

EALING JSNA 'Focus on' Older people - Frailty December 2018

The Joint Strategic Needs Assessment (JSNA) is a statutory document published by the London Borough of Ealing and NHS Ealing Clinical Commissioning Group, which describes the health and social care needs of the population. The JSNA contains topic and theme-based chapters, which are updated on a rolling basis. The 'Focus on' series provides succinct chapter summaries from the JSNA.

Navigate by scrolling each slide or clicking on the section buttons on the bottom of each slide Sections may contain more than one slide

EALING JSNA 'Focus on' Older People - Frailty

Key facts

December 2018

Frailty is a distinctive clinically recognizable health state related to ageing in which multiple body systems gradually lose their in-built reserves and the ability of older people to cope with every day or acute stressors is compromised. Frail older people are at risk of adverse outcomes with dramatic changes in their physical and mental wellbeing after an apparently minor event, such as an infection or new medication. They also have an increased risk of falls, fractures, comorbidity, disability, dependency, hospitalisation, need for long-term care and mortality. Around 10% of people aged over 65 years have frailty, rising to between 25 % and 50% of those aged over 85 years.

Facts and figures

- In Ealing 14,491 (35.8% of over 65s have been identified as having frailty (electronic frailty index, Apr 2015- Dec 2017)
- Population of over 65s is projected to be 62,700 by 2036
- Frailty progresses with age and as the population ages, the prevalence and impact of frailty is likely to increase
- 1,300 people in Ealing aged over 55 were admitted with falls in 2016-17
- There were 32 deaths over 2014-2016 in over 65s where a fall was the main cause of death

Reducing inequalities

- By increasing physical activity, particularly in older people and those from ethnic minorities
- Providing and increasing uptake of falls prevention services and fracture liaison services
- Providing health, wellbeing and independence promoting services for older people
- Address income poverty among older people
- Encourage continued learning among over 65s

Population groups

- Of those with frailty, 8563 (59%) are women and 5928 (41%) are men (Apr 2015 - Dec 2017)
- More patients with an Asian ethnic origin have moderate or severe frailty 3480 (24%) compared to patients to any other group (Apr 2015 - Dec 2017)
- 4115 (28%) people have mild frailty, 7532 (52%) have moderate frailty and 2844 (20%) have severe frailty (Apr 2015 - Dec 2017)

National and local strategies

- *Inequalities report*: Fair society. Healthy lives, UCL
- *NICE*: Dementia, disability and frailty in later life
- *Public Health England*: Falls and Fractures consensus statement
- *NHS England*: Older people living with frailty
- *NHS RightCare*: Frailty Shared decision-making
- National Planning Policy Framework
- *STP*: NWL Sustainability and Transformation Plan
- *STP*: Fracture Liaison Services, frailty pathways
- London Borough of Ealing Corporate Plan

Key facts

National burden of frailty

- 1.8 million people aged over 60 and 0.8 million people aged over 80 are living with frailty
- Overall prevalence of frailty in people aged over 60 is 14%
- 5% of people aged 60-69 and 65% in people aged over 90 have frailty
- Frailty is linked with poor mobility, difficulty carrying out everyday activity, or simply 'slowing up'
- Frailty results in large increases in the health cost for care settings such as inpatient, outpatient and nursing homes
- Interventions should be targeted against the causes underlying frailty rather than its clinical manifestations to prevent or reverse frailty

Older People - Frailty

There are two models of frailty, the **phenotypic** model involves of the presence of frailty if 3 or more of the following characteristics - unintentional weight loss, reduced muscle strength, reduced gait speed, self-reported exhaustion and low energy and the broader **deficit** model includes co-morbidity and disability as well as cognitive, psychological and social factors. The electronic frailty index (**eFI**), used by GPs for identification of frail patients is based on the broader deficit model.

Functional ability and **intrinsic capacity** (physical, mental and psychological capacities) are central to frailty. Enhancing intrinsic capacity is a way of preventing frailty and main goals for frailty are the prevention of declines in intrinsic capacity and the maintenance of functional ability. Functional ability is a product of an individual's intrinsic capacity and the environment (Figure 2). Intrinsic capacity peaks in early adulthood and declines from midlife onwards. Diminished intrinsic capacity affects functional ability and, creates difficulties with activities for daily living. Figure 1 shows potential trajectories for intrinsic capacity and impact on healthy ageing (World Health Organisation, (WHO)). Public health interventions can improve intrinsic capacity at almost all points in a person's life. Adoption of a healthier lifestyle such as through physical exercise and good nutrition can positively modify the trajectory of the intrinsic capacity in later life (WHO).

Fig 1 Potential trajectories of intrinsic capacity and healthy ageing

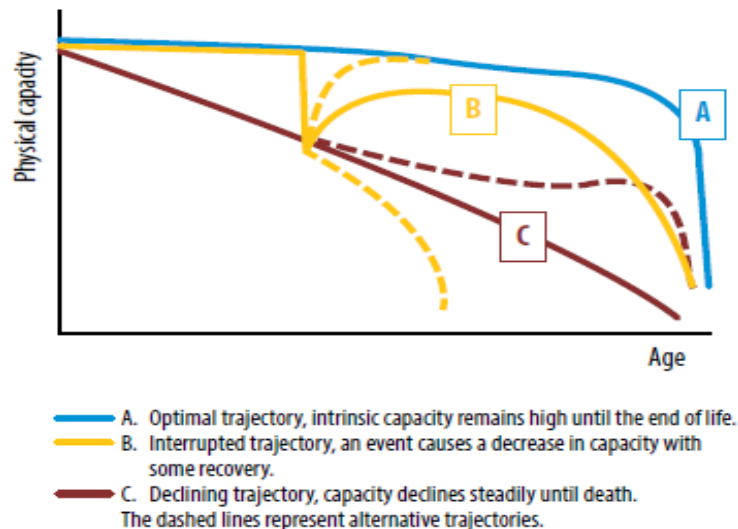


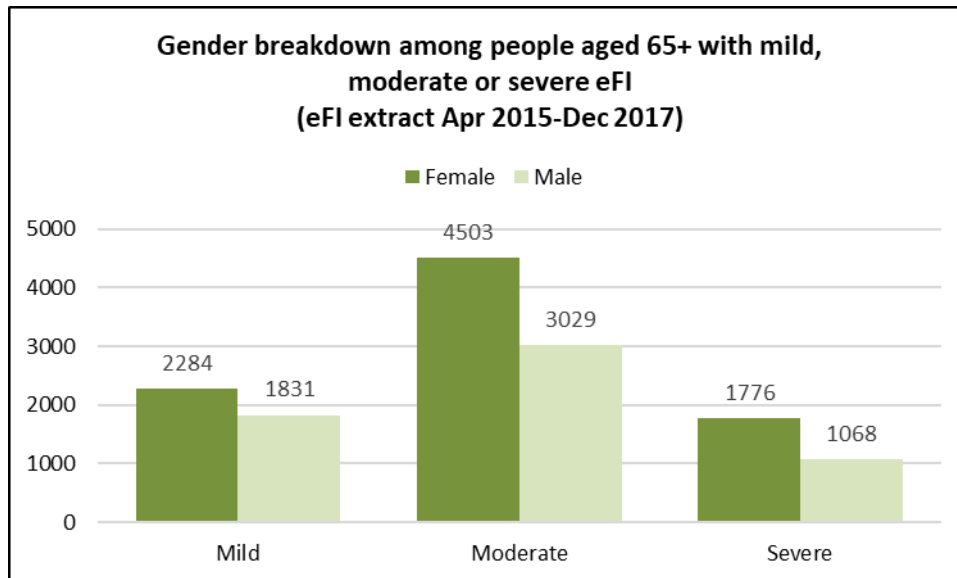
Fig 2 Functional ability, intrinsic capacity and the environment



Functional ability = intrinsic capacity + environment

Setting the scene: Ealing

- RightCare data shows 24% (11,166) of GP registered over 65+ patients (46,003) were assessed for frailty using the eFI by GP practices compared to 26% in England and number of assessments carried out in Ealing range from 5% to 95% across the (Quarter 4, 2017/18)
- There may be 23,895 (59% of 40,500 estimated over 65 population) and 27,142 (59% of 46,003 registered patients) frail patients based on the deficit model
- Presence of one or two deficits indicates pre-frailty and absence of deficits, a robust state
- Estimated number of **pre-frailty** could be 19,035 (47% of 40,500, total population of over 65s) and 21,621 (47% of registered patients)

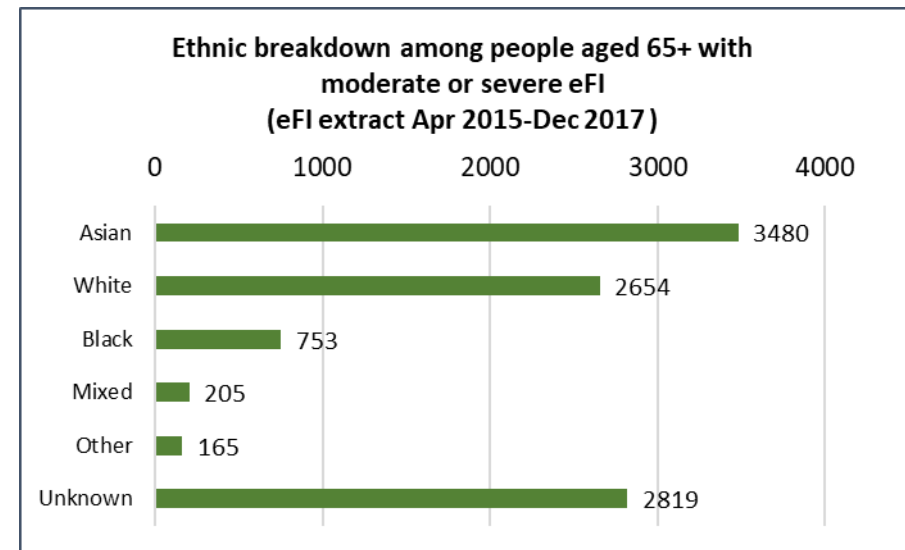


Older People - Frailty

Estimated prevalence of frailty in Ealing- phenotypic model

Age group	Resident population	Phenotypic model estimates	
		Frail (%)	Frail (number)
65-69	12,700	4%	508
70-74	9,400	7%	658
75-79	7,600	9%	684
80-84	5,600	16%	896
Over 85	5,200	26%	1352
TOTAL	40,500	10%	4,098

- Estimated **phenotypic model** prevalence is 508 (4%) to 1352 (26%) and in the broader **deficit model** 1,620 (4%) to 23,895 (59%) in the total population of 40,500.



Setting the scene: Ealing

Older People - Frailty

Physical Activity

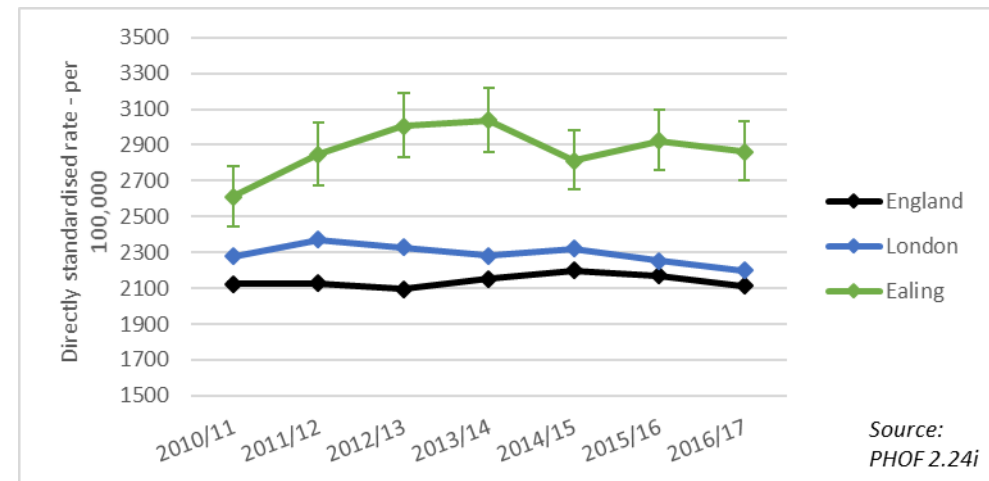
- 44% of 65+ years olds are *inactive* which is higher compared to *inactivity* in London
- Physical activity and strength and balance training is necessary for the maintenance of musculoskeletal health
- Southall, west Greenford, Northolt and East Acton show lower levels of physical activity as do women compared to men
- Nationally, only 11% of Bangladeshi and 14% of Pakistani women are reported to undertake the recommended amounts of physical activity

Associated conditions and risk factors

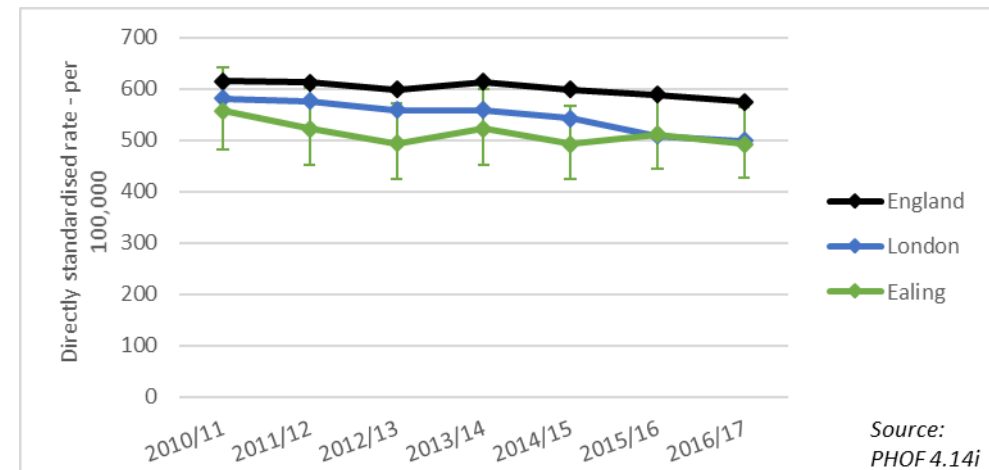
- Relationship between frailty and dementia is reciprocal
- Alcohol-related brain damage (ARBD) caused by regularly drinking too much alcohol over years and drinking over recommended limits increases a person's risk of developing common types of dementia
- Correlation of frailty and depression is substantial
- 60% of adult social care users report they do not have as much social contact as they want (2016/17)
- Diabetes has the risk of developing physical disability in older people resulting in lower muscle mass and strength
- Risk of falls is higher in Ealing as seen with the emergency admissions for injuries due to falls which has been higher than London and England over the past 7 years

Falls and fractures

Emergency admissions for injuries due to falls are higher



Hip fractures are lower among over 65s



Future need

Older People - Frailty



By 2030 the population of over 65s is expected to rise by 53% with 18,748 older people with limiting long-term illness predicted to rise to 21,002 (17.4%). The highest rise among older people aged 85 and over (40.8%). Ealing is likely to be an increasingly diverse borough, with a rise projected for BAME groups at 52% and the white ethnic group at 48%.

Age related conditions

- Prevalence and impact of frailty is likely to increase by 2026 among the predicted 51,000 over 65s. Estimated frailty between could be 2,040 (4%) to 30,090 (59%) in the predicted 65+ population
- Muscle mass and strength, bone density and functional status decline with age
- Increasing levels of falls (estimated at rate of 3200per 100,000) are likely due to expected changes in demographics by 2026
- One in three adults over 65 and one in two over 80 year olds have falls each year, leading to loss of independence and social isolation
- Hip fracture is a serious consequence of falls in the elderly, with a national mortality of 10% at one month and 30% at one year. Hip fracture rate is likely to rise with the increase in over 65s by 2026
- Physical frailty is associated with more severe depressive symptoms and quarter of depressed older patients are physically frail

Healthy ageing

- Everyone working with older people should understand the concept of intrinsic capacity, that it is not a fixed entity
- Declines in older person's intrinsic capacity can be identified and progression delayed or stopped. Effective interventions can restore a person's intrinsic capacity
- All concerned professionals should focus on Healthy Ageing and prevention and move away from a focus on disease
- Working across disciplines and organisations to prevent, respond and treat is recommended for success

NW London Sustainability and Transformation Plan

Aims to:

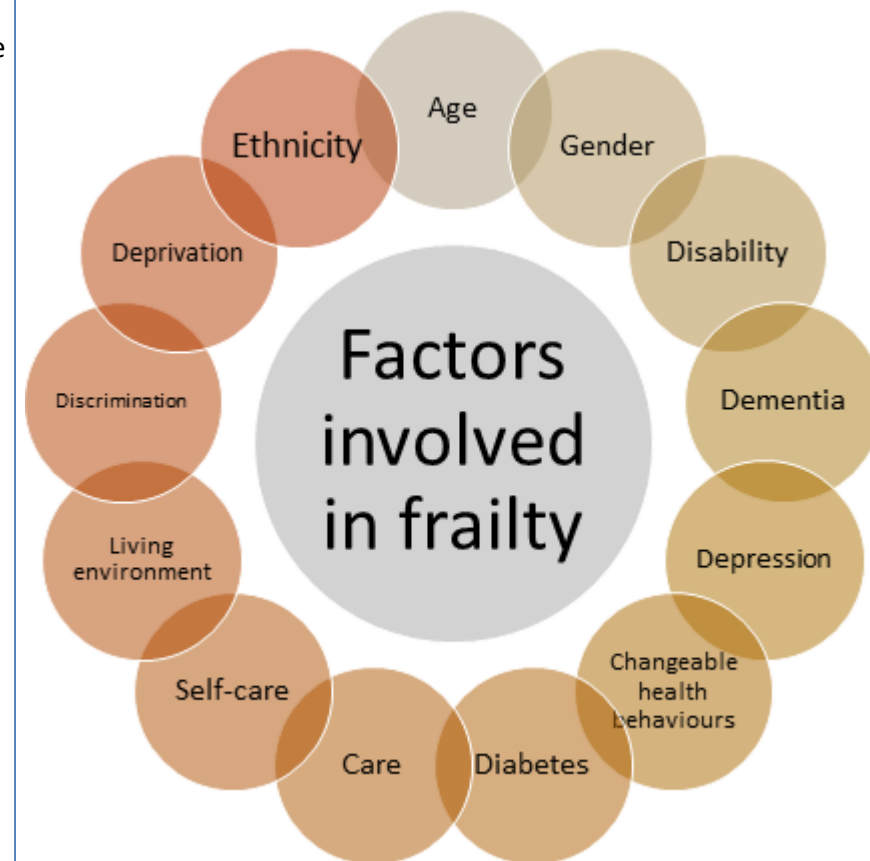
- Shift out of hospital and transitioning away from emergency care towards a semi-planned service
- Improve outcomes from long term condition management
- Developing a fully integrated older persons frailty service
- Fragility fracture liaison services being rolled out in Dec 2018
- Facilitate early supported discharge after orthopaedic operations

6

What influences this topic?

Older People - Frailty

- Disadvantage accumulates over the life course
- Attitudes to age and ageing across all ages, impacts profoundly on older people
- Frailty is more prevalent among women than men and certain minority groups
- Reduced sensory input, polypharmacy, oedema, arthritis and disuse exacerbates the inefficiency of the musculoskeletal system
- Low levels of physical activity leads to musculoskeletal pain, osteoarthritis, osteoporosis, reduced muscle strength and falls
- Smokers are more likely to have lower bone mineral density and develop frailty due to Chronic Obstructive Pulmonary Disease (COPD)
- Healthy diet and weight are important for good bone health and to prevent osteoporosis in later life
- Adverse care outcomes could be avoided through proactive case finding, timely comprehensive assessment, care planning and targeted proactive use of services outside of hospital
- People with long term conditions have low levels of knowledge, skills and confidence to self-care, manage health and wellbeing and live independently
- 16.4% of 65year olds have at least one difficulty with activities of daily living (e.g. eating, toileting and washing, doing housework, taking medications and preparing meals). It rises to 50% for those aged 85
- Modest improvements in fitness could mean a value of several billion per year since the mean costs of care double between the age of 65 and 75 and triple between 65 and 85
- Safe, well maintained accessible natural greenspace, housing designed for care at home and independent living in housing with care schemes can enhance the long-term health and wellbeing, reduce the risk of falls, promote physical activity and reduce social isolation



What influences this topic?

Older People - Frailty

Influences on the outcomes of frailty

- General awareness of risk and protective factors
- Early identification in primary care with appropriate advice, referrals and interventions
- Frailty assessments for over 65s attenders of A & E and, pre-operatively
- Changing specific *changeable* risk factors and behaviours can reduce the risk of frailty (as well as dementia and disability). Changeable factors are smoking, lack of physical activity, alcohol consumption, poor diet and being overweight
- Risk of frailty (as well as dementia and disability) will sometimes be determined by factors that can't be changed, such as inherited conditions or injury

Common problems in frailty which need to be addressed to reduce severity

- Falls
- Cognitive Impairment
- Mobility
- Alcohol
- Polypharmacy
- Vision problems
- Continence
- Low mood
- Weight loss/nutrition
- Social isolation and loneliness

What works?

Older People - Frailty

PRIMARY PREVENTION -reduces the risk of frailty developing: increasing physical activity, cognitive function, reducing obesity, reducing alcohol intake, stop smoking and improving nutrition

SECONDARY PREVENTION - reduces the risk of frailty worsening: increasing moderate physical activity, balance and muscle strength improvement, risk factor assessment, nutrition, appropriate polypharmacy and signposting and health promotion in nursing care services and care co-ordination

TERTIARY PREVENTION- early geriatric assessment reduces admissions and improves outcomes for frail older people: better understanding of frailty among hospital staff, frailty assessment for those attending A&E, pre-operative frailty assessment and integrated health and social care systems to support early discharge and, reablement

- National Planning Policy Framework recommends policies and decisions aim for healthy, inclusive and safe places. Ealing's Corporate Plan includes priorities of home adaptations to existing homes, community learning to support health and wellbeing among others to support independent living
- Supporting self-care improves outcomes and is cost-effective
- NHS health checks and NHS diabetes prevention programmes are an opportunity to encourage people to change behavioural risks
- MECC approach is recommended for workforce competency development as well as for supporting behaviour change
- Multi-factorial falls prevention for people at high risk of falls and secondary prevention of fragility fractures are clinically and cost-effective from NHS and societal perspectives, and are high priority programmes in NW London
- Return on Investment tools (ROI) are available from NHS RightCare and Public Health England. Most of these interventions are cost-effective from a societal perspective (e.g. productivity gains, social care costs), but for some interventions, there is uncertainty about the savings from a purely NHS perspective

Clinically and cost-effective

Increasing physical activity

NHS health check to prompt behavioural risks

Support for self-care and Making Every Contact Count (MECC)

Fracture liaison services for secondary prevention

Falls prevention and strength and balance programmes

Clinically effective

High intensity progressive resistance training

Decreasing obesity to prevent lower limb osteoarthritis

Improving nutrition for maintaining bone and muscle strength

Targeted case finding for falls risk, frailty and osteoporosis

Reducing medicines to 6 as appropriate for frail older people and, pre-operative frailty assessment

Assets and services

Older People - Frailty

Majority of care for frail older people occurs in the community through primary care, nursing at home and help with activities of daily living such as washing, dressing and eating. Older patients account for more than half the caseload of district nurses. Social services provide home care and informal care at home is given by close family members, neighbours and friends. A third of over 65s population attend the community musculoskeletal service at least once in a five year period. 472 over 65s (7.2% of total of 6447) accessed IAPT in 2017-18.

Local Authority

- Ealing Council provides 'Making Every Contact Count' (MECC) Train the Trainer for primary care staff, community physiotherapists and community voluntary sector workers, to train staff to discuss lifestyle interventions, such as physical activity and healthy weight with their patients and clients
- Ealing Council funds Strength and Balance Classes, Healthy Walks Programme, Everyone Active Exercise Referral Scheme, One You service and promotes cycling schemes
- The Let's Go Southall programme aimed at getting Southall residents more active is being set up currently
- Drug and alcohol services encourage sensible drinking, provide support, treatment and recovery for residents and their family and friends. Development of alcohol clinics in GP practices to ease access under way
- The reablement service provides short-term intensive support usually up to six weeks to assist individuals regain and/or maximise their independent living skills after a period of illness or incapacity
- A joint falls prevention task group has developed the falls risk assessment tool (FRAT) for use by professionals, carried out an equity audit, set up Careline local telecare support and, developed and distributed information about falls prevention
- NHS health checks are commissioned for 40-70 year olds to help prevent heart disease, stroke, diabetes and kidney disease
- Community Connections VCS grant funding supports dementia, strength and balance and social isolation
- Dementia Concern provides community support activities including home based, outreach and day activities
- Carers support service for people with long term conditions is available

Self-management

- GP practice websites offer self-care advice and self-help options, guiding patients to see the right person and provide a directory of local support services
- Ealing Community and Voluntary Sector (CVS) organisations provide chair-based exercises, healthy walks, yoga, relaxation therapies, massage, and healthy cooking sessions. Ealing CVS maintains a directory of voluntary sector projects and advice about healthy living

NHS Primary Care

- The Ealing Primary Care Standard is a 3½ year investment programme from 2017, to improve access and health outcomes for people
- Primary care will be expected to deliver the following with regard to frailty- identification and management of frailty, use of eFI, a register, annual review incl. medication and discussion on falls in the last 12 months, relevant interventions and, face to face/telephone review of any frail patient with an unplanned admission within 5 working days of notification of discharge
- Care co-ordinators in primary care aim to improve patient outcomes by co-ordinating support across health and social care to ensure patients with frailty and complex needs can maintain their optimum independence and wellbeing

NHS Community Care

- Physiotherapy and falls services help people to regain movement and strength following illness, injury, or as a consequence of ageing
- The Ealing IAPT service (Improving Access to Psychological Therapies), runs a long term conditions group (LTC), groups for patients with anxiety and depression and, for older people
- Homeward provides intensive support to patients who are at risk of admission to hospital, or following discharge for a period of rehabilitation at home, preventing avoidable re-admissions and releasing capacity in acute services for those who need acute hospital care
- Community Transport service to support frail and elderly patients and those experiencing social isolation

Hospital care

- Frailty assessment for over 65 A & E attenders are being developed
- Fracture liaison services are being developed at NWL

Targets and outcomes

Older People - Frailty

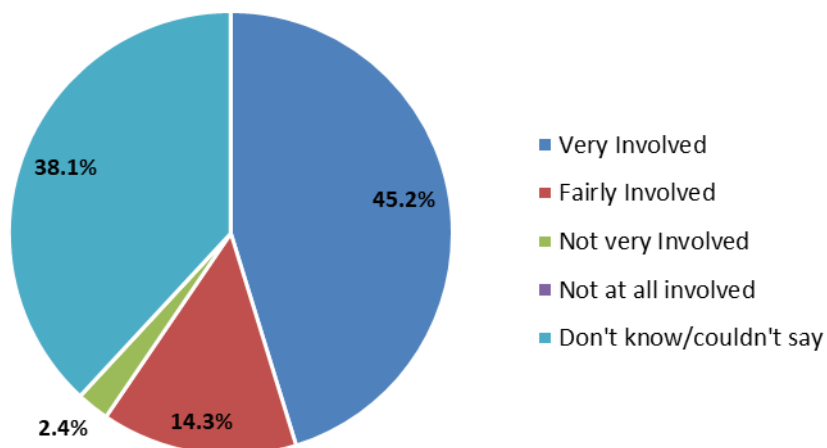
	Increase healthy neighbourhoods, warm adaptable housing and accessible, safe green spaces to support healthy ageing. Priorities in the council Corporate Plan include improvements to homes to support independent living, development plans for thriving, healthy and safe places and, community learning. Delivery Area (DA) 1 of the NWL CCG transformation plan aims to support wider determinants.	Carry out comprehensive assessment for those with moderate and severe frailty to diagnose illness, optimise treatment and produce personalised care and support plan including review of polypharmacy. Ealing Primary Care Standard requires GPs to deliver against Standard 7 and 19 (medicines optimisation).	Review polypharmacy in hospital to ensure appropriate & consider limiting medicines to no more than 6 for frail patients. Polypharmacy in Ealing 65+ appears to be higher than national average.	
  	<p>Incorporate timely awareness / advice to increase physical activity, strength and balance training in every interaction between health, care and wider professional workforce to build and maintain functional capacity among over 65s .</p> <p>NHS Standard Contract includes a requirement that staff use every contact they have with users and the public to maintain or improve health and wellbeing e.g. through MECC and following NHS Health Checks. Frailty assessments are integral to the Ealing Primary Care Standard 7. Ealing Corporate Plan aims to support healthy lifestyles, walking and cycling.</p>	Proactive follow up of frail patients who have fallen to reduce risk with falls prevention and strength and balance referrals. Ealing Primary Care Standard requires GPs to deliver the against Standard 5 (musculoskeletal health) and 7. Trend for emergency admissions due to injuries due to falls has been higher than London and England since 2010.	Over 65s attending A&E to have a frailty assessment to minimise admissions and length of stay. NWL older people care programme is considering frailty unit in Ealing hospital.	
	Increase referrals to alcohol clinics for those with harmful drinking identified on the eFI register. The CCG encourages GPs to refer to the community clinics, rather than directly to hospital, in accordance with best practice advice from NHS England and Ealing Corporate Plan has target to reduce alcohol admissions.			
	Double existing referrals to IAPT to support those identified with low mood/depression on the eFI register and refer to befriending to address isolation for those who are house bound addressing physical and mental vulnerability to poor health. IAPT runs groups for older people, those with LTCs and for people with depression. Supported by Ealing Primary Care Standard 1 (adult mental health).	Increase uptake of flu and pneumococcal vaccination from 64.3% and 66.1% respectively to meet 75% among over 65 in the community and in hospitals. The most common diagnoses for emergency admissions are for flu, falls, pneumonia and UTIs. Ealing Primary Care Standard 12 expects practices to provide the immunisations and develop action plans to meet national Targets.	Improve understanding of frailty among workforce.	
	Reduce variation in the numbers of patients who receive an assessment for frailty among GP practices and work with Care Co-ordinators to support frail patients. Ealing Primary Care Standard 7 aims to reduce variation in practice and offer care planning and co-ordination.	Carry out pre-op frailty assessment to enhance functional ability and nutrition pre-operatively, to avoid post operative complications and support early discharge. Ealing CCG aims to reduce inappropriate length of stay in hospitals.		

11

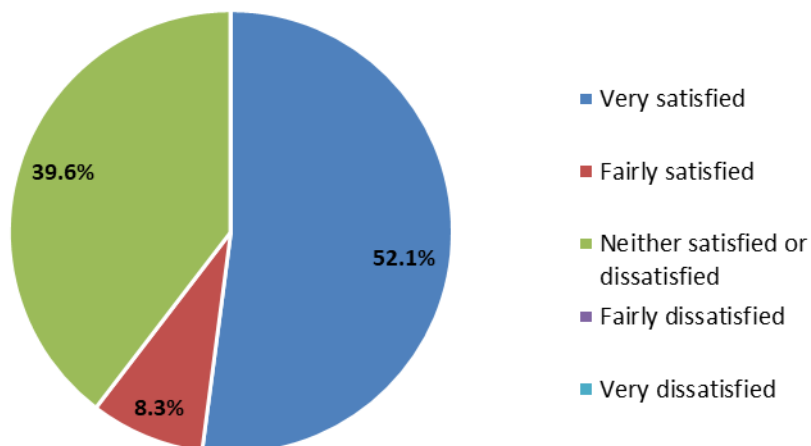
The voice: Reablement Questionnaire July- Sept 2018

Survey results of Reablement service between July and Sept 2018 are displayed below.

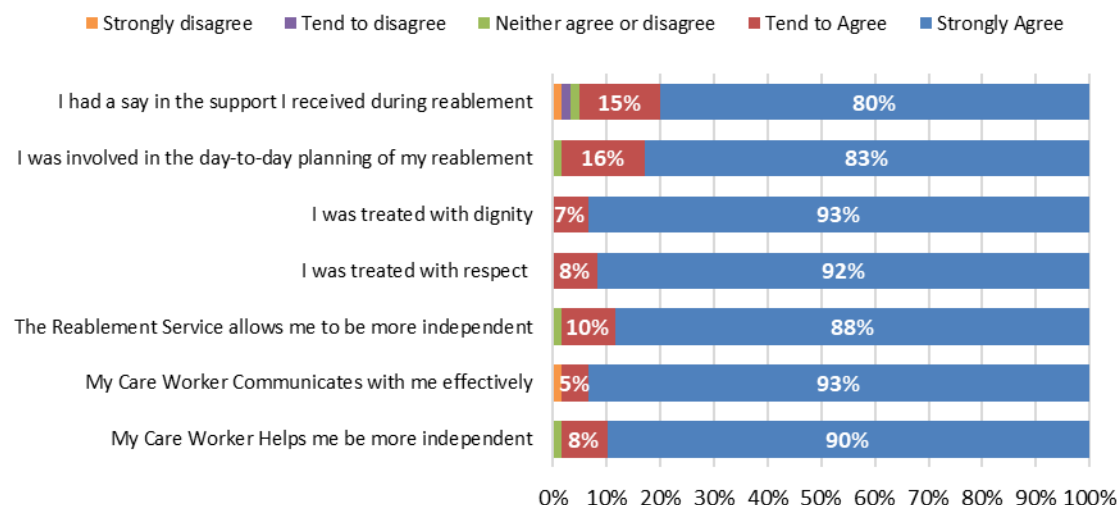
How involved or uninvolved were you in decisions about your care needs



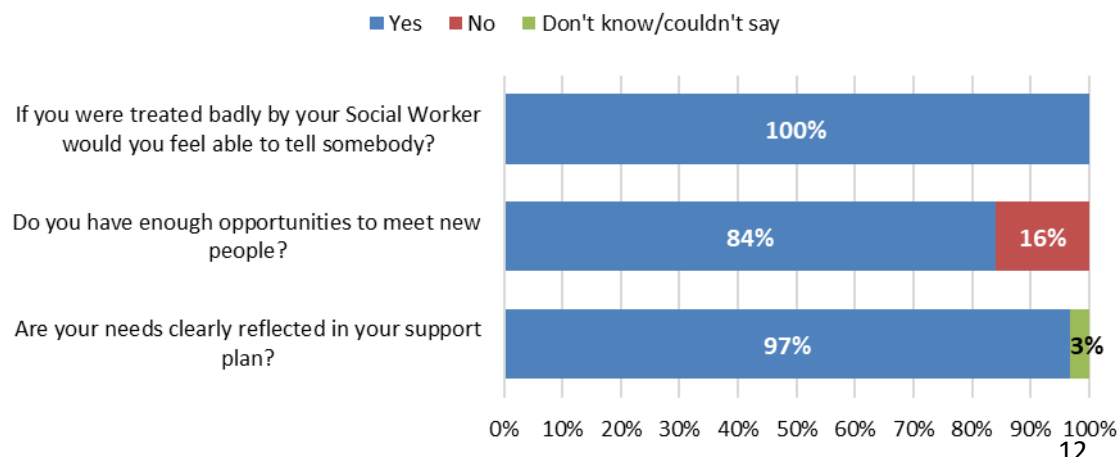
Overall how satisfied/dissatisfied were you with the quality of the service received from the Social Worker?



Care worker questions



Needs and opportunities





Gaps and unmet needs

Older People - Frailty

Prevention Across All Domains

Healthy neighbourhoods not currently Ealing wide

Lack of healthy ageing awareness

Combating age related stigma among the population and professionals not consistent

Not enough physical activity every day by everyone and with every diagnosis

Ensure planning for demand for services due to longevity and demographic changes

Lower numbers of over 65s referred to IAPT

No referrals to mental wellbeing, IAPT from care, dementia and nursing homes

Ongoing tailored MECC to maximize support population risk and behaviour change

Limited referrals to and capacity in strength & balance provision

Primary Prevention

Low levels of physical activity in over 65s, women and minority groups.

Capacity to support Ealing wide warm adaptable homes and safe, accessible facilities lower than demand

Secondary Prevention

Frailty identified among over 65s via eFI not shared with Care co-ordinators and care homes

Variation in numbers of frailty assessments carried out by practices

Lower number of referrals to alcohol clinics

Variation in levels of polypharmacy

Likely gap in comprehensive assessment for moderately & severely frail

Low uptake of flu and pneumococcal vaccinations

Opportunity to reinforce behaviour change following the NHS Health checks not utilised

Tertiary Prevention

Lower levels of understanding and confidence among hospital staff to manage frailty syndromes and safeguarding frail over 65s

Potential lack of pre-op frailty assessment to enhance functional ability and nutrition pre-operatively

Variation in prevention of in-hospital falls

Lower uptake of in-hospital vaccinations

Lack of frailty assessments for all over 65s attending accident and emergency

Potential variation in polypharmacy

Limited fracture liaison service in Ealing

Potential gaps in advanced care planning

Recommendations for commissioners

Older People - Frailty

High Priority Recommendations – in order of population-wide, individual-focussed and workforce training recommendations

Action by

1.	Increase healthy living spaces in Ealing to support healthy ageing	Local Authority
2.	Raise population wide awareness of healthy ageing, combatting stigma and support self-care and prevention	Local Authority & Ealing CCG
3.	Reverse <i>inactivity</i> among older people starting early with mid life	Local Authority & Ealing CCG
4.	Increase commitment to strength and balance through every interaction between health, care and wider workforce to build and maintain intrinsic capacity and functional ability	Local Authority & Ealing CCG
5.	Reduce variation in numbers of frailty assessments carried out in practices, optimise treatment including appropriate and measured polypharmacy, care and support plans for frail patients	Ealing CCG
6.	Improve provision and access to falls prevention programme to reduce injuries, further frailty, ambulance callouts, A&E attendances and admissions for falls in the elderly	Ealing CCG
7.	Ensure referrals for mental wellbeing, IAPT, physical therapies (to improve muscle strength and power) and for harmful drinking including from care, dementia and nursing homes	Local Authority & Ealing CCG
8.	Frailty assessments in hospital for all over 65s A&E attenders and pre-operative patients and, early discharge and advance care plans	Local Authority & Ealing CCG
9.	Provide staff training to support risk behaviour change (Making Every Contact Count – MECC) and include healthy ageing targets in existing health and care contract	Local Authority and Ealing CCG

The general principles for developing interventions and services for frailty are:

- Person or patient central to decision-making
- Life course approach to illness prevention and in all health and care strategies
- Consider that interventions such as increasing activity levels, reducing harmful drinking and mental wellbeing interventions will benefit other conditions too
- Consider how to engage particular groups with interventions to encourage healthy ageing and reduce health inequalities
- Further recommendations and details are in the full version of the JSNA available on the Ealing council website:

https://www.ealing.gov.uk/info/201072/strategies_plans_and_policies/1963/ealings_joint_strategic_needs_assessment

Further information

Older People - Frailty

Key local documents

- Ealing Joint Strategic Needs Assessment: Older People- Frailty 2018 LB Ealing Kulkarni-Johnston R et. al.
- Ealing Joint Strategic Needs Assessment: Musculoskeletal Health in Ealing 2017. LB Ealing and Ealing CCG. Bernstein I. et al.
<http://www.ealingccg.nhs.uk/media/136122/ealing-jsna-musculoskeletal-health-in-ealing-pre-publication-2017-12-15.pdf>
- North West London Collaboration of Clinical Commissioning Groups. *STP October submission 2016, NW London Sustainability and Transformation Plan*. NWL CCS; 2016. <https://www.healthnorthwestlondon.nhs.uk/documents/sustainability-and-transformation-plans-stps/stp-october-submission-2016>
- London Borough of Ealing. Ealing Corporate Plan 2018-22
https://www.ealing.gov.uk/downloads/download/233/corporate_plan
- Ealing CCG 2017 JHOSC frailty in Northwest London. NWL Clinical Commissioning Group Collaboration, Sustainable Transformation Programme

Resources

- Department of Health 2009 Falls and Fractures- Exercise Training to Prevent Falls. Produced by COI for the Department of Health (archived)
- Public Health England 2017 Falls and Fractures consensus statement. Supporting commissioning for prevention. Produced by Public Health England and National Falls Prevention Coordination Group member organisations. Jan 2017
<https://www.gov.uk/government/publications/falls-and-fractures-consensus-statement>
- Department of Health. *Start Active, Stay Active: A report on physical activity from the four home countries' Chief Medical Officers*. London: DH Physical Activity Team, 2011. https://www.sportengland.org/media/2928/dh_128210.pdf
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216370/dh_128210.pdf
- NIHR, CLAHRC, Yorkshire and Humber 2017? Development of an electronic Frailty Index. <http://clahrc-yh.nihr.ac.uk/our-themes/primary-care-based-management-of-frailty-in-older-people/projects/development-of-an-electronic-frailty-index-efi>
- NHS RightCare Heller M 2013: Falls and Fragility Fractures Pathway. Public Health England. National Osteoporosis Society. NHS Right Care
<https://www.england.nhs.uk/rightcare/products/pathways/falls-and-fragility-fractures-pathway/>
- Sport England. *Active People Survey Analysis Tool*.
<http://activepeople.sportengland.org>

Key references

- World Health Organisation 2015 World report on ageing and health. World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857;
http://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf?sequence=1
- NICE 2015 Dementia, disability and frailty in later life – mid-life approaches to delay or prevent onset. NG16, NICE guideline, October 2015
<https://www.nice.org.uk/guidance/ng16>
- British Geriatric Society 2014 Fit for frailty. Consensus best practice statement for the care of older people living in the community and outpatient settings. A report by the British Geriatric Society in association with the Royal College of General Practitioners and Age UK. London
- NHS England Older people living with frailty
<https://www.england.nhs.uk/ourwork/lit-op-eolc/older-people/frailty/>
- Public Health England Public Health Outcomes Framework,
<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>
- National Institute for Health and Care Excellence. Physical activity: brief advice for adults in primary care. NICE Public Health Guideline PH44. London: NICE; 2013.
<http://www.nice.org.uk/Guidance/PH44>
- Public Health England 2018 Guidance Falls prevention: cost-effective commissioning. A resource to help commissioners and communities provide cost-effective falls prevention activities. <https://www.gov.uk/government/publications/falls-prevention-cost-effective-commissioning>

Acknowledgements-

- **Author** Rutuja Kulkarni-Johnston, Consultant in Public Health, London Borough of Ealing kulkarnijohnstonr@ealing.gov.uk
- **Editor and contributions:** Dr Ian Bernstein, Clinical Lead, Ealing CCG, Mira Mangara and Jennifer Bull, Public Health Analysts, Usha Prema, Asst Director Unplanned Care, Ealing CCG, Lorna Fleming, Joint Manager Older People, Louise Taylor, Public Health Specialist, Dr Ruby Bains, Consultant in Public Health, Dr Sapna Chauhan, Public Health Specialist, Clare Brighton, Drug and Alcohol Programme Manager, Richard Shaw Principal Planning Officer and Lisa Watson, Housing Strategy and Policy Manager, London Borough of Ealing
- Design and layout: Public Health Department, London Borough of Camden