental aspects also contribute to the risk of mortality as these will influence the pre-morbid status of the patient. Factors such as low social class and low income have been linked to mortality for older people in a number of studies (Banks *et al*. 2006, Harding 1995, Marang van de Mheen *et al*. 2000, Marang van de Mheen *et al*. 2001) while deprivation has also been associated with mortality (Boyle *et al*. 2004, Harding 1995, Smith *et al.* 1998, Wilkinson *et al*. 2004). In Wandsworth there is much variation with areas of high deprivation next to areas of low deprivation. An analysis of deprivation and the projected 65+ years old population at ward level shows that these two do not correlate (Section 4.8.3.). However there are particular wards where high deprivation is experienced and a relatively high proportion of the population is considered to be older. These wards include Roehampton, Tooting, Graveney and Furzedown. In Roehampton and Tooting one in every ten is 65 years old or above (Map 1, Map 2 and Map 4).

Map 4: A map of Wandsworth borough index of multiple deprivation by Lower Super Output Area with ward boundaries overlaid (Wandsworth scale).



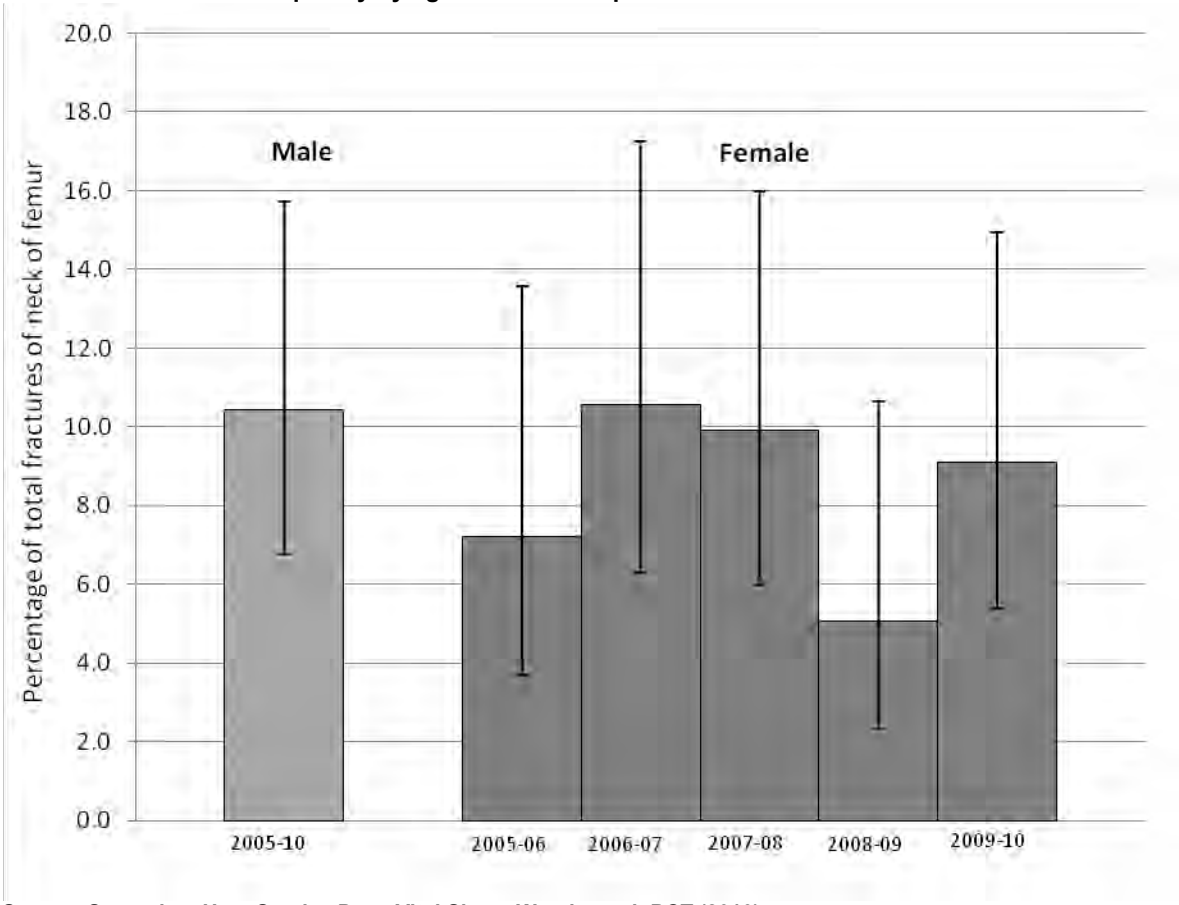
Source: The English Indices of Deprivation 2007. Department for Communities and Local Government.

Furzedown also has a 65 and over population which accounts for just under 10% of the ward population, while Graveney shows a proportion of nearly 9%. Both of these wards also experience near to highest deprivation in the borough. The wards of Queenstown and Latchmere do not exhibit relatively higher proportions of older population residing in them even though the range in proportions are narrow across the borough, 5.66% to 13.04% (see Map 1). This narrow range indicates that older people are distributed throughout Wandsworth.

4.15. Fracture of neck of femur admissions and subsequent mortality while in hospital

Hip fractures are associated with substantially increased risk of mortality (*Cauley et al, 2000).* This section looks at the percentage of people aged 65 years and over that die in hospital after experiencing a fracture of their neck of femur. The data does not include those that may die after discharge. For 2009-10, 9.1% of women died in hospital after suffering a hip fracture. However from year to year it could vary from 5.4% to 14.9%. This is confirmed by looking at previous levels of mortality. Figure 17 overall shows a constant trend in mortality for females with a large decrease 2008-09. This may be due to data issues plus the susceptibility of these rates to large changes due to small numbers of deaths overall from year to year. However this may be negated by a lack of intervention in regard of those suffering non-hip fragility fractures, i.e. it is estimated that 50% of people suffering these fracture go on to suffer a hip fracture.

Figure 17: Percentage of Wandsworth GP registered people 65 years and older suffering a fracture of the neck of femur and subsequently dying in while in hospital.



Source: Secondary User Service Data, Vital Signs, Wandsworth PCT (2010).

Due to the number for men dying being small the figures have been combined for the five year period. This shows that 10.4%, or just over one in ten men admitted due to a hip fracture have died between 2005 and 2010. It is estimated that this could vary from 6.8% to 15.7% from year to year. Comparable data for other PCTs was not available.

Analysis supplied by Dr. Foster Intelligence shows a proportion of 16.4% dying in hospital for both genders for the period April 2009 to January 2010. This is higher than the figures above for 2009-10. Some differences may be due to different data collection parameters and case definition as the data is sourced through two different methods.

The data presented in this section was extracted from NHS Wandsworth's Secondary User Service database - Vital Signs. An audit of patients who have been admitted to St George's and died following a fractured neck of femur is being undertaken by Public health. It initially identified 40 cases for the year 2008-09 through the ONS' Public Health Mortality Files. There is a discrepancy between these two sources with Vital Signs showing many less cases. This audit is at an initial stage at time of writing and the cause of the discrepancy is yet to be determined.

4.16 Conclusion

While Wandsworth PCT has a relatively young population and the 65 years old and over population is projected to remain constant over the next 5-10 years, for those that do live in the borough there is need around falls and their prevention. Non-hip fractures have been increasing year on year since 2005-06 for both men and women. Considering that research shows that around 50% of people 65 and over that suffer a non-hip fragility fracture go onto

have a hip fracture, this is an important factor pointing to the need for intervention strategies. Most recent data shows that admissions for fracture of neck of femur is continuing to increase and is likely to carry on due to non-hip fragility fractures increasing and the population changes expected in 20 years. The wards of Bedford, West Hill, Wandsworth Common and Graveney experience higher than expected admissions of non-hip fractures, while West Hill also shows significantly higher rates of hip fractures compared to the PCT average. Fracture (hip and non-hip) rates for post menopausal women (55-64 years old) follow the same trend as in the older age groups with year on year increases in fractures (with a slight decrease for 2009-10 from 291.6 per 100,000 population to 213.7). Again this has implications for a long term strategy as prevention strategies will need to be directed at this client group.

The other key points of the needs assessment are:

- Continuation of work and assessment around bisphosphonates and Vitamin D prescribing. Analysis presented here provides a basis for further assessment but is not conclusive. Older People's Strategy Group are working with the PCT's Clinical Effectiveness Group on their work and recommendations on Vitamin D deficiency, which is a relevant factor in falls prevention.

- Around one in ten people (65+) die while still in hospital after a hip fracture.

- Wandsworth experiences much higher rates (66% higher than nearest) of mortality due to an accidental fall compared to similar PCTs in London (WCC Cluster PCTs).

- There are nearly a third more women over the age 64 years than men projected to be resident now and in the future in Wandsworth.

- Mortality from a fractured femur shows Wandsworth with a directly age standardised rate higher than all other similar (WCC cluster) PCTs. However, the rate is only significantly higher than the London average and Hammersmith and Fulham PCT.

- London ambulance service (LAS) conveyance for falls (2009-10) is highly correlated with where the largest proportion of the 65 years and over reside, despite the conveyance incidence being logged at the location of fall rather than the fallers home address.

- Older people living in areas of high deprivation (Roehampton, Tooting, Graveney and Furzedown) should be given particular attention. Graveney experiences higher than expected non-hip fragility fracture (2005-10) while Graveney and Furzedown also experience higher than average rates of hip fractures (2005-10). Furzedown also experiences significantly higher hip fractures compared to the PCT average in the 80 years and over age group.

- While incidence of hip fractures and non-fragility fractures are not particularly correlated to areas of highest deprivation, any initiatives should also target these areas so as not to increase overall health inequalities as well as the fact that the highest proportions of older people live in these wards.

- Furthermore the future configuration of services need to be considered as the 65 and over population in Wandsworth is projected to increase steadily over the next 10 years and exponentially in some wards from 2020 to 2030. These wards include Thamesfield, Southfields, Queenstown and St. Mary's Park.

4.17 Recommendations arising from needs assessment

- Data collected by individual GP Practices as part of the osteoporosis DES should be submitted to the Performance and Primary Care Contracting Directorate as a requirement of payment (currently data is held at individual practice level and is not available at PCT level for public health analysis).
- The Pharmacy Department should review current contractual arrangements with ProStrakan to ensure that data collected as part of the ongoing audit undertaken by ProStrakan is made available on a regular basis to the PCT and individual practices. (The audit is of patients who have experienced falls and who are most at risk of fracture to ensure that they receive calcium and vitamin D3 supplements when appropriate as detailed in agreed protocols). These results then need to feed into a central integrated forum for consideration.
- Consideration needs to be given to ways of collecting data to enable analysis of fragility fractures for all patients who attend A&E – this data is not currently available.
- To fulfil the recommendations from the Falls and Bone Health Organisational Audit Report 2009 the number and rate of both hip fractures and other fragility fractures should be calculated annually in the borough.
- Integrated work streams incorporating falls prevention services, bone health, Primary Care and commissioning are required within the allocated wards of; West Hill, Wandsworth Common, West Putney, Graveney, Bedford, to focus on those populations with greatest need with regard to the prevention of falls and fractures. There will need to be clear leadership for this work within NHS Wandsworth. The priority ward for additional work is West Hill.
- The Older Peoples Strategy Group should be used as the forum for integrating working and the sharing of information between different directorates in areas where this has not always happened.
- Further joint work needs to be undertaken to look at the high mortality rate for falls. This will need to be led and coordinated through the Older People's Strategy Group.
- Joint work needs to be undertaken to look at the high mortality rate for fractured neck of femur. Public health is already undertaking an audit of patients who have been admitted to St George's and died following a fractured neck of femur. The results of this audit will be fed back to the Older People's Strategy Group.
- Work need to take place to review length of stay at St George's to bring this into line with national guidelines.
- Joint work needs to take place with regard to LAS conveyance rates – this will require agreed leadership to enable partnership working with LAS around developing effective pathways to prevent unnecessary conveyance to hospital whilst ensuring that systems, services and data collection are in place to ensure the close monitoring of the impact of non-conveyance on the patient. Joint work between commissioning, LAS, Social Services, care homes, CSW and acute hospitals around prevention and avoidance of conveyance should focus on Roehampton, Nightingale and West Hill. This again will require agreed leadership and clear reporting structures.
- Consideration should be given to mechanisms for identifying fragility fractures at acute providers other than St Georges to ensure that bone health and falls prevention interventions are targeted equitably across the borough. Admission rates for hip fracture suggest that only 50% of patients are accessing St Georges – hence the need to consider that lesser fractures may well present with a similar picture.

Appendix A – Hospital admissions and hospital attendances

Currently the database system, Vital Signs (Wandsworth's Secondary User Service (SUS) database), does not allow hospital attendance data to be collected by specific fracture type. Hospital attendances are those instances that are recorded of patients attending hospital for treatment irrespective of whether they are admitted to stay in hospital or not.

Admissions data are recorded within the *Inpatient* data cube of Vital Signs. This cube allows identification of disease and injury under the World Health Organisation's *International Statistical Classification of Diseases and Related Health Problems* (ICD-10). Using this classification allows specific fracture data to be extracted for analysis.

Hospital attendance data is recorded in the *Accident and Emergency Attendances* data cube. This records injury and disease using *Healthcare Resource Group* (HRG) codes. This codes groups fractures under one heading and therefore not allowing for extraction of data by fracture type.

Appendix B - 2008-09 hip fractures by GP & cost per 1,000 patients for bisphosphonates and calcium and vitamin D prescriptions.

Average cost per 1,000 patients: Bisphosphonates £1,031.18
Calcium & Vitamin D £704.52

Practice Code	Practice	No. of fractures	65+ Pop	Crude Rate fractures per 100k	Bisphosphonates cost per 1,000 patients (£)	Calcium & Vitamin D cost per 1,000 patients (£)
H85002	THE FALCON ROAD MEDICAL CENTRE	6	1602	374.53	561.76	389.60
H85003	QUEENSTOWN ROAD MEDICAL PRACTICE	<5	1476	67.75	1,220.67	835.59
H85004	THE SURGERY	<5	840	119.05	983.06	654.75
H85005	DR NICHOLAS & PARTNERS	<5	2606	115.12	1,156.50	415.10
H85006	MAYFIELD SURGERY	7	1648	424.76	2,480.18	851.08
H85007	SOUTHFIELDS GROUP PRACTICE	8	2796	286.12	1,626.75	978.94
H85008	THE ROEHAMPTON SURGERY	13	2292	567.19	1,867.32	904.56
H85009	BEDFORD HILL FAMILY PRACTICE	5	1424	351.12	761.51	474.24
H85011	THE GRAYSWOOD PRACTICE	<5	1712	58.41	780.92	666.86
H85012	PUTNEYMEAD MEDICAL CENTRE	<5	1482	134.95	970.29	368.02
H85039	WATERFALL HOUSE	5	916	545.85	823.74	449.68
H85041	EARLSFIELD SURGERY	8	2308	346.62	1,292.24	629.19
H85045	BRIDGE LANE GROUP PRACTICE	7	2664	262.76	1,319.58	728.65
H85047	CHATFIELD MEDICAL CENTRE	<5	2022	98.91	814.23	636.55
H85048	BROCKLEBANK HEALTH CENTRE	12	2056	583.66	1,098.08	484.51
H85049	BATTERSEA RISE GROUP PRACTICE	<5	858	349.65	908.98	274.30
H85052	STREATHAM PARK SURGERY	<5	1572	190.84	1,992.12	1,348.22
H85056	BALHAM HILL MEDICAL PRACTICE	<5	550	181.82	426.04	268.96
H85057	ELBOROUGH STREET SURGERY	<5	760	394.74	461.45	431.29
H85061	THE HEATHBRIDGE PRACTICE	5	2438	205.09	1,378.26	510.62
H85065	THE ALTON PRACTICE	<5	856	233.64	2,795.49	720.65
H85066	BALHAM PARK SURGERY	<5	1798	166.85	955.71	497.92
H85067	DANEBURY AVENUE SURGERY	<5	810	370.37	1,790.07	792.66
H85069	LAVENDER HILL GROUP PRACTICE	<5	1530	65.36	678.58	341.16
H85075	ST JOHNS	<5	514	194.55	285.22	396.31
H85077	THE HERITAGE MEDICAL CENTRE	<5	992	100.81	704.23	413.12
H85082	TRIANGLE SURGERY	<5	852	352.11	986.07	859.31
H85087	OPEN DOOR SURGERY	<5	2220	90.09	1,054.49	798.21
H85088	CLAPHAM JUNCTION MEDICAL PRACTICE	<5	700	285.71	476.54	432.95
H85100	ST PAUL'S COTTAGE PRACTICE	<5	642	311.53	845.16	646.74
H85104	PUTNEYMEAD MEDICAL CENTRE	<5	732	409.84	310.83	173.48
H85107	MITCHAM ROAD SURGERY	<5	502	199.20	494.99	800.85
H85111	BATTERSEA FIELDS PRACTICE	5	1284	389.41	599.11	950.42
H85114	THURLEIGH ROAD PRACTICE	<5	1106	180.83	1,273.56	474.53
H85636	NORTHCOTE ROAD SURGERY	<5	492	203.25	1,315.96	985.83
H85637	BALHAM HEALTH CENTRE	<5	374	0.00	834.30	1,157.96
H85643	INNER PARK ROAD HEALTH CENTRE	<5	840	0.00	3,915.09	1,078.68
H85650	GRANVILLE ROAD SURGERY	<5	262	0.00	199.48	321.77
H85659	ST. JOHN'S HILL PRACTICE	<5	224	0.00	182.62	384.51
H85664	TOOTING BEC SURGERY	<5	166	0.00	87.33	239.95
H85680	TOOTING SOUTH MEDICAL CENTRE	<5	498	0.00	602.08	1,003.79
H85682	TUDOR LODGE HEALTH CENTRE	<5	644	310.56	387.71	411.84

H85685	SAI MEDICAL CENTRE	<5	90	0.00	21.58	279.73
H85688	THE FRANCISCAN SURGERY	<5	734	0.00	612.15	365.36
H85695	FURZEDOWN PRIMARY CARE CENTRE	<5	738	406.50	1,143.54	886.05
Y01132	CHARTFIELD SURGERY	5	1784	280.27	923.46	514.91
Y02423	DR FREEMAN AND PARTNERS	<5	3002	99.93	0.00	0.00