Falls Prevention

Joint Strategic Needs Assessment

Executive summary

A fall is defined as an event that causes a person to unintentionally come to rest on the ground or a lower level. Falls, particularly among older adults, are a significant public health concern, imposing a substantial burden on individuals and healthcare systems. This needs assessment examines the impact of falls in Norfolk and Waveney, exploring national and local trends, risk factors, protective factors and inequalities in outcomes. This document also aims to summarise the current falls prevention service provision in the area and describe evidence-based approaches.

Falls are a leading cause of emergency hospital admissions among older adults, resulting in significant costs to the health and social care system. National indicators, such as emergency admissions for falls and hip fractures, are widely used to assess this burden.

The risk of falls escalates significantly with age. Among those aged 80 and over, emergency hospital admissions due to falls are more than five times higher than for those aged 65-79. Hip fractures resulting from falls, represent the most severe outcome in terms of morbidity and healthcare costs. Women are disproportionately affected, with rates nearly double those of men due in part to higher osteoporosis prevalence.

Norfolk and Waveney have a higher proportion of older adults compared to the rest of England, with North Norfolk having the highest proportion of people aged 65 and over. Due to current and projected future age profiles of Norfolk and Waveney, falls and hip fractures are critical issues for the health and care system, disproportionately impacting older populations.

NICE Guidelines advocate individualised, multifactorial interventions like strength and balance training, home hazard assessments, vision care, and medication reviews. The All Our Health framework calls for community and professional action to reduce falls through risk assessment, promoting physical activity, and supporting healthy aging. This needs assessment has identified several falls prevention interventions and multiple pathways with varying criteria and levels of data collection and collation across Norfolk and Waveney. This variation and gaps in data collection make it challenging to understanding how current services meet the needs of the local population.

What is the issue and why is it important for Norfolk and Waveney?

Falls are the most frequent and serious type of accident for people aged 65 and over and are the number one reason that older adults are taken to the emergency department. Falling is a cause of distress, pain, injury, loss of confidence, loss of independence, and mortality.

The risk of falling increases with age, with 30% of those aged 65 falling at least once a year, and 50% of those aged 80 having a fall, at least once a year (1). Age is an important risk factor for falls related fractures. The UK population aged 50 years and above is projected to increase by 13.2% between 2019 and 2034. The increases in men and women aged 75 years or more are even more marked; 42.2% for men; 31% for women. Accordingly, the number and burden of fragility fractures are likely to increase (2). Evidence shows that many adults do not report falls, for a variety of reasons, therefore it is likely that data underestimates the actual burden of falls.

Norfolk and Waveney have an older population compared to the rest of England, and this population is projected to increase at a greater rate than the rest of England. In North Norfolk 34% of the population are aged 65 and over which is the highest proportion in England (3).

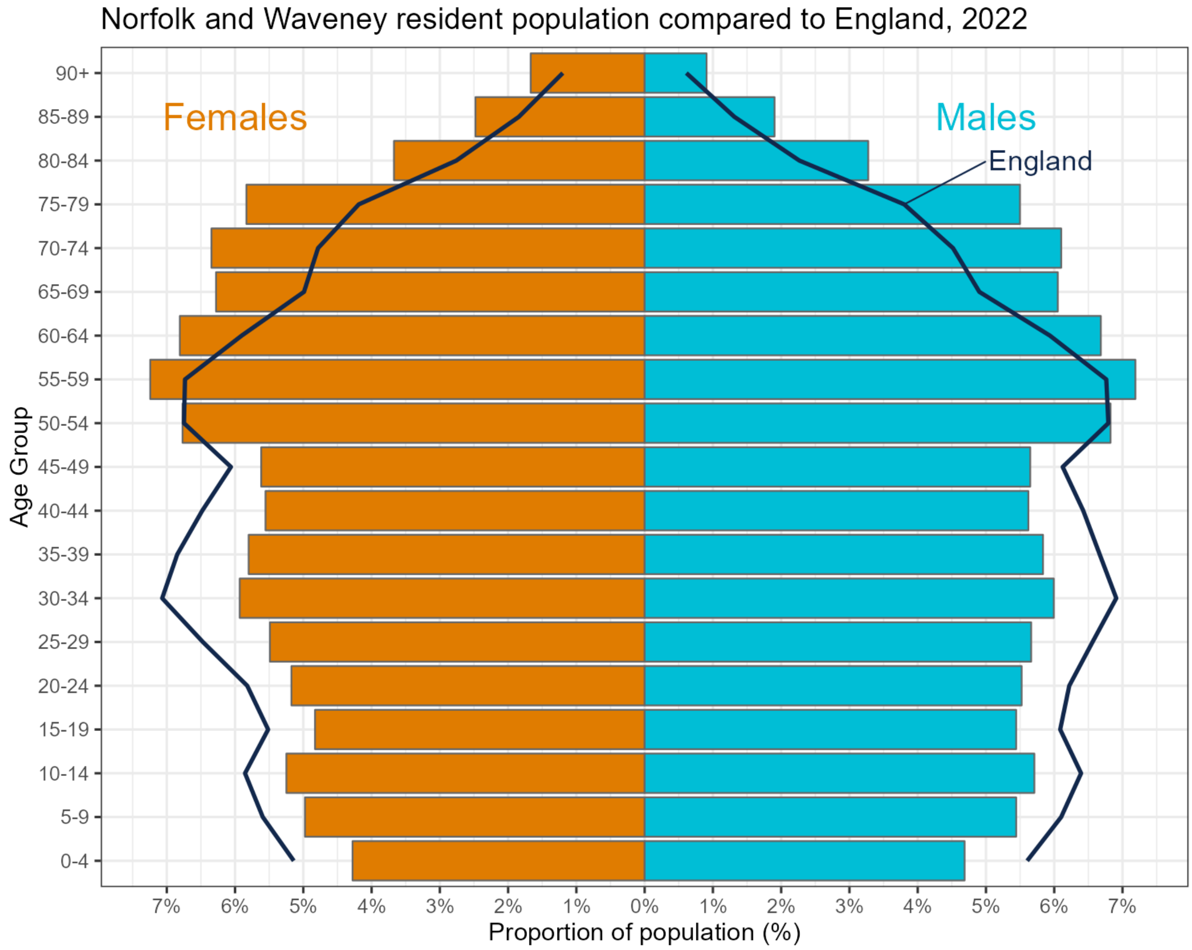

Figure 1: Population pyramid showing the age structure of Norfolk and Waveney compared to England, 2022. Source: ONS population estimates

The distribution of this ageing population is not equal across Norfolk, the proportion of those aged 65 and above varies by District but has remained relatively stable over the last 10 years. Areas such as North Norfolk have a much greater proportion of people aged over 60, and a markedly lower proportion of adults aged under 50, young people and children.

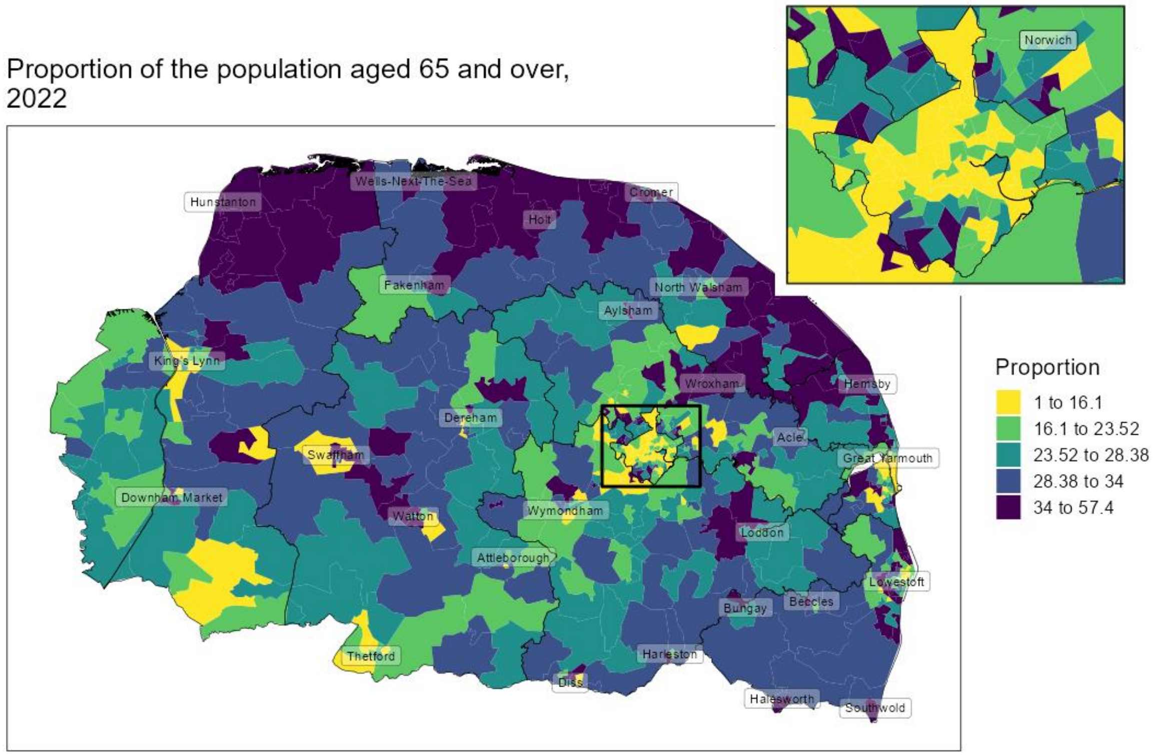

Figure 2: Map of Norfolk and Waveney Lower Super Output Areas showing the proportion of the population aged 65 and over, 2022. Source: ONS population estimates

Area	Total Population	Population 65+	Proportion 65+ (%)
Breckland	143,500	36,200	25.3
Broadland	133,900	34,800	26.0
Great Yarmouth	99,800	24,400	24.4
King's Lynn and West Norfolk	155,700	40,600	26.1
North Norfolk	103,200	34,900	33.8
Norwich	145,000	21,800	15.0
South Norfolk	144,600	35,500	24.5
Waveney	116,600	32,700	28.0
Norfolk and Waveney	1,042,300	260,900	25.0
England	57,112,500	10,629,800	18.6

Table 1: Populations by district and proportion of the population aged 65 and over, 2022. Source: ONS population estimates

The number of fragility fractures in the UK is expected to increase by more than 26% between 2019 and 2034, with a substantial impact on the healthcare budget (4). This may be higher in Norfolk, due to its older population. By 2040 it is predicted that 40% of Norfolk's population will be of dependent age, rather than working age (5).

The old age dependency ratio (OADR) is a measure of how many people of pensionable age there are for every 1,000 working-age people in an area. Norfolk has the 2nd highest OADR of all upper tier local authorities in England (6). This is expected to grow in all geographies except for Norwich over the next twenty years, North Norfolk is projected to see the largest increase.

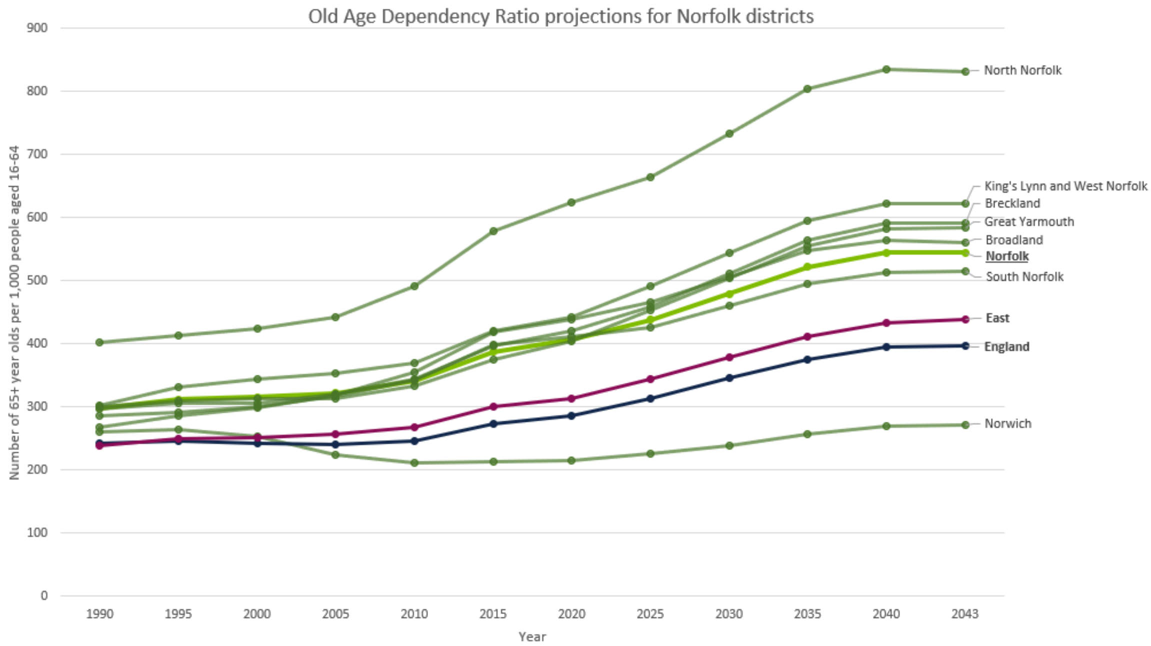

Figure 3: Old Age Dependency Ration projections for each Norfolk district, Norfolk County, East of England Region and England from 1990-2043.

Falls are a major contributor to years lived with disability (YLD) both nationally and locally, this is a measure of the impact of health conditions on quality of life in a population. In Norfolk, falls are ranked the 5th highest cause of YLD, increasing 63.35% since 1990. Injurious falls indeed pose a significant burden on health and social care systems, as well as individual confidence and ability to undertake activities of daily living.

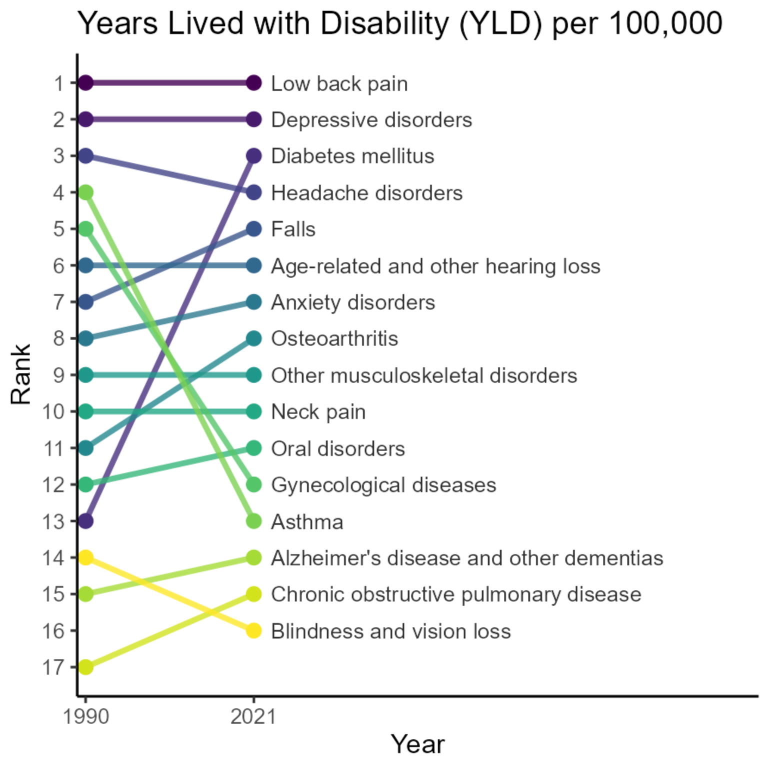

Figure 4: Ranked conditions leading to most years lived with disability (YLD) per 100,000 people in Norfolk. Source: Global Burden of Disease (7)

Which population is this needs assessment about?

This needs assessment focuses on older adults, although most falls related data relate to those aged 65 and over where possible this needs assessment considers those 50 years and above.

This needs assessment focuses on the Norfolk and Waveney geography, aligning to the Norfolk and Waveney ICB where possible. Data that is not available for the ICB footprint will be reported for Norfolk only and this will be clearly stated.

National Evidence

Causes of falls

The causes of having a fall are multifactorial – a fall is the result of the interplay of multiple risk factors (8).

These include:

- muscle weakness
- poor balance
- visual impairment

- polypharmacy – and the use of certain medicines and interactions with other substances such as alcohol
- environmental hazards such as home hazards or uneven outdoor surfaces
- Dementia and mild cognitive impairment
- there are many medical conditions, which might make a person more likely to fall, such as heart disease, diabetes, dementia or low blood pressure, arthritis, incontinence and Parkinsons disease.

There is a strong body of evidence that shows a history of falls in the past year is the single most important risk factor for falls and is a predictor of further falls (9).

Physical activity, in particular activities that maintain strength and balance is a key protective factor for falls. Evidence suggests that those with multimorbidity have a higher likelihood of physical inactivity which may further accelerate the declines in physical activity that occur during natural aging (10).

The Active Lives survey reports that adults over the age of 75 become less physically active. In 2022/23, 33% of 75–85year-olds were inactive, increasing to 57% in those over 80. The Active Lives survey shows that participation in physical activity decreases dramatically once a person turns 85 years of age (11). Despite this, Sport England reports that activity levels for those 55 and over are the highest they have been since records began, with those aged 75-84 years of age, particularly driving this trend. In 2022-23 56% of people aged 75-84 years of age were physically active (completing or exceeding the recommended 150 minutes per week) compared to 46.6% in 2015-16 (12).

Numbers of those who were physically active in the 85 and over age group also saw an increase from 27.5% in 2019/20 to 30.7% in 2022/23 (13).

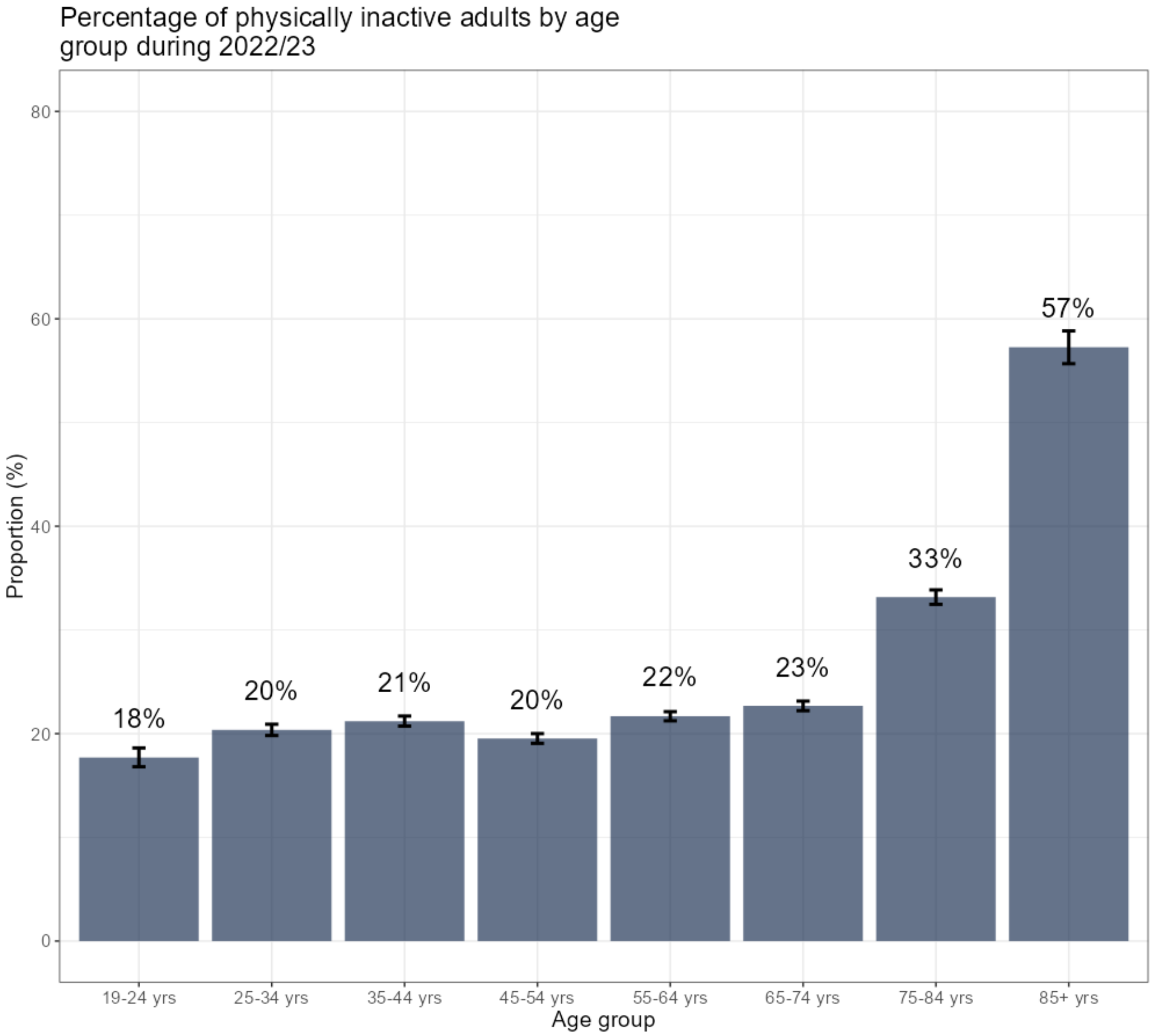

Figure 5: Proportion of physically inactive adults by age group in England during 2022/23. Source: Office for Health Improvement and Disparities based on Active LIves Survey, Sport England data

Sport England (14) reported that in 2022-23 there were significant inequalities regarding physical activity levels (more than 150 minutes per week) in those aged 16 and over:

- Physical activity is less common for adults with a disability or long-term health condition (48%) than those without (69%).
- Men (66%) are more likely to be physically active than women (61%) and those who describe themselves in another way (61%). Those from lower social socio-economic groups (NS-SEC 6-8) were less likely (53%) to be active than those in the higher socio-economic groups (73%) (NS-SEC-1-2).
- Gay men, lesbian women and bisexual adults are all more likely to be more physically active than heterosexual adults.
- There are differences in physical activity levels based on ethnic background, with those from a mixed ethnicity background more likely to be physically active (71%) than those from a Black (55%) or Asian (excluding Chinese) (55%) background.

Health conditions such as Dementia and mild cognitive impairment double the risk of falls and falls-related injuries, including hip fractures, fractures of the arm and head injuries (15). North Norfolk is the third highest constituency for dementia prevalence in the UK with 24 per 1,000 people (16). This number of people is forecast to double by 2040 (17).

A recent (2024) systematic review showed that the overall chance of falling in older adults (60 and over) with Type 2 Diabetes Mellitus (T2DM) is 59% higher than that of non-diabetic older adults and in older adults with T2DM who take insulin the chance of falling is 162% higher (18).

Frailty is associated with an increased risk of falls (19). NHS England describes frailty as a loss of resilience that means people are less able to cope and recover from accidents, physical illness or other stressful events (20). There is wide variation in estimated incidence of falls in frail adults (between 6.7% and 44% (21)). Over half of frail adults are reported to have fallen in the previous year (22). Frailty-induced falls are associated with a greater risk of fractures, hospitalisation and institutionalisation (23). As the severity of frailty increases, the risk of future falls increases (24, 25).

Complications/injuries

The likelihood and severity of injury resulting from a fall is related to a number of factors including bone health, frailty and low weight.

People with low bone mineral density are more likely to experience a fracture following a fall. Osteoporosis is one of the reasons why people have low bone mineral density (26). Over 3 million people in the UK have osteoporosis and they are at much greater risk of fragility fractures. Fragility fractures are fractures that result from mechanical forces that would not ordinarily result in fracture, known as low-level (or ‘low energy’) trauma. The World Health Organization (WHO) has quantified this as ‘forces equivalent to a fall from a standing height or less’ (27).

The risk of osteoporosis starts to increase in women after the menopause. People may also be at increased risk due to hereditary factors, or because of side effects of some medications. Therapies and treatments are available to help prevent fractures in people with osteoporosis. Norfolk and Waveney slightly lower levels of recorded osteoporosis prevalence to the England average. However, differences may be due to recording practices of General Practices rather than disease prevalence.

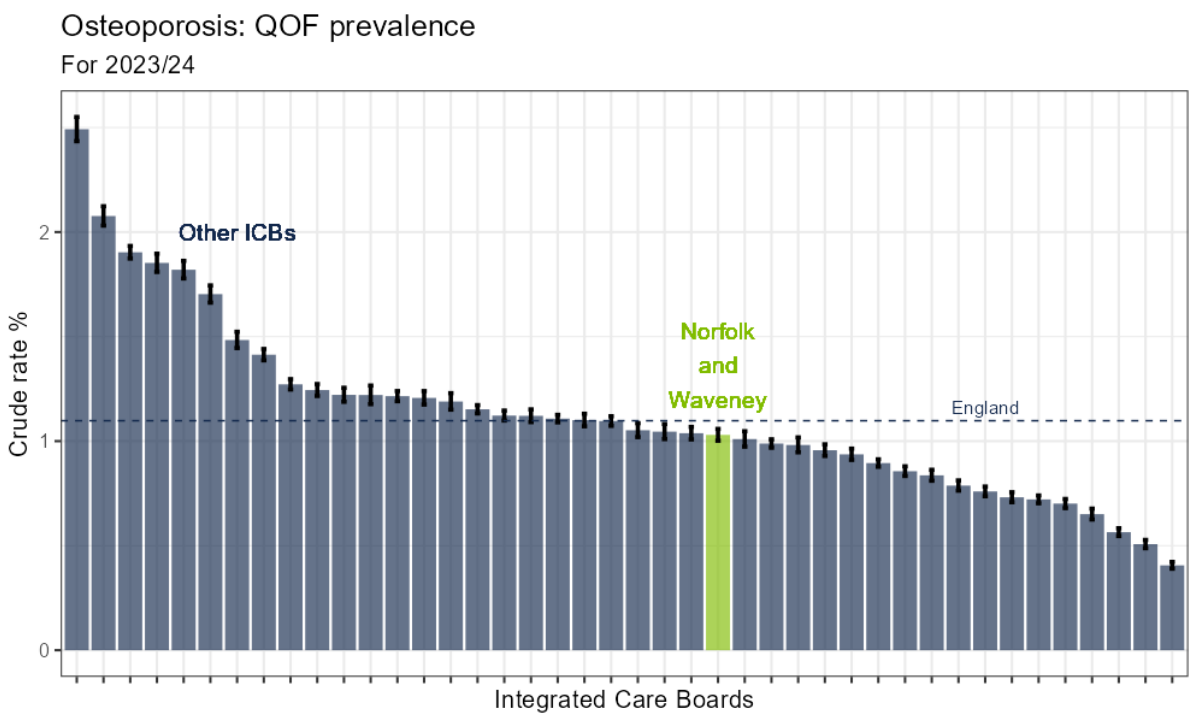

Figure 5: Quality Outcome Framework recorded prevalence of osteoporosis during 2023/24 across Integrated Care Boards (ICBs) in England. Source: Quality Outcomes Framework (QOF)

Other factors may put a person at increased risk of fractures, such as calcium and vitamin D deficiency, a Body Mass Index (BMI) of less than 19, poor mobility, smoking, alcohol intake, diabetes, or certain long-term medications, such as corticosteroids (28).

The costs and implications of falls

The total annual cost of fragility fractures to the UK has been estimated at £4.4 billion which includes £1.1 billion for social care; hip fractures account for around £2 million of this sum (29) Hip fractures have a high mortality risk of 9.4% at 30 days and 31.2% at 1 year, and a mean length of hospital stay within one year of fracture of 20.5 days. Hip fractures account for 1.8 million hospital bed days and £1.1 billion in hospital costs every year, in the UK, excluding the high cost of social care (30).

Falls are estimated to cost the NHS more than £2.3 billion per year. Unaddressed fall hazards in the home are estimated to cost the NHS in England £435 million annually (31). Falls are the most common reason for an ambulance being called to an older person (32). Local costs cannot currently be accurately counted, however the emerging Norfolk and Waveney datahub indicates that there were over 18,300 callouts as being defined for a fall during 2023 calendar year.

About 40-60% of recorded falls result in major lacerations, traumatic brain injuries, or fractures (33). Other complications of falls include distress, pain, loss of self-confidence, reduced quality of life, loss of independence and mortality (34).

Where do falls occur?

People living in care homes are three times more likely to experience a fall than people living in the community (35) and 10% of those residents who do fall, will sustain a fracture. Nationally, over 40% of hospital admissions and 40% of injury causing deaths from care homes are falls related (36).

Falls in hospital are the most commonly reported patient safety incident with more than 240,000 reported in acute hospitals and mental health trusts in England and Wales. There are several factors that increase the risk of falls in a hospital setting including increased time in bed leading to reductions in muscle strength. National audit data from NHS trusts suggests that most inpatient femoral fractures occur on medical wards, almost twice as many as on older adults' wards, and that the mean rate of inpatient femoral fracture was 6 per 100,000 occupied bed days.

In the UK, approximately 60% of injurious falls among older adults occur at home. Many falls occur in community spaces because of environmental hazards, however there is limited understanding of the specific factors and outcomes relating to falls in community spaces.

Prevention

The causes of falls can be complex and overlapping, therefore, preventing older adults from falling is a societal challenge that requires involvement from multiple sectors and organisations. Falls prevention includes medical, environmental, behavioural, and human factors, which impact across the NHS, social care, housing and the built environment and the voluntary and community sector (37).

OHID and The National Falls Prevention Coordination Group member organisations have produced a 'Falls and fracture consensus statement' (38) advocating for a whole system approach to prevention, which includes:

- risk factor reduction across the life-course
- case finding and risk assessment
- strength and balance exercise programmes
- healthy homes
- high-risk care environments
- fracture liaison services
- collaborative care for severe injury

The falls impact pathway is recommended for health and care professionals to record and measure actions undertaken as part of routine care which impacts on falls prevention.

Falls prevention involves identifying and managing risks related to health, wellbeing, and environment. This includes:

- Keeping active
- Looking after feet
- Looking after vision and hearing

- Managing medication
- Identifying hazards
- Moving around safely
- Eating healthily

The more recent 'World Clinical Falls Guidelines for Falls Prevention and Management' complements the 'Falls and Fracture Consensus Statement' and offers new advances and scientific discoveries as they become available (39).

Epidemiology of falls

Serious falls can result in hospitalisation and significant skeletal fractures, with falls being a major cause of emergency hospital admissions for older adults. The main indicators used nationally to assess the impact of falls at a population level include emergency hospital admissions due to falls, and emergency admissions from hip fractures, which often are linked to falls and mortality from falls. Definitions of these indicators are provided by the Office for Health Improvement and Disparities (OHID).

Locally however, these indicators do not fully represent the falls and hip fracture burden across the ICB as for a period of time one hospital trust has coded hip fractures differently to the definition used in the national indicator. In November 2020 the James Paget University Hospital (JPUH) began coding fractures in the older population as being osteoporotic fragility fractures. As these fractures use a different International Classification of Diseases version 10 (ICD-10) code to those codes used in the national indicator definitions for falls and hip fractures, the national indicators under report hospital admissions for areas in the JPUH catchment area. This is most noticeable for Great Yarmouth and East Suffolk district areas that see sudden decreases in the rates of admissions for falls and hip fractures and have some of the lowest rates in the country. In turn, this lowers the rates for Norfolk, Suffolk, and the ICB footprint making benchmarking using the national indicators unreliable. Then, during autumn 2024 this coding practice ceased and returned using to the national definition, meaning that publicly available data will use a consistent definition in the future.

We can see the impact of the change in coding practices in the emergency hospital admissions due to hip fracture indicator below. The national indicator (below, left) indicates that all districts have comparable rates of admissions for hip fractures over time until 2020/21. Great Yarmouth's rate then decreases drastically due to admissions for hip fractures no longer being counted in the same way. If we add the additional code used by the JPUH into the definition (below, right) we can see the rate for Great Yarmouth increases back up to where we would expect it to be and continues to follow the previous trend before the change in coding practice. However, if we add the additional code to the definition, we then may slightly overestimate the burden of hip fractures across the ICB as the definition becomes slightly broader than just hip fractures.

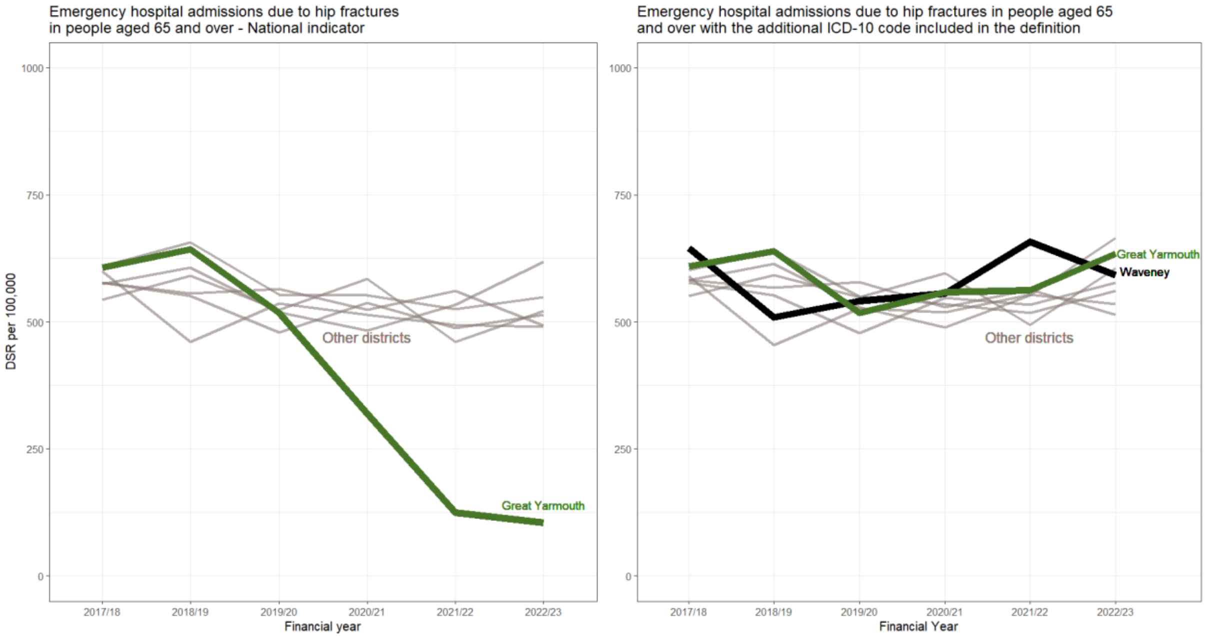

Figure 6: Emergency hospital admissions over time comparing the national indicator with the traditional definition (left) with the local analysis using the new codes (right). Source: Hospital Episode Statistics (HES)

As illustrated above the national indicators do not fully represent the issues falls and hip fractures place on the local system. Therefore, this JSNA will use Hospital Episode Statistics (HES) data to look at the impact of falls and hip fractures place on the ICB using the definition provided by the national indicator, with the additional code now used at the JPUH included in the indicator definition. The additional code has been included with the usual definitions, for all time periods and residents living in the Norfolk and Waveney ICB footprint. Definitions can be found in Appendix 1.

Emergency Admissions due to Falls

Person

Nationally, the risk of falling increases with age, with 30% of those aged 65 and over falling at least once a year, and 50% of those aged 80 and over having a fall, at least once a year (40). The likelihood of a person having an emergency hospital admission at age 80 and over due to falls, is greatly increased (3,803 per 100,000 directly standardised) compared to those aged 65-79 (660 per 100,000) in Norfolk 2022/23 (41). These figures are also better than the England and East of England averages for both age categories and some of the best figures in the East of England for age 65-79 and ages 80 and over (42).

In 2022/23 there were more than 4,040 emergency hospital admissions due to falls for people aged 65 and over in Norfolk and Waveney. Of that number, 2,735 people were aged 80 and over, meaning around two thirds of falls admissions occur in the oldest age groups.

Nationally for those aged 65 and over, women are more likely than men, (2,170 vs 1,616 per 100,000 directly age-standardised rate) to have an emergency hospital admission due to a fall. Women are more likely to be admitted to hospital from a fall than men. This pattern is also evident in Norfolk and Waveney when looking at the local analysis including the change in diagnosis code with women having higher age standardised rates of admissions compared to men (1,765 per 100,000 compared to 1,232 per 100,000 respectively).

In England, those living in the four most deprived deciles (Indices of Multiple Deprivation (IMD) 2019) have the most hospital admissions due to falls in people aged 65 and over (43) (directly standardised rate – per 100,000). Locally there is not a clear relationship between deprivation and emergency hospital admission due to falls.

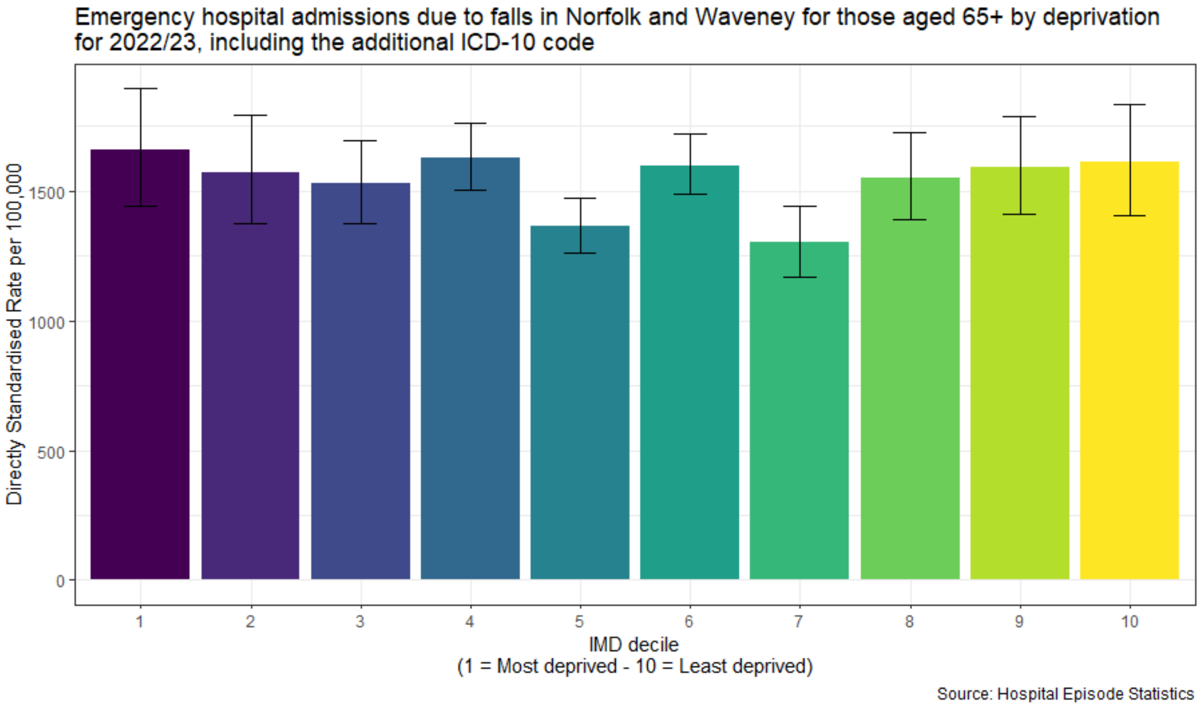

Figure 7: Emergency hospital admissions due to falls in Norfolk and Waveney in those aged 65 and over by deprivation decile. Source: Hospital Episode Statistics (HES)

In previous years, Norfolk had a similar distribution by deprivation as the national trend, with more deprived areas having higher standardised rates of admissions. Over time however this gap has closed and most recently there is no significant difference in standardised rates in terms of deprivation.

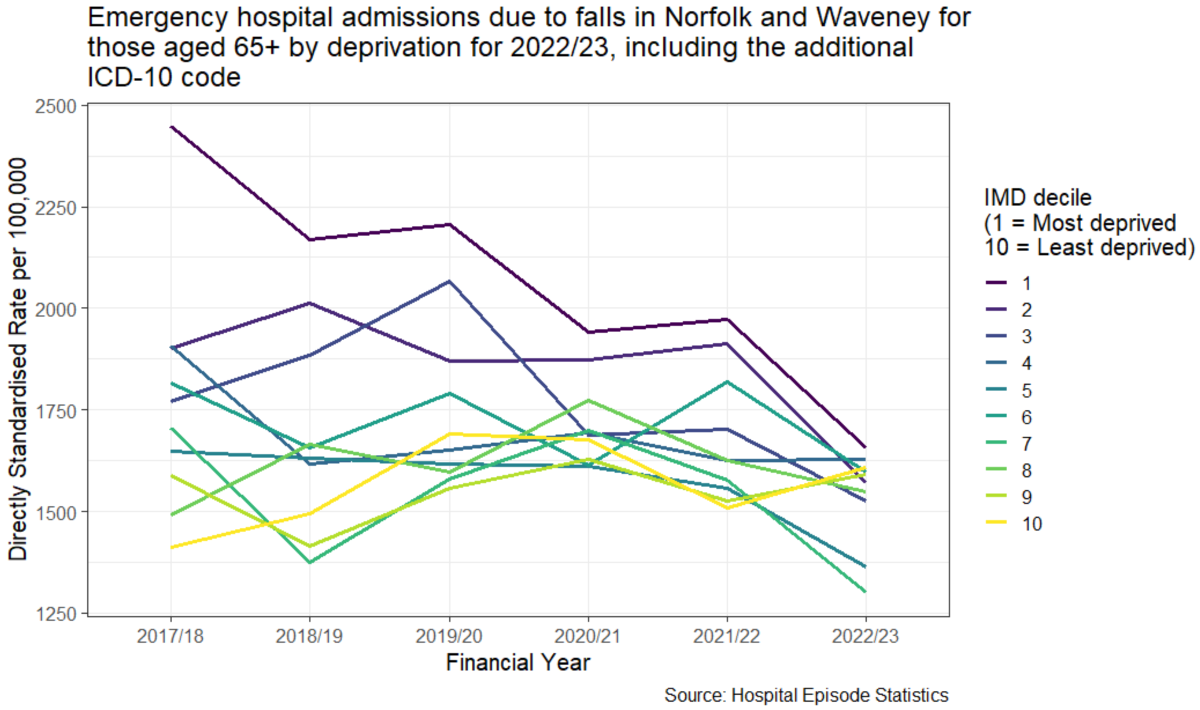

Figure 8: Emergency hospital admissions due to falls in Norfolk and Waveney in those aged 65 and over by deprivation decile over time. Source: Hospital Episode Statistics (HES)

Place

Kings Lynn and West Norfolk district has the highest rate (directly standardised per 100,000) of emergency hospital admissions due to falls in people aged 65 and over, and hip fractures in those aged 65 and over, with Great Yarmouth having the lowest values, in both categories (44).

King's Lynn and West Norfolk district has the highest rate of falls admissions for any district in Norfolk, although they are statistically similar to most other districts in Norfolk and have lower age standardised rates of falls compared to the national average.

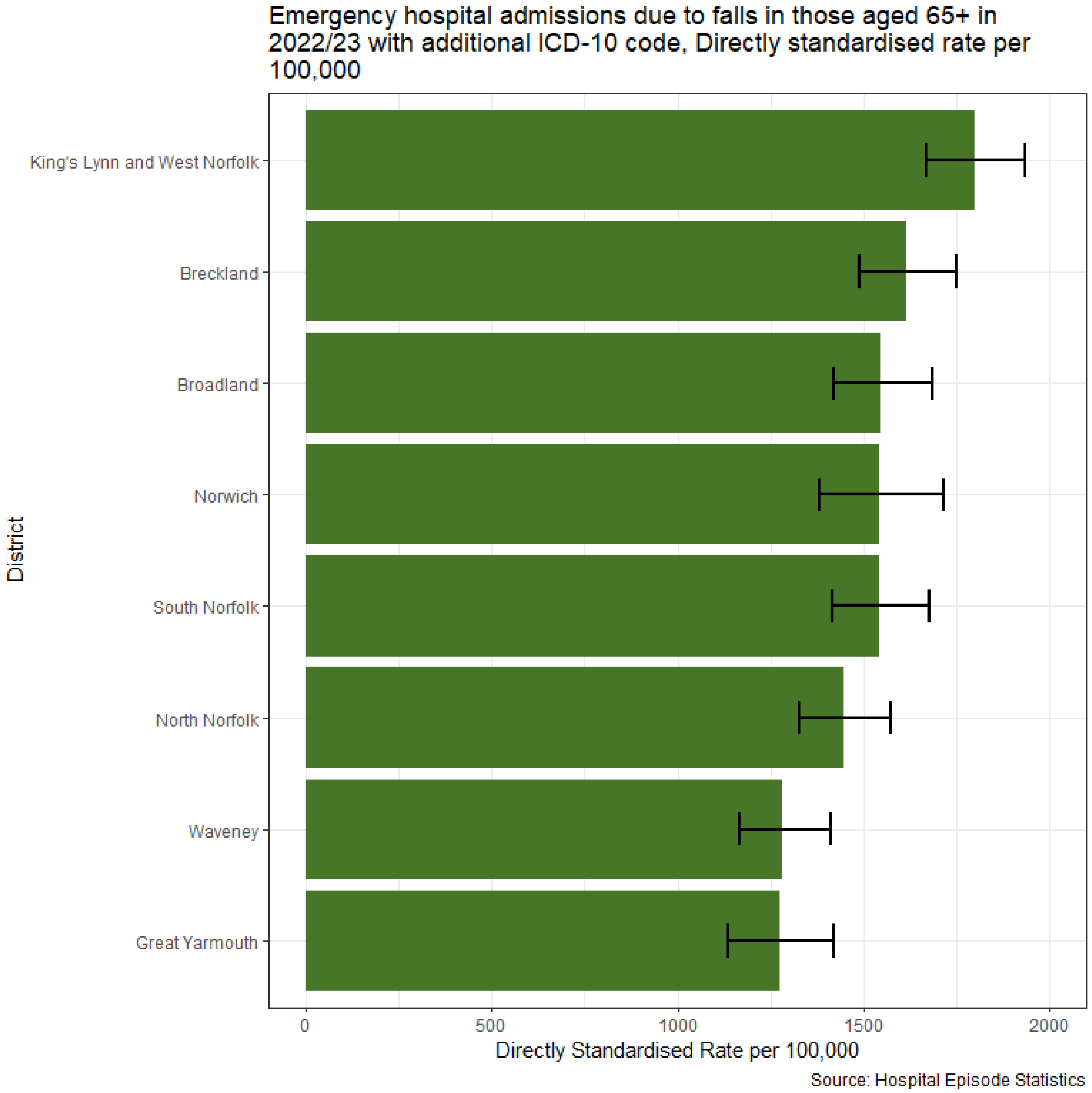

Figure 9: Emergency hospital admissions due to falls in Norfolk and Waveney districts in those aged 65 and over. Source: Hospital Episode Statistics (HES)

Norfolk and Waveney compare favourably with regional and national comparators, even when adjusting for the JPUH coding (which may slightly over report emergency admissions due to falls). The directly age standardised rate of admissions is significantly lower than the England and Regional average.

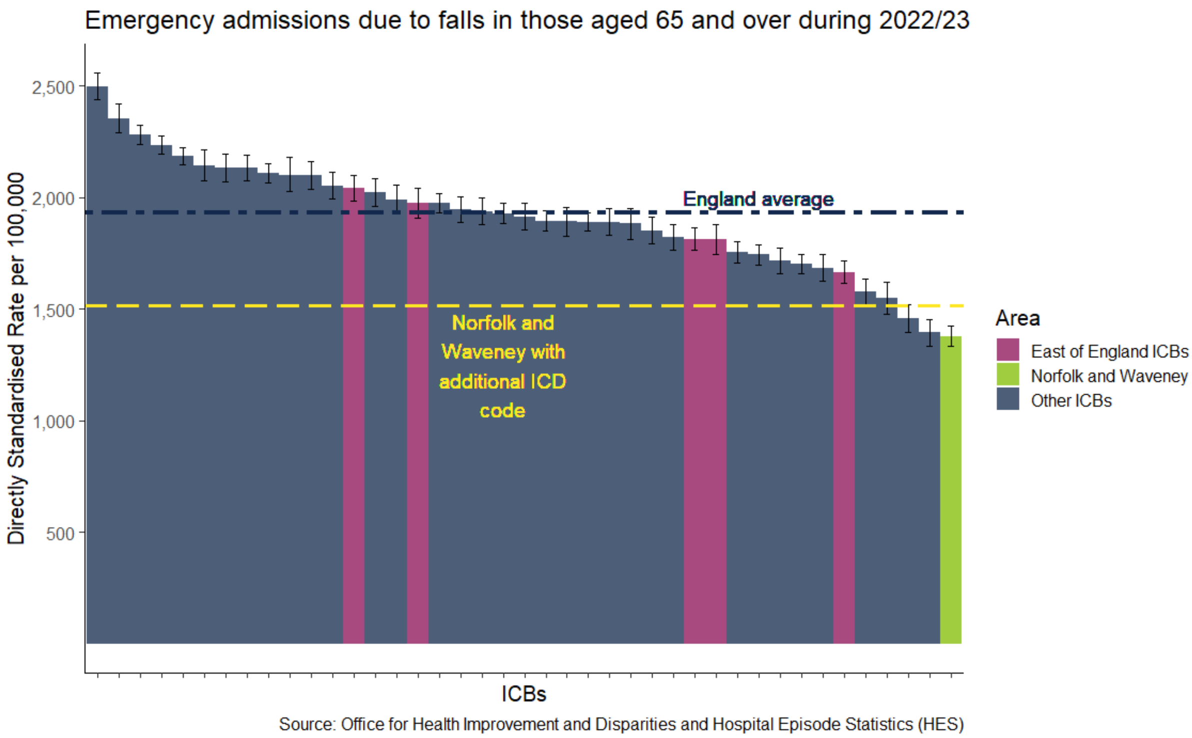

Figure 10: Emergency hospital admissions due to falls in those aged 65 and over across Integrated Care Boards (ICBs) in England, with Norfolk and Waveney's position reported nationally and local analysis using additional code. Source: Hospital Episode Statistics (HES)

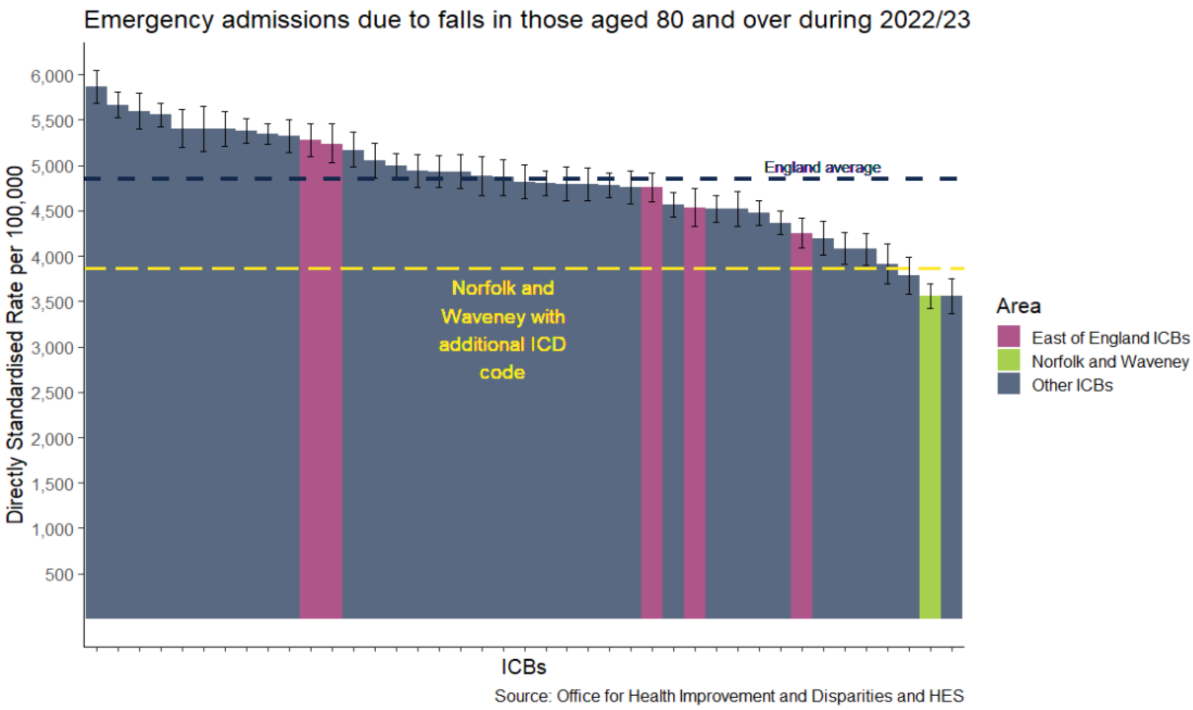

Figure 11: Emergency hospital admissions due to falls in those aged 80 and over across Integrated Care Boards (ICBs) in England, with Norfolk and Waveney's position reported nationally and local analysis using additional code. Source: Hospital Episode Statistics (HES)

Time

The directly standardised rate of emergency hospital admissions due to falls in people aged 65 and over for England and Norfolk have been on a general downwards trend since 2019/20, with numbers currently at their lowest since data capturing of this measurement began in 2010/11(45).

The total number of fragility fractures in the UK is expected to increase by more than 26% between 2019 and 2034 (46). There is estimated to be over 8,400 fragility fractures in Norfolk each year. Applying this expected increase would result in around 10,500 fragility fractures every year by 2034.

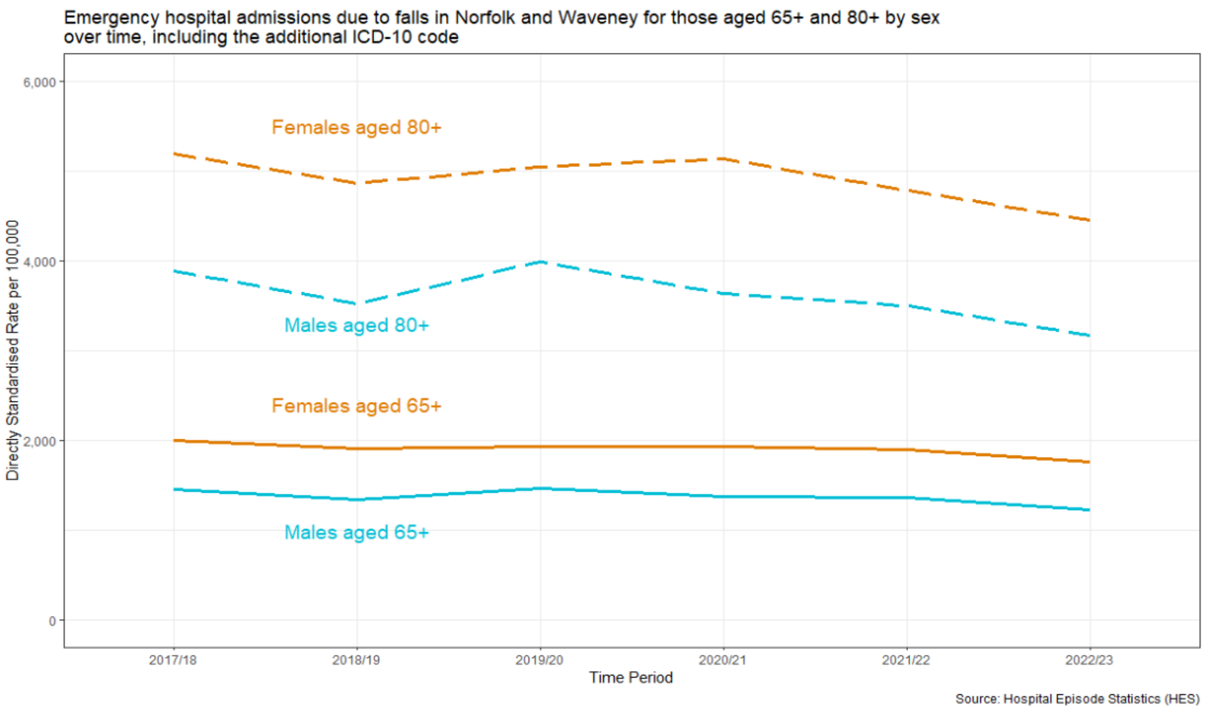

Figure 12: Emergency admissions due to falls in Norfolk and Waveney in those aged 65 and over and 80 and over, by sex

Hip fractures due to falls

Person

Hip Fractures are a common result of a fall in older adults. Data for 2022/23 shows that the age standardised rate by sex for admissions to hospital due to hip fractures is 4,116 per 100,000 for females and 2,785 per 100,000 for males, aged 80 and over. Women having higher rates of admissions due to falls continues a long running trend. In those aged 65 and over in Norfolk, females are almost twice as likely to be admitted for a hip fracture than males. This could be due to a variety of reasons, but evidence suggests that increased osteoporosis in this age group may significantly influence this.

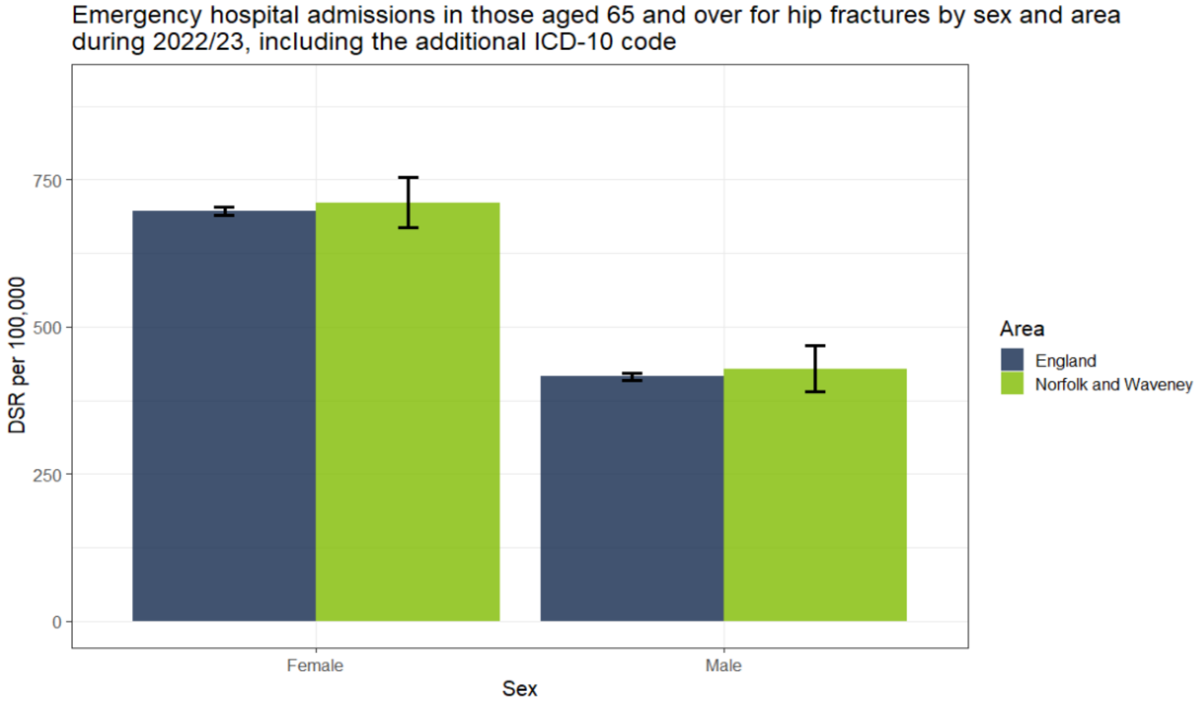

Figure 2: Emergency hospital admissions for hip fractures in those aged 65 and over in England and Norfolk and Waveney. Source: Hospital Episode Statistics (HES)

In the UK around 22% of women and 7% of men aged 50 years or older are estimated to have osteoporosis (47). The prevalence of osteoporosis increases markedly with age, from 2% of women at 50 years of age to almost 50% at 80 years of age (48). In England and Wales around 180,000 of the fractures presenting each year are the result of osteoporosis. More than one in three women and one in five men will sustain one or more osteoporotic fractures in their lifetime. White men and women are at increased risk of fragility fracture compared with other ethnic groups (49).

Hip fracture is the most serious consequence of a fall in someone with osteoporosis in the terms of morbidity, mortality, and health care expenditure. The remaining lifetime probability of hip fracture at the ages of 50 years in men and women in the UK, was 4.8% and 13.8% respectively (50).

Genetics, ageing, female gender, and a history of broken bones can all increase the likelihood of osteoporosis. Factors that can further increase risk are low body weight, smoking, drinking too much alcohol, low balance, poor coordination, and poor reflexes. Certain medications are known to increase the risk of osteoporosis by affecting bone strength, these are: glucocorticoid steroids, anti-epileptic medications, breast cancer treatments such as aromatase inhibitors and prostate cancer treatments that affect either the production of testosterone, or the way it works in the body (51).

Place

Hip fractures for those aged 65 and over follows a similar pattern to emergency admissions due to falls, with the highest number being in the Kings Lynn and West Norfolk district, and the lowest rate being in Norwich.

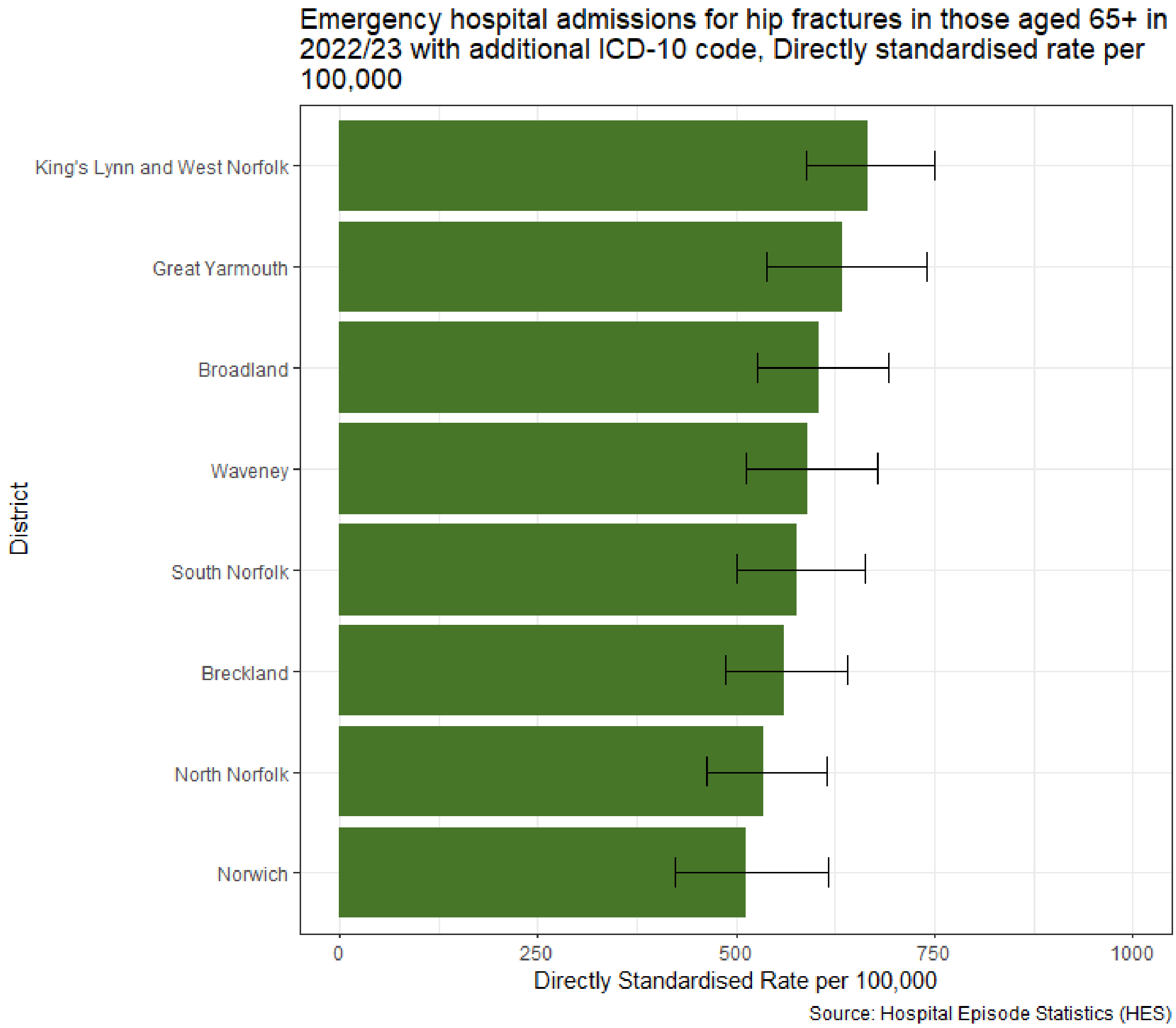

Figure 34: Emergency hospital admissions for hip fractures in those aged 65 and over across Norfolk and Waveney districts

The Norfolk and Waveney ICB is similar to the national average for emergency hospital admissions for hip fractures despite lower levels of emergency hospital admissions for falls generally.

In England, hip fracture is also statistically more common in the more deprived populations, compared to the least deprived deciles (52, 53). There are however data quality concerns with data reported for the least deprived areas nationally which may skew the overall associations with hip fractures and deprivation.

Locally however, Norfolk and Waveney have no clear deprivation gradient for admissions due to hip fractures, there is no clear difference between the more deprived areas compared to the least deprived when the additional code used at one trust in the ICB.

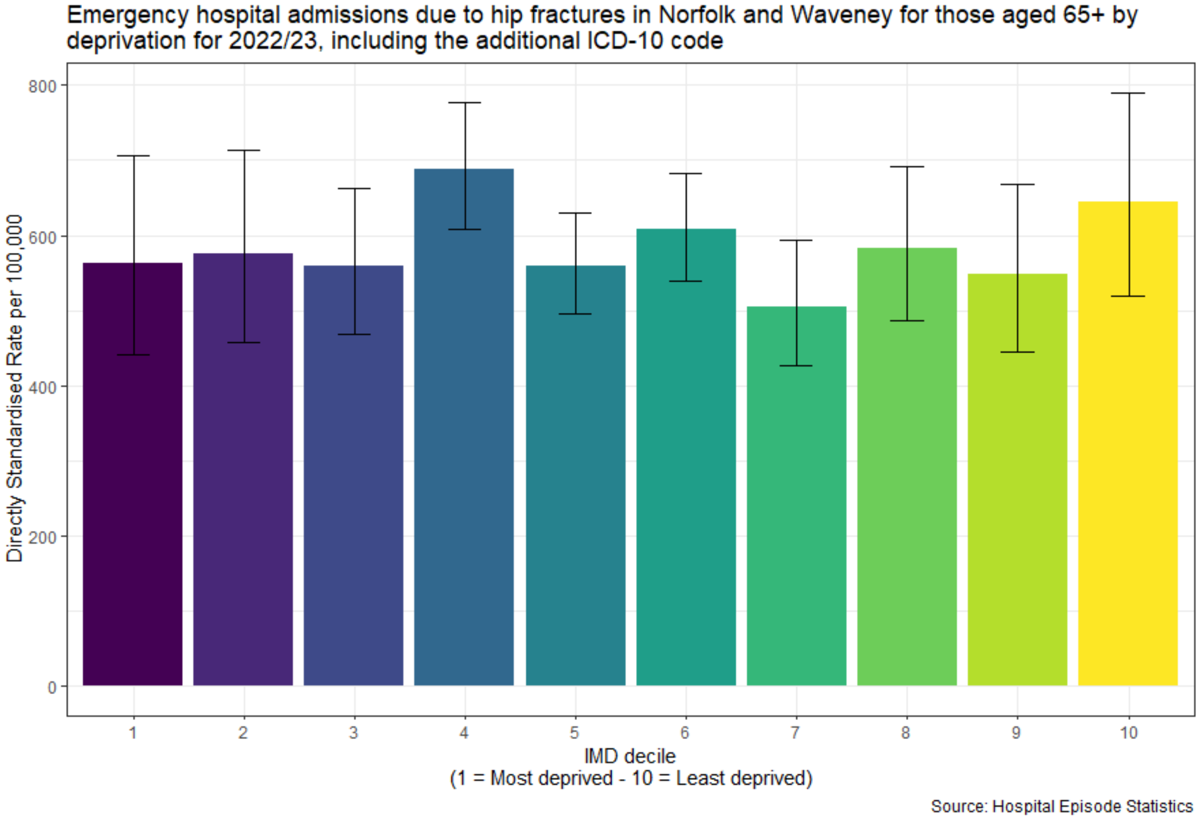

Figure 45: Emergency hospital admissions for hip fractures in those aged 65 and over across Norfolk and Waveney districts

Time

Norfolk and Waveney ICB are comparable to the national average for emergency hospital admissions for hip fractures and has been historically over time. There is no significant change in trend nationally and locally.

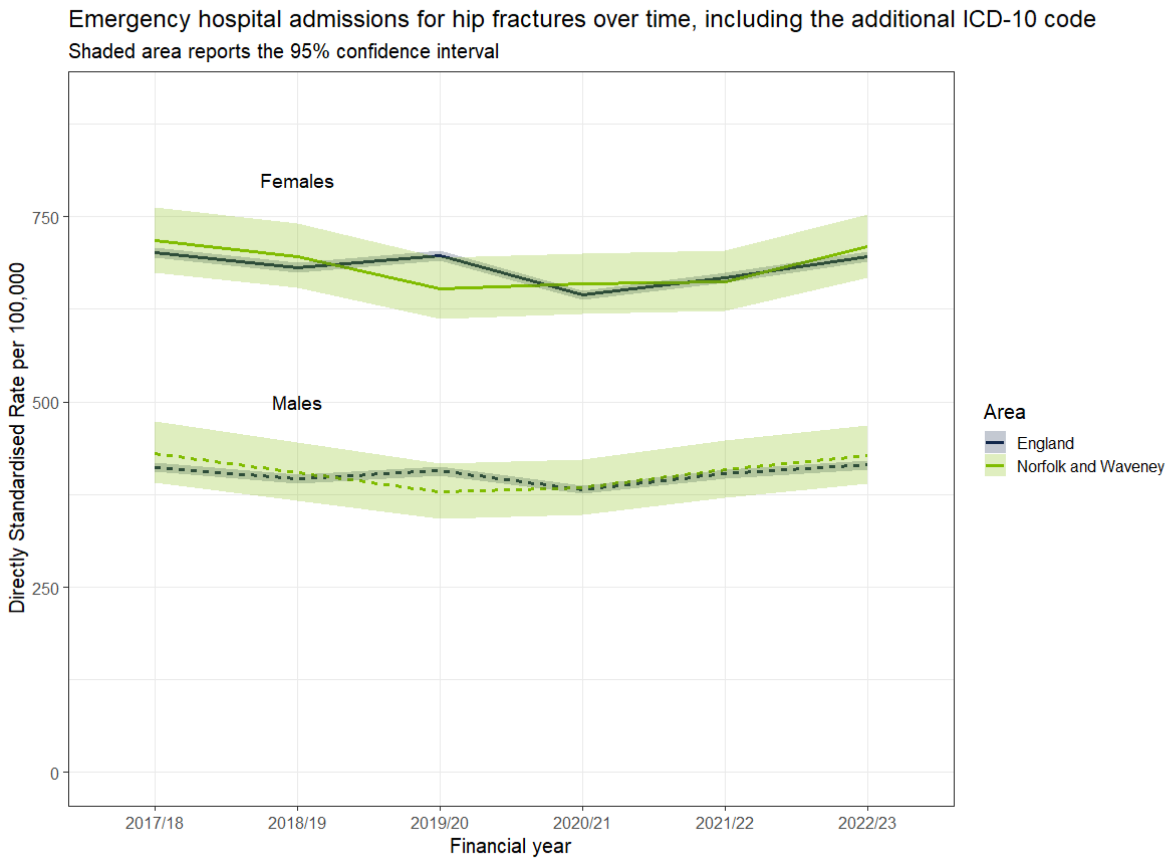

Figure 56: Directly standardised rate of emergency hospital admissions for hip fractures over time in Norfolk and Waveney and England, by sex. Source: Hospital Episode Statistics (HES)

Norfolk and Waveney ICB have the lowest directly standardised rates in England for the 65 and over age group and the 65-79 age group, and the second lowest rate in the 80 and over age group. Norfolk had consistently had one of the lowest rates of admissions for falls in the 65 and over age group in the region.

Mortality

Person

Although females have a higher rate of hospital admissions for falls, Males have a higher mortality rate, both nationally and in Norfolk. Norfolk however has a lower rate of mortality due to accidental falls than the national average.

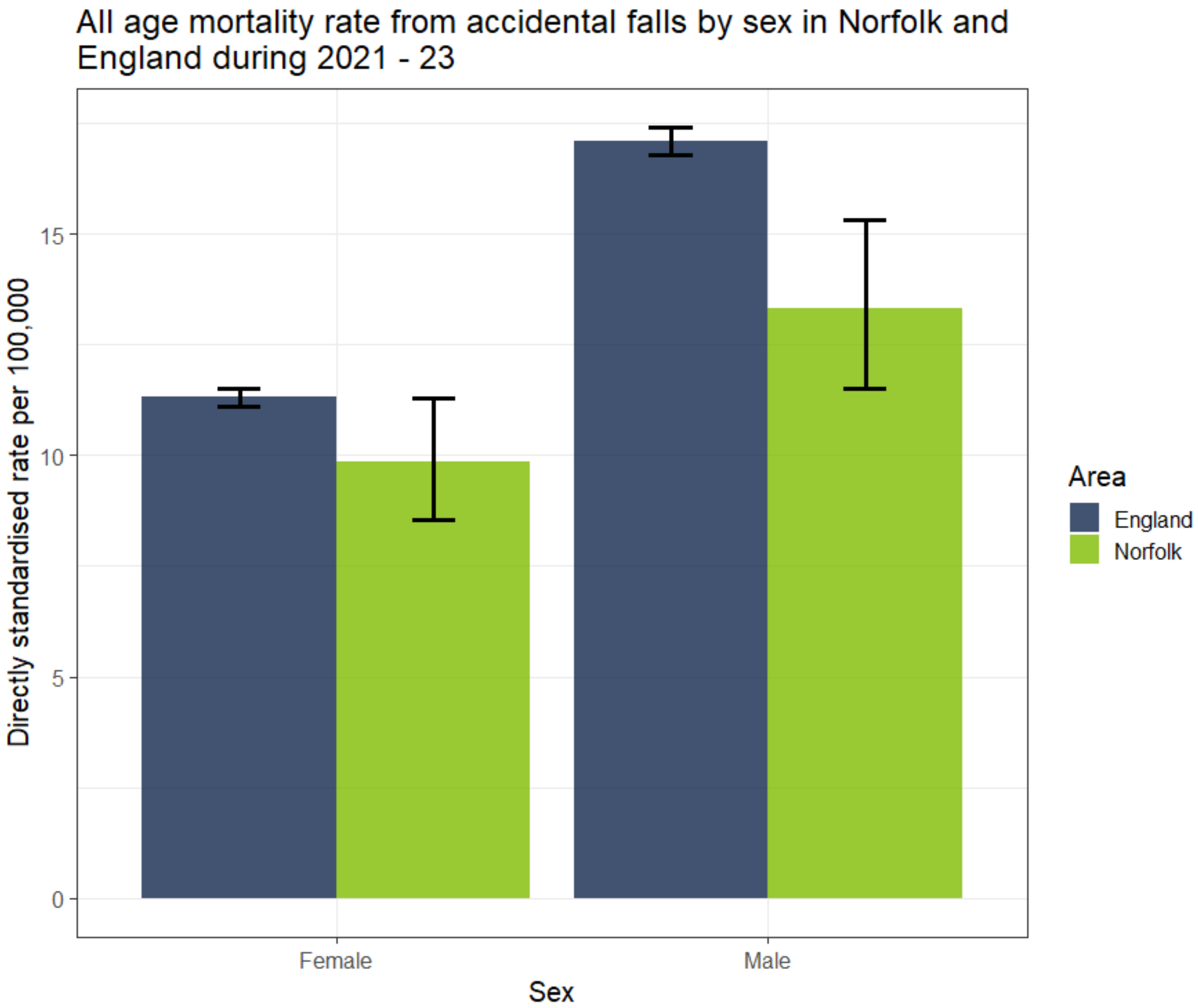

Figure 67: Directly Standardised rate of mortality due to falls in Norfolk and England by sex during 2021-2023. Source: Office of National Statistics Mortality data

Falls are significantly more likely to result in mortality as a person ages. Norfolk has a similar pattern to England in this regard. In 2023 no deaths were reported due to falls in Norfolk in children or younger adults, but rates increase significantly with age, particularly in the 90 and over ages.

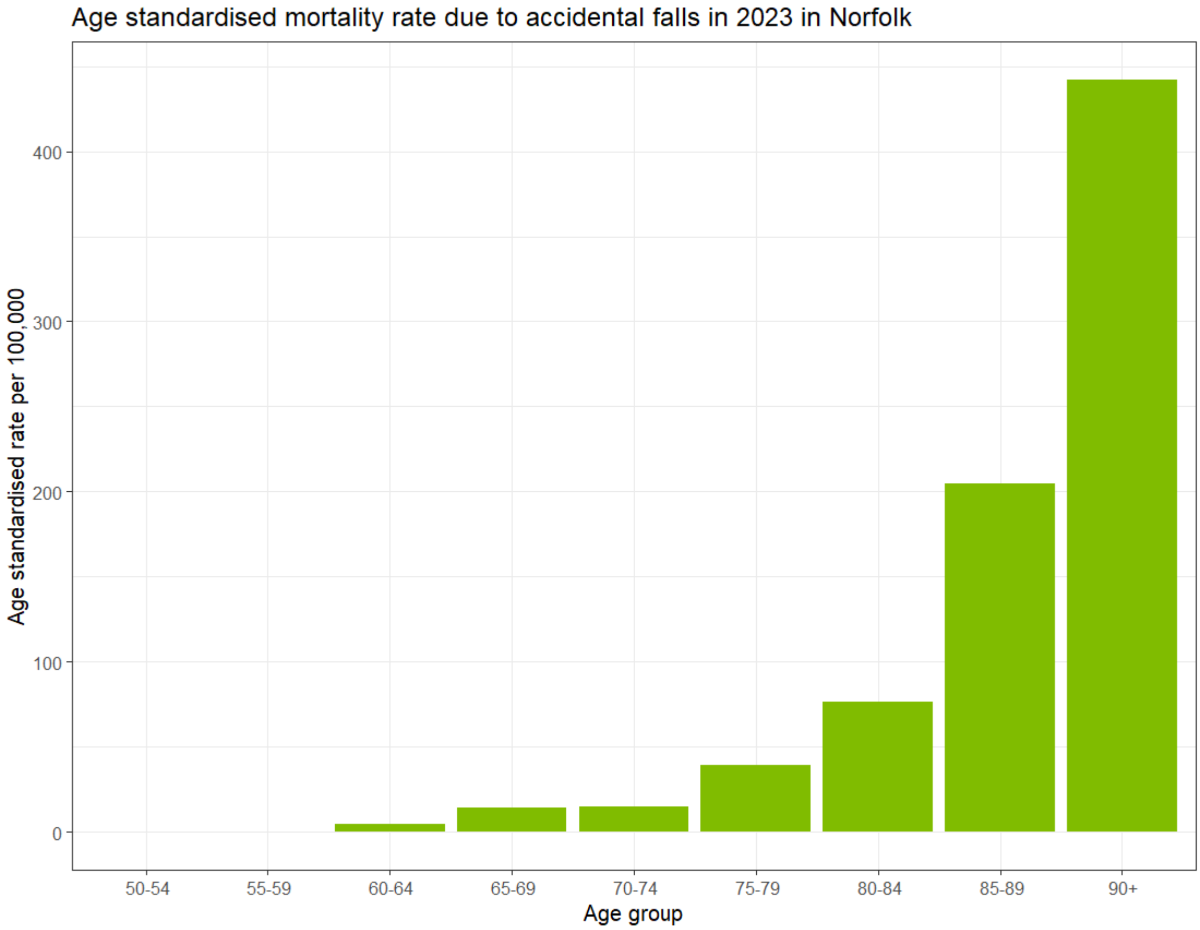

Figure 78: Rates of mortality due to falls by age group in Norfolk in 2023. Source: Office for National Statistics Mortality data

Place

Standardised rates of all age mortality where the underlying cause has been linked to accidental falls has been increasing both nationally and within Norfolk (54). During 2021 to 2023, there were around 490 deaths where the underlying cause was recorded as a fall. Around 98% of mortality due to falls occurred in those aged 50 and over, and around 73% occur in those aged 80 and over indicating ageing is strongly associated with mortality due to falls, as is hospital admissions due to falls. Due to small numbers, there is a large level of uncertainty in the rates, and rates can vary substantially each year at a district level. In 2020-2022, Norwich had the highest rate, although was not significantly different from the Norfolk or national average for all age mortality. Most recently however, Waveney has a significantly higher rate than the ICB footprint overall, although caution must be used when interpreting this result as it is only a single time period and due to small numbers, short term trends can change substantially.

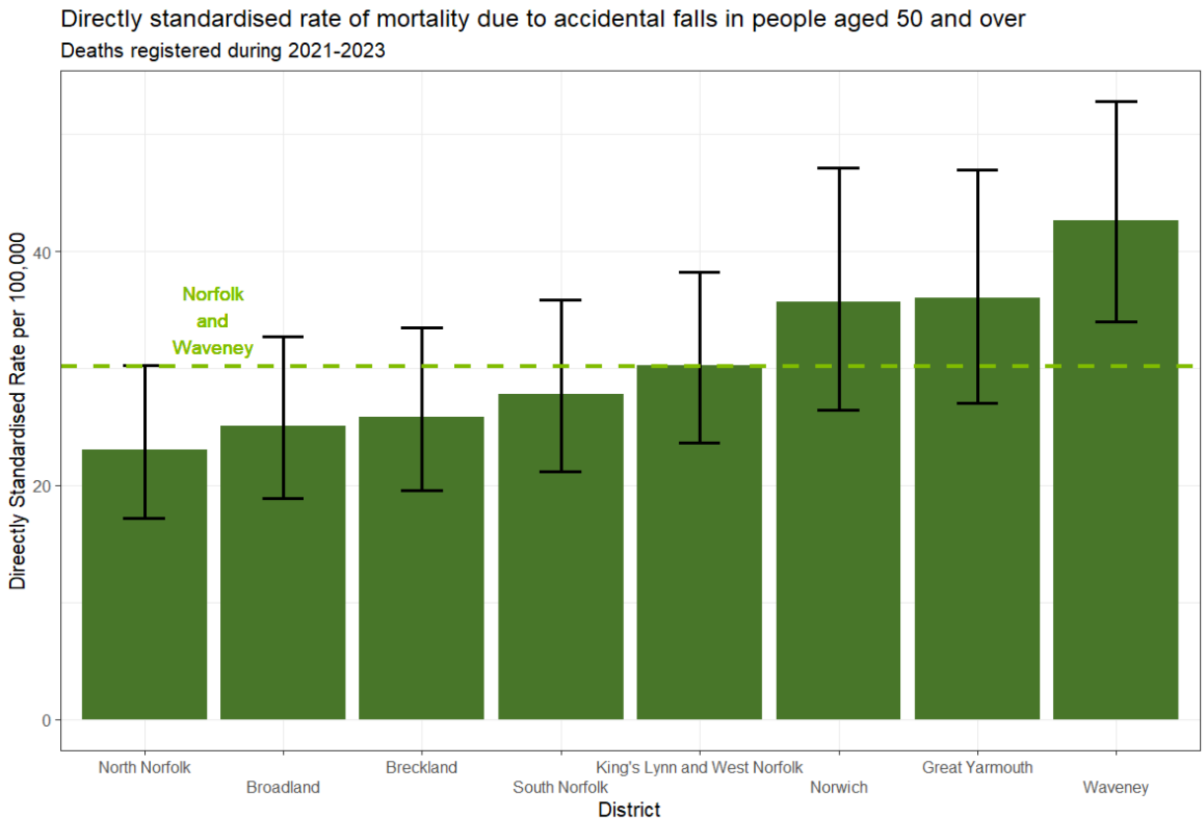

Figure 89: Directly Standardised rate of mortality due to falls in Norfolk and Waveney districts (bars) and Norfolk and Waveney ICB (line). Deaths registered 2021 to 2023. Source: Office of National Statistics Mortality data

Time

National indicators show that for England and the Norfolk local authority, standardised rates of mortality due to falls in all ages have been increasing over the last 20 years. This may be driven by increasing morbidity in an ageing population, however the exact reasons for this is unknown. Although there is some variation over time, Norfolk generally has lower rates of mortality due to falls than the national average.

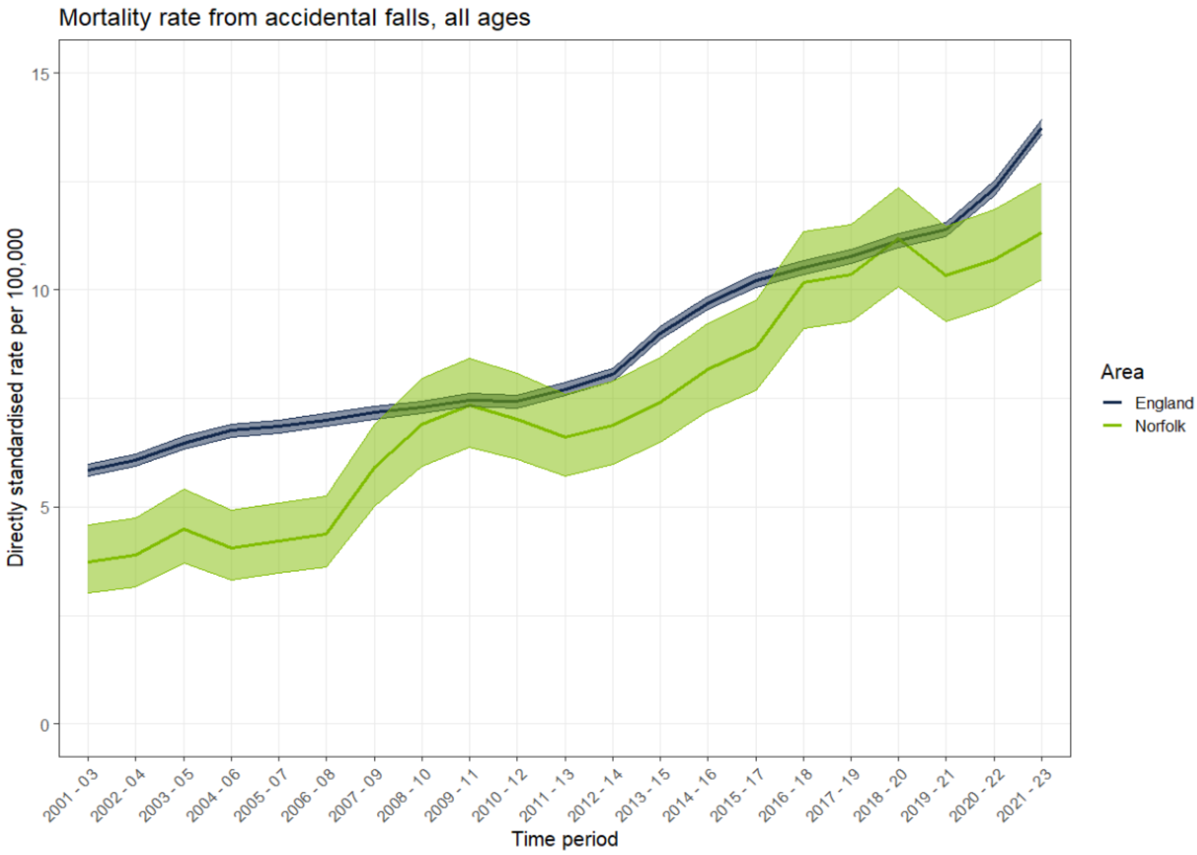

Figure 20: Directly standardised rate of mortality from all age accidental falls in Norfolk and England over time. Source: Office for National Statistics mortality data

Good practice

CMO report

The UK Chief Medical Officers annual report (2023) (55) recognises the importance of simple measures that health and social care professionals can undertake in the prevention of falls.

The recommendations from this report are:

- Clinicians should routinely ask about falls in their interactions with older adults
- Clinicians should assess gait speed as a predictor for falls risk
- A structured approach to prescribing to improve identification of fall-risk-increasing drugs, and that medication review and deprescribing of these drugs can reduce fall risk

- An assessment of cognition should be included as part of a fall risk assessment in older adults
- A falls risk should include a cardiovascular assessment, as well as environmental factors and physical capacity
- Exercise programmes should be delivered by appropriately trained professionals who can adapt exercises appropriately to functional status and co-morbidities
- Exercise for hip fracture patients should focus on mobility rehabilitation and include balance training and adequate pain control

The UK Chief Medical Officers' Activity Guidelines (56) recommends that older adults improve balance by choosing activities such as dance, bowls, or Tai Chi at least 2 days per week to reduce the chance of frailty and falls.

NICE Guidelines

NICE QS86 (57) recommends an individualised multifactorial intervention for those that are identified as being at increased risk of falling. Specific components in successful multifactorial interventions are:

- Strength and balance training
- Home hazard assessment and intervention
- Vision assessment and referral
- Medication review with modification or withdrawal

According to NICE QS86 (58), the following interventions are not recommended to address falls risk factors due to insufficient or conflicting evidence, although they may result in other health benefits:

- Low intensity exercise combined with incontinence programmes
- Group exercise (not individually prescribed)
- Cognitive behavioural interventions
- Referral for correction of visual impairment as a single intervention
- Vitamin D
- Hip protectors

NICE (59) Clinical Guideline 161:

All people 65 or older who are admitted to hospital should be considered for a multifactorial assessment for their risk of falling during their hospital stay. They should be offered a multifactorial assessment of their community-based falls risk, if appropriate.

People aged 50 to 64 who are admitted to hospital and are judged by a clinician to be at higher risk of falling because of an underlying condition, are also covered by the guideline recommendations about assessing and preventing falls in older adults during a hospital stay.

The Health and Social Care Act 2008 (Regulation no, 12) requires that providers, (such as care homes), prevent people from receiving unsafe care and treatments, and prevent avoidable harm or risk of harm. The Care Quality Commission recommends care providers to follow the guidance of the NICE CG161 Falls: assessment and prevention of falls in older adults.

Applying All Our Health: Falls

This national action orientated publication (60), outlines key actions for professionals to reduce the prevalence and impact of falls in our community. Key actions outlined include:

Health and care professionals can have an impact on an individual level by:

- routinely asking older adults about falls
- observing for deficits in gait and balance
- knowing how to recognise the signs of potential risk
- assessing potential risks, including medical conditions which might predispose a person to fall
- understanding the referral pathway to local services, that reduce fall risks
- reassuring individuals and their carers or families, that help is available to reduce the risk of falling
- supporting healthy ageing, including reducing exposure to risk factors such as physical inactivity and visual impairment, making every contact count and signposting eligible patients to NHS health checks
- providing up-to-date patient information on falls, such as Get up and go: a guide to staying steady from the Chartered Society of Physiotherapists

Community health and care professionals, and providers of specialist services can have an impact by:

- considering their role in primary falls prevention and the messages given out about health behaviours
- encouraging people to stay active, get socially connected and get their eyes and ears checked regularly
- eat a healthy balanced diet, reduce alcohol intake and stay well hydrated to reduce the risk of falling – and improve outcomes if a fall happens
- developing links with local community providers
- displaying information in workplaces promoting physical activity benefits for adults and older adults
- promoting the importance of strength and balance exercise
- encouraging people to drink enough water, especially in hot weather to avoid dehydration

- ensuring that inpatient care is in line with national falls and fracture clinical guidelines and quality standards

Senior or strategic leaders should be aware of interventions at population level, which can include:

- understanding the local population – considering the proportion of older adults, frailty prevalence, and the number of falls in the population
- reviewing the capacity and makeup of falls prevention services
- influencing relevant parties to support the development of local services – ensuring that falls prevention is a local health priority
- encouraging the use of established tools, such as those from Chartered Society of Physiotherapy (CSP)
- considering the training needs of the workforce, and what action is needed to give all health and care professionals the knowledge and skills to identify the risk of falls for older adults
- ensuring the promotion of physical activity is prominent within commissioned services
- exploring the intensity of exercise programmes
- promoting the importance and influencing the evaluation of strength and balance exercise programmes
- ensuring alignment of falls and fracture services with related services such as frailty

Enhanced Health in Care Homes Framework

The Enhanced Health in Care Homes Framework (61) (NHS, 2023) best practice recommends that care homes prevent falls by promoting physical activity and strength and balance, and complete a multifactorial assessment for every resident, as per the World Falls Guidelines 2022 (62) and NICE CG161(63).

Safeguarding Adults

The Norfolk Adults Safeguarding Board: Falls and safeguarding – this guidance should be used by providers, to promote best practice in understanding when a fall may need reporting as a Safeguarding Adults concern and should be used in conjunction with professional judgement (64).

PHE Falls Prevention ROI Tool

The PHE Falls Prevention ROI tool (65), developed in 2018 is designed to be used by health and care commissioners to evaluate their own activities to understand return on investment. See section below ‘Evidence of Effectiveness’ for further details.

Existing services

There is a variety of falls prevention services across Norfolk and Waveney, these are built into a range of pathways to enable residents to receive the right support at the right time e.g. after a hospital episode following a fall. This section describes the interventions available as well as the pathways for access.

Due to the varying nature of these programmes, locations and inclusion criteria, it is difficult to accurately summarise these and to understand any gaps in provision. Some example pieces of work are described below:

Interventions:

There are a range of evidence-based interventions taking place across Norfolk and Waveney, these include:

- Strength and balance physical activity
- Home hazard assessment and intervention
- Vision assessment and referral
- Medication review with modification or withdrawal

This needs assessment includes a description of physical activity and home hazard interventions; however, medication reviews and vision assessments occur in a broad range of ways across Norfolk and Waveney making collation of data and interventions beyond the scope of this document.

Active NoW

Active NoW is a single point of referral for physical activity and exercise across Norfolk and Waveney for inactive individuals who do less than 30 minutes of moderate intensity exercise each week, as well as those living with a long-term health condition, whose condition could be managed or improved by being more active. One of the priority conditions is those who are at risk of a fall (classified as a 3, 4 or 5 on the Rockwood Frailty scale). Physical activity interventions within Active NoW include evidence-based strength and balance activity (including Otago and Fame). Many of these classes are subsidised however some require self-funding or contributions from participants.

Patients can also be referred to digital resources, such as the exercise referral app – Exi or online exercise classes. The programme offers either community classes, one-to-one home visits, online resources, or leisure operators. The cost differs based on the chosen option; activities will be either free or at a significantly discounted rate.

Many of these classes are available to individuals without necessarily using the Active NoW referral mechanism, for example 'Your Health Norfolk' offers two distinct exercise class types, Otago (strength and balance) and FaME (Falls Management Exercise Programme) specifically designed to reduce the risk of falls, improve mobility, strength, flexibility, stability and enhance independence. Individuals self-fund activities which are £6.50 each, or £25 per month at various locations throughout Norfolk. Your Health Norfolk also offers one-to-one home classes, strength and balance DVD's and Falls Talks.

Referral Status	Number of Referrals
Completed	576
Intends To Participate	13
Not Participating	217
Referred	26
Grand Total	832

Referred = waiting for triage call
Intends to participate = they want to do something but haven't decided what yet
Not Participating = don't want to do anything
Completed = been referred on to a provider for an exercise programme / community provider / received an exercise at home pack

Figure 921: Active NoW referrals by referral status, 1st January to Dec 5th, 2024

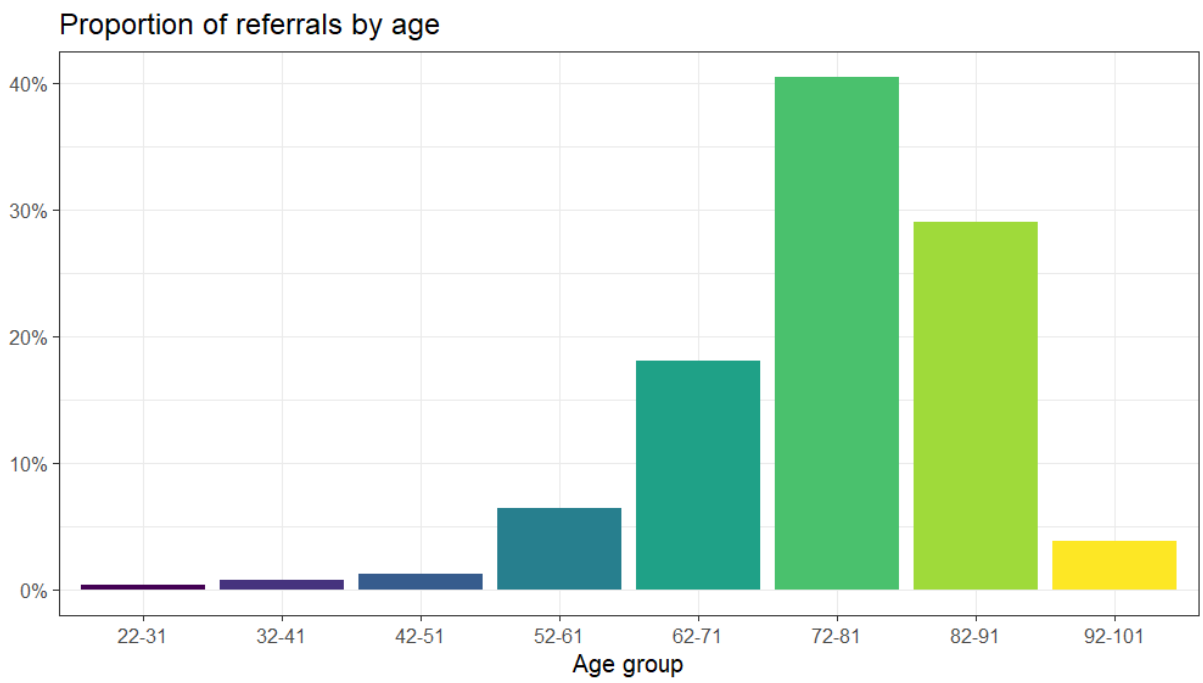

Figure 22: Active NoW referrals by age-group 1st January to Dec 5th, 2024

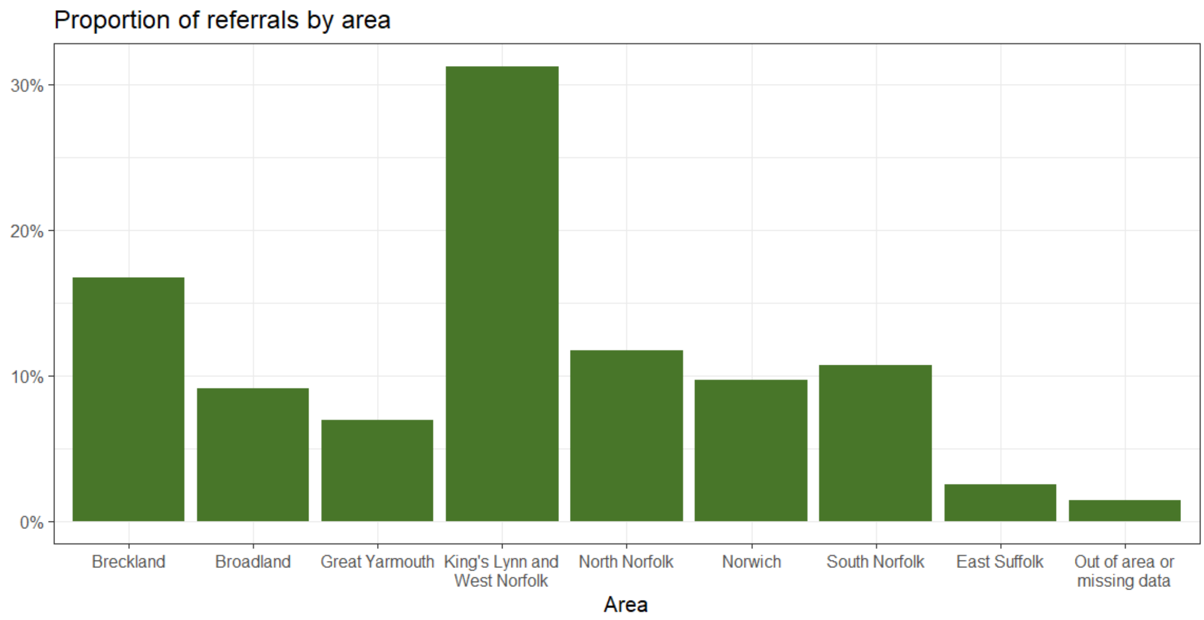

Figure 23: Active NoW referrals by district of residence, 1st January to Dec 5th, 2024

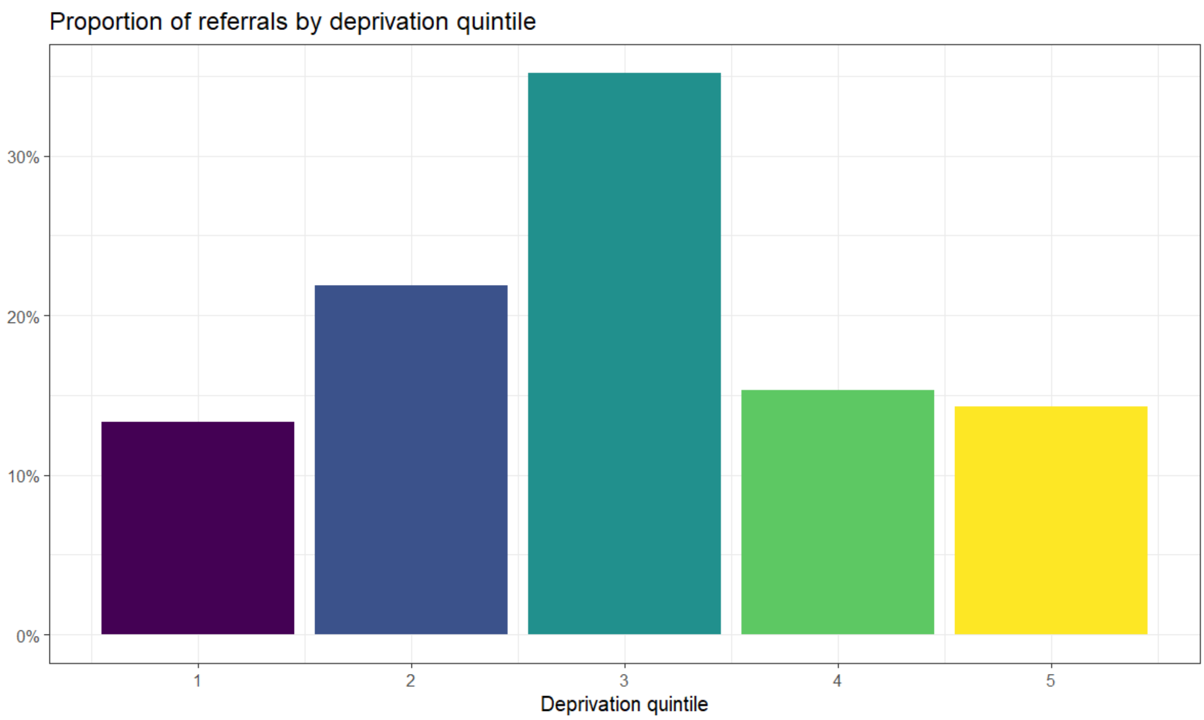

Figure 24: Active NoW referrals by deprivation quintile, 1st January to Dec 5th, 2024

Gender	Number of Referrals
Female	566
Male	266
Total	832

Figure 25: Active NoW referrals by gender, 1st January to Dec 5th, 2024

Health and Wellbeing Coaching

There are various models of health and wellbeing coaching delivered across Norfolk. These generally include one-to-one holistic support, or group exercise sessions for health and wellbeing in a range of settings, including sheltered housing locations.

Support available includes:

- Weekly physical activity sessions between 6-12 weeks within a client's home, garden or online with a qualified physical activity instructor.
- Community classes including seated exercise, adaptations to standing exercises, all designed to improve strength, balance, cardiovascular fitness, energy and confidence.
- Specific health condition management sessions such as stroke recovery or menopause.
- Support to encourage patients to reach their goals and tackle any barriers or issues, which may include hardship grants to provide clothing to enable physical activity, or signpost to other internal services that provide a person-centred and holistic approach to their health and wellbeing, e.g. financial aid to buy clothes or equipment.
- Building a trusting relationship to explore a patient's attitudes and behaviours for their health, set goals and enabling incremental change.
- Support to find the patient local opportunities for ongoing self-care i.e. activity clubs, food, smoking cessation, weight management etc.

Gait Smart

GaitSmart is a motion analysis tool designed to assess and monitor mobility, particularly in patients with conditions affecting gait and movement, such as osteoarthritis and rehabilitation after surgery. NICE guidance outlines that for adults at risk of falls, the rehabilitation exercise programme can be used to treat gait and mobility issues in the NHS while more evidence is being generated (66). There are several pilots using GaitSmart across Norfolk and Waveney, working with a range of delivery partners. Between May-November 2024 over 250 individuals across Norfolk and Waveney have received a GaitSmart test, with 56 having had a protocol that enabled improvement to be identified and quantified. This cohort had improved mobility which directly relates to reduced falls risk and greater independence.

Home Adaptations:

Disabled Facilities Grants (DFG) are a national programme to help with the cost of paying for essential housing adaptions that enable disabled people, people living with chronic health conditions and older adults to stay in their homes. DFG is subject to financial means test unless individuals are already receiving selected benefit. Grants of up to £30,000 are available and administered via lower-tier local authorities. Tenants of housing associations and private tenants require their landlord's consent to apply.

The relevant local authority assesses the needs of the person with consultation from the welfare authority to establish what is considered necessary and appropriate, and thereby reasonable and practicable, in line with the Disabled Facilities Grant (DFG) delivery guidance for Local Authorities in England.

Some examples of work considered include:

- improving access to and from the property with ramps
- installing accessible toileting, showering, or kitchen facilities
- building an extension, for example, a downstairs bedroom

DFG have two reporting measures at a County level, Statutory DFG offer, these are significant cost adaptations as outlined in national DFG guidance, in addition discretionary grants (which have different names in different districts) represent smaller scale spend on adaptations to a home, district Councils have a variety of thresholds and priorities for this spend across Norfolk. In some districts there is provision for such minor adaptations such as grabrails, an example of this is the handyperson scheme in South Norfolk and Broadland.

Data on DFG grants across Norfolk is illustrated below, it is important to note that these are a measure of demand rather than need, and that the outcomes below are anticipated benefits to the individual at the time of application.

Anticipated Outcome	**Reduce frequency of falls (All Norfolk Districts)**	**Remain living independently at home - which may include reducing frequency of falls (All Norfolk Districts)**	**Total (All Norfolk Districts)**
4A Statutory DFG Offer- Anticipated outcomes	4	1,415	1,419
4B Housing Assistance Policy (HAP)/Regulatory Reform Order (RRO) Discretionary Grants - Anticipated Outcomes	435	876	1311

Figure 26: Norfolk districts combined DFG anticipated outcomes relevant to falls Q2 2022/23-Q2 2023/24

Norfolk and Suffolk NHS Foundation Trust (NSFT) Fear of Falling

NSFT Talking Therapies team have worked with Protect NoW to segment the population using the Eclipse tool. Individuals receive a letter, leaflet and phone call describing the offer and an invite to a portal. If the person consents, the Talking Therapies team complete a needs assessment and can offer the person a range of support, including online workshops, for managing low mood, anxiety and/or fear of falling.

This offer was poorly attended in Norfolk & Waveney and is no longer offered as a workshop.

East Coast Community Healthcare (ECCH) Falls and Frailty Team

This service is available to adults following a referral from any health or social care professional for those who have:

- A completed Rockwood score identifying they are frail with details as to how they are frail (using criteria on the referral form)
- Complex patients who are recurrent fallers (at least 2 or more in the last 12 months)
- Those who may have an unknown reason for 2 or more falls in the last 12 months
- Community dwelling that is registered with a Great Yarmouth and Waveney GP (includes care homes)

Additional considerations will be made for:

- Patients with a diagnosed inner ear condition who would benefit from vestibular assessment and rehabilitation (there are 2 vestibular trained therapists in the team)
- Recurrent hospital admissions in the last year related to frailty

If the patient has only had 1 fall in the last 12 months, they do not meet the criteria. However, if they have any therapy needs, they are referred onto the PCH therapy teams.

The Falls & Frailty therapists predominantly visit people in their own accommodation and complete a comprehensive multifactorial falls assessment and intervention – (as recommended by the NICE guidelines). Alternatively, a clinic appointment may be arranged, but this is rare.
The team provides tailored strength and balance exercises for patients to complete independently and does referrals to Active Now for longer term exercise programs.

The team liaises with other professionals if there are any concerns; for example, to pharmacy to help with medication management, GP to review postural hypotension, social services for care support, continence team etc. The team also provides equipment to support independence, mobility, activities of daily living and to improve quality of life. Where appropriate, backward chaining can be taught and practiced in order for patients to learn how to safely get themselves up from the floor. Alternatively, specialist lifting equipment for relatives/carers has been provided to help retrieve the patient up off the floor.

As of January 2025, there were 200 open referrals, with an almost equal split between male and female (male – 97, female – 103). The majority are in the 76-85 age category.

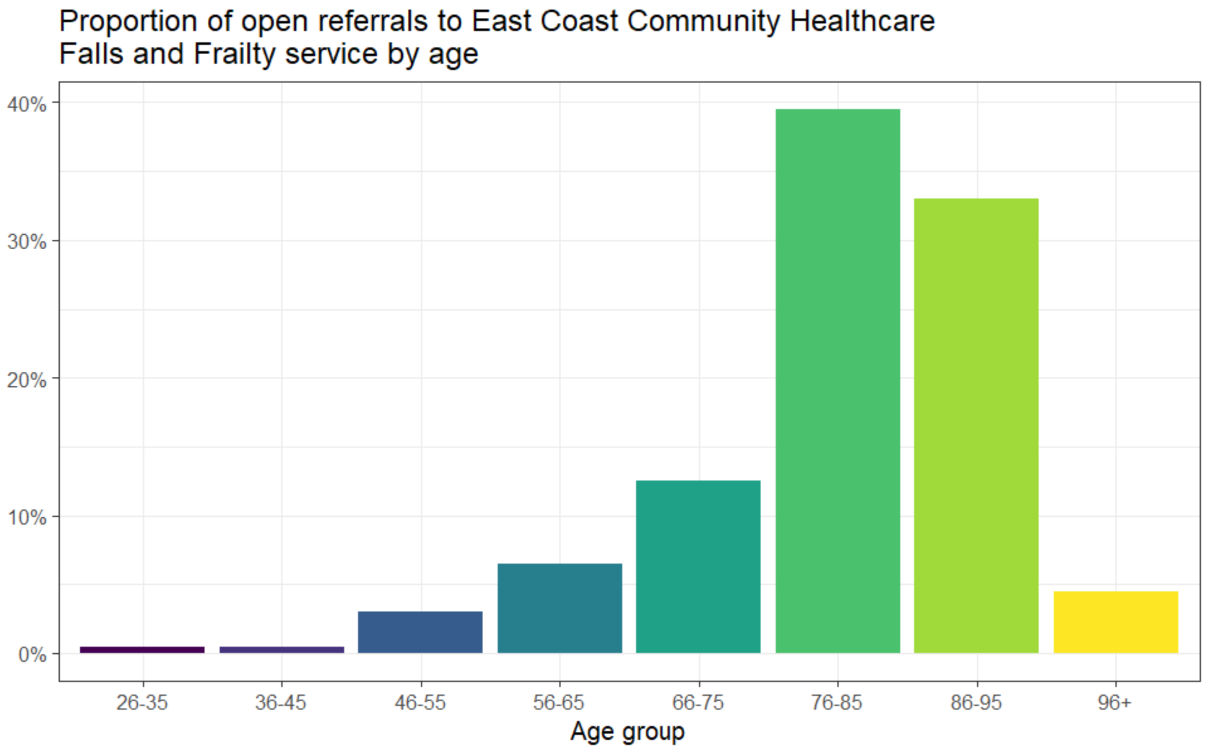

Figure 27: Numbers of open referrals to ECCH falls and frailty team by age group (January 2025 data).

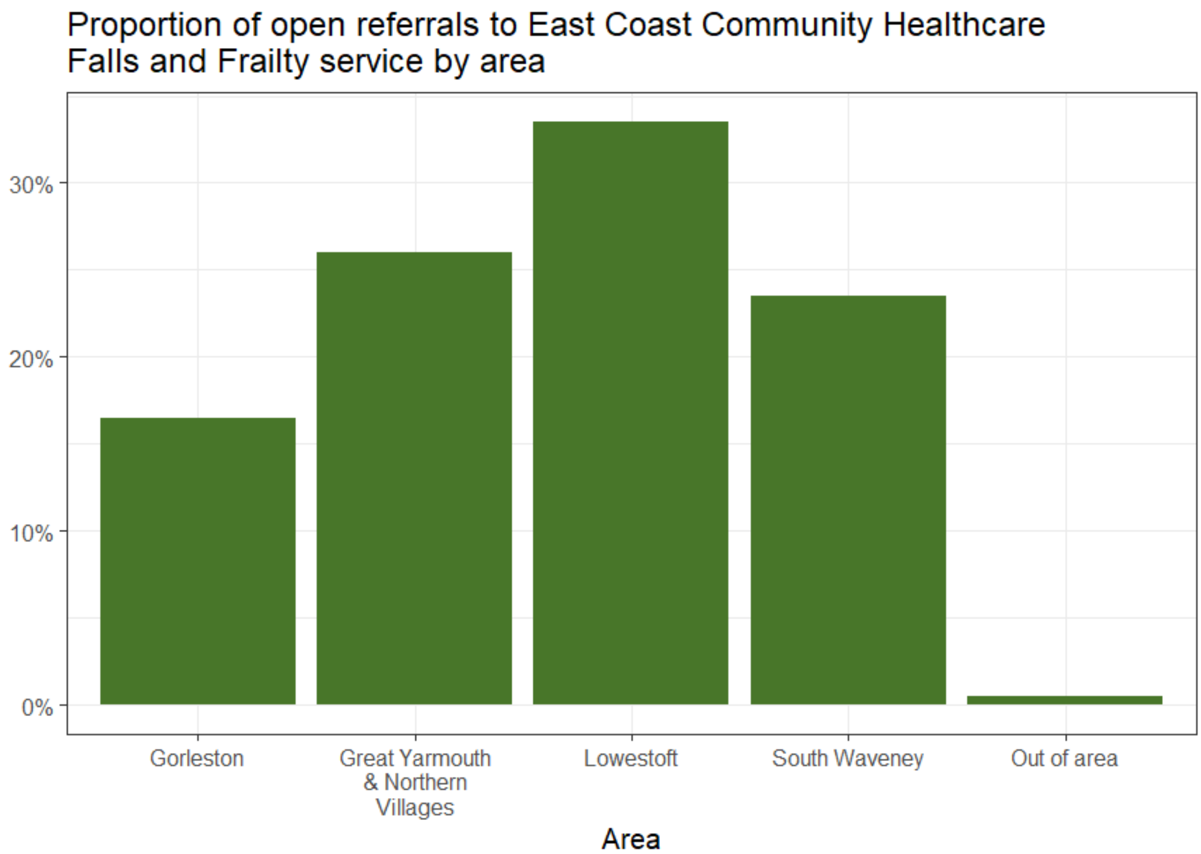

Figure 28: Numbers of referrals per place of residency for open referrals (January 2025 data).

Norfolk Community Health and Care NHS Trust (NCHC) Falls Prevention service within NCHC Therapy teams

This service is available to adults after a referral from a healthcare professional for those who have either:

- experienced 2 or more falls in the past six months, or
- have had a hospital admission due to a fall, or
- have been referred by their GP to the service

Patients can be referred after 1 fall – they will undertake a mobility and balance assessment, rather than a full multi-factorial risk assessment.

Referrals for falls prevention support are managed by therapists in NCHC, there is no dedicated falls prevention team. In addition to referrals for falls prevention support, every individual who is referred to the therapy team for other reasons is also screened for falls.

The service does not see individuals with a 'fear of falling' unless there is an underlying mobility issue.

The NCHC therapists complete a comprehensive multi-factorial falls risk assessment (MFFRA). Next steps will depend on the reasons for the fall. This can include:

- tailored strength and balance exercises for up to 6 weeks
- referrals to other NCHC teams e.g. podiatry, dietetics
- request to the GP to make relevant onwards referrals e.g. dizziness – ENT specialist; loss of consciousness during a fall – acute hospital Older People's Ambulatory Care (OPAC); cognition – referral for specialist cognitive assessment
- equipment to support mobility

Total number of patients where a Falls Assessment has been completed (all services April-Dec 2024):

Area	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
North Norfolk	65	54	40	48	46	49	50	51	46	449
Norwich	70	72	61	64	67	52	71	68	58	583
South Norfolk	167	145	152	153	139	138	189	195	148	1426
West Norfolk	90	103	94	91	80	87	92	87	81	805
Non Norfolk	1	0	0	0	2	0	1	0	1	5
Total	393	374	347	356	334	326	403	401	334	3268

Figure 29: NCHC number of patients receiving falls assessment by previous CCG area April-December 2024

Place based pathway projects

There are several place-based pathways that are at varying levels of development across Norfolk and Waveney (detailed below). Due to their relative newness and the difficulty in measuring pathway outcomes, their falls prevention impact is not yet fully understood.

Norfolk County Council Proactive Falls Prevention

The programme identifies people who are at risk of falls, using AI to scan social care records for risk factors and apply data modelling to create a prioritised list of those most at risk of a fall. This identifies people who are currently receiving social care services, or those who have done so in the past, that could benefit from preventative support. These individuals are then contacted via both a letter and a phone call to have a holistic conversation to understand their needs and to offer these patients some proactive interventions to reduce their risk of falls, to help keep them independent within their own homes for longer.

The project involves an initial call and referrals onto other services, if needed, with follow up calls to check that any interventions are going well and to assess their impact on the persons wellbeing. Initial results show that of those people who agreed to have a holistic conversation, 93% were eligible for at least one service, which is a potential indicator of model effectiveness.

The West Norfolk Falls Prevention Project

The aim of this project is to identify people who are 70 and over, who haven't had a serious fall and are relatively active, and provide an approach to proactively support them, hopefully prevent them having a fall in the future.

The approach offers:

- Advice to help them stay safe in their home, offer free minor adaptations to the home, to reduce the likelihood of falls, and help support their day to day living and independence. These can include grab rails, stair rails, keys, safes etc.
- A free exercise class suitable to their ability to help them stay mobile and active, which can be provided in a community setting or on a one-to-one basis in their home by a personal trainer.
- Support, if required, to connect them with their local community, including help to find social clubs, groups, and referrals to any other organisations as needed.

North Norfolk Falls and Frailty Project

The aim of this project aim is to find ways to identify and support individuals living with frailty and at risk of frailty and falls in North Norfolk by taking a multi-partner collaborative approach including colleagues from community healthcare, primary care, district councils etc. The falls aspect of the project is intending to contact individuals who are registered with a North Norfolk GP and who have attended either the NNUH's Emergency Department or Cromer Minor Injuries Unit due to a fall, returning home the same day without an admission. Individuals in this cohort are contacted within 7 days of their hospital attendance and offered a range of falls prevention interventions and holistic support.

East Locality Model/Pathways for Falls & Frailty

The acute and community system partner colleagues work collaboratively to optimise the falls and frailty prevention pathways and model used in East Norfolk and Waveney.
Current work so far:

- The approach has included a series of workshops to discuss and refine the pathways.

- Effective use of Better Care Fund funding to commission strength and balance exercise support via a private provider (Your Health Norfolk) and use of falls-related exercise schemes available via Active NoW.
- The use of Gait Smart in various healthcare settings to explore how best to use it to enable individuals to improve their gait and reduce their falls risk.
- Acute: At the JPUH in Ward 12, the Acute Frailty Unit and in Orthopaedics (Trauma and Elective) as part of in-reach reablement delivered by Health Coaches
- Community: Collaborating with ECCH's MSK Physio Team and Escape Pain clinics, to deliver the GaitSmart Programme using VCSE Health Coaches
- Primary Care: Proactive identification of patients at risk of falls in Waveney who would benefit from the GaitSmart Programme delivered by Everyone Active as part of the Active NoW Falls Prevention Programme for Waveney
- Exploring acute access to System 1 generic assessment and shared care records as they include important information in assessing and handing over care between providers, a key element in planning for Frail patients.

Service user experience

There is not currently a good understanding of service user experience across the range of falls prevention services delivered in Norfolk and Waveney. At the time of writing, the only feedback available was from a small number of Active NoW participants.

Feedback from Active NoW:

- "I feel more confidence when walking, I don't use my stick as much. My mobility has also improved and it's easier to bend over and pick things up".
- "I have noticed improvements in my balance and feel more confidence when walking up and down stairs".
- "The sessions have been extremely beneficial to both my physical and mental health".
- "It's 40 years since I did any proper physical activity, I'm 82 and have the exercise bug, I will continue to exercise for as long as possible now!"
- "'It has been a pleasant and valuable experience. I'm walking with more confidence and much easier"
- "I am getting up and down from the chair easier and feel my legs are stronger"

Professional experience

There is not currently a good understanding of professionals' experiences of the range of falls prevention services delivered in Norfolk and Waveney.

Information gaps

This JSNA has highlighted a number of information gaps in relation to falls and falls prevention:

1. We do not currently have enough data to ascertain the prevalence of falls in Norfolk and Waveney in relation to visual impairment, polypharmacy or environmental hazards.
2. A history of falls is the biggest predictor of future falls; however, we do not have any data on those who have fallen but not needed medical treatment as these falls go mostly unreported.
3. We have a variety of Falls Prevention services across the County but due to the varying types of intervention, eligibility criteria, and area of delivery, it is difficult to ascertain if there are any areas of unmet need.
4. We are unable to compare interventions across the county due to their varying nature of delivery.
5. We do not currently have an understanding of what the people of Norfolk would like in the way of falls preventions services, and how they would like to access these services.
6. We do not have an understanding of the population of non-service users, who have not yet fallen, but are at risk of a fall.
7. We do not have an understanding of what carers feel is needed in regard to falls prevention services.
8. We do not have a clear picture of the care home environment and falls prevention.

Conclusion

Falls among older adults are a significant public health challenge, impacting individuals, families, and the health and care system. Falls are a leading cause of injury, loss of independence, and mortality among older adults, and the risk increases with age. With the population of those aged 65 and over projected to grow substantially, the burden of falls and related injuries is expected to rise, placing additional strain on healthcare and social care systems.

Research highlights the multifactorial causes of falls, including muscle weakness, poor balance, visual impairment, and environmental hazards, among others. Therefore, preventing falls requires a multifaceted approach that integrates clinical best practices, community-based interventions, and policy-level actions. This document highlights the importance of proactive preventative measures, including the recommendations outlined by the UK Chief Medical Officer, NICE guidelines, and the Enhanced Health in Care Homes Framework.

At an individual level, routine fall-risk assessments, medication reviews, and tailored exercise programs including strength and balance are essential to reduce risks and improve outcomes, alongside incorporating environmental assessments, and where relevant, adaptations (for example in the home). Early identification of other risk factors such as visual impairment or dementia may also have a positive impact on falls risk.

At a population level, increasing strength, balance, and physical activity plays a pivotal role in falls prevention, ideally encouraging this prior to any deconditioning associated with later life or co-morbidities. Reducing risk through primary prevention activity such as this will not only improve the quality of life for older adults but may also reduce the burden on health and care systems.

Norfolk and Waveney have implemented various falls prevention services and initiatives, but there are still gaps in data and service provision. Understanding the needs and preferences of the local population, including those who have not yet experienced a fall, is essential for developing targeted and effective prevention strategies.

Through continued enhancement of falls prevention efforts and addressing the identified information gaps, Norfolk and Waveney can improve the quality of life for their ageing population, reduce the incidence of falls, and alleviate associated healthcare and social care burdens.

Glossary

A glossary of terminology used.

Directly Standardised Rate - These rates are directly age standardised using European Standard Population 2013 per 100,000.
This improves the comparability of rates for different areas, or between different time periods, by taking into account differences in the age structures of the populations being compared.
The directly age standardised rate is the rate of events that would occur in a standard population if that population were to experience the age specific rates of the subject population. The standard population used for the direct method is the European Standard Population.

Confidence Intervals - A confidence interval is a range of values that is used to quantify the imprecision in the estimate of a particular indicator. Specifically, it quantifies the imprecision that results from random variation in the measurement of the indicator. A wider confidence interval shows that the indicator value presented is likely to be a less precise estimate of the true underlying value.

References

Appendix 1 Definitions, Interventions and Pathways further descriptions

Definitions of data used to measure falls incidence

Falls definition:

Emergency hospital admissions for falls injuries in persons aged 65 and over, directly age standardised rate per 100,000

The definition of the numerator for the falls indicator used in this needs assessment includes every emergency admission for falls injuries classified by the primary diagnosis code (ICD-10) being between S00 and T98 *or* a primary diagnosis code of M8095, *and* an external cause ICD-10 code between W00 and W19.

In addition to the primary diagnosis codes and cause codes stated, admissions were also included where it was an emergency admission (episode order = 1 and admission method starts with 2), and the age of the patient at the time of the admission was 65 years or over.

Admissions were counted in the financial year in which the episode ended. Elective booked, waiting lists, or planned admissions were excluded. Regular and day attenders have been excluded, and patients were only included is they had a valid Lower Super Output Area (LSOA) code within the Norfolk and Waveney ICB footprint to allow small area analysis.

The denominator is the Office for National Statistics mid-year population estimates for relevant years, by LSOA for ages 65 and over.

Hip fracture definition:

Emergency Hospital Admissions for fractured neck of femur in persons aged 65 and over, directly age standardised rate per 100,000.

The definitions of the numerator for the hip fracture indicator used in this needs assessment includes every emergency admission to hospital where the age of the patient was 65 years or over at the time of the admissions and was classified as an emergency admission (episode order = 1 and admission method starts with 2).

Admissions were counted if they had a primary diagnosis ICD-10 code of a fracture to the neck of the femur (S72.0), a pertrochanteric fracture (S72.1), a subtrochanteric fracture (S72.2), or unspecified osteoporosis with pathological fracture of the pelvic region and thigh (M80.95) which is the code used at the JPUH.

Admissions were counted in the financial year in which the episode ended. Elective booked, waiting lists, or planned admissions were excluded. Regular and day attenders have been excluded, and patients were only included if they had a valid Lower Super Output Area (LSOA) code within the Norfolk and Waveney ICB footprint to allow small area analysis.

The denominator is the Office for National Statistics mid-year population estimates for relevant years, by LSOA for ages 65 and over.

Appendix 2 Evidence of effectiveness

PHE Falls Prevention ROI Tool (67)

The tool, developed in 2018 is designed to be used by health and care commissioners to evaluate their own activities to understand return on investment. The ROI Tool was tested with four common falls prevention interventions. All 4 interventions provide a societal ROI (i.e. cost savings and Quality of Life Years gains outweigh cost of implementation) with home assessment and modification also providing a financial ROI (i.e. cost savings outweigh cost of implementation). These results are summarised below. All interventions were also found to be cost-effective compared with usual care.

Intervention	Financial ROI	Societal ROI
Otago	£0.95 : £1.00	£2.20 : £1.00
FaME group exercise	£0.99 : £1.00	£2.28 : £1.00
Tai Chi	£0.85 : £1.00	£1.97 : £1.00
Home assessment and modification	£3.17 : £1.00	£7.34 : £1.00

The NICE evidence review of falls prevention interventions is due to be completed in 2025. In the interim, the 'World Guidelines to Falls Prevention and Management for Older Adults: A Global Initiative' is commonly used to inform of the strength of falls prevention intervention evidence, and the recommendations regarding the interventions.

World Falls Guidelines Evidence of Falls Prevention Interventions and Districts where offered:

Quality of Evidence

	North Norfolk	South Norfolk	KL and West Norfolk	Breckland	Norwich	Broadland	Gt Yarmouth	East Suffolk/Waveney
Strength & Balance 1A (>3xweek for at least 12 weeks)	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Active NoW	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Active NoW	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Active NoW	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Active NoW	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Health Coaching Some elements of Active NoW	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Active NoW	NCHC Falls Prevention Service within NCHC Therapy teams Some elements of Active NoW	ECCH Falls Prevention Offer ActiveNoW Waveney Falls Prevention Programme (Everyone active)
Gaitsmart 1A			Offer in 6 sheltered housing accommodations in West Norfolk.		AGE UK Norwich Health Coaches & Gaitsmart			Active NoW (identifying individuals retrospectively)
Multifactorial falls risk assessment 1B	NCHC Falls Prevention Service within NCHC Therapy teams	NCHC Falls Prevention Service within NCHC Therapy teams	NCHC Falls Prevention Service within NCHC Therapy teams	NCHC Falls Prevention Service within NCHC Therapy teams	NCHC Falls Prevention Service within NCHC Therapy teams	NCHC Falls Prevention Service within NCHC Therapy teams	NCHC Falls Prevention Service within NCHC Therapy teams	ECCH Falls Prevention Offer
Fear of Falling 1B	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW	NSFT Talking Therapies/Protect NoW
Home modifications (Eligibility varies between Districts) 1B		District LA Housing Adaptations (self-referrals)	District LA Housing Adaptations (self-referrals)	District LA Housing Adaptations (self-referrals)	District LA Housing Adaptations - Healthy Homes (self-referrals)	District LA Housing Adaptations (self-referrals)	District LA Housing Adaptations – Be at Home Service (professional referrals)	District LA Housing Adaptations - Be at Home Service (professional referrals)
General physical activity "general physical activity alone is unlikely to prevent falls"	Active Now	Active Now	Active Now	Active Now	Active Now Dance to Health, seated exercise, Falls Prevention programme – Gaitsmart Health Coaching Menopause, Health Coaches &	Active Now	Active Now	Active Now Waveney Falls Prevention Programme & Gaitsmart (Everyone Active)

Key:

Modified GRADE system description

Strength of Recommendation	1	**Strong**: benefits clearly outweigh undesirable effects
	2	**Weak or conditional**: either lower quality evidence or desirable and undesirable effects are more closely balanced
Quality of evidence	A	**High:** 'further research is unlikely to change confidence in the estimate of effect'
	B	**Intermediate:** 'further research is likely to have an important impact on the confidence in the estimate of effect and may change the estimate'
	C	**Low:** 'further research is very likely to have an important impact on the confidence in the estimate of effect and is likely to change the estimate'
No evidence Available	E	**Experts:** 'When the review of the evidence failed to identify any quality studies meeting standards set or evidence was not available, recommendations were formulated expert consensus'

Source: World Falls Guidelines Working Group Evidence Rating[68]

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