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Public Health & Social Research Unit

Data Commentary:
Falls Among Older Adults

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Public Health and Social Research Unit

West Sussex County Council

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- There are approximately 828,400 people living in West Sussex, of which, 94,750 are 65 to 74 years of age, and a further 89,220 are aged 75 years or over. This equates to an estimated 183,970 residents who are over retirement age.
- There are some small areas of West Sussex where more than 50% of the resident population are aged 65 or above. In particular, small areas within the wards Rustington East, Rustington West, East Preston with Kingston, and Ferring have a largely older population.
- The population of older adults is projected to increase nationally and locally. In West Sussex, the population of adults aged 70+ is projected to grow at the fastest rate. In 2039, more than 30% of the resident population is projected to be aged 65 or older.
- Life expectancy at birth and at age 65 is significantly higher for men and women in West Sussex when compared to England, and is similar to the South East.
- The number of adults over the age of 65 who are predicted to have a fall is expected to increase from nearly 50,000 adults in 2014, to more than 87,000 by 2039.
- In 2014/15, there were approximately 4,200 emergency admissions to hospital due to injuries from falls among adults aged 65 and over in West Sussex; a rate of 2000.0 admissions per 100,000 persons (65+).
- Rates of emergency hospital admissions for falls are greater among women. In 2014/15, the rate of emergency admissions for a fall injury was 2,440 per 100,000 women aged 65 and over, compared to 1,560 per 100,000 men.
- Over the next 25 years, the number of adults aged 65+ admitted to hospital due to a fall is projected to nearly double, rising from 3,940 admissions in 2014 to 7,330 in 2039.
- There were more than 1,200 emergency hospital admissions for persons aged 65+ due to a fractured femur in 2014/15. Of these, the majority (N = 901) were for adults aged 80 or above.
- Rates of emergency hospital admissions for femur fractures are consistently higher for women than men; with 734.0 admissions per 100,000 females aged 65+ compared to 391.8 per 100,000 males aged 65+.
- Between 10 and 13% of patients admitted to hospital for treatment for a femur fracture were readmitted with 28 days following discharge in Clinical Commissioning Groups (CCGs) within West Sussex.

Background

Falls and injuries sustained due to a fall are a common and serious problem for older people. People aged 65 and older have the highest risk of falling, with 30% of people older than 65, and 50% of people older than 80 falling at least once a year[1]. Annually, approximately 5% of older people who fall obtain a fracture or require hospitalisation for a fall-related injury[2].

The human cost of falling includes; distress, pain, injury, loss of confidence, psychological problems such as depression, as well as increases in dependency, disability and mortality. Falls are the most common cause of death from injury in adults aged over 65 and are estimated to cost the NHS more than £2.3 billion per year. Therefore, falls have a huge impact on quality of life, health and healthcare costs.

NICE guidance on falls[3] cover all adults aged 65 or older, and adults aged 50 to 64 who are judged as being at high risk of a fall on admission to hospital due to an underlying condition/s. According to the NICE recommendations, all people aged 65 or older who are admitted to hospital should be assessed for their risk of falls during their hospital stay, and for their community-based falls risk.

A Note on Data Quality

Falls data should generally be viewed with caution. The recording of falls is relatively poor nationally. This is because a large number of falls go unreported (particularly where no injury is sustained), or the records are incomplete; for example, where an injury from a fall is recorded but not the cause. As a result, the number and impact of falls is likely to be underestimated.

The data presented within this summary is not inclusive. This summary intends to give an overview of the demography of older populations within West Sussex, and reviews key data sources relating to falls.

Demography of West Sussex

There are approximately 828,400 people in West Sussex, of whom 183,970 are aged 65 years and over (22.2% of the population). This includes an estimated 89,220 people aged 75 years and over[4] (Table 1).

Table 1: 2014 Mid-Year Population Estimates for Adults aged 65 and over in the local authorities of West Sussex

Local authorities	All ages	65+	Number of residents aged 65+					
			65-69	70-74	75-79	80-84	85-89	90+
Adur	63,176	14,607	4,310	3,283	2,767	2,086	1,370	791
Arun	154,414	43,316	12,410	9,652	8,218	6,252	4,127	2,657
Chichester	115,527	30,550	8,743	6,881	5,685	4,503	2,906	1,832
Crawley	109,883	14,400	4,440	2,903	2,487	2,318	1,515	737
Horsham	134,158	28,905	8,842	6,559	5,332	4,077	2,548	1,547
Mid Sussex	144,377	28,499	8,816	6,270	4,984	4,055	2,697	1,677
Worthing	106,863	23,692	6,744	4,894	4,323	3,532	2,439	1,760
West Sussex	**828,398**	**183,969**	**54,305**	**40,442**	**33,796**	**26,823**	**17,602**	**11,001**

Source: ONS mid-year estimate 2014

Figure 1 shows the proportion of the population of West Sussex who are aged 65 or over at lower super output area (LSOA). Small areas along the coast of the county tend to contain older populations rather than inland, urban areas

[1] NICE Guidance (CG161) – Falls in older people: assessing risk and prevention. Accessed on 21 June 2016 from: https://www.nice.org.uk/guidance/cg161/chapter/Introduction

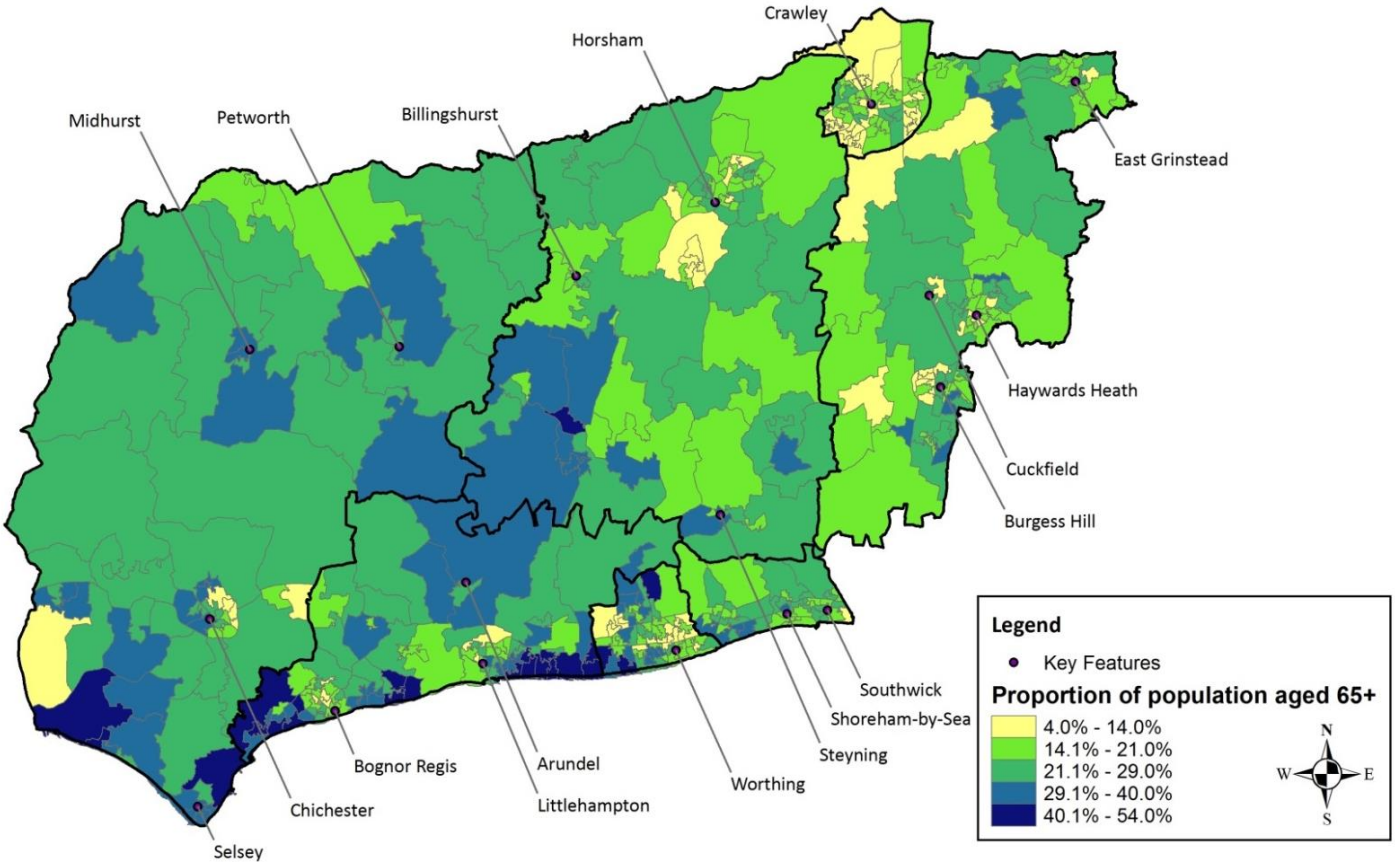
[2] Rubenstein L.Z. (2001). Fall risk assessment measures: an analytic review. *Journal of Gerontology, Biological Sciences and Medical Sciences, 56*(12): M761-M766

[3] NICE Guidance (CG161) – Falls in older people: assessing risk and prevention.

[4] Source: ONS Mid-Year Population Estimate (2014)

(such as Crawley, Horsham and Burgess Hill). In particular, four small areas in Arun have populations where more than 50% are aged 65 and above. These areas sit within the wards Rustington East, Rustington West, East Preston with Kingston and Ferring and are situated to the east of Littlehampton on the coastal strip.

Figure 1: The proportion of the population of West Sussex aged 65 years or above, by lower super output area (2014 mid-year estimate)



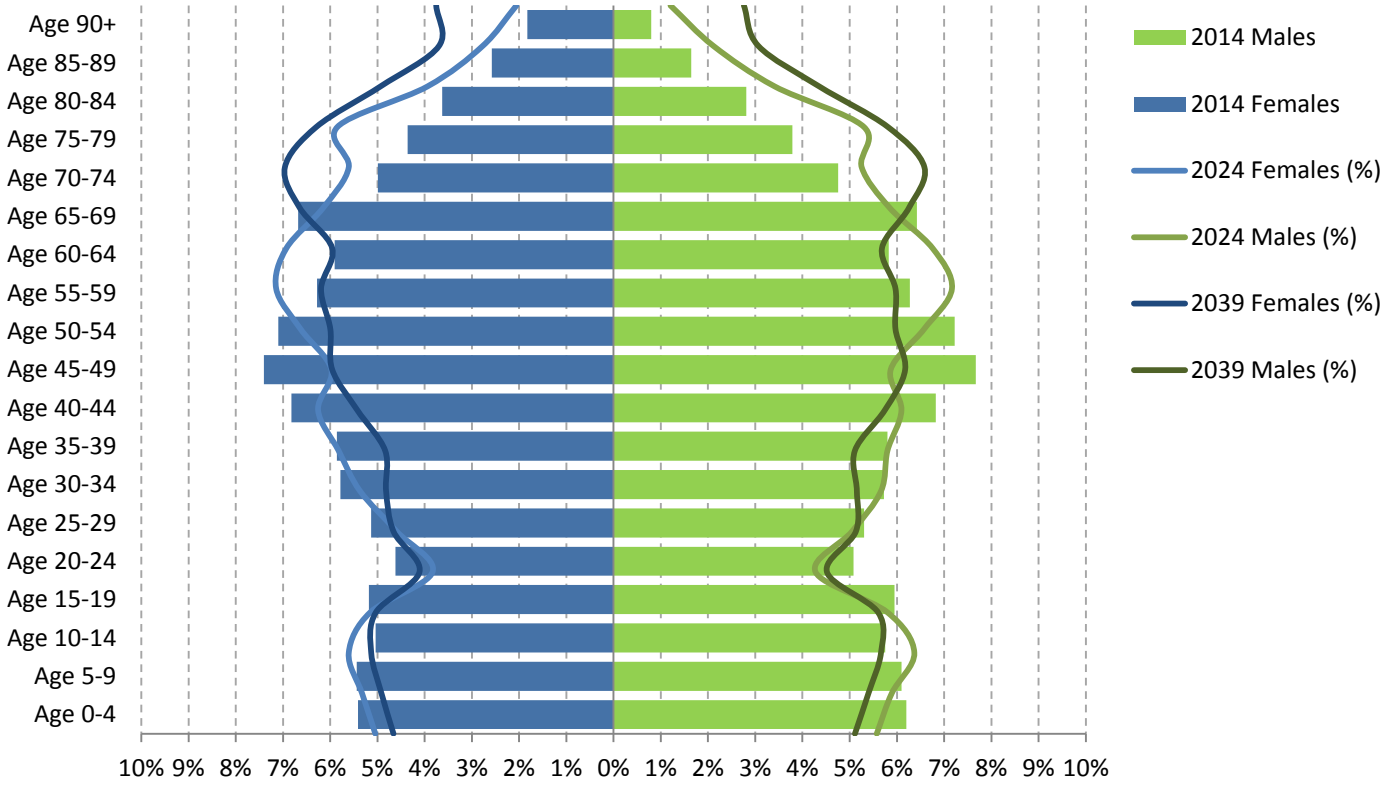
Projected change in age structure of West Sussex

Nationally, the population of older adults is projected to increase. The number and proportion of older people continues to rise, with over 11.4 million people (17.7% of the population) in the UK aged 65 and over in mid-2014. This has increased from mid-2013 where 11.1 million people (17.4%) were aged 65 or older. The number of males aged 85+ has increased by 61.8% since mid-2004; this compares to an increase of 25.9% for females in the same age group. This difference reflects greater improvements in factors contributing to male mortality (such as changes in smoking habits, occupation and housing standards etc.), as well as greater life expectancies for both groups.

Figure 2 illustrates the aging population of West Sussex[5]. The population of adults aged 70 or over is projected to grow at the fastest rate, whereas the population of working age adults (approx. ages 20-59 years) is projected to decrease. In 2014, approximately 22.2% of the population of West Sussex are aged 65 or above. This is projected to increase to nearly a quarter by 2024 (24.8%), and to more than 30% by 2039 (30.6%).

[5] Source: ONS Sub-National Population Projection (2014 based)

Figure 2: Population estimate for males and females in 2014 and projected size of the population in 2024 and 2039 in West Sussex



Source: ONS Population Projections (2014 based)
Note that population projections are not forecasts. These projections are based on the population estimate for 2014 and patterns of fertility, births, deaths and migration in the preceding five years. They do not take into account future changes in policy or policies that have yet to have an impact.

These population projections have many implications for older people, particularly affecting health and social care services. As people age, they are more likely to live with complex co-morbidities, disability and frailty. In 2014-15, 53% (£7.2 billion) of gross current expenditure on Adult Social Care Services in England was spent on short and long-term support for adults aged 65 and over[6]. As the population continues to age, this expenditure will need to increase to meet the growing demand on health and social care services.

At a local authority level, the projected change in the size of the retirement age population varies (Table 2). The greatest change is expected in Crawley and Worthing (approx. increase of 77% by 2039 from 2014), although this population is expected to have grown by more than half that of 2014 in all local authorities in West Sussex by 2039. In addition, the population of adults aged 75+ is projected to more than double in Horsham and Mid Sussex by 2039 (Table 3).

[6] Source: HSCIC - Personal Social Services: Expenditure and Unit Costs, England 2014-15 Final release. Accessed from http://www.hscic.gov.uk/searchcatalogue?productid=19459&q=personal+social+services&sort=Relevance&size=10&page=1#top (on 20th June 2016)

Table 2: 2014 mid-year population estimate (000's) and projected change for adults aged 65+ in West Sussex

AREA	Mid-year population estimate 2014 (000's)	Projected change from 2014*				
		2019	2024	2029	2034	2039
Adur	14.7	5.4%	13.6%	25.9%	41.5%	52.4%
Arun	43.4	8.8%	20.3%	35.0%	50.9%	62.4%
Chichester	30.5	8.5%	19.3%	33.4%	47.2%	56.7%
Crawley	14.3	9.8%	24.5%	43.4%	62.2%	76.9%
Horsham	28.8	12.8%	26.7%	44.1%	61.8%	72.9%
Mid Sussex	28.6	10.8%	22.7%	37.8%	53.8%	66.4%
Worthing	23.6	8.9%	22.9%	41.1%	61.0%	76.7%
West Sussex	183.9	9.6%	21.5%	37.4%	53.8%	66.0%
South East	1,648.8	10.1%	22.2%	38.1%	54.0%	65.8%
England	9,537.8	9.4%	20.4%	34.9%	49.3%	59.2%

*These projections published on 25 May 2016 are based on the 2014 mid-year population estimates published in June 2015
Source: ONS subnational population projections (2014 based)

Table 3: 2014 mid-year population estimate (000's) and projected change for adults aged 75+ in West Sussex

AREA	Mid-year population estimate 2014 (000's)	Projected change from 2014*				
		2019	2024	2029	2034	2039
Adur	7.1	7.0%	26.8%	38.0%	53.5%	71.8%
Arun	21.3	10.3%	35.2%	51.6%	68.1%	90.1%
Chichester	14.9	12.1%	34.9%	49.7%	66.4%	87.2%
Crawley	7.0	0.0%	18.6%	37.1%	60.0%	84.3%
Horsham	13.4	15.7%	44.0%	64.9%	86.6%	112.7%
Mid Sussex	13.5	13.3%	40.7%	58.5%	77.8%	101.5%
Worthing	12.0	7.5%	32.5%	50.8%	71.7%	99.2%
West Sussex	89.2	10.7%	35.0%	52.2%	70.6%	94.2%
South East	766.3	12.2%	37.7%	55.6%	74.4%	98.5%
England	4,374.9	10.8%	33.9%	50.7%	67.8%	89.8%

*These projections published on 25 May 2016 are based on the 2014 mid-year population estimates published in June 2015
Source: ONS subnational population projections (2014 based)

Life expectancy and healthy life expectancy at birth and age 65

Period life expectancy for an area is the average number of years a person would expect to live, if he or she experiences that particular area's age-specific mortality rates, for that time-period, throughout his or her life. A longer average life expectancy contributes to an aging population. Life expectancy at birth for males has increased from 77.8 years in 2000 to 2002 to 80.6 years in 2012 to 2014 in West Sussex. For females, life expectancy at birth has increased from 81.6 years in 2000 to 2002, to 84.2 years in 2012 to 2014. This is significantly higher than in England (male life expectancy: 79.5 years, female life expectancy: 83.2 years - Table 4).

Healthy life expectancy at birth reflects the average number of years a person would expect to live in good health based on current mortality and health status rates. In 2012 to 2014, males at birth in West Sussex could expect to spend 82.0% of their lives in good health. This is similar for females, who could expect to spend 81.5% of their lives in good health. This differs to England, where males can expect to spend a greater proportion of their lives in good health (79.7%) compared to females (76.9%), despite having a lower average life expectancy.

Between 2012 and 2014 in West Sussex, men aged 65 could expect to live for a further 19.4 years, with 60.7% of these years spent in good health (11.8 years). In comparison, women aged 65 could expect to live for a further 22.0 years, with 70.0% of these years spent in good health (15.4 years).

Table 4: Life expectancy at birth and at 65, and healthy life expectancy at birth and at 65 in West Sussex the South East and England (2012-14); confidence intervals are shown in parentheses.

	West Sussex		South East		England	
	Males	Females	Males	Females	Males	Females
Life expectancy at birth	80.6	84.2	80.5	84.0	79.5	83.2
	(80.4 – 80.9)	*(84.0 – 84.4)*	*(80.5 – 80.6)*	*(83.9 – 84.1)*	*(79.5 – 79.6)*	*(83.2 – 83.2)*
Life expectancy at 65	19.4	22.0	19.3	21.7	18.8	21.2
	(19.3 – 19.6)	*(21.9 – 22.1)*	*(19.3 – 19.4)*	*(21.7 – 21.8)*	*(18.8 – 18.8)*	*(21.2 – 21.2)*
Healthy life expectancy at birth	66.1	68.6	65.9	66.6	63.4	64.0
	(64.6 – 67.6)	*(67.1 – 70.2)*	*(65.5 – 66.3)*	*(66.1 – 67.1)*	*(63.3 – 63.6)*	*(63.8 – 64.2)*
Healthy life expectancy at 65	11.8	15.4	11.8	13.3	10.6	11.5
	(10.7 -12.9)	*(14.6 - 16.5)*	*(11.4 – 12.2)*	*(12.9 – 13.7)*	*(10.4 - 10.7)*	*(11.3 - 11.6)*

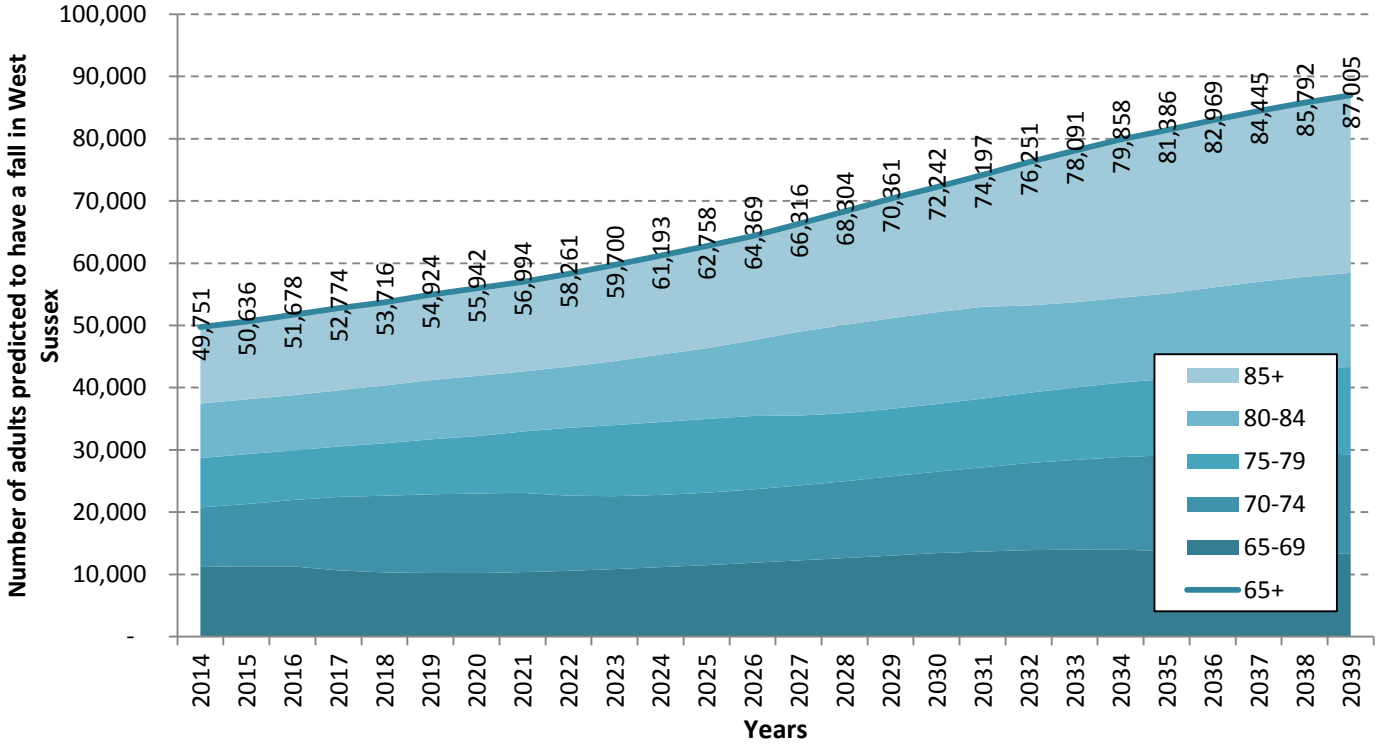
Source: Public Health Outcomes Framework; ONS: Healthy Life Expectancy (HLE) and Life Expectancy (LE) at age 65, England

Number of adults projected to have a fall

Figure 3 shows the number of adults aged 65 years and over (5-year age bands) who are predicted to have a fall in West Sussex (2014-2039). The prevalence of falls was estimated from data recorded in the 2005 Health Survey for England. These figures have been applied to the subnational population projections for West Sussex to produce Figure 3. These projections are based on current trends in births, deaths, fertility and migration in the 5 years preceding 2014, and do not take into account recent or future changes in policy and services.

The number of adults over the age of 65 predicted to have a fall is expected to increase by more than 37,000 from 2014 to 2039. This places a significant burden on health and social care resources to meet the increasing demand.

Figure 3: Population of adults aged 65 and over projected to have a fall in West Sussex (2014 to 2039)



Source: POPPI. Health Survey for England (2005), volume 2, table 2.1. Prevalence of falls in the last 12 months, by age and sex. The prevalence of falls from the HSE (2005) was applied to the subnational population projections (SNPP) released by the ONS in May 2016 (2014 figure uses the mid-year population estimate).

Emergency Hospital Admissions for Injuries due to Falls (65 years +)

Admissions to hospital for falls and fractures among older people are a serious and growing public health issue. Whilst most falls are not serious, falls among older and at risk populations (e.g. those with osteoporosis) are more likely to result in a significant injury (such as femur and wrist fractures)that require further hospital treatment.

In 2014/15, there were approximately 4,200 emergency hospital admissions for falls injuries among adults aged 65 and over in West Sussex; a rate of 2000.0 emergency admissions per 100,000 persons aged 65+ (Table 5). The rate of emergency admissions for falls (65+ years) in West Sussex and the South East is significantly lower than in England.

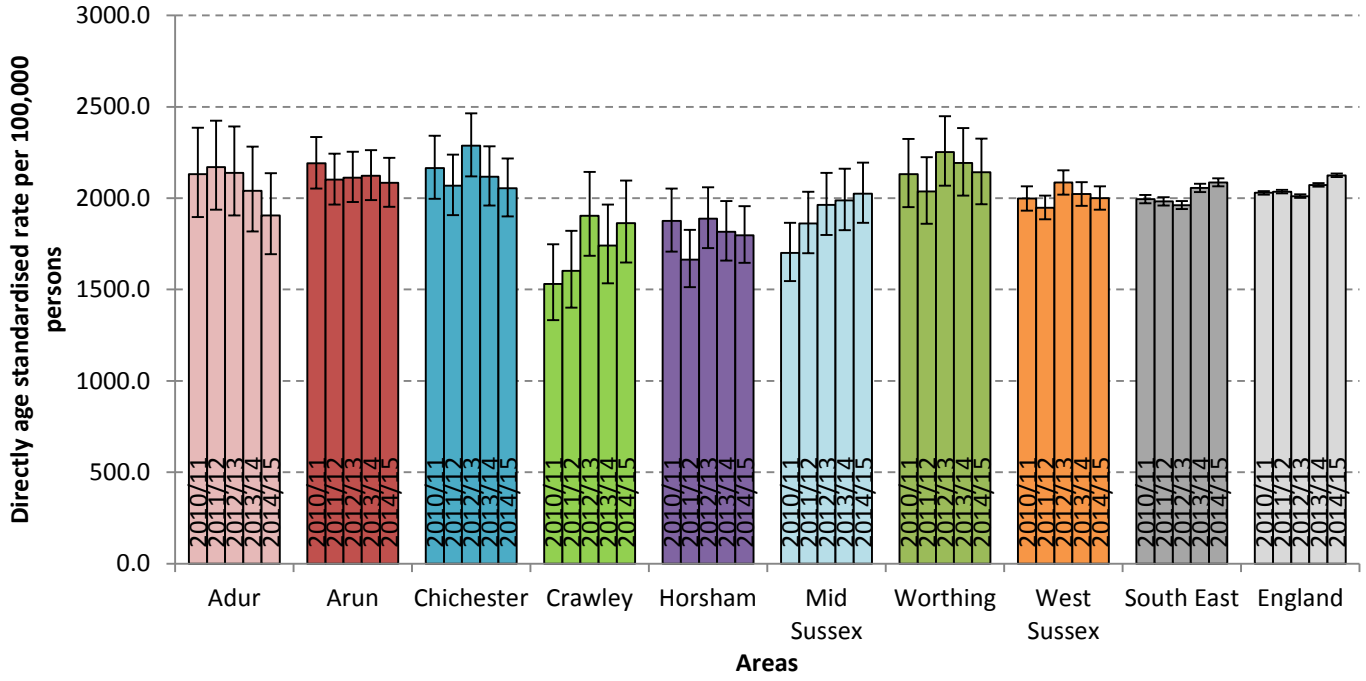
Table 5: Directly age-sex standardised rate of emergency hospital admissions for injuries due to falls; males, females, persons aged 65 years and over, per 100,000 (2014/15)

Area Name	Persons				Males				Females			
	Count	Value	LCI	UCI	Count	Value	LCI	UCI	Count	Value	LCI	UCI
Adur	309	1,905.4	1,692.5	2,136.9	88	1,425.3	1,141.1	1,758.3	221	2,385.5	2,076.9	2,726.4
Arun	1,026	2,083.7	1,953.0	2,220.6	306	1,654.0	1,472.1	1,852.1	720	2,513.4	2,328.6	2,708.6
Chichester	718	2,054.4	1,900.9	2,216.5	200	1,540.0	1,331.9	1,771.1	518	2,568.8	2,347.3	2,805.2
Crawley	302	1,862.7	1,648.5	2,095.8	91	1,489.3	1,194.2	1,834.2	211	2,236.0	1,934.6	2,569.9
Horsham	564	1,796.1	1,645.5	1,956.4	174	1,456.9	1,245.1	1,694.0	390	2,135.3	1,925.6	2,361.3
Mid Sussex	647	2,024.9	1,864.3	2,195.2	194	1,674.7	1,444.8	1,930.5	453	2,375.1	2,155.6	2,610.5
Worthing	633	2,141.1	1,967.4	2,325.4	160	1,559.4	1,325.6	1,822.2	473	2,722.9	2,471.0	2,992.6
West Sussex	4,199	2,000.0	1,937.4	2,064.0	1,213	1,560.0	1,472.6	1,651.2	2,986	2,440.0	2,351.1	2,531.3
South East	37,007	2,086.0	2,064.0	2,108.2	11,596	1,711.0	1,679.6	1,742.9	25,411	2,461.0	2,430.3	2,491.9
England	211,521	2,124.6	2,115.2	2,134.0	66,612	1,739.8	1,726.3	1,753.3	144,909	2,509.5	2,496.4	2,522.6

Source: PHOF – Rate of emergency hospital admissions for falls injuries in males, females, and persons aged 65+ (2014/15);
Note: LCI: Lower Confidence Interval, UCI: Upper Confidence Interval (95%).

Figure 4 shows small variations in the rate of emergency admissions for falls injuries (adults 65+) across West Sussex. In 2014/15, Horsham had a significantly lower rate of emergency admissions for injuries due to falls among adults of retirement age than Worthing (see Table 5). In addition, Horsham and Crawley have a significantly lower rate of admissions for falls compared to England.

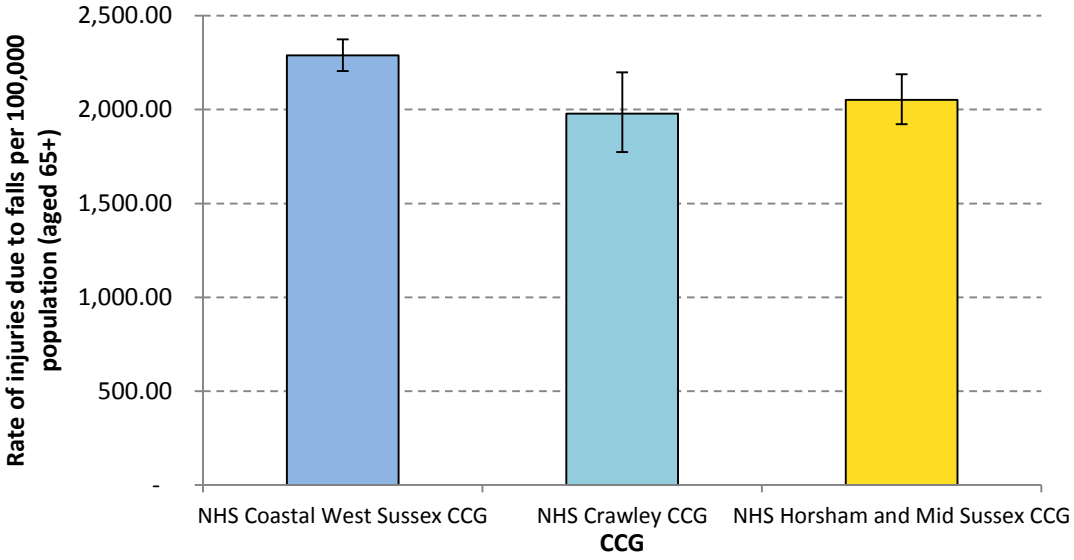
Figure 4: Directly age standardised rate per 100,000 emergency hospital admissions for falls injuries in persons aged 65 and over in local authorities across West Sussex (2010/11 to 2014/15)



Source: PHOF – Rate of emergency hospital admissions for falls injuries in persons aged 65+ (2010/11 to 2014/15)

There are also differences in the rate of falls resulting in emergency hospital admissions across the Clinical Commissioning Groups (CCGs) in West Sussex (Figure 5). NHS Coastal West Sussex CCG has a significantly higher rate of emergency admissions for falls injuries in persons aged 65 and over when compared to NHS Horsham and Mid Sussex and NHS Crawley CCG. This aligns with evidence for older populations in areas along the coast (see Figure 1).

Figure 5: The rate of emergency admissions for injuries due to falls in people aged 65 and over per 100,000 population, CCGs in West Sussex (2014/15)



Source: Commissioning for Value Pack 2016 – Injuries due to falls per 100,000 population aged 65+ (2014/15)

Whilst it is useful to examine variation in the number and rate of falls between the CCGs in West Sussex, the characteristics of the populations served by the CCGs may be quite different. The NHS Commissioning for Value (CfV) tool identifies a group of comparable CCGs that are similar in terms of age structure, ethnicity and population density to each individual CCG. It is interesting to note that none of the CCGs in West Sussex includes another of the CCGs in the county within the benchmarked group, suggesting variation in the demographics of the populations served.

Table 6 shows the performance of the CCGs in West Sussex on three trauma and injury indicators when compared to the average of the ten most similar CCGs. Coastal West Sussex CCG has significantly higher rates of admissions for fractures and for injuries due to falls in people aged 65 and over when compared to its benchmarked group. Horsham and Mid Sussex CCG does not differ from its ten most similar CCG group on any of the indicators presented. Finally, Crawley CCG has a significantly lower rate of injuries due to falls for adults aged 65 and over when compared to its benchmarked group.

Table 6: Performance of West Sussex CCGs (compared to the average of 10 similar CCGs) for key trauma and injury indicators (2014/15) affecting adults aged 65 and over.

Red cells indicate that the CCG has significantly worse performance than the average of the 10 most similar CCGs, and green cells indicate significantly better performance. White cells suggest no statistically significant difference. Average rates for the benchmarked group are shown in parentheses.

Area	Performance of West Sussex CCGs on indicators benchmarked against 10 similar CCGs for trauma and injury indicators		
	Rate of all fracture admissions per 1,000 population aged 65+	Rate of injuries due to falls per 100,000 population aged 65+	Rate of hip fractures in people aged 65+
NHS Coastal West Sussex CCG	16.2 *(15.1)*	2,289.5 *(2,041.9)*	659.6 *(601.2)*
NHS Crawley CCG	12.9 *(14.1)*	1,978.4 *(2,245.0)*	559.5 *(580.4)*
NHS Horsham and Mid Sussex CCG	13.5 *(14.0)*	2,052.1 *(2,011.0)*	554.2 *(598.7)*

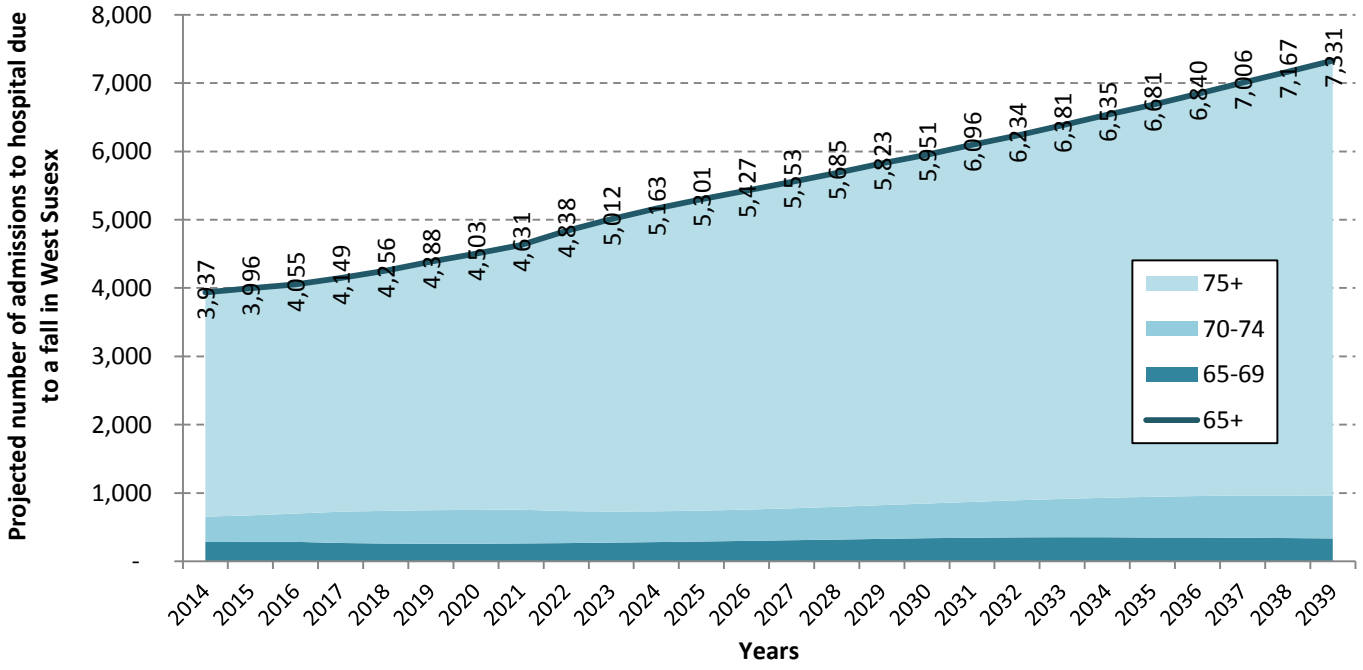
Source: Commissioning for Value Packs (2014/15)

Projected number of admissions to hospital due to a fall

Figure 6 shows the number of adults aged 65 years and over (by ages 65-69, 70-74 and 75+) who are predicted to be admitted to hospital as a result of an unintentional fall in West Sussex (2014-2039). The rates for hospital admissions due to falls were estimated from a study of A&E attendances and admissions for fall related injuries[7]. These figures have been applied to the subnational population projections for West Sussex. As previously stated, these projections are based on current trends in births, deaths, fertility and migration in the 5 years preceding 2014, and do not take into account changes in policy and services.

The number of adults over the age of 65 predicted to be admitted to hospital due to a fall is projected to nearly double that of 2014 by 2039. Adults aged 75+ account for the largest proportion of those (aged 65+) predicted to be admitted to hospital due to a fall.

Figure 6: Projected number of hospital admissions due to a fall in West Sussex, adults aged 65+ by age (2014 to 2039)



Source: POPPI. The rate of admissions to hospital due to falls from Scuffham (2003) was applied to the subnational population projections (SNPP) released by the ONS in May 2016 (2014 based).

Factors increasing risk of serious falls

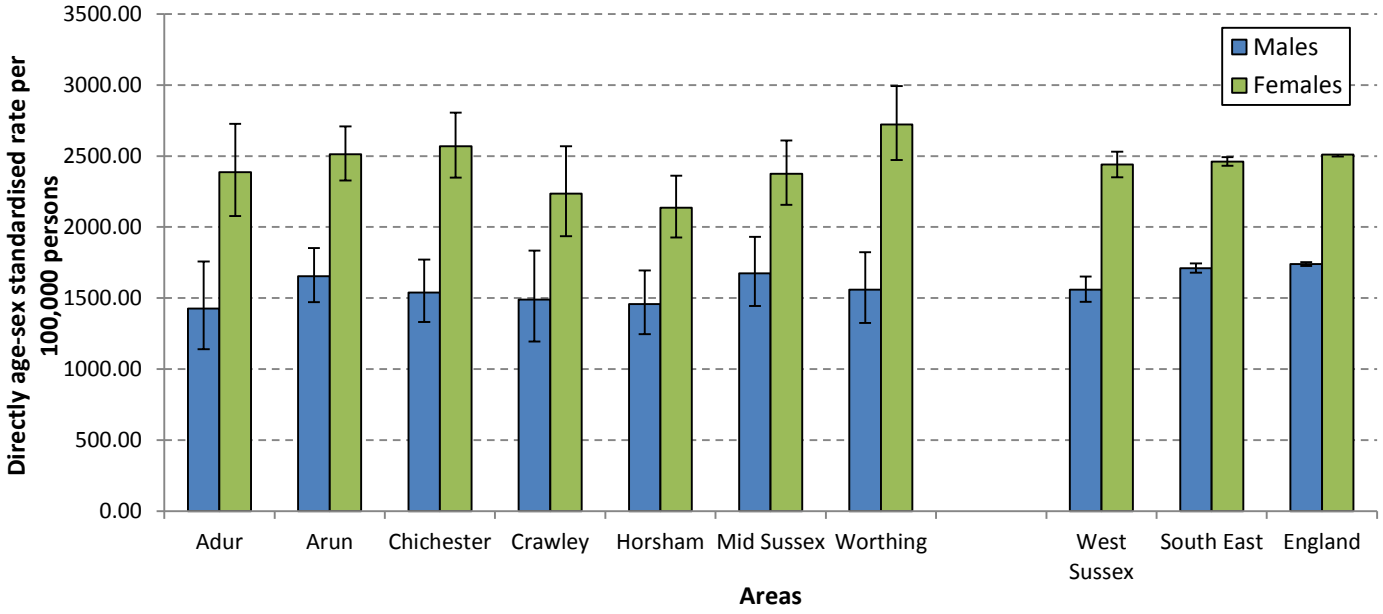
Gender

Figure 7 demonstrates the consistently higher rates of emergency hospital admissions due to injuries sustained from falls for women compared to men (aged 65+). In 2014/15, there were approximately 1,215 emergency admissions for fall injuries for men aged 65 and above in West Sussex, this compares to 2,985 admissions for women in the same age group.

At a local authority level, women in Worthing are more likely to be admitted to hospital for an injury due to falls than in Horsham, although no difference exists between admission rates for males. Compared to England, West Sussex has a similar rate of emergency admissions for falls injuries in females aged 65 and over, and a significantly lower rate for males aged 65 and over (2014/15). Table 5 presents the rates and confidence levels by gender.

[7] Scuffham, P. et al, Incidence and costs of unintentional falls in older people in the United Kingdom, Journal of Epidemiology and Community Health, Vol. 57, No.9, Sept. 2003, pp.740-744.

Figure 7: Directly age-sex standardised rate per 100,000 emergency hospital admissions for falls injuries in men and women aged 65 and over in local authorities across West Sussex (2014/15)

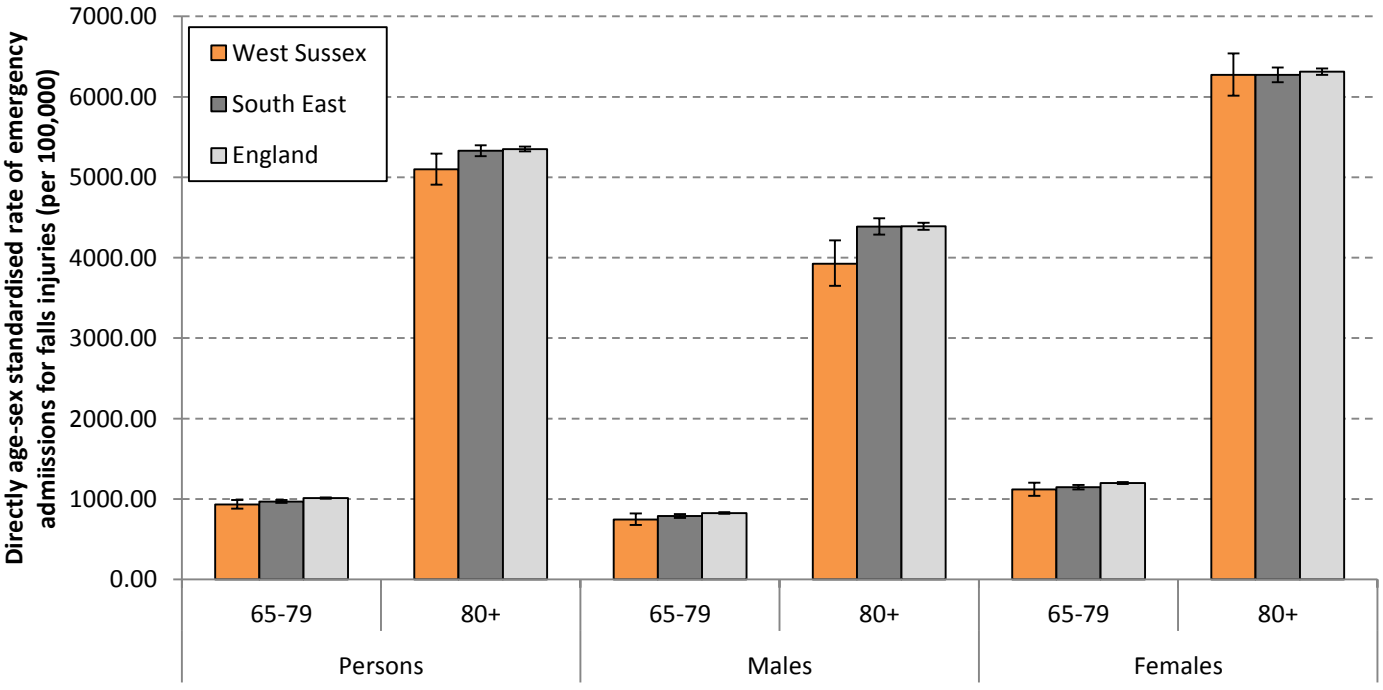


Source: PHOF – Rate of emergency hospital admissions for falls injuries in males and females aged 65+ (2014/15)

Age

Older adults are more likely to be admitted to hospital due to injuries sustained from a fall. This reflects a greater frequency of falls and a higher risk of serious injury in older populations (Figure 8), where frailty and conditions affecting mobility and bone strength are more prevalent. In West Sussex, the rate of admissions due to falls for men aged 80 and over (3924.6 per 100,000 men; 95% CIs: 3651.0 – 4213.2) is significantly lower than in England (4390.5 per 100,000 men; 95% CIs: 4346.7 – 4434.6). No difference exists between rates of admissions in West Sussex and England for women aged 80 and over.

Figure 8: Directly age and sex standardised rates for emergency hospital admissions for falls injuries in persons, men and women aged 65-79, and 80 and over (2014/15)



Source: PHOF – Rate of emergency hospital admissions for falls injuries in males and females aged 65-79, and 80+ (2014/15)

Osteoporosis

Osteoporosis is a condition that weakens bones and makes them fragile and more likely to break. Every year, an estimated 300,000 fragility fractures occur in the UK, many of which could be prevented with earlier diagnosis and treatment[8] [9]. Because of increased bone loss after the menopause in women, and age-related bone loss in both women and men, the prevalence of osteoporosis increases with age; rising from 2% at 50 years to more than 25% at 80 years in women for example. As the life expectancy of the population increases, so will the incidence of osteoporosis and fragility fracture[10].

Table 7: Estimates of bone health and post-menopausal women in West Sussex

Estimates of bone health amongst post-menopausal women in West Sussex	Number
Total Population of West Sussex:	828,400
Estimated number of post-menopausal women:	151,850
Estimated number of post-menopausal women with undiagnosed osteoporosis:	48,050
Estimated number of post-menopausal women with a previous fracture:	19,050
Estimated number of post-menopausal women with a new fracture (yearly):	2,490

Source: Using figures presented in *Falls and Fractures: Effective Interventions in Health and Social Care* (Department of Health, 2009): http://www.slips-online.co.uk/resources/Fallsandfractures-effectiveinterventionsinhealthandsocialcare.pdf

Note. Rounded to the nearest 10

The Quality and Outcomes Framework (QOF) incentivises GPs to keep a register of patients (aged 50+) with osteoporosis. This includes patients aged 50-74 with a record of a fragility fracture and a diagnosis of osteoporosis confirmed through a DEXA scan, and patients aged 75+ with a diagnosis (no scan required). Fragility fractures are fractures that result from mechanical forces that would not ordinarily result in a fracture. This is quantified as forces equivalent to a fall from standing height or less. Fragility fractures are most common in the spine, hip and wrist.

Table 8 presents QOF recorded disease prevalence of osteoporosis for patients aged 50+ in CCGs across West Sussex. It should be noted that the data recorded within QOF were originally designed as a payment system for GP's. Therefore, QOF prevalence rates may not reflect those published elsewhere, or the true prevalence rate. These figures account for patients that are registered and diagnosed following fragility fracture. As such, there are likely to be a large number of undiagnosed patients within the population of West Sussex who are not receiving treatment.

Table 8: Recorded disease prevalence of osteoporosis (registered patients aged 50+) in CCGs across West Sussex, April 2014 to March 2015

Area	List Size (50+)	Register	Prevalence (%)
NHS Coastal West Sussex CCG	223,285	524	0.23%
NHS Crawley CCG	39,731	99	0.25%
NHS Horsham and Mid Sussex CCG	91,103	180	0.20%
South of England Commissioning Region	5,569,926	10,516	0.19%
ENGLAND	20,052,188	34,992	0.17%

Source: QOF 2014/15 http://www.hscic.gov.uk/catalogue/PUB18887

Note. For practice level data see the QOF results tool by GP Practice: http://www.qof.hscic.gov.uk/search/index.asp

Impact of Falls

Falls among older people are more likely to result in injury and fractures. In addition, prolonged time on the floor can result in further complications and precipitate loss of independence. Injury from falls is often a leading cause for people moving into long-term nursing or residential care. Approximately 1 in 20 older people living in the community

[8] British Orthopaedic Association (2007). The care of patients with fragility fracture.

[9] National Osteoporosis Society (2015). The Osteoporosis Agenda England. https://www.nos.org.uk/file/resources/agendas-2015/Agenda-for-osteoporosis-England-2015-FINAL.pdf

[10] NICE Guidelines (CG146) – Osteoporosis: assessing the risk of fragility fracture. https://www.nice.org.uk/guidance/CG146/chapter/introduction

experience a fracture or need hospitalisation after a fall. Falls and fractures in those aged 65 and above account for over 4 million bed days per year in England[11].

Mortality from Falls

In 2014, there were an estimated 62 deaths of adults aged 65 and over in West Sussex due to an accidental fall[12] (approx. 70 deaths across all ages). This includes any accidental fall, not just those occurring within the home. Small numbers make it difficult to determine trends over time.

Table 9 shows the directly age-standardised rate of mortality from accidental falls during 2012-14 per 100,000 European Standard population (2013 - all ages). Whilst this data spans all age groups, the majority of these deaths are likely to occur among older populations, where there is a greater risk of serious injury following a fall. Wide confidence intervals and small numbers of deaths make it difficult to determine the significance of these differences, although West Sussex appears to have a lower rate of mortality from accidental falls than England.

Table 9: Directly age standardised rate of mortality from accidental falls; per 100,000 persons (2012-14 pooled)

	DEATHS	Directly age-standardised rate per 100,000 persons (all ages)		
		DSR	LOWER 95% CONFIDENCE LIMIT	UPPER 95% CONFIDENCE LIMIT
Adur	17	7.56	4.37	12.16
Arun	28	4.07	2.65	5.94
Chichester	18	3.60	2.12	5.72
Crawley	20	8.21	4.96	12.75
Horsham	36	7.80	5.45	10.80
Mid Sussex	41	8.93	6.38	12.14
Worthing	27	6.70	4.36	9.83
West Sussex	187	6.19	5.33	7.16
South East	1,758	6.77	6.46	7.10
England	11,744	8.03	7.88	8.17

Source: HSCIC Indicator Portal – Mortality from Accidental Falls (ICD10 W00-W19). Directly standardised rates have been calculated using the 2013 European Standard Population.

Hip Fractures

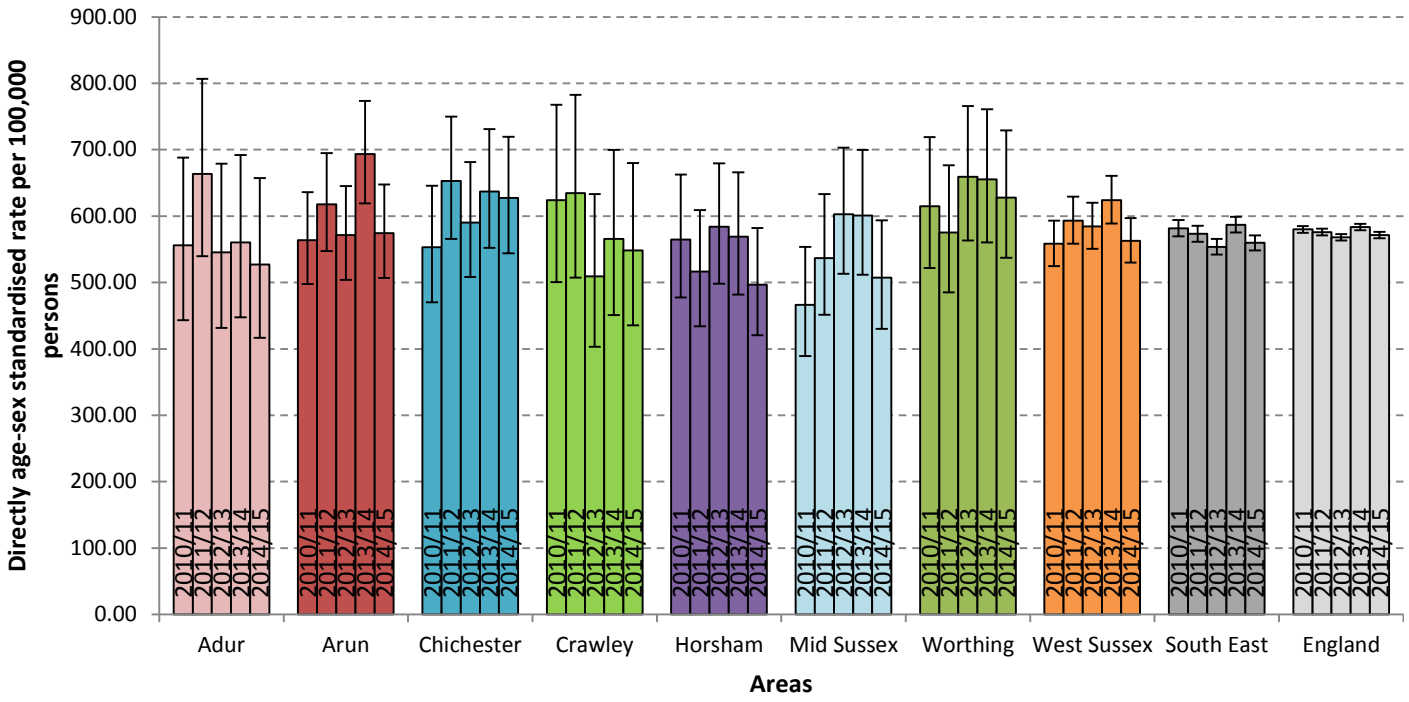
One of the most serious consequences of a fall is hip fracture, with half of people suffering a hip fracture failing to return to their original level of independence. The average age of persons sustaining hip fractures is approximately 83 years[13], with a greater incidence among women. Hip fractures following a fall are far more common in people who have osteoporosis, a condition that is also more common among women. The National Hip Fracture Database reports that mortality from hip fracture is high - about 10% of people with a hip fracture die within 1 month and about one in three within 12 months[14]. Hip fractures are therefore a major public health concern, with considerable cost required for acute care, long-term hospitalisation and social care, as well as a significant impact on an individual's wellbeing, independence, disability and mortality.

In West Sussex, there were 1,204 emergency hospital admissions of persons aged 65 and over due to femur fractures in 2014/15. Of these, the majority were for adults aged 80 or above (N = 901). This number is expected to rise in future years due to an aging population, and increasing life expectancy.

[11] Royal College of Physicians (2010). Falling standards, broken promises. https://www.nos.org.uk/document.doc?id=1516
[12] HSCIC Indicator Portal – Mortality from Accidental Falls: Number, by age group, annual (2014)
[13] PHOF – Hip fractures in people aged 65+ and over (aged 80+)
[14] National Hip Fracture Database (NHFD), National Hip Fracture Database National report 2013. Available at: http://www.nhfd.co.uk/20/hipfractureR.nsf/luMenuDefinitions/CA920122A244F2ED802579C900553993/$file/NHFD%20Report%202013.pdf?OpenElement

Figure 9 shows the directly standardised rate of emergency hospital admissions for hip fractures in adults aged 65 and over (per 100,000) in local authorities across West Sussex. Overlapping confidence intervals suggest little difference in the rate of admissions for femur fractures across the county.

Figure 9: Emergency hospital admissions for fractured neck of femur in persons aged 65 and over, directly age-sex standardised rate per 100,000 persons



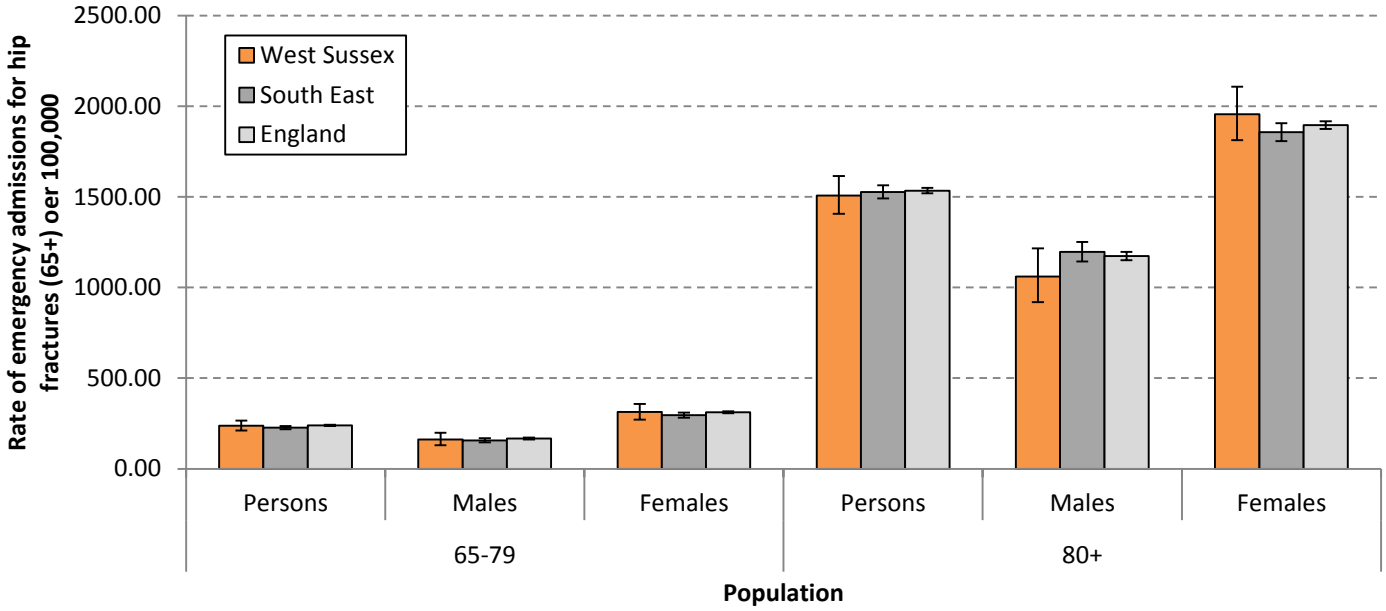
Source: PHOF – Emergency hospital admissions for fractured neck of femur in persons aged 65 and over, directly age-sex standardised rate per 100,000 persons (2010/11 to 2014/15)
Note: Primary diagnosis of fractured neck of femur as defined by ICD10 codes S72.0 to S72.2. The ICD10 codes used to define femur fractures varies for different sources. Therefore, similar indicators may produce different statistics due to the codes used.

The rate of emergency hospital admissions for femur fractures is consistently greater for women (734.0 emergency admissions per 100,000 females aged 65+ in West Sussex, 2014/15) than men (391.8 per 100,000 males aged 65+), and this may in part be due to a higher incidence of osteoporosis for post-menopausal women[15]. During 2014/15, there were 902 emergency hospital admissions for femur fractures in women aged 65 and over. This compares to 302 for males of the same age group.

Figure 10 demonstrates the greater rate of emergency admissions for femur fractures among older populations. During 2014/15, there were approximately 303 emergency admissions for femur fractures among adults aged 65-79 years in West Sussex; this compares to 901 admissions for adults aged 80 and above .

[15] National Osteoporosis Society. Accessed via https://www.nos.org.uk/about-us/media-centre/facts-and-figures
National Osteoporosis Society and Age UK (2013). *Report to the minister of state for care services: Breaking through: Better Falls and Fracture Services in England*. Accessed via: https://www.nos.org.uk/document.doc?id=987

Figure 10: Directly age-sex standardised rate of emergency hospital admissions for femur fractures in persons, males and females aged 65-79 years and 80+ years, per 100,000 (2014/15)



Source: PHOF – Emergency hospital admissions for fractured neck of femur in persons, males and females aged 65-79 and 80+, directly age-sex standardised rate per 100,000 (2014/15)

Table 10 shows the percentage of patients returning to their usual place of residence following hospital treatment for a fractured femur. Note that this covers patients of all ages where a femur fracture was recorded as the primary diagnosis (not necessarily due to a fall). Coastal West Sussex CCG has the highest proportion of patients returning to their usual place of residence following a fractured femur (57.34%), although overlapping confidence intervals suggests little difference exists between the three CCGs.

Table 10: The percentage of patients returning to usual place of residence following hospital treatment for fractured femur (all ages) by CCG (2014/15)

Area	% of patients returning to usual place of residence following hospital treatment for femur fracture (2014/15)		
	%	95% Lower CI	95% Upper CI
NHS Coastal West Sussex CCG	57.34%	54.02%	60.60%
NHS Crawley CCG	46.67%	24.81%	69.88%
NHS Horsham and Mid Sussex CCG	52.67%	44.71%	60.49%

Source: Commissioning for Value – Trauma and Injury Pathway: % of patients returning to usual place of residence following hospital treatment for fractured femur (2014/15)

Table 11 shows the percentage of patients discharged from hospital following treatment for a fractured femur who were readmitted within 28 days of discharge. This does not indicate the cause for readmission. In West Sussex CCGs, between 10 and 13% of patients discharged from hospital following treatment for a hip fracture were readmitted within 28 days.

Table 11: The percentage of emergency readmissions to hospital within 28 days of discharge for patients who received treatment for a fractured femur (all ages) by CCG (2014/15)

Area	% of patients returning to usual place of residence following hospital treatment for femur fracture (2014/15)		
	%	95% Lower CI	95% Upper CI
NHS Coastal West Sussex CCG	12.89%	10.75%	15.38%
NHS Crawley CCG	11.46%	6.52%	19.36%
NHS Horsham and Mid Sussex CCG	10.67%	7.44%	15.08%

Source: Commissioning for Value – Trauma and Injury Pathway: % of emergency readmissions to hospital within 28 days for patients: hip fractures (2014/15)

Hip Fracture: Proportion of patients recovering to their previous levels of mobility/walking ability at 30 days

The proportion of patients recovering to their previous level of mobility/walking ability at 30 days following a fragility fracture is monitored in the CCG outcome indicator set (CCGOIS), using data from the National Hip Fracture Database (NHFD)[16].

In 2014, 27.9% (95% CIs: 24.0% to 32.1%) of patients admitted to hospital with a fragility fracture had returned to their previous level of mobility at 30 days in Coastal West Sussex CCG. This proportion was estimates at 40% for Crawley CCG (95% CIs: 19.9 to 64.3%), although small samples and wide confidence intervals mean that this data is unlikely to be reliable. Due to poor data completeness, data are not published for Horsham and Mid Sussex CCG.

At 120 days after admission to hospital, 53.9% of patients (95% CIs: 48.3% to 59.3%) with a fragility fracture had recovered to their previous level of mobility at 120 days in Coastal West Sussex CCG. Again, due to poor data completeness and small numbers, data is not presented for Crawley and Horsham and Mid Sussex CCG.

[16] CCGOIS – 3.10.i and 3.10.ii – Hip fracture: Proportion of patients recovering to their previous level of mobility/walking ability at 30/120 days (downloaded from the HSCIC Indicator portal)

Additional Sources of Data

- Commissioning for Value
  - Commissioning for Value Data Tool
  - Commissioning for Value Explorer Tool
  - Musculoskeletal, and Trauma and Injury pathways
- HSCIC: QOF 2014/15 Results
- Projecting Older People Population Information System (POPPI)
- Public Health Outcomes Framework
- Public Health Older People's Health and Wellbeing Profile