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The Northamptonshire JSNA

From 2019 the Northamptonshire JSNA consists of a collection of three types of presentation, an Insight Pack, a JSNA Briefing Document and an In-Depth Needs Assessment. Definitions of these products are below. In addition, other work that complements the JSNA, or is of interest or is similar to the three types of product mentioned will be published alongside the JSNA products if it is appropriate and helpful to do so.

**Insight Pack**
An Insight Pack will highlight the key facts and local needs about a particular subject. This will be presented, where possible, in a very visual format with charts and infographics and will include relevant data produced with comparisons.

There will be a short narrative accompanying this which will provide an overview of the subject. This may result in recommendations for further, more detailed work in the JSNA programme.

**JSNA Briefing Document**
A JSNA Briefing Document is designed to provide an overview of a subject area, usually accompanied by an Insight Pack (though not all Insight Packs will be accompanied by a Briefing Document).

The Briefing Document will summarise the local needs, risk factors, current services in place, evidence to support commissioners and considerations and recommendations for local commissioning. This product may result in recommendations for more detailed analysis and/or an In-depth Needs Assessment.

**In-Depth Needs Assessment**
An In-Depth Needs Assessment will include a detailed analysis of the subject area. Typically this can take up to 6 months to deliver and will usually only be completed if it is either clear at the outset that one is required or a JSNA Briefing Document has been completed that recommended an In-depth Needs Assessment be delivered.

Each full needs assessment will be delivered by a working group and truly delivered in partnership across all relevant organisations for the subject area.

This document is a JSNA In-Depth Needs Assessment focused on Falls in older people Northamptonshire.

Further JSNA products can be found on the [Northamptonshire JSNA website](http://www.northamptonshire.jsna.org).
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Recommendations

1. **Identify an NHCP clinical lead for falls** to ensure strategic and clinical leadership.

2. **Review the current falls pathway** with the aim of developing an end to end pathway based on national guidelines that includes:
   a. An overriding principle of prevention before, during or after a fall
   b. Promotion of healthy ageing across different stages of the life course
   c. Maximising everyday opportunities to identify and raise awareness of falls prevention in those at risk particularly: people with visual impairments, learning disabilities, dementia or long term physical health conditions
   d. Proactive identification and management of those at risk, including those with osteoporosis
   e. Appropriate response and support to those who have fallen
   f. Fragility fracture liaison
   g. Specific consideration/action plans to reduce the risk of falls in high risk environments including residential care, secondary care and specialist mental health units.

3. **Develop an integrated commissioning framework for falls** that is part of an overall frailty pathway.

4. **Ensure any falls pathway is part of an overall frailty pathway** that incorporates identification and assessment of frailty.

5. **Carry out an annual equity audit of all falls services/the falls pathway** to ensure response is accessible where it is most needed.

6. **Develop an integrated health and social care training package** that includes, but is not limited to, falls prevention and is linked to quality assurance processes. This should aim to increase skills and confidence of staff and be available to all staff including domiciliary care staff, care managers and housing support staff.

7. **Increase identification of osteoporosis and Type 2 diabetes** by linking into appropriate prevention programmes.

8. **Develop provision of accredited strength and balance classes** particularly in high risks areas such as extended care home settings or care homes; ensure all provision is provided equitably.

9. **Carry out further analysis to better understand:**
   a. The reasons for variation/increase in emergency admission rates across the county
   b. Differing rates of osteoporosis prevalence
   c. Reasons for variation in lengths of hospital stays of people who have fallen
   d. Place of fall and any underlying condition or diagnosis (e.g. Parkinson’s, dementia, learning disability) of those who have fallen.

10. **Explore opportunities to increase the lifeline service** and other appropriate alternative technologies.

11. **Provide a county wide home hazard assessment** and improvement programme; ensure local approaches to improve poor or inappropriate housing address falls prevention.

12. **Review the physical activity pathway** to ensure all stages of falls response are incorporated and that there is a single joined up approach to accessing physical activity opportunities.
Executive summary

Key Findings

Ageing well and healthy ageing

Falling should not be seen as an inevitable part of ageing. Any approach to reducing falls should be asset based, building on the knowledge and resources already in place including those of the individual person and their family. Provision of information and advice on healthy ageing or ageing well should be an integral part of any falls pathway, in particular the provision of physical activity opportunities.

Who is at risk of falling?

Currently nearly 47,000 older people (65+) are at risk of having a fall each year in Northamptonshire of which 10% (4,700) will result in a serious injury and 5% (2,300) in a fracture. By 2022 this is projected to rise to 51,500 at risk of falling, 5,150 suffering a serious injury and 2,600 experiencing a fracture.

There are an estimated 133,906 people aged 65 and over living in Northamptonshire (17.9% of the population), 16,106 (2.2%) of whom are over the age of 85 years.

Those at higher risk of falling and injury include:

- Older women
- Those with a history of falls or fear of falls, with a balance or gait issue or with muscle weakness
- Those with specific conditions such as Parkinson’s
- People with learning disabilities of any age
- Those with poor bone health or osteoporosis
- Those with Type 2 diabetes
- Those living in poor housing: cluttered, lack of handrails, uneven flooring or rugs
- Those with visual impairment, impaired cognition or nutritional deficiency/low BMI
- Those who use glucocorticoids or who are on multiple medications.

Methods to proactively identify those at risk include:

- Asking all older people in contact with services about their history of falls or fear of falls
- Identifying people with osteoporosis or low bone health
- Assessing falls risk (history of falls, fear of falling, balance/gait) in those with recognised high risk conditions: Parkinson’s, epilepsy, learning disability
- Raising awareness amongst primary and secondary care services of those who are at more risk.

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1 Learning Disabilities, are defined as a significantly reduced ability to understand new or complex information, to learn new skills, and a reduced ability to cope independently, which started before adulthood, with a lasting effect on development (Valuing People White Paper 2001).
The link with frailty

Falls are one of the syndromes of frailty. The response to falls and the development of any falls pathway needs to be considered as part of any frailty pathway or system approach to frailty.

Hospital conveyance and admissions

In 2018/19, EMAS took an average of 229 patients per month to hospital as a result of a fall and treated, but did not convey, an additional 98 patients per month following a fall.

16% of EMAS conveyances were from care homes; care homes averaged 57 falls related calls to EMAS per month and 37 conveyances.

Around 153 calls per month came to the lifeline service with 26 per month subsequently conveyed to hospital.

In 2017/18, for every 100,000 of the county’s population, 2,569 people 65+ were admitted to hospital as an emergency as a result of a fall. This is significantly higher than national average and has been for a number of years.

Northampton, Wellingborough, Kettering and Corby all have higher rates of emergency admissions than their statistical neighbours and the national average, while South and East Northamptonshire have similar rates of admissions.

The rate of falls in Northamptonshire has been significantly higher than the national average for a number of years and currently the county has the highest rate of emergency admissions than all of its statistical neighbours. The increasing rate of hospital admission is a worsening trend, and not explained solely by the increasing proportion of people aged 65+ living in Northamptonshire (2.1% increase in population and a 6% increase in emergency admissions as a result of a fall). More locally, Northampton, Wellingborough, Kettering and Corby all have higher rates of emergency admissions than their statistical neighbours and the national average, while South and East Northamptonshire have similar rates of admissions. These differences are not necessarily linked to differing age profiles. Corby and Kettering have relatively low proportions of over 65 year olds (15% and 14% respectively) but a significantly higher emergency admission rate for falls whereas East Northamptonshire and South Northamptonshire both have a relatively higher proportion of over 65 year olds but lower emergency admissions from falls.

Causes of increasing admissions and variation is not clear. Contributory factors could be the changing of national and local guidelines or the de-commissioning of a local falls ambulance service in 2014/15. Further analysis is required to understand better these increased admissions and district/borough variations in admissions.

There is some correlation between numbers of care home beds for people over 65 and rates of emergency admissions, with a higher number of beds in an area associated with a higher rate of admissions in the local population.
Reasons for admissions

The main reason for people being admitted to hospital following a fall is that of head injury. In 2014 updated national guidelines required all those with a head injury and on anti-coagulant therapy to have a CT scan, thus needing admission.

The second highest reason for admission is that of hip and thigh injury. Rates of hip fracture are significantly higher in Northamptonshire than the national average and are a key indicator of poor bone health or osteoporosis. Early identification and treatment of osteoporosis can have a significant impact on the rate of fragility fractures (those occurring following a fall from standing height or less). Prevalence of osteoporosis (as recorded in Primary Care) varies across the county indicating variation in identifying those with the condition.

Costs of falls and length of stay

In 2018/19 the total acute cost of hospital admissions relating to falls was £9,811,128, slightly down from 2017/18 when it was £9,811,128.

Costs of falls related emergency admissions are likely to be connected to longer length of stays but further analysis is required to identify whether there is an opportunity for improvement. For example, length of stay may be necessarily related to complexity of falls rather than any delayed discharge.

In 2018/19 falls admissions cost NGH £4,790,627, a 5.1% decrease from the previous year.

In 2018/19 falls admissions cost KGH £4,483,680, a 6.3% increase on the previous year.

The average length of hospital stay for an admission due to a fall in 2018/19 was 11.48 days, down from 12.99 days in 2017/18.

Opportunities

RightCare information suggests there is a ‘significant opportunity to benefit’ in falls spending equating to £3,557,000 if the county was similar in performance to its best performing comparator CCGs.

There is a lack of system wide investment in falls prevention that aligns with best practice (as set out by RightCare and PHE) to match the scale of needs identified and in comparison with neighbouring areas and CIPFA comparators.
Falls pathway: National evidence and best practice

RightCare, based on the PHE Falls Consensus, recommend a systematic health and social care approach to falls incorporating an end to end falls pathway, which incorporates:

1. Clinical system leadership with a named lead for falls.
2. Prevention:
   - Guidance and support on healthy ageing including physical activity
   - Ensure local approaches to improve poor/inappropriate housing addresses falls issues.
3. Proactive identification of those at risk:
   - Including by all those who come into contact with an older people
   - Those with or at risk of osteoporosis or fracture:
     - All women over 65
     - All men over 70
     - Younger people with risk factors
   - Those with specific conditions, balance or gait issues
   - Those with learning disability
   - Those with a history of falls or a fear of falling.
4. An appropriate response to those who have fallen:
   - Fracture liaison service for those with fragility fracture with follow up at 4 and 12 months
   - Assessment of bone health of all over 50 year olds with a fragility fracture
   - Multifactorial assessment/intervention (for higher risk) that includes:
     - Home hazard assessment and improvement programme
     - Cognition/vision checks
     - Medication review with modification/withdrawal as appropriate
     - Assessment of balance and gait.
   - Bone strengthening agents for those with fragility fracture or osteoporosis
   - Evidence based strength and balance classes (low to moderate risk)
   - Multi-disciplinary assessment for those who have had an injurious fall.
5. Incorporation of the falls pathway into the local frailty pathway that considers falls as a syndrome of frailty.

Targeted case finding should be carried out by all who come into contact with an older person, with the ‘Safe and Well’ home visits which are provided by the Fire and Rescue Service being recognised as evidence based interventions.

Current services and gaps in provision

Commissioning arrangements

The majority of falls services in Northamptonshire are commissioned and funded by Public Health Northamptonshire and include strength and balance classes, the Supporting Independence Programme and the Falls Prevention Service; in addition the Fire and Rescue service carry out Safe and Well checks which include home hazard assessment and advice on falls prevention. At the time of writing there is no fragility fracture liaison service and no identified clinical lead for falls within the county.

Evidence from surrounding health and care systems show that falls services are usually commissioned and funded by respective Clinical Commissioning Groups. Where public health does contribute to the falls pathway, this tends to be around provision of community based strength and balance classes as an integral part of the overall falls pathway.
Care homes and care home staff

All care homes should have guidelines and toolkits/care plan templates for residents who fall and for their nutrition/bladder health. Locally, it is not clear how well these care plans are referenced, with anecdotal evidence suggesting that, at least in the case of falls, many care homes do not feel able to support their residents themselves.

RightCare highlight the need for high risk environments such as care homes or extended care home settings to be a particular focus for any falls interventions and responses. Evidence from current falls services report that there are many calls from care homes who are not confident in dealing with a faller despite available guidelines and care plans in place.

Training for care home staff is provided as part of the current falls prevention service, with separate training available from the CCG. Online training materials are available hosted by the University of Northampton and are currently being updated. Integrating all training into a single package may help to make best use of available resources and provide a more consistent message/training approach.

PHE recommends that strength and balance classes are provided in settings where those particularly vulnerable to falling reside including extended care settings, and it is recommended that this is developed as a priority.

Rapid Response

Those areas that have a rapid response service base them around therapists, using either Occupational Therapists or Physiotherapists alongside paramedics or ambulance technicians; the rapid response is not seen as a front line clinical service. Most report a relatively low number of patients seen per day and all report degrees of success in reducing the number of emergency hospital admissions.

Evidence from EMAS data highlights a large number of people seen as a result of a fall and a large number of calls from care homes. An evaluation of a previous falls response ambulance service highlights the reduction of patients taken to hospital via EMAS in the year before and after the rapid response service started. Although data is not clear on how many of those conveyed were then either not admitted or discharged within 48 hours, it would seem that there is a cohort of patients who would benefit from a more home based response to ambulance call out.

At the time of writing, the Northamptonshire health and social care system have worked together to commission a rapid response service to reduce the number of people taken to hospital as a result of a minor fall by increasing the proportion of older people who are appropriately supported to stay at home in the immediate aftermath of a fall. An evaluation framework is currently being developed.

Areas of improvement

- There is a lack of robust data about current service activity related to falls. More information would enable a better understanding of gaps in provision and equity of access.
- Further analysis is required to determine if there is a systematic approach to targeted case finding for falls risk, frailty and osteoporosis, and whether appropriate follow-up referrals are being undertaken. This is not reflected in the information obtained to date.
- Currently there are 30 accredited strength and balance sessions taking place weekly across the county. These sessions are systematically organised based on risk identification and referral. Funding is limited to training instructors and setting up sessions. There is no NHS funded preventative ‘treatment’ in place in relation to accredited strength and balance class provision. Any strength and balance classes need to be located equitably across the county and it is recommended that availability is increased, that provision is centred on best practice of at least 24 weeks, and that opportunities to make it more sustainable for both instructors and participants are explored. Further details and analysis is required to fully understand the impact of these sessions.
The recently re-procured falls service is aligned to the Supporting Independence Programme. The service is multi-disciplinary and provides specialist assessment and treatment, as well as staff training. Further data from the service would enable more understanding of its impact.

Preliminary analysis shows parts of Corby with a high number of emergency admissions but a lack of corresponding falls prevention services. Further analysis is required to fully understand this but use of health equity audits as a routine part of service improvement is likely to support more equitable service provision.

There is no systematic approach currently in place to deliver home hazard assessments other than the Fire and Rescue Service’s ‘Safe & Well’ checks. Opportunities exist to integrate this assessment via the operational delivery of NASS / Olympus Care services and through the voluntary sector service provision.

Elements of provision to support healthy ageing are undertaken through Northamptonshire Sport’s ‘Community Programme’, the Supporting Independence Programme, Age UK, SERVE, and other voluntary sector providers. However, there is no co-ordinated county wide programme currently in place.
1  What is health need?

Health need is multifaceted and often defined as including:

- Perceptions and expectations of the profiled population (felt and expressed needs)
- Perceptions of professionals providing the services
- Perceptions of managers of commissioner/provider organisations, based on available data about the size and severity of health issues for a population, and inequalities compared with other populations (normative needs)
- Priorities of the organisations commissioning and managing services for the profiled population, linked to national, regional or local priorities (corporate needs).

Unmet need can therefore be identified where evidence of the following is found:

- Non-recipients of beneficial healthcare interventions
- Recipients of ineffective health care
- Recipients of inefficient health care
- Recipients of inappropriate health care (for whom health outcomes could be improved).

Health Needs Assessment (HNA) is a systematic method of reviewing the health issues faced by a population, leading to agreed priorities and resource allocation that will improve health and reduce inequalities. A rapid health needs assessment concentrates on collating information that already exists and applying intelligence via a gap analysis. An effective rapid assessment provides sufficient information and intelligence for decision makers to improve existing services to better meet local need.

2  Purpose of this Falls Health Needs Assessment

This HNA intends to provide a clear understanding of current and future falls needs, key risk and protective factors and health inequalities. It will be used to support the development of an integrated falls pathway from healthy ageing to reactive intervention and proactive management and to inform the development of a Northamptonshire Falls Strategy that is part of the NHCP Frailty Strategy.

The HNA aims to:

- Provide an overview of who is falling and the extent of their injuries
- Identify best practice and evidence based interventions for falls prevention and falls response
- Identify gaps in current provision and make recommendations for future services.

3  Scope

While anyone can fall, the impact for those falling over the age of 65 are likely to be more severe and have greater adverse long term effects. The focus of this HNA is therefore on the Northamptonshire population who are aged 65 years and older.

The HNA covers both injurious and non-injurious falls. Data on non-injurious falls is less available and so based on national prevalence estimates including those of ‘fear of falling’. Factors contributing to falls are considered including factors that are likely to cause a more serious consequence such as osteoporosis.

4  Data sources

Data for this HNA has been identified from a number of sources:

- Public Health Outcomes Framework (PHOF) data based on nationally available data though often with a time lag. PHOF data can be compared to both national and statistical neighbour data
- The Northamptonshire Falls Dashboard is the result of collaborative work between North East London Commissioning Support Unit (NEL CSU) and Northamptonshire County Council (NCC) Public Health Analysts. Based on NHS ‘Secondary Uses Service’ (SUS) and East Midlands Ambulance Service
(EMAS) data it collates data on a monthly basis including average length of stay, diagnosis, area from where an individual was admitted, the number of people admitted from a care home, provider cost data and number of referrals from the Crisis Response Team. Although this does not provide all data on falls in Northamptonshire, it does provide some overview of current need.

- Service activity data is collated directly from those services concerned.

5 Introduction

Falls and fall-related injuries 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 (NICE, 2013).

While not all falls cause injury, the consequences of those that do can be serious and wide ranging, and include distress, pain, injury, impaired function, and mortality (PHE, 2018). Even the less serious can have major impact including pain, reduced function and substantial healthcare costs (Burns, 2016), adverse impact on mental wellbeing (Parry et al, 2016) and reduced quality of life (Stenhagen, 2014). A fall is one of the syndromes of frailty and a key contributor to increased levels of frailty (PHE, 2017).

Impact is not restricted to the immediate period following a fall. Those who have fallen often experience a decrease in confidence, independence and activity levels which may then increase the risk of further falls by contributing to deterioration in physical abilities (Yardley, 2002). Similar restrictions are found in those who fear falling, including those who may not have experienced an actual fall.

Falls should not be considered an inevitable part of ageing. Evidence and guidelines provide a range of interventions that can help to prevent falls and fractures resulting in improved quality of life, health outcomes and independence for the older person, contributing to savings in both health and social care services (NICE, 2019). Furthermore, effective and integrated commissioning of services can reduce demand by shifting the focus towards prevention reducing variation in the quality, safety and outcomes of care (PHE, 2017).

6 Policy context and guidance overview

6.1 Global context

Two key international policies consider falls as part of their approach to healthy ageing:


- **WHO Global Report on Falls Prevention in Older Age, WHO, (2007):** proposes a model to facilitate the development of policies, practices and procedures to promote active ageing and aiming to:
  - Build awareness of the importance of falls prevention and treatment among older persons
  - Improve the assessment of individual, environmental, and societal factors that increase the likelihood of falls
  - Facilitate the design and implementation of culturally-appropriate evidence based interventions that will significantly reduce the number of falls among older persons.
6.2 National context

Relevant national policies include:

a. **NHS Long Term Plan (2019)** references falls prevention in relation to supporting people to age well.

b. **PHE Consensus Statement on Falls and Fractures (2017):** recommends a collaborative and whole system approach to prevention, response and treatment, which should:
   - Promote healthy ageing across the different stages of the life course
   - Optimise the reach of evidence-based case finding and risk assessment
   - Be able to demonstrate the commissioning of services that provide:
     - An appropriate response attending people who have fallen
     - Multifactorial risk assessment and timely and evidence-based tailored interventions for those at high risk of falls
     - Evidence-based strength and balance programmes and opportunities for those at low to moderate risk of falls
     - Home hazard assessment and improvement programmes
   - Ensure that local approaches to improve poor or inappropriate housing address falls prevention and promote healthy ageing
   - Be able to demonstrate actions to reduce risk in high-risk health and residential care environments
   - Provide fracture liaison services in line with clinical standards including access to effective falls interventions when necessary
   - Provide evidence-based collaborative, interdisciplinary care for falls-related serious injuries supported by clinical audit programmes
   - Have a strategic lead and governance body with oversight and assurance of falls, bone health and related areas including frailty and multi-morbidity.

c. **NICE Falls in older people: assessing risk and prevention, Clinical guideline [CG161], (2013)** recommends:
   - Case/risk identification: Health care professionals should routinely ask older people if they have fallen in the last year. Those who have, or who are considered at risk of falling should be assessed for balance and gait deficits and referred to strength and balance classes as appropriate
   - Multifactorial falls risk assessment: For those older people who have fallen or who demonstrate abnormalities of gait and/or balance
   - Multifactorial interventions: For older people with recurrent falls or assessed as being at increased risk of falling to include:
     - strength and balance training
     - home hazard assessment and intervention
     - vision assessment and referral
     - medication review with modification/withdrawal
   - Multidisciplinary assessment for those who have had an injurious falls aimed at identifying/addressing future risk and increasing physical/psychological function and independence
   - Strength and balance training
   - Exercise in extended care settings
   - Home hazard and safety intervention following treatment in hospital following a fall and usually as part of discharge planning.
NICE is currently undergoing a review of all evidence and its clinical guideline is likely to be updated accordingly. Areas for update include:

- The use of falls risk assessment tools and the need to consider frailty in any assessments
- Whether multifactorial interventions are effective in their current format
- An increase in the range of exercise interventions that may be effective
- The role of Vitamin D in the prevention of falls.

d. RightCare Analysis and Guidance (Fig 1) working with local health and care systems to provide an analysis of local data to identify potential improvements in patient outcomes and public expenditure. They recommend a systematic approach to reducing falls and fragility fractures with a focus on:

- Targeted case-finding for osteoporosis, frailty and falls risk
- Strength and balance training for those at low to moderate risk of falls
- Multi-factorial intervention for those at higher risk of falls
- Fracture liaison service for those who have had a fragility fracture.

![RightCare Pathway: Falls and Fragility Fractures](source)
The over 65 year old population of Northamptonshire

Based on the most recent data from 2018 (ONS mid-year estimates) there are an estimated 133,906 people aged 65 and over living in Northamptonshire (17.9% of the total population), 16,106 (2.2%) of whom are over the age of 85 years. Both proportions are lower than the national average of 18.2% over 65s and 2.4% over 85 year olds respectively. The local proportion of over 85 year olds has grown by 4.7% compared to the national average of 6%, but the local proportion of over 65 year olds has seen a greater increase to that of England, seeing a 10.1% increase between 2014 and 2017 compared to the national average increase of 6.7% (Table 1).

<table>
<thead>
<tr>
<th>Area</th>
<th>65 + population</th>
<th>% of total population</th>
<th>% change since 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northamptonshire</td>
<td>133,906</td>
<td>17.9%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Corby</td>
<td>10,020</td>
<td>14.1%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Daventry</td>
<td>17,270</td>
<td>20.4%</td>
<td>13.1%</td>
</tr>
<tr>
<td>East Northamptonshire</td>
<td>19,554</td>
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<td>Kettering</td>
<td>18,643</td>
<td>18.4%</td>
<td>8.8%</td>
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<tr>
<td>Northampton</td>
<td>34,227</td>
<td>15.2%</td>
<td>8.6%</td>
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<tr>
<td>South Northamptonshire</td>
<td>18,946</td>
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<td>Wellingborough</td>
<td>15,246</td>
<td>19.2%</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

Table 1 People aged 65 and over, Northamptonshire (2018)

Source: Office for National Statistics mid-2018 population estimates

The highest proportion of older people in the population are found in the more rural areas of Northamptonshire - Daventry, East Northamptonshire and South Northamptonshire. These areas have older populations of more than 20%, contrasting with the more urban areas of Corby and Northampton where the proportion is 14% and 15% respectively.

By 2022 it is estimated there will be 147,100 and by 2027 166,400 older people in the county. Based on the proposed administrative boundary changes, the new North Northamptonshire unitary authority will have 63,500 residents aged over 65, and the West Northamptonshire unitary authority will have 70,400 residents over 65 (Office for National Statistics, 2018).

In 2016 the gender split was around 46/54 male to female, this is forecast to be closer to balance over the next 25 years.

Average life expectancy for a male is 79.4 years and 83 years for female. Average healthy life expectancy (the age to which a person lives in good health) is 64.8 years in men and 64.4 years for female meaning that around 15 years (men) and 19 years (women) are spent living in poor health.

The Index of Multiple Deprivation (Department for Communities and Local Government, 2019) uses multiple indicators including income, employment, health, disability and education to identify those areas that are more generally deprived. People living in more deprived areas are more likely to experience poor health, disability and a shorter life and healthy life expectancy. The more deprived areas of Northamptonshire are generally found in urban areas particularly parts of Northampton, Corby, Wellingborough and Kettering (Fig 2).
Deprivation for older people is higher in similar parts of the County to that of the whole population, although there are fewer areas of Corby in the most deprived quintile (data not shown).
8 Why people fall and who is at risk

8.1 Risk Factors

Falls should not be considered a normal or inevitable part of ageing. Nevertheless there are risk factors to older people falling including those that are particular to the individual concerned:

- Gender: an increased risk in females
- Sedentary behaviour, muscle weakness or low mobility
- Nutritional deficiency
- Impaired cognition
- Previous history of falling
- Use of prescribed or multiple medication (particularly psychotropic and benzodiazepines)
- Visual impairment
- Specific conditions such as Parkinson’s or arthritis
- People with learning disabilities have a similar risk of falls throughout their lives as older people in the general population; around one third of falls in people with learning disabilities result in injury (PHE 2019, Emerson et al 2012, Finlayson et al 2018).

And those that are more related to the external environment:

- Poor lighting
- Hazards in the home: wet or polished floors, rugs or worn carpets, uneven surfaces
- Inappropriate footwear or walking aids
- Absence of handrails.

WHO categorised falls risk factors into four areas (WHO, 2007):

- **Behavioural**: Multiple medication use, excess alcohol intake, lack of exercise, inappropriate footwear
- **Biological**: Age, gender, race, chronic illnesses (e.g. Parkinson, arthritis, osteoporosis)
- **Environmental**: Poor building design, slippery floors and stairs, loose rugs, insufficient lighting, cracked or uneven sidewalks
- **Socioeconomic**: Low income and education levels; inadequate housing; lack of social interaction, limited access to health and social services, lack of community resources.

Rubenstein (2002) analysed individual risk factors for level of risk (Table 2) with a number of factors increasing the likelihood of falling. People with muscle weakness are over four times more likely to fall than individuals with no muscle weakness; those who have a history of falls three times more likely to fall; and those with depression more than twice as likely to fall. The analysis provides a useful reminder that falls are not just age related with those over 80 years of age at ‘just’ an 70% increased risk of falling, far lower than many other non-age related risk factors.
Table 2: Risk factors of falling

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Mean Risks/Odds Ratio (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle weakness</td>
<td>4.4 (1.5-10.3)</td>
</tr>
<tr>
<td>History of falls</td>
<td>3.0 (1.7 – 7.0)</td>
</tr>
<tr>
<td>Gait deficit</td>
<td>2.9 (1.3 – 5.6)</td>
</tr>
<tr>
<td>Balance deficit</td>
<td>2.9 (1.6 – 5.4)</td>
</tr>
<tr>
<td>Use of assist devices</td>
<td>2.6 (1.2 – 4.6)</td>
</tr>
<tr>
<td>Visual deficit</td>
<td>2.5 (1.6 – 3.5)</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2.4 (1.9 – 2.9)</td>
</tr>
<tr>
<td>Impaired activities of daily living</td>
<td>2.3 (1.5 – 3.1)</td>
</tr>
<tr>
<td>Depression</td>
<td>2.2 (1.7 – 2.5)</td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>1.8 (1.0 – 2.3)</td>
</tr>
<tr>
<td>Age &gt;80 years</td>
<td>1.7 (1.1 – 2.5)</td>
</tr>
</tbody>
</table>

Source: Rubenstein, 2002

8.2 Fragility fracture risk

Major risk factors for fragility fractures include:

- Low bone mineral density or osteoporosis: prevalence of osteoporosis increases with age from 2% at age 50 to 25% at age 80 years in women (NICE, 2012)
- Previous fracture or history of falls
- Age and gender (female)
- Smoking or high alcohol consumption
- Low BMI
- Visual impairment
- Use of glucocorticoids (PHE, 2017)
- People with type 2 diabetes and those with epilepsy (NICE, 2013): In Northamptonshire, there are approximately 8,000 people with undiagnosed Type 2 diabetes with the proportion of those diagnosed with good blood glucose control significantly below the national average.
9 Falls in Northamptonshire

Available data shows the number of older people who have attended A&E or been admitted to hospital following a fall in Northamptonshire, however as not everyone seeks medical attention following a fall estimates are based on national prevalence data. This suggests that around 30% of people over 65 and 50% of people over 80 have at least one fall each year.

Based on these estimates each year just over 30,300 people aged 65 to 79 years and 16,400 over 80 year olds will fall in Northamptonshire (Fig 3), a total of nearly 47,000. Of those who fall, 5% will experience a fracture as a result and 10% a serious injury (WHO 2004) equating to 4,674 older people with a serious injury and 2,337 with a fracture in Northamptonshire each year. Consequences of both can have serious and long term effects on an individual’s health and wellbeing.

![Figure 3: Population likely to experience a fall in any one year](source: ONS Population estimates and national prevalence figures)

9.1 Community based falls: East Midlands Ambulance Service (EMAS)

EMAS have clear guidelines on who should and shouldn’t be taken to hospital and only those assessed as minimal risk will be seen and treated at home. Between April 2018 and June 2019 an average of 229 patients per month were seen by EMAS after a fall and taken to hospital as a result of their injury and an average of 98 patients per month were seen and treated at home (Fig 4).

![Figure 4: EMAS Activity for falls patients aged 65 and Over, April 2018-June 2019](source: Northants Falls Dashboard 2019-20)

It is not clear how many of those taken to hospital were admitted or required further treatment.

A rapid response service was commenced in November 2019 to provide a more community focussed support for those who would benefit (see Section 10.7).
9.2 Community based falls: Lifeline

Northamptonshire Adult Social Services operate a ‘Lifeline’ personal alarm service, which can be linked to various pieces of equipment such as pendants, fall sensors or smoke detectors. When the equipment is activated, the lifeline unit sends an alert to the monitoring call centre which will alert the emergency services or an emergency contact.

From December 2018 to April 2019, an average of 549 alarm triggers were made to the Lifeline service per month, with an average of 55 per month requesting assistance following a fall (Table 3).

<table>
<thead>
<tr>
<th>Reason for call</th>
<th>Number</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triggered by passive falls devices such as falls detectors or bed sensors</td>
<td>3,293</td>
<td>549</td>
</tr>
<tr>
<td>A number of these could be false calls / alerts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requesting assistance following a fall</td>
<td>327</td>
<td>55</td>
</tr>
<tr>
<td>Requesting an ambulance</td>
<td>153</td>
<td>26</td>
</tr>
<tr>
<td>Total calls received</td>
<td>9,735</td>
<td>1,623</td>
</tr>
</tbody>
</table>

Table 3: Olympus Care lifeline call outs December 2018-April 2019
Source: Olympus Care, 2019

9.3 Falls in care homes

Between April 2018 and March 2019, EMAS conveyed a total of 2,747 people to hospital as a result of a fall, or around 229 people per month. Of these 442 per year or 16% were residents of local care homes (Table 4).

<table>
<thead>
<tr>
<th></th>
<th>All conveyances</th>
<th>From care homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total annual</td>
<td>2,747</td>
<td>442</td>
</tr>
<tr>
<td>Monthly average</td>
<td>229</td>
<td>37</td>
</tr>
<tr>
<td>Weekly average</td>
<td>53</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 4: Falls related EMAS conveyances April 2018-March 2019
Source: Northants Falls Dashboard 2019

The last year has seen an increasing number of falls related calls each month from care homes (Fig 5). In April to June 2018 there were 133 calls and 95 conveyances compared to 210 calls and 160 conveyances in the same time period in 2019. This represents a significant increase for both (z=4.6, p<0.001) however, there is no significant difference between the numbers of conveyances as a proportion of calls, therefore the data is showing conveyances are increasing in line with calls. Nevertheless the last few months are showing an increase for conveyances at a faster rate which will need further monitoring to see whether this is sustained over a longer time period.
There is no information regarding how many of these people were either admitted to hospital or discharged following immediate treatment.

### 9.4 Hospital emergency admissions: Northamptonshire

Reasons for admission following a fall are not always straightforward or due to an obvious injury.

The updating of NICE guidelines (CG176) in 2014/15 required all those presenting to hospital with a head injury and who were on anticoagulant therapy to have a CT scan, this frequently result in the individual being admitted in order for this to happen. During 2014 Northampton General Hospital introduced a more comprehensive and structured assessment of older adults attending A&E following a call - the ‘Falls Treatment Bundle’ which requires a list of further investigations to identify contributing factors. Such investigations can identify previously unknown conditions which in turn require further investigation and thus admission.

In 2017/18 for every 100,000 of the population, just over 2,500 people aged 65 and over were admitted to hospital as an emergency as a result of a fall (Table 5). This is significantly higher than the England average of 2,170 and is the highest rate amongst all Northamptonshire’s statistical neighbours².

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² Those local authority areas that are most similar to Northamptonshire in a range of nationally calculated parameters
Analysis of the trend data shows that the number of emergency hospital admissions in people aged 65 and over have increased since 2014/15 from 2,474 falls per 100,000 of the population to 2,513 in 2016/17 and the current rate of 2,569 in 2017/18 (Fig 6). There may be a number of reasons for this but of note is the introduction of the ‘Falls Bundle’ pathway in NGH during 2014, the introduction of national CT scanning guidelines for head injury and the disbanding of the ‘Falls Ambulance’ in 2014/15; refer to section 12.7 of this document for further details about this service.

Further analysis by type of injury from 2010/11 to 2017/18 shows a slight increase in hip injury admissions but a significant rise in admission rates for people having a fall and sustaining any form of head injury. Over this period the head injury group increased from 23% to 33% of all falls admissions, and hip injury decreased from 37% to 27% of all falls related admissions. This may be linked to the introduction of the new NICE guidelines though it is not clear whether this is associated with an overall increase in the number of falls or solely an increase in falls classified as head injury.
9.5 Hospital admissions: unitary, district and borough

Analysis shows that the proposed unitary authority of West Northamptonshire has a significantly higher rate of emergency admissions due to falls in over 65 year old females compared to the England average (no data shown).

In four of the seven district and boroughs of Northamptonshire, emergency admissions due to falls in the over 65 year old population are significantly higher than the England average (Table 6). This is the same for over 80 year old fallers with Corby being higher than all its statistical neighbours. However, both Corby and Kettering have a similar rate of emergency admissions for fallers aged between 65 and 79 years as the England average, whilst Northampton and Wellingborough remain significantly higher (data not shown).

![Graph of hospital admissions by district/borough](image)

Table 6: Falls emergency admissions by district/borough (per 100,000 population 65+)

<table>
<thead>
<tr>
<th>Area</th>
<th>Count</th>
<th>Value</th>
<th>95% Lower CI</th>
<th>95% Upper CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>220,160</td>
<td>2,170</td>
<td>2,161</td>
<td>2,180</td>
</tr>
<tr>
<td>Northamptonshire</td>
<td>3,224</td>
<td>2,568</td>
<td>2,481</td>
<td>2,660</td>
</tr>
<tr>
<td>Corby</td>
<td>2,077</td>
<td>3,077</td>
<td>2,713</td>
<td>3,475</td>
</tr>
<tr>
<td>Northampton</td>
<td>987</td>
<td>2,712</td>
<td>2,787</td>
<td>3,152</td>
</tr>
<tr>
<td>Kettering</td>
<td>687</td>
<td>2,712</td>
<td>2,475</td>
<td>2,964</td>
</tr>
<tr>
<td>Wellingborough</td>
<td>373</td>
<td>2,627</td>
<td>2,367</td>
<td>2,909</td>
</tr>
<tr>
<td>Daventry</td>
<td>353</td>
<td>2,323</td>
<td>2,069</td>
<td>2,576</td>
</tr>
<tr>
<td>South Northamptonshire</td>
<td>372</td>
<td>2,131</td>
<td>1,919</td>
<td>2,359</td>
</tr>
<tr>
<td>East Northamptonshire</td>
<td>375</td>
<td>2,068</td>
<td>1,863</td>
<td>2,289</td>
</tr>
</tbody>
</table>


Trend data is varied with a large increase seen in Corby and Kettering from 2016/17 and a large sustained increase in Northampton from 2014/15 (Fig 7). The population of Northampton is more than one fifth of the total county population and therefore any changes in trends overall will have a larger impact in Northampton if the rate of increase continues at the same pace.
Latest local figures shows that the rate of falls in the over 65 year old age group is highest in Northampton at 27 falls per 1,000 of the population and lowest in South Northamptonshire at 16 falls per 1,000 of the population (Fig 8). (Note that national published data is based on a rate of 100,000 population).

Figure 7: Emergency admissions by district/borough
9.6 Hip Fractures

Hip fractures occur mainly as a result of a fragility fracture: a fracture sustained as a result of a force that would not ordinarily result in a fracture, such as a fall from standing height or less (NICE, 2018).

PHOF data for 2017/18 shows that Northamptonshire is similar to the national average for hip fractures in the over 65 year old population with a rate of 605 hip fractures per 100,000 of the population. However the county is significantly worse than the national average for people aged between 65 and 79 years with a rate of 282 hip fractures per 100,000 of the population compared to a national average of 246. Hip fractures in those over 80 are similar to the national average.

RightCare highlights the need good identification of osteoporosis or poor bone health as an important factor in addressing fragility fractures (NHS, 2017).

9.7 Understanding contributing factors to falls admissions

The highest rate of emergency admissions due to falls is not necessarily associated with those populations where the highest number of older residents live. For example the over 65 year old population of both Corby and Northampton equate to around 15% of the total population yet they both have a significantly higher rate of admissions due to falls than South and East Northamptonshire where the population is around 20%.

Mapping and analysis of those areas with the highest rates of falls and location of care homes shows a visual correlation; it appears that the highest proportions of admissions are centred around areas with multiple care homes (Fig 9).
Further analysis shows a significant relationship between the number of over 65 year old beds in care homes and falls admission rate, with care home beds accounting for just over 40% of the variation in admissions (Fig 10). However this does not take into account factors such as deprivation and does not imply causation (that one causes the other). It does highlight an association and suggests further analysis is recommended to understand this in more depth, with an initial focus on the two highest outliers which appear towards the top right of Figure 10.
9.8 Osteoporosis

In the UK over 3 million people are estimated to have osteoporosis (RightCare and Royal Osteoporosis Society, 2017). Reduced bone density is a major risk factor for fragility fracture. Due to an increased bone loss following the menopause the prevalence of osteoporosis increases markedly with age in women, increasing from 2% at 50 years to more than 25% at 80 years (NHS, 2017).

People with osteoporosis are more likely to experience a bone fracture as a result of a fall than the general population, with an estimate of over 500,000 fragility fractures occurring in the UK each year. Many of those fractures could be prevented with earlier identification and intervention.

GP practices are required to maintain a register of their patients identified with osteoporosis providing some understanding of the level of osteoporosis experienced within the community. However, prevalence is dependent on accurate identification and so available figures are unlikely to reflect actual prevalence of the condition. Northamptonshire has a higher prevalence in the over 50 year old population than the national average, with 0.7% compared to the national average of 0.6%. Corby (0.4%) and Daventry (0.5%) both have a statistically significantly lower recorded prevalence than the national average whilst Wellingborough, Kettering, Northampton and East and South Northamptonshire are similar to the national average. A lower prevalence rate may indicate lower prevalence of osteoporosis in Corby and Daventry or a lower rate of identifying people living with osteoporosis.

9.9 Hospital admissions by site

The Falls Dashboard provides more detailed information on those who have been admitted to hospital as a result of a fall. Detailed data is only available from 2017 and so it is not possible to analyse trend information, but the data does provide a good overview of local activity. Total patients are all those registered with a Northants GP practice regardless of where they are treated.

Overall there was a 5.9% increase in emergency admissions due to falls between 2017/18 and 2018/19 (Table 7). A total of 1,644 people were admitted to Northampton General Hospital (NGH) during 2018/19, an average of 137 per month; this is an increase of 6.5% from 2017/18. Admissions show a general rise throughout the year with a peak around December/January (data not shown). Data for 2019/20 show similar monthly averages to date with a peak of 159 admissions in July 2019.

Kettering General Hospital saw a total of 1,269 emergency admissions due to falls in 2018/19, an average of 106 per month and a 6.9% increase from 2017/18. Admissions were generally similar throughout the year with data to date for 2019/20 having a slightly lower monthly average (105) and a peak in May 2019 of 137 emergency admissions.

Gender split across all over 65 year old emergency admissions for falls is, on average, 66% female and 34% male.

<table>
<thead>
<tr>
<th>Acute Hospital</th>
<th>2017/18</th>
<th>2018/19</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Av/month</td>
<td>Total</td>
</tr>
<tr>
<td>Northampton General</td>
<td>1,544</td>
<td>129</td>
<td>1,645</td>
</tr>
<tr>
<td>Kettering General</td>
<td>1,188</td>
<td>99</td>
<td>1,270</td>
</tr>
<tr>
<td>Other</td>
<td>125</td>
<td>10</td>
<td>113</td>
</tr>
<tr>
<td>Total Northants</td>
<td>2,857</td>
<td>238</td>
<td>3,028</td>
</tr>
</tbody>
</table>

Table 7: Emergency admissions for falls: Dashboard data

Source: Northants Falls Dashboard 2019
9.10 Financial costs of hospital admission

Financial costs are calculated based on the total continuous stay of the patient including all associated procedures calculated as part of a national tariff. Costs for 2017/18 have been adjusted to 2018/19 tariff prices.

Despite an increase in falls related emergency admissions at NGH, the trust saw a 5.1% decrease in associated costs (Table 8). This is not reflected in KGH who saw a 6.7% increase in costs comparable to its 6.9% increase in emergency admissions. Overall costs show a 1.3% decrease between the two years despite a 5.9% increase in admissions. The main contributory factor to this is likely to be length of stay (see Section 9.11).

<table>
<thead>
<tr>
<th>Site</th>
<th>2017/18</th>
<th>2018/19</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGH</td>
<td>£5,235,464</td>
<td>£4,970,627</td>
<td>-5.1%</td>
</tr>
<tr>
<td>KGH</td>
<td>£4,202,065</td>
<td>£4,483,680</td>
<td>6.7%</td>
</tr>
<tr>
<td>Northants STP Total*</td>
<td>£9,942,626</td>
<td>£9,811,128</td>
<td>-1.3%</td>
</tr>
</tbody>
</table>

Table 8: Financial cost of emergency falls admissions

*Total costs include all Northants registered patients treated out of area and who are not included in individual hospital trust costs.

Source: Northants Falls Dashboard 2019

9.11 Length of stay

In 2018/19, the average length of stay (LoS) following an emergency admission for a fall was 11.5 days, a reduction of 1.5 days from 2017/18. Decreases in LoS have been seen in both trusts, however the biggest decrease of 2.3 days was in NGH where the average LoS reduced from 12.4 to 10.1 days. KGH had a higher average LoS of 13.3 days in 2018/19, a reduction from 14 days in 2017/18 (Northamptonshire Falls Dashboard, 2019).

There has been an increased number of patient spells of one day or less duration and a significant reduction in the number of patients spells of more than 50 or 100 days (Table 9).

Clinicians in NGH have indicated that as of July 2019 there were 372 ‘stranded’ (patients who have stayed for 7 days or longer) and ‘super-stranded’ patients (those who have stayed for 21 days or longer). Of these, 44 (11.8%) initially presented with a fall.

There was no stranded patient information available from KGH at the time of this HNA.

<table>
<thead>
<tr>
<th>Length of stay</th>
<th>Number of patients</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/18</td>
<td>2018/19</td>
<td></td>
</tr>
<tr>
<td>0 – 1 days</td>
<td>1,230</td>
<td>1,375</td>
</tr>
<tr>
<td>More than 50 days</td>
<td>183</td>
<td>157</td>
</tr>
<tr>
<td>More than 100 days</td>
<td>38</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 9: Secondary care length of stay

Source: Northants Falls Dashboard 2019

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3 A hospital provider spell is the total continuous stay of a patient using a hospital bed on premises controlled by a health care provider during which medical care is the responsibility of one or more consultants, or the patient is receiving care under one or more nursing episodes in a ward.
9.12 Presenting injury

The most frequent reasons for admission to hospital following a fall in the over 65 year old age group between April 2018 and March 2019 were head injuries, hip and thigh injuries and knee/lower leg injuries. Almost 400 more people were admitted with a primary diagnosis of head injury following a fall compared to the next most common presenting injury of hip and thigh injury (Table 1). As previously mentioned, this may be due to a change in guidelines for reporting and treating head injury.

<table>
<thead>
<tr>
<th>Primary Diagnosis April 2018-March 2019</th>
<th>Total number (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injuries to the head</td>
<td>1,109</td>
</tr>
<tr>
<td>Injuries to the hip and thigh</td>
<td>703</td>
</tr>
<tr>
<td>Injuries to the knee and lower leg</td>
<td>262</td>
</tr>
<tr>
<td>Injuries to the shoulder and upper arm</td>
<td>245</td>
</tr>
<tr>
<td>Injuries to the elbow and forearm</td>
<td>218</td>
</tr>
</tbody>
</table>

Table 10: Primary diagnosis on admission
Source: Northants Falls Dashboard 2019

10 Current falls prevention activity in Northamptonshire

10.1 The Falls Prevention Service: Northamptonshire Healthcare Foundation Trust

The Falls Prevention Service is commissioned by NCC Public Health, to provide specialist clinical assessment and multi-disciplinary advice and intervention to people with a history of falling. The service is mainly aimed at over 65 year olds, though younger adults are considered if appropriate.

The service aims to:
- Carry out a falls risk assessment including an assessment of bone health
- Provide treatment and advice on reducing the risk of future falls
- Carry out a home hazard assessment
- Refer to strength and balance classes (OTAGO) where appropriate
- Provide multi intervention support according to identified need.

The service is accessed via the NCC Customer Service triage system and operates 8.30am to 4.30pm Monday to Friday. The triage system provides a preliminary assessment of need in order to ensure clients are referred to the most appropriate service as quickly as possible. Referrals include those to the Falls Prevention Service, the Supporting Independence Programme, strength and balance classes or to Adult Social Care.

A new contract for the service was awarded in April 2019 so analysis of current activity data is limited. Previous data is also limited to the number of referrals received which averaged around 130 per month (Fig 11). Following the introduction of the new triage system the new contract is limited to 90 referrals per month.

Activity data from 2017/18 show a varying number of people completing treatment and being discharged from the service which is also reflected in 2018/19. It is not clear why there are fluctuations in activity or why there was an increase in activity from September 2018; no data is available on outcomes following discharge. It is anticipated that the new contract will obtain more comprehensive data on both activity and outcomes.
10.2 NGH and KGH outpatients clinics

Evidence from local consultant geriatricians suggest that each year between 185 and 195 new patients are seen by two consultants working in local geriatric outpatient services (Dr Shah correspondence, 2019).

Whilst around 10% of patients are general geriatric patients requiring treatment for issues such as weight loss or breathlessness, the majority attend the Outpatient Clinics for dizziness, collapses, falls, and mobility issues.

There is little information on treatment or outcomes for these patients.

10.3 Community based strength and balance classes: OTAGO

OTAGO is a NICE recommended, evidence based community based strength and exercise programme (NICE, 2013). Led by qualified instructors, classes run weekly for 24 sessions and participants pay a small contribution for their attendance.

Northamptonshire Sport (NSport) are commissioned by NCC Public Health to train a network of OTAGO exercise programme instructors across Northamptonshire who in turn provide OTAGO classes in a variety of community based locations. Instructors are funded to receive OTAGO training on the agreement that they will then put on at least one 24 week programme. They then receive income directly from class participants. The funding has recently been extended up to March 2021 to enable further training of instructors and so provision of classes.

Activity data shows 21 instructors provided 30 OEP classes between April 2018 and June 2019. The retention rates at 12 weeks is generally high, with the exception of Corby which has a low retention rate of 45% (Table 11). This is believed to be due to a parallel exercise class using a similar approach but different name ("Steady Steps").

An evaluation of the progress of just under 10% of current participants in OTAGO across the county was undertaken in June 2019 as part of a routine monitoring process of the whole programme. The participants sampled had attended strength and balance sessions for between 12-20 weeks.

Changes of note included an average reduction in the Timed Up and Go (TUG) scores from 18.98 seconds to 15.37 seconds and a reduction in participants’ fear of falling as measured by the Falls Efficacy Scale - International (FES-1). While both measures are positive, ongoing data is needed to ensure this impact is sustained.
Table 1: OTAGO strength and balance classes, April 2018 - June 2019

<table>
<thead>
<tr>
<th>Localities</th>
<th>Trainers</th>
<th>Classes</th>
<th>Participants</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corby</td>
<td>3</td>
<td>3</td>
<td>53</td>
<td>45%</td>
</tr>
<tr>
<td>Daventry</td>
<td>2</td>
<td>2</td>
<td>16</td>
<td>100%</td>
</tr>
<tr>
<td>East Northants</td>
<td>3</td>
<td>5</td>
<td>50</td>
<td>100%</td>
</tr>
<tr>
<td>Kettering</td>
<td>2</td>
<td>6</td>
<td>118</td>
<td>97%</td>
</tr>
<tr>
<td>Northampton</td>
<td>8</td>
<td>8</td>
<td>75</td>
<td>100%</td>
</tr>
<tr>
<td>South Northants</td>
<td>1</td>
<td>2</td>
<td>20</td>
<td>70%</td>
</tr>
<tr>
<td>Wellingborough</td>
<td>2</td>
<td>4</td>
<td>34</td>
<td>94%</td>
</tr>
<tr>
<td>Northamptonshire</td>
<td>21</td>
<td>30</td>
<td>366</td>
<td>89%</td>
</tr>
</tbody>
</table>

10.4 Safe and Well checks

‘Safe and Well’ checks are part of a national prevention programme carried out by the Fire and Rescue Service predominantly aimed at people aged 65 and over. The main aim of the check is to assess a household for fire risk providing advice and information as part of a Home Fire Safety visit and they will also assess a range of other issues that may impact on an individual’s health, safety and wellbeing including falls risk.

In 2018-19 Northamptonshire Fire and Rescue carried out 982 ‘Safe and Well’ visits across the county, during these visits the service:

- Gave falls prevention advice to residents in 29% of households
- Identified an occupier who had fallen during the previous 12 months in 17% of households
- Signposted 7% of residents to their local GP or Pharmacy
- Referred 4% of people to the Falls Prevention Service.

10.5 Supporting Independence Programme

The Supporting Independence Programme is delivered by Public Health Northamptonshire. It aims to support people living with mild frailty to live independently for longer by halting, reducing or reversing the progression of their frailty. One to one support is provided for up to 12 weeks and includes addressing those factors that may contribute to frailty including poor nutrition, low physical activity, social isolation, multiple medication use or visual impairment.

The programme was formally launched in April 2019 and to date has seen around 150 customers, though at the time of writing there is no outcome data available.

10.6 Equity of current service provision

Initial analysis has mapped current emergency hospital admissions against falls service activity. It should be noted that not all service activity by location is available (for example SIP data) and that which is available is not always comprehensive (for example the Falls Prevention Service). However this does provide a first attempt at mapping service activity against need.
Northamptonshire Falls Health Needs Assessment, October 2019

Preliminary analysis shows that there is good coverage of OTAGO across the county and in particular those areas where there is a higher concentration of emergency admissions (Fig 12). The Falls Prevention Service is mainly based in the west of the county and as such has a gap in provision in Corby while SIP has a gap in provision around Wellingborough. Note that this is an initial visual analysis and does not take into account different start dates of current services.

Figure 12: Service activity vs emergency admissions 2015/16 to 2017/18
Source Public Health Intelligence, Northamptonshire County Council 2019

10.7 Falls rapid response ambulance

The Northamptonshire Integrated Response Service operated between 2012-13 and 2014-15 aiming to reduce avoidable conveyances to hospital and support people back home from A&E and so reducing hospital admissions. The service comprised one ambulance and social care and ambulance staff working alongside each other to provide a rapid response to people who had had a fall. An integral part of the service was its integration with the Crisis Response Team (CRT) which could provide ongoing support (in the home) or as part of hospital discharge as appropriate.

The service operated between 7am and 5pm with analysis showing that the majority of falls related calls came between 8am and 9pm with the peak time period between 9am and 4pm.
An evaluation was carried out on the service looking at falls related calls to EMAS before and after the introduction of the CRT. The evaluation ran from September 2010 to November 2012. Approximately 40% of the total 1,546 CRT referrals received during the evaluation period originated from the falls ambulance, of which 50% were made in order to avoid an individual being admitted to hospital and 43% to facilitate discharge from hospital. For the two years the service was fully operational, approximately 500 patients were seen each year (Table 12) consisting of between 32 and 40% of all CRT referrals.

<table>
<thead>
<tr>
<th></th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
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<tbody>
<tr>
<td>Falls ambulance referral</td>
<td>641</td>
<td>560</td>
<td>69</td>
</tr>
<tr>
<td>Accepted</td>
<td>524</td>
<td>473</td>
<td>65</td>
</tr>
<tr>
<td>Rejected/not required</td>
<td>67</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td>Admitted to hospital</td>
<td>50</td>
<td>53</td>
<td>0</td>
</tr>
<tr>
<td>Proportion of total CRT referrals</td>
<td>40%</td>
<td>32%</td>
<td>3%</td>
</tr>
<tr>
<td>Number facilitated A&amp;E discharge</td>
<td>637</td>
<td>427</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 12: Falls ambulance 2012 - 2015

Source: Northamptonshire Adult Social Services 2019 (shared in email correspondence)

The evaluation reported that total ambulance calls outs remained the same in the year before the rapid response service started and in its first year of operation. Despite total calls remaining the same, those conveyed to hospital reduced significantly from 55.7% to 54.3% during this time period, equating to a reduction of 174 patients being conveyed to hospital. There was mixed evidence regarding number of conveyances during times when the falls ambulance was operational compared to when it wasn’t, with no significant differences found (Campbell et al, 2013).

The benefits of integrating the falls ambulance with CRT were highlighted with the finding that almost three quarters (72.2%) of patients did not need further intervention once discharged from CRT.

The evaluation was caveated by an acknowledgement that it had not been possible to meet the original aims of the study to identify the effectiveness of the service, particularly regarding secondary falls or to produce an evidence base of the cost effectiveness of the service due to the limited availability of data.

A new rapid response service was set up in November 2019 based on the original model in an attempt to address the large number of patients being taken to hospital following a minor fall who could be better supported in the community, thus reducing admission to hospital and its associated risks. The service is still in its infancy but has seen a number of patients and is being evaluated as part of its implementation.

11 Literature review: evidence of effective falls interventions

A literature search was undertaken to inform this Health Needs Assessment, using both peer reviewed research papers and evidence of good practice from across England and Wales.

An initial search was carried out using the term ‘falls prevention’, with supplementary searches using the terms ‘falls ambulance’, ‘falls rapid response’ and ‘falls response’. The search strategy for the initial search using ‘falls prevention’ was refined to include evidence that was peer reviewed and freely available, published since 2010, relating to England and Wales, and in the English language.

Searches were undertaken via MedLine, PubMed and the Cochrane Library, and recognised online resources used as sources for the 2019 NICE Surveillance report re Clinical Guideline 161: Falls in older people: assessing risk and prevention (NICE, 2019). Initial results were further filtered for relevance, identifying those appropriate for in-depth review and consideration.
11.1 Literature review: falls prevention


The key findings focussed on:
- Prevention measures are more likely to have a greater effectiveness where there is a multifactorial approach
- A combination of exercises in group and individual settings demonstrate clear and positive outcomes
- Effective screening and assessment to establish risk and enable early intervention.

11.2 Literature review: rapid response

The literature searches of ‘falls rapid response’ and ‘falls ambulance’ provided only eight studies. Key themes included:
- Recommended assessment and referral protocols for ambulance paramedics
- Decision making support for ambulance control staff
- Impact and effectiveness of a community based dedicated falls prevention services.

Further searches of the grey literature highlighted a useful exemplar of a dedicated falls rapid response service in Norfolk (Crosby, 2018). The service is operated by the East of England Ambulance Service Trust (EEAST), Norfolk Community Health and Care NHS Trust and the Norfolk and Norwich University Hospital, and provides two dedicated early intervention vehicles for falls, which are staffed by a senior emergency medical technician and an occupational therapist who assess patients at the scene and if they do not need hospital care, provide support to help avoid falls in the future.

The reported service benefits identified include the speed of response to people who have fallen, the significant reduction in emergency hospital admissions and the increased likelihood that people stay in their own home rather than being admitted to hospital. EEAST reported that 3 months after the service was introduced more than £200,000 was saved by the NHS during one month due to reduced pressure on ambulance resources and fewer hospital admissions, and there is the potential to save the NHS more than £2.5m per year (https://aace.org.uk/news/success-eeast-nchc-early-intervention-vehicle-pilot-norfolk/2017). They note the importance of having suitably skilled staff as part of the response: emergency medical technician, physiotherapist or occupational therapist.

The search also located evidence of a NICE case study, evidencing a rapid response initiative commenced in November 2011 in Northamptonshire which had been independently evaluated (EMAS, 2014). Details about this historical service can be found in Appendix A.

12 Falls services in other areas: common themes

Discussions were carried out with neighbouring local authorities to understand their respective falls prevention services. These included: Leicester City, Leicestershire & Rutland (LLR), Cambridgeshire & Peterborough, Mid Bedfordshire, Bedford, Milton Keynes and Oxfordshire. In addition services further afield were identified and contacted where relevant services may provide some local insight. This was focussed on rapid response provision.

Common themes/service provision include:

1. Commissioning arrangements

All falls prevention services are commissioned and funded by local Clinical Commissioning Groups with the exception of two areas which have public health funded strength and balance classes.
2. **Rapid response provision**: where such a service was available (amalgamated information, for details of individual examples please see Appendix B):
   a. Multidisciplinary team including paramedic and therapist (OT/Physio) for immediate clinical assessment and home based assessment/support.
   b. Fire & Rescue service to help move patients; ambulance staff and emergency care practitioners; follow up by falls prevention.
   c. Response time: one hour.
   d. Four patients per day, 8am to 6pm, seven days per week.
   e. 60% patients did not require transport to hospital.

3. **Specialist falls prevention service**
   a. Available as hospital, community hospital, home or combination service.
   b. Community/home based predominantly use OT/Physio with access to clinician/geriatrician for clinical falls.
   c. Provide range of support but non-clinical falls mainly based around therapist led interventions (home hazard assessments etc.).

4. **Safe and well checks**
   Typically carried out by Fire and Rescue Service as part of national Safe and Well initiative.

5. **Strength and balance exercise programmes**
   Typically funded for up to 26 weeks with option to self-fund for follow up programmes with some self-funded from start. Ability for GPs to directly refer and classes either FaMe or OTAGO.

The detailed evidence from each area can be found in Appendix B.
13 References: Including Literature Review (Appendix A)


Snooks H, Cheung WY, Close J, et al. 2010, ‘Support and Assessment for Fall Emergency Referrals (SAFER 1) trial protocol. Computerised on-scene decision support for emergency ambulance staff to assess and plan care for older people who have fallen: evaluation of costs and benefits using a pragmatic cluster randomised trial’ British Medical Council Emergency Medicine, Retrieved July 2019 from Cochrane Library.


Appendix A: Literature Review Extract

Introduction

Falls and fall-related injuries are a common and growing issue, with 30% of people aged 65 and older and 50% of people older than 80 falling at least once a year (NICE Clinical Guideline CG161 Falls in older people: assessing risk and prevention, 2013).

A Health Needs Assessment was carried out to provide a wider understanding of the key risk and factors in relation to preventing injurious falls in Northamptonshire, and to determine future priorities. To aid this a literature review was conducted to investigate and evaluate peer reviewed evidence on falls, focussing on rapid response to falls and falls prevention. Good practice based on national guidance and other associated outcomes were researched to inform the development of sustainable services in Northamptonshire.

Methodology

A scoping exercise was initially carried out to establish the advanced search strategy. The search strategy for the initial search using ‘falls prevention’ was refined to include evidence that was peer reviewed and freely available, published since 2010, relating to England and Wales, and in the English language. Initial results were further filtered for relevance, identifying those appropriate for in-depth review and consideration.

Sources that were not in the English language were excluded to help eliminate studies from outside of the identified geographical area.

The search was carried out using a number of sources. The Cochrane Library and MedLine through OpenAthens was used. PubMed was also used, but due to the absence of filter options in OpenAthens, the online site was used (www.ncbi.nlm.nih.gov/pubmed/).

References and information sources cited in the NICE Surveillance report Clinical Guideline 161 “Falls in older people: assessing risk and prevention”, (2019) were also researched, these included: Chartered Society of Physiotherapy (www.csp.org.uk/); British Geriatrics Society (www.bgs.org.uk); British Orthopaedic Association (www.boa.ac.uk); Age UK (www.ageuk.org.uk); National Osteoporosis Society (theros.org.uk); and the Royal College of Nursing (www.rcn.org.uk). The criteria concerning the publication date for the online search was refined to include sources published since 2018. This avoided omission of any sources which would have informed the NICE Surveillance Report.

An initial review of the results was made, whereby any finding which did not meet the criteria were discarded. A more in-depth review was then undertaken whereby the publication abstract was reviewed, to establish further the suitability of the finding as a source. Where an abstract was unavailable a full version of the document would be sourced and reviewed for relevance. If the evidence fulfilled the requirements it was used as a source as part of the review.

Where relevant sources indicating good practice were identified, further investigation of grey literature was undertaken in order to locate additional supportive evidence, using the Google search engine. Where a specific issue arose, the enquiry would be communicated directly to the service concerned.

A data capture form was compiled to record the findings of all the searches in a standard format. A summary of the search results can be viewed in Appendices i and iii at the end of the full version of
this document, and a more detailed summary of the findings can be found in Appendix ii and Appendix iv of the full version of this document.

A number of challenges were experienced in the course of this review which are detailed in Appendix v of the full version of this document.

Findings

Falls Prevention

The significance of a multifactorial approach in reducing the number of falls is evident across the findings (Blunt, 2018) (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018). Wide ranging sources support the effectiveness of multiple intervention involving education, medical and environmental assessment and measures, to reduce falls and lessen the risk of a fall occurring (Ambrose, et al, 2015). Combining exercise, education and risk assessments is shown to be effective in reducing and lessening occurrences. Findings corroborate an individualistic approach, fully engaging with the person, whereby greater effectiveness is achieved through personalising the intervention (Walker, et al, 2011).

Exercise is widely considered to be an important feature across all studies, demonstrating clear positive outcomes to falls prevention when carried out in a group and individual setting. (Logan, et al, 2010) (Sherrington, et al, 2019) (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018) (Chartered Society of Physiotherapy, The Prevention of Falls Injury Trial, 2018) (Bruce, et al, 2017) (Ciapponi, 2019). Exercises combining strength and balance, functional and resistance activities are shown to have a positive effect in reducing risks and fall rates and in addition can lessen the fear of falling; this is highlighted as a factor which can increase the risk of falls in the future (Wieland 2017) (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018). Additional evidence supports that specific types of exercise can be effective. The use of Thai Chi is effectively evidenced as part of an organised exercise programme, thereby helping to reduce the number of falls (Huang, 2017) (Logan, et al, 2010) (Sherrington, et al, 2019). On a similar line, systematic reviews of incorporating yoga in a falls exercise programme demonstrate its effectiveness in providing physical and psychological benefits. Evidence supports how yoga can help to reduce falls through structured and purposive physical activity which improve strength, gait and balance, whilst encouraging relaxation and overall mental well-being (Wieland 2017). In order to enhance this, evidence exists demonstrating how health professionals can be equipped to effectively incorporate enabling patients to do physical activity in the services and care they provide through the Clinical Activity Champions scheme (RCN Bulletin, Helping older people get active, 2019).

Evidence, purportedly supported by a number of organisations, emphasises the importance of providing regular screening and assessment programmes for people aged 65 and over (Ambrose, et al, 2015). An annual screening programme to establish the risk of falling, and subsequently a patient based programme focusing on the risks identified, is considered to contribute favourably in reducing falls and the high number of fractures in people within this age group. Various assessments are demonstrated as having an impact on reducing the likelihood and occurrence of falls, significantly medication, home evaluations, footwear and sight are shown to collectively make a considerable difference (Ambrose, et al, 2015). A number of findings highlight the importance of incorporating visual acuity for those who are at risk of falling due to the higher rate of falls in people with visual impairment (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018). Providing sight tests every two years is considered to be effective at helping to reduce the number of people who could fall due to poor vision (British Geriatrics Society, Watch your step, 2018). Additionally this can have a wider impact by identifying other sight issues before they become more complex (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018). Evidence exists which demonstrate how environmental intervention can be effective in reducing falls,
specifically considering risks in the home and immediate environment. There is a wide range of information evidencing trials on a range of common and specific prevention equipment that is available, but little evidence is available on the measurable outcomes (Clemson, et al, 2019) (Cochrane Trials, Fall Detection and Prevention System for the Elderly, 2018). The effectiveness of engaging with all older adults is evidenced, to help reduce or delay future issues occurring, and as such the risk of a fall. The provision of support and signposting to those who are at high or moderate risk and preventative information for those who aren’t is suggested to increase awareness and encourage action (Walker, et al, 2011) (Ambrose, et al, 2015) (Chartered Society of Physiotherapy, Leicester Falls Booklet, 2018).

Evidence supports the suggestion that effective interventions contribute positively to the person if they experience a fall in the future. Comprehensive multifactorial measures can contribute to a lessened impact if a fall occurs, resulting in fewer injuries being sustained, reduced emergency and/or medical response and quicker recovery (Cochrane Trials, Fall Detection and Prevention System for the Elderly, 2018) (Chartered Society of Physiotherapy, Leicester Falls Booklet, 2018).

Overall, many studies demonstrate that falls and resulting injuries, can cause have a varied and often substantial impact, causing issues that are both physical and psychological (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018). Fractures, bruising and lacerations are the common physical injuries caused as a result of falling, however a loss of confidence and increased social isolation should not be underestimated as further resulting factors. These wider health issues can increase the need and reliance on services, and as such can result in a gradual loss of independence. This in turn increases the likelihood of a person having to leave their home and being admitted to hospital or a care home due to the impact of falling.

Evidence arose concerning interventions dealing with the issue of falls and prevention in hospital and care facilities (Cameron, et al, 2018) (Cochrane Trials, Prevention of Patient Fall, 2015). Whilst trials have concluded and evidence suggests intervention in the form of planning and education can be effective, evidence is varied. It is considered that the issues and risks in these particular environments require specific adaption of what are commonly effective measures in other circumstances (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018).

The range of evidence supports the concepts that falling should not be considered inevitable once a person reaches a certain age, and the importance of early interventions to reduce and delay the onset of these issues before a person is identified as a high risk (British Geriatrics Society, The Other ‘F’ Word, 2018). Furthermore, risk assessment and interventions focussed on falls can have a far reaching impact on a person’s general health, well-being and quality of life, due to improvement and early detection as well as reducing the need to engage with wider health and community services (Cochrane Special Collection, Fall Detection and Prevention System for the Elderly, 2018) (Blunt, 2018).

**Falls Ambulance**

The availability of peer-reviewed evidence supporting an ambulance service specifically for people who have experienced a fall was extremely limited.

Evidence of studies examining similar service models were identified, however the studies tended to consider an individual aspect of the service or a technical application or solution, not a comprehensive overall efficiency of an entire falls ambulance or rapid response service (Halter, et al, 2011) (Snooks, et al, 2010) (Snooks, et al, 2012) (Snooks, et al, 2017) (Munjal, et al, 2019). A number of the results detailed trials, which whilst relevant in meeting the defined criteria, provided limited

Findings detailing an early intervention service in the East of England provide a favourable overview of a comparable pilot scheme (Chartered Society of Physiotherapy, Falls: a better way, 2018). The evidence provided suggests effectiveness is maximised where a combination of factors are in place, including: dedicated resources in respect of an equipped and available vehicle, which enables the early intervention to respond to patients who have fallen. Another key factor is the availability of a range of falls qualified and experienced staff who are capable of dealing with the different aspects that arise when a person experiences a fall (in the East of England an emergency medical technician and physiotherapist or occupational therapist is shown to maximise the response). Whilst the scheme had not been operating for an extensive, as of the date of the evidence, and is only available between specific hours on week days, evidence suggests it has provided many measurable efficiencies. The initial benefit of this service is the quick response to people who have fallen which has meant they can remain in their own home, and as such this has reflected in a vast reduction in emergency hospital admissions of fall patients (up to 77%). Further investigation reveals the service being endorsed by the Association of Ambulance Chief Executives, reporting that in the first four months of the pilot more than 300 falls patients were responded to, and of these more than 60% were not transported to hospital due to the specialist care being provided. As a result the service has saved the NHS over £200,000 due to a dedicated service being available to deal with the fall rather than the use of another response vehicle and subsequently the reduction in hospital admissions. With one in five of 999 calls in the ambulance service area for a patient who has fallen, it is estimated that in the longer term £2.5m could be saved in the NHS and future falls avoided (https://aace.org.uk/news/success-east-nchc-early-intervention-vehicle-pilot-norfolk/ 2017).

The evidence from one study highlights the importance of effective decision making before an emergency response is mobilised to a person who has experienced a fall (Halter, et al, 2011). The complexity around the process that is required when determining the action to be taken was detailed for review, considering the support that might be required. Whilst the details of the study were stated, the planning information did acknowledge the importance of the staff possessing knowledge of falls and the impact this can on the decisions made during the process. The study reviewed examined the decision making process of London Ambulance staff behind the rapid response to a person who has fallen. It supports the concept that the decision making process is greatly enhanced if there are fall specialist staff involved, due to the application of their knowledge aiding the process and helping to avoid unnecessary admission to hospital where it can be avoided.

The evidence obtained advocates the differences in practice by agencies and the services provided around the country when responding to falls patients, this may be one of the reasons the review does not provide clear peer reviewed evidence of an obvious model of good practice.

Conclusions

The prevention of falls prevention is shown to be most effectual when provided as a multifactorial intervention. A combination of exercise, education and risk assessment is evidenced as maximising the impact, by reducing the number of falls, lessening the risk and helping to reduce the impact if a fall does occur by requiring reduced medical intervention and increased recovery time (Ambrose, et al, 2015). A variety of exercises and activities combining balance, functional and resistance functions, are shown to have a positive effect in reducing risks and fall rates and can lessen the fear of falling. Particular benefits are evidential when exercises are undertaken in both group and home settings. Evidence also places importance on incorporating risk assessment into reducing the occurrence of falls, including reviewing medication, footwear and home hazards. There is a strong emphasis around focusing on the vision of people aged over 65, and how regular sight testing can help to identify issues early on and with correction the risk of falls is lessened.
Whilst it is limited, evidence strongly supports a rapid response service is effective in treating people who have fallen, with other models demonstrating that early intervention helps to reduce subsequent admission and stays in hospital. (East of England early intervention school has reduced admissions to A&E by 77%). It is evident that a dedicated vehicle resources which is appropriately staffed, and supported by embedded processes enables this service to be most effective.
Appendix B: Alternative falls services

The following provides more detailed information on falls services in other local authority areas.

**Leicester City and Leicestershire initiatives:**

Falls Prevention – secondary prevention:

- Small CCG funded, hospital based, specialist falls prevention service which includes assessment and up to 6 weeks therapy - clinician led initiative, primarily Leicester City focused, often responding to referrals from ED clinicians
- CCG Fund 24 weeks FAME (therapeutic intervention) LLR wide initiated by county PH funding of some community based ‘follow-up / maintenance’ FAME sessions (known as ‘Steady Steps’) 24-week postural stability exercise programme for people aged 65 and over who are at risk of falling or who have previously fallen. 24 weeks free (i.e. CCG funded as therapeutic intervention)
- 400 people participating each year @ £3,300 per programme for 14 people
- (Approx. £95,000 investment pa)
- NB: 50% drop out rate among participants
- 12 weeks follow-up paid for by participants themselves (nominal fee £1.50 - £3.00)
- Arrangements to move on to other activities.

Leicester City: Integrated Rapid Response Service

- Integrated Crisis Response Service in house service (BCF funded) total 40 staff, NB: also involved in DTOC and other work; saw 1768 fallers in 2017-18 with only 8% needing onward conveyance to Leicester Royal Infirmary for further acute assessment in ED. They are co-located with LPT’s Community Nursing and Therapy services and all patients have a follow-on assessment.
- The majority of responses are triggered by those wearing local authority pendant alarms but they also take referrals from domiciliary care agencies and take hand-on referrals from EMAS ambulance crews. This service is 24/7.
- The team is also well linked to community Pharmacy and local GP practices to seek further support. The average response time by ICRS to a faller in the city in 28 mins. The team are trained to use the Manger Elk no-touch lifting devices to get patients up from the floor once they have assessed that this is safe.
- Essentially ICRS offers up to 72 hours immediate personal care and assessment and is the portal into several other elements into our integrated system of care for frail and multi-morbid patients. This would include:
  - Commissioned package of social care (new or increase of previous)
  - Referrals to Nursing and/or therapy services
  - Referrals to home adaptation service (practical Help at Home)
  - Referral to Assistive Technology Service
  - Provision of low-level pieces of equipment (perching stools /commodes etc.)
  - Referral to Community Pharmacy
  - Referral to GP
  - Referral to Care Navigation
  - Referral to social inclusion offers
  - Referral to housing
  - Liaison with Fire and Rescue re: hoarding
- Better Care Fund makes an annual investment of approximately £1M in this Integrated Rapid Response Service NB: multiple roles of the service, rather than falls prevention specific.
Insight: Co-location has been key to developing effective working and high quality, high moral service, across Integrated Rapid Response Service, Community Nursing and Therapy services.

Care Homes Therapy team

3 clinicians—physio, OT, and technician (approximately £140,000 pa)

Dedicated support to 104 residential and nursing homes in Leicester; providing training and direct consultations; 444 patients 200 staff training sessions in 2018-19

**Leicestershire:**

Falls service (funded by the CCG) elements:

Multiple referral routes in to a triage where an individual is assessed whether they have a medical or non-medical related fall (as much as possible); the triage is relatively new and additional funding to the mainstream funding services. They emphasised that they shouldn’t/couldn’t take everyone into the falls and triaging was important to manage demand/divert people to the most appropriate service.

A pilot is being carried out for community referrals to go through FRAT and refer directly to other specialities if this comes up in the initial phone assessment (such as podiatry etc)

Consultant geriatrician clinics for those assessed as having a medical reason for their falls. Consultant clinics are commissioned (mainstream funding) to be carried out 6 times a week (once at each of the community hospitals) with a consultant geriatrician, OT etc consisting of 4 new patients and two follow up or five new patients per clinic

Community service consisting of two teams of 1xOT, 1xphysio and 1x technical assistant one team for the west and one for the east of the county. After referral an OT will visit a patient in their home, carry out an assessment and refer them to the falls programme; depending on the wait they will give the person immediate exercises they can do in the home etc

The falls programme is a six week programme run by the team of progressive exercise, - physio led, and education about falls prevention; there is currently a waiting list for this. The programme is carried out in community venues around the county. Commissioned by the CCG with a number of KPIs around number of home visits done, people on the 6 week programme, change in balance etc

24 week onward referral from this programme

**Cambridgeshire**

Joint commissioning arrangements in place for range of falls prevention initiatives:

Locality based falls prevention service provided by band 4 therapy assistants, who conduct assessment and develop individual action plans, and refer on to community or home based strength and balance sessions plus aides and adaptations. In addition, 5 health trainers (PH funded) community based across Cambridgeshire developing community based OTAGO sessions. Resident population for all community based interventions, with locality based interventions paid for by combination of BCF, PH and STP funding.

NB: Potential use of generic ‘Admission Avoidance Team’, as well as Change Point Cambridgeshire Lifestyle Service, to supplement falls response.

**Nottingham City Rapid Response Service**

The integrated Ambulance and Urgent Care Service Model:

Integrated emergency, health and social care assessment reduces future falls.

On average 71.6% treated at home, a 21.6% increase from baseline.
Reduce ED attendance and associated acute admissions; promotes independent living; high patient and
carer satisfaction. Better Care Fund money involved in setting up service and ongoing.

Integrated model:

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**Gloucestershire rapid response service**

The emergency rapid response service is a team of care staff that provide personal care in an emergency
or urgent care crisis to all South Gloucestershire adult residents. The service is in operation 24/7, 365
days of the year. Highly trained staff are able to rapidly respond throughout South Gloucestershire
when they are informed of a resident with a personal care crisis. Includes an emergency response to
Telecare when a person presses their pendant, in most instances because they have fallen. The call
centre will telephone previously agreed emergency contacts. If the resident does not have emergency
contacts, including family or friends or those contacts are not available, the rapid response service will
attend at the person’s home within 40 to 50 minutes

An adult care manager may be available to visit to assist a rapid responder where the crisis requires
more than a one off visit. The service will continue to provide visits for a short period, usually 72 hours,
until the crisis is over or an alternative provider can be found.

**Other areas**

<table>
<thead>
<tr>
<th>Rapid Response Service</th>
<th>Bath and North Somerset</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development of small multidisciplinary team that includes a</strong></td>
<td><strong>Paramedic and a Therapist (Occupational or Physiotherapist) to</strong></td>
</tr>
<tr>
<td><strong>Paramedic and a Therapist (Occupational or Physiotherapist) to</strong></td>
<td><strong>respond to four patients per day 8am - 6pm, seven days per week.</strong></td>
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<td><strong>respond to four patients per day 8am - 6pm, seven days per week.</strong></td>
<td><strong>The Paramedic provides immediate clinical assessment and</strong></td>
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<td><strong>The Paramedic provides immediate clinical assessment and treatment of injuries, whilst the Therapist facilitates a home based</strong></td>
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<td><strong>assessment to support an older person’s independence and enable</strong></td>
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<td><strong>them to carry out their normal activities. (Fully details available incl</strong></td>
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<td><strong>costings, and evaluation report).</strong></td>
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<td>Early Intervention Vehicle East of England and John Paget Hospital</td>
<td>Early Intervention Vehicle (initiated 2017) uses senior emergency medical technicians (EMT) and occupational therapists to attend people who have had a fall. More than 60% of those patients visited did not require transport to hospital.</td>
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<td>Hull FIRST</td>
<td>Hull FIRST (Falls Intervention Response Safety Team) provides a rapid 24/7 response to elderly or vulnerable patients in Hull who have fallen and need non-emergency medical support. When a patient has fallen and calls NHS111 or 999, they are triaged (assessed) by trained staff at Yorkshire Ambulance Service (YAS). Clinical advisers will provide a robust assessment to ensure patients are provided with the most appropriate care for their needs. Where it is clinically appropriate, the patient is referred to the Hull FIRST Service. The service is made up of professionals with a range of skills and includes officers from Humberside Fire and Rescue Service to help move or offer physical support to the patient, and ambulance staff and CHCP emergency care practitioners (ECPs) to provide non-emergency medical care. The team aims to reach the patient within one hour. The Humber FT Falls Prevention Team follow up the initial response with one to one support to resolve any instant problems which may have caused the fall. The team also offer fragility fracture risk assessments in the home, occupational therapy, physiotherapy and fracture liaison nurses. Any required safety equipment is provided through the joint Hull City Council and Hull CCG Better Care in Hull programme.</td>
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