

PUBLIC HEALTH

Musculoskeletal Health Health Needs Assessment

Joint Strategic Needs Assessment
November 2018



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East Riding Musculoskeletal Health Needs Assessment

1 Summary of key points

- Musculoskeletal (MSK) conditions account for 22.1% of years lived with disability disease burden globally, and nationally 1/5 of people see their general practitioner about an MSK problem each year (Arthritis Research UK National Primary Care Centre, Keele University, 2009), accounting for up to 3 in 10 GP consultations (Department of Health, 2006). Low back pain is the single leading cause of disability.
- The term ‘MSK conditions’ comprises over 100 conditions that affect the bones, joints, muscles, spine and rarer autoimmune conditions and can be divided into three groups (Arthritis Research UK, 2018a):
 - (i) conditions of musculoskeletal pain (e.g. back pain and osteoarthritis),
 - (ii) inflammatory conditions (e.g. rheumatoid arthritis), and
 - (iii) osteoporosis and fragility conditions.
- The percentage of people reporting a long-term MSK problem
 - rises with age (3.4% for 18 to 24 year-olds, 42.0% for those aged 85 and older) (Public Health England, 2018a),
 - is more common in women (female prevalence 31.8%, male prevalence 25.9%) (Arthritis Research UK, 2018a),
 - is more common in deprived areas (prevalence 14.5% in the least deprived areas 17.1% in the most deprived areas) (Public Health England, 2018a),
 - has a substantial impact on quality of life (reduction in quality of life score of a third compared to people with no long-term conditions) (Public Health England, 2018a),
 - is associated with physical inactivity (37.9% of people aged 40-60 with long term pain are inactive compared to 16.7% of people with no disability or illness) (Public Health England, 2017a),
 - affects people’s ability to work (people with MSK conditions are less likely to be employed than people in good health, 8.9 million days are lost nationally due to work-related MSK disorders, back problems are the second most common diagnosis on fit notes) (Health and Safety Executive, 2018), and
 - has substantial wider economic costs (wider economic costs of combined osteoarthritis and rheumatoid arthritis are £30.7 billion per year, health and hospital costs of £6.1 billion (Oxford Economics, 2010).
- MSK problems have been described by the Chief Medical Officer for England as an unrecognised public health problem and there is a misconception that ‘nothing much can be done’ if you have arthritis (Arthritis Research UK, 2016). Many local authorities have not specifically considered MSK conditions as part of their Joint Health and Wellbeing Strategy or Joint Strategic Needs Assessment (Arthritis Research UK, 2015).
- There is international, European, national, regional and local interest in addressing this problem. The World Health Organisation (WHO) has a Global strategy and action plan on ageing and health and at a European level an Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European region 2016-2025 (World Health Organisation, 2016b). Nationally the Arthritis and Musculoskeletal Alliance (ARMA) umbrella body of 40 organisations aims to transform the lives of



people with MSK conditions living in the UK and there are National Institute for Health and Care Excellence (NICE) Quality Standards for each of the three major groups of conditions. Regionally there is a Humber, Coast and Vale Sustainability and Transformation Plan (STP) with a specific back pain programme. Locally there are substantial ongoing changes by the East Riding Clinical Commissioning Group (CCG) to alter the management for people with MSK conditions including Get Help Sooner (a care navigation system) and introduction of First Care Practitioners as the first point of contact rather than the general practitioner, and working with leisure services to provide structured community rehabilitation programmes.

- This health needs assessment aims to assess the needs of the population of the East Riding of Yorkshire with respect to MSK conditions, to support programmes of work within the CCG and STP. It fits with the East Riding Joint Strategic Needs Assessment priority areas of ‘isolation and loneliness’ due to isolation secondary to immobility and pain, and ‘mental and emotional health across the lifecourse’ as MSK conditions are associated with an increased risk of mental health problems.
- The East Riding of Yorkshire Council is a predominantly rural area in Yorkshire of 338,061 people, who generally have better health and longer life expectancy than the England average (East Riding Data Observatory, 2018). There is a higher proportion of people aged over 65 than the England average (25.0% for East Riding of Yorkshire Council, 17.9% for England) and a higher dependency ratio (73.2% for the East Riding compared to 60.7% for England) meaning the East Riding has a higher proportion of non-working (dependents) than the rest of England (Public Health England, 2018b). Most residents of the East Riding are registered at general practices in the East Riding of Yorkshire Clinical Commissioning Group (CCG), except for those in the west of the East Riding (mostly in Pocklington).
- The East Riding of Yorkshire Council population has
 - A higher proportion of people that are overweight or obese compared to the England average (67.4% in the East Riding, 61.3% in England) and one of the highest levels when compared to similar areas (Public Health England, 2018c)
 - 22.9% of people are physically inactive (less than 30 minutes of moderate intensity exercise per week), similar to the England average (22.2%)(Public Health England, 2018c)
 - Lower smoking prevalence of 10.8% (England 14.9%)(Public Health England, 2018c)
 - Few areas of the most extreme deprivation (13 of 210 lower super output areas are in the most deprived Indices of Multiple Deprivation deciles; the areas of greatest deprivation are in Goole, Bridlington and Withernsea). Life expectancy is 6.9 years lower for men and 3.8 years lower for women in the most deprived areas of East Riding than in the least deprived areas (Public Health England, 2018b)
 - Low ethnic diversity (96.2% of East Riding residents described themselves as White British in 2011) (East Riding Data Observatory, 2018)
 - Lower prevalence of anxiety and depression reported in those with an MSK condition (18.7% for East Riding, 24.1% for England) and higher quality of life scores (0.614 for East Riding, 0.577 for England) (Public Health England, 2018c)
 - 1380 employment and support allowance and incapacity benefit and severe disablement allowance claimants for MSK conditions, accounting for 14.3% of total claimants for these benefits in the East Riding (Office for National Statistics, 2017)



- MSK disease prevalence in the East Riding of Yorkshire Council population:
 - Is significantly higher for self-reported MSK conditions (17.9% for East Riding, 16.5% for England) (Public Health England, 2018c)
 - There are an estimated 63,808 people (19%, statistically significantly higher than the England average) living in the East Riding of Yorkshire Council area with back pain; 24,354 males (male prevalence 14.8%) and 39,455 females (female prevalence 23.0%); 9,428 are aged under 35 years (14.8%), 30,524 are aged 35 to 64 years (47.8%), 23,856 are aged 65 years and over (37.4%); overall 39,938 (11.9%) have severe back pain (Arthritis Research UK, 2018b)
 - There are an estimated 18,912 people aged 45 and over (10.9%, statistically similar to the England average) with hip osteoarthritis; 5,618 have severe hip osteoarthritis (Arthritis Research UK, 2018b)
 - There are an estimated 31,716 people aged 45 and over (18.2%, statistically similar to the England average) with knee osteoarthritis, 10,789 have severe knee osteoarthritis (Arthritis Research UK, 2018b)
 - There are an estimated 436 people aged over 50 with osteoporosis in the East Riding (statistically significantly lower than the England average) (Arthritis Research UK, 2018b)
 - There are an estimated 2499 people over 16 with rheumatoid arthritis in the East Riding (prevalence 0.9%, significantly higher than the England average of 0.7%)(Arthritis Research UK, 2018b)
- Health service admissions (NHS England, 2016):
 - Day case admissions for back pain in the East Riding CCG significantly exceeds the five best comparator CCGs by a total of 798 admissions and emergency admissions by 38 admissions
 - Day case admissions for osteoarthritis in the East Riding CCG significantly exceeds the five best comparator CCGs by 220 admissions
 - Day case admissions for rheumatoid and inflammatory arthritis in the East Riding CCG significantly exceeds the five best comparator CCGs by 194 admissions
 - Day case admissions for osteoporosis and fragility fractures in the East Riding CCG significantly exceeds the five best comparator CCGs by 198 admissions
- Musculoskeletal spend (NHS England, 2016):
 - Total spend on MSK conditions in the East Riding CCG significantly exceeds the five best comparator CCGs by £4,425,000
 - Spend on back and radicular imaging in the East Riding CCG significantly exceeds the five best comparator CCGs by 43 procedures
 - Total primary care spend in the East Riding CCG on co-codamol (paracetamol and codeine phosphate, a mild opioid) significantly exceeds the five best comparator CCGs by £504,000
 - Total primary care spend in the East Riding CCG on opioid analgesics significantly exceeds the five best comparator CCGs by £135,000
 - Spend in the East Riding CCG on back pain injections significantly exceeds the five best comparator CCGs by 330 procedures, and radicular pain injections by 291 procedures
 - Spend in the East Riding CCG on drugs to prevent osteoporosis is significantly lower than the five best comparator CCGs



- Opportunities for health service improvement (NHS England, 2016)
 - The percentage of patients aged 50-74 with a fragility fracture and confirmed osteoporosis who are currently treated with an appropriate bone-sparing agent in the East Riding CCG population is 75.3%, which is statistically significantly lower (by 7 patients) than the best 5 comparable CCGs (84.0%) and is lower than the England average of 82.8%. There is wide variation by general practice from 37.5% to 100%.
 - The percentage of patients aged 75+ years with a fragility fracture treated with a bone sparing agent in East Riding CCG population is 59.3%, which is statistically significantly lower (by 44 patients) than the best five comparator CCGs (68.3%) and is lower than the England average (67.4%). There is wide variation by general practice from 33.3% to 100%.
 - The percentage of patients with rheumatoid arthritis who have had a review in the last 12 months is significantly lower in the East Riding CCG population (84.9%) than the five best comparator CCGs (86.8%) by 44 patients, but slightly higher than the England average (84.3%).

- Most patients completing a survey on MSK health by the East Riding CCG reported if they had a new or flare up of an existing MSK condition would go to their general practice first for help and advice. Most people chose seeing a physiotherapist (most popular choice) or a general practitioner (second most popular choice) as the best way to understand and manage their MSK condition, and a face-to-face discussion was preferred to telephone discussion.

- Leisure and lifestyle services:
 - There were 839 Exercise Referrals to East Riding Leisure in 2017/18 of which 472 (56.3%) cited muscle/joint problems as one of their medical problems and 109 (13%) where muscle/joint problems were their only referral reason. Of these, 101 (92.7%) were motivated to continue exercising, 100 (91.7%) described their health as having improved and 85 (78.0%) reported their mood had improved.
 - There have been 326 people referred for the Health Optimisation Programme from 17 October 2017 – 10 July 2018. 90 (27.6%) referrals were prior to a musculoskeletal intervention.
 - There were 1014 health trainer patient contacts in 2017/18. Reason for seeing a health trainer is a free text option and may be broad such as 'to improve health'. 'Pain' was specifically mentioned by 67 patients, 'mobility' by 50 patients, 'knees' by 41 patients, 'hip' by 34 patients and 'arthritis' by 18 patients.



2 Introduction

One in five people see their general practitioner about musculoskeletal (MSK) problems each year, second only to respiratory problems (Arthritis Research UK National Primary Care Centre, Keele University, 2009) and up to 30% of general practice consultations are for musculoskeletal problems (Department of Health, 2006).

The term ‘musculoskeletal conditions’ comprise over 100 MSK conditions and syndromes interfere with people’s abilities to carry out their normal daily activities (Arthritis Research UK, 2018a). Many people wrongly believe persistently painful joints and backs need rest (Gross et al., 2006) (Arthritis Research UK, 2013) and others do not realise the magnitude to which weight loss and physical activity may reduce pain and improve their quality of life (Slade et al., 2014) (Arthritis Research UK, 2013). The Chief Medical Officer for England has previously described MSK conditions as an unrecognised public health problem (Arthritis Research UK, 2016).

There has been a national and international call to action on this problem.

2.1 Musculoskeletal health – a public health approach

Arthritis Research UK (now “[Versus Arthritis](#)”) have called for a shift away from treating musculoskeletal *disease* to promoting musculoskeletal *health* (Arthritis Research UK, 2013). They held a [workshop](#) in 2013 bringing together national leaders from public health and musculoskeletal academic communities to consider a lifecourse approach to MSK health (Arthritis Research UK, 2013). They also made the following recommendations:

- *“When assessing local and national population health, MSK health must be included in the assessment*
- *When designing, implementing and evaluating programmes targeting lifestyle factors such as obesity and physical inactivity, impact on MSK health should be explicitly included*
- *When developing health promotion messages, the benefits of physical activity to people with MSK conditions should be emphasised*
- *All this public health activity must be underpinned by high quality data about MSK health”*

These recommendations will be considered throughout this health needs assessment on MSK health in the East Riding.

2.2 Global context

MSK conditions affect over 1.2 billion of the world’s population (Global Burden of Disease Study 2016) (Vos et al., 2017). Whilst MSK conditions only account of 0.157% of total deaths globally (Institute for Health and Metrics Evaluation, 2016), they are one of the three largest causes of non-fatal disease burden, accounting for 17.1% (15.3 – 18.9%) of global years lived with disability (Vos et al., 2017).

The World Health Organisation (WHO) recognises that MSK conditions contribute greatly to disability and has a [Global strategy and action plan on ageing and health](#) (World Health Organisation, 2018) (World Health Organisation, 2016a).

At a European level, the WHO have released an [Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European region 2016 – 2025](#). They recognised MSK conditions are the greatest cause of disability in the European Region, identify a gap around specific actions to target MSK conditions, and suggest a number of supporting actions to promote MSK health and oral health (another overlooked area) including (World Health Organisation, 2016b):



- “promote musculoskeletal health at all ages to improve physical function by increasing physical activity, reducing obesity and avoiding injuries”
- “improve oral and musculoskeletal health across the life-course by supporting children and adolescents through their families and peer groups and promoting oral and musculoskeletal health through preschool and school health programmes; integrating oral and musculoskeletal health with health promotion and occupational health in the workplace; introducing systematic oral and musculoskeletal health programmes for older people, including those living in residential care”
- “build musculoskeletal health systems that allow timely access to person-centred care of musculoskeletal conditions, focusing on early intervention to restore and maintain function, and that enable people to self-manage their musculoskeletal conditions; and increase awareness of what can be achieved”
- “strengthen surveillance; and develop a skilled and diverse workforce relevant to oral and musculoskeletal health”

Low back pain has been and remains to be the single leading cause of disability since it was first measured in 1990 (Vos et al., 2017), (World Health Organisation, 2018a). In March 2018, The Lancet, a world leading medical journal called for [global action on low back pain](#) (Buchbinder et al., 2018).

2.3 National Context

The [Musculoskeletal Services Framework](#) in 2006 aimed to support the improvement of care for people of all ages with MSK conditions (Department of Health, 2006).

The [Five Year Forward View](#), published by NHS England in 2014 set out the future vision for the NHS in the next 5 years including a radical upgrade in prevention and public health, patients who do need health services gaining greater control of their own care, and the NHS taking decisive steps to break down barriers in how care is provided (NHS, 2014).

Understanding the health needs and improving the care of people with MSK conditions fits with the [NHS outcomes framework](#), a series of high-level national outcomes focusing on improving health and reducing health inequalities.

Domain 2 – “Enhancing quality of life for people with long-term conditions” and

Domain 3 – “Helping people to recover from episodes of ill health or following injury” are of particular relevance (NHS Digital, 2018a).

It also fits with the [Adult Social Care Outcomes Framework](#), particularly

Domain 1 – “Enhancing quality of life for people with care and support needs” (NHS Digital, 2017).

However, the Arthritis Research UK report ‘[A Fair Assessment? Musculoskeletal conditions: the need for local prioritisation](#)’ found one in four local authorities (26%) have not included any mention of MSK conditions in their Joint Strategic Needs Assessment and only one local authority included osteoarthritis in their Joint Health and Wellbeing Strategy (Arthritis Research UK, 2015). They recognise there is often a misunderstanding that ‘nothing can be done’ if you have arthritis, but much can be done using a public health approach (Arthritis Research UK, 2015).

Arthritis Research UK subsequently produced the report ‘[State of musculoskeletal health 2018](#)’, a compendium of information on the burden and impact of musculoskeletal conditions



estimating there are 17.8 million people (28.9% of the total population) living with a musculoskeletal condition in the UK (Arthritis Research UK, 2018a). Patients presenting with MSK problems make up to 30% of primary care consultations and 10% of all general practitioner referrals (NHS England, 2017).

The [Health Profile for England: 2018](#) using data from the Global Burden of Disease Study found MSK conditions account for 22.1% of years lived with disability disease burden (Public Health England, 2018a). Musculoskeletal conditions account for around 9% of disability adjusted life years in the UK, yet in 2014 they only received 2.8% of research funding (Arthritis Research UK, 2018a), (UK Clinical Research Collaboration, 2015)

There is work being done to address this. The [Arthritis and Musculoskeletal Alliance](#) (ARMA) is an umbrella body of 40 member organisations in the UK aiming to transform the quality of life of people with MSK conditions, offering networks and a knowledge hub (Arthritis and Musculoskeletal Alliance, 2018). NHS England are working in partnership with the Arthritis and Musculoskeletal Alliance to support the development of national MSK improvement plans.

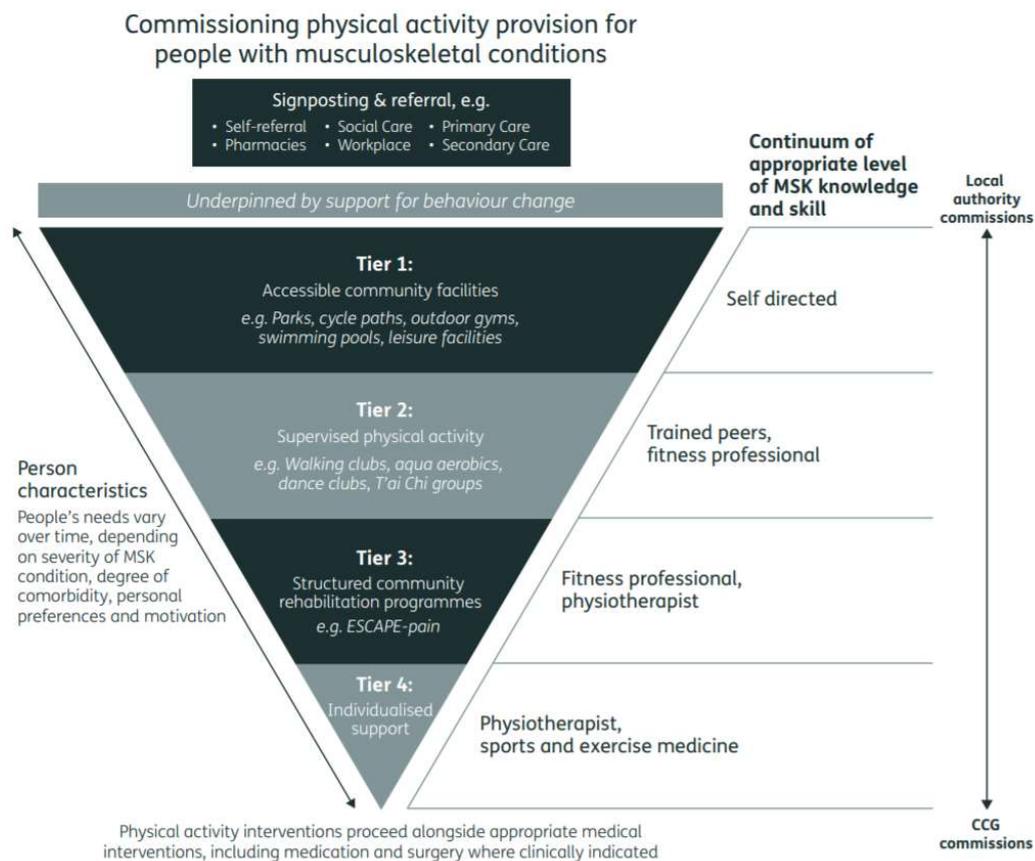
NHS England have published a handbook for local health and care systems “[Transforming musculoskeletal and orthopaedic elective care services](#)” (NHS England, 2017). It covers three themes: rethinking referrals (improving quality through advice and guidance, standardised pathways and referral templates); maximising shared decision making and self management support (improving access to self-management support and education for people with long term conditions); and transforming outpatients (offering patient-initiated, rapid access and virtual follow ups to better meet people’s needs and improve access to timely care). The identified opportunities for improvement are:

1. MSK clinical review and triage for local MSK referrals
2. Standardised referral template
3. First Contact Practitioner service
4. MSK self-management education
5. A patient passport to support people with MSK conditions to take an active role in their care, self-manage effectively and access support when they need it
6. Telephone follow-up

Arthritis Research UK, in partnership with NHS England, the Department of Health, and Public Health England and has published “[Providing physical activity interventions for people with musculoskeletal conditions](#)” that includes a musculoskeletal commissioning pyramid, setting out four tiers of provision that could be provided locally (Figure 1).



Figure 1. Four tiers of commissioning activity for people with MSK conditions (Arthritis Research UK, 2016)



Additional collaborative work between NHS England and partners such as Public Health England, ARMA, Arthritis Research UK and Health Education England include a core capabilities framework for [first point of contact practitioners](#), [musculoskeletal networks of care](#), a musculoskeletal workforce group and a [musculoskeletal indicators and musculoskeletal health questionnaire](#).

2.3.1 National quality standards

The National Institute for Health and Care Excellence (NICE) has published Quality Standards with quality statements for a range of MSK conditions.

2.3.1.1 [Low back pain and sciatica in over 16s](#)

There are six quality statements (National Institute for Health and Care Excellence, 2017a):

[Statement 1](#) Primary care services have an approach to risk stratification for young people and adults presenting with a new episode of low back pain with or without sciatica.

[Statement 2](#) Young people and adults with low back pain with or without sciatica do not have imaging requested by a non-specialist service unless serious underlying pathology is suspected.

[Statement 3](#) Young people and adults with low back pain with or without sciatica are given advice and information to self-manage their condition.

[Statement 4](#) Young people and adults are not given paracetamol alone, anticonvulsants or antidepressants to treat low back pain without sciatica.



[Statement 5](#) Young people and adults are not given opioids to treat chronic low back pain without sciatica.

[Statement 6](#) Young people and adults do not have spinal injections for low back pain without sciatica with the exception of radiofrequency denervation for people who meet the criteria.

2.3.1.2 [Osteoarthritis](#)

There are eight quality statements (National Institute for Health and Care Excellence, 2015):

[Statement 1](#). Adults aged 45 or over are diagnosed with osteoarthritis clinically without investigations if they have activity-related joint pain and any morning joint stiffness lasts no longer than 30 minutes.

[Statement 2](#). Adults newly diagnosed with osteoarthritis have an assessment that includes pain, impact on daily activities and quality of life.

[Statement 3](#). Adults with osteoarthritis participate in developing a self-management plan that directs them to any support they may need.

[Statement 4](#). Adults with osteoarthritis are advised to participate in muscle strengthening and aerobic exercise.

[Statement 5](#). Adults with osteoarthritis who are overweight or obese are offered support to lose weight.

[Statement 6](#). Adults with osteoarthritis discuss and agree the timing of their next review with their primary healthcare team.

[Statement 7](#). Adults with osteoarthritis are supported with non-surgical core treatments for at least 3 months before any referral for consideration of joint surgery.

[Statement 8](#). Healthcare professionals do not use scoring tools to identify which adults with osteoarthritis are eligible for referral for consideration of joint surgery.

2.3.1.3 [Osteoporosis](#)

There are four quality standards (National Institute for Health and Care Excellence, 2017b):

[Statement 1](#) Adults who have had a fragility fracture or use systemic glucocorticoids or have a history of falls have an assessment of their fracture risk.

[Statement 2](#) Adults at high risk of fragility fracture are offered drug treatment to reduce fracture risk.

[Statement 3](#) Adults prescribed drug treatment to reduce fracture risk are asked about adverse effects and adherence to treatment at each medication review.

[Statement 4](#) Adults having long-term bisphosphonate therapy have a review of the need for continuing treatment.

2.3.1.4 [Rheumatoid arthritis in over 16s](#)

There are seven quality standards (National Institute for Health and Care Excellence, 2018):

[Statement 1](#) People with suspected persistent synovitis affecting the small joints of the hands or feet, or more than one joint, are referred to a rheumatology service within 3 working days of presentation.

[Statement 2](#) People with suspected persistent synovitis are assessed in a rheumatology service within 3 weeks of referral.

[Statement 3](#) People with newly diagnosed rheumatoid arthritis are offered conventional disease-modifying anti-rheumatic drug (cDMARD) monotherapy within 3 months of onset of persistent symptoms.

[Statement 4](#) People with rheumatoid arthritis are offered educational and self-management activities within 1 month of diagnosis.

[Statement 5](#) People who have active rheumatoid arthritis have their C-reactive protein (CRP) and disease activity measured monthly in specialist care until they are in remission or have low disease activity.



[Statement 6](#) People with rheumatoid arthritis and disease flares or possible drug related side effects receive advice within 1 working day of contacting the rheumatology service.

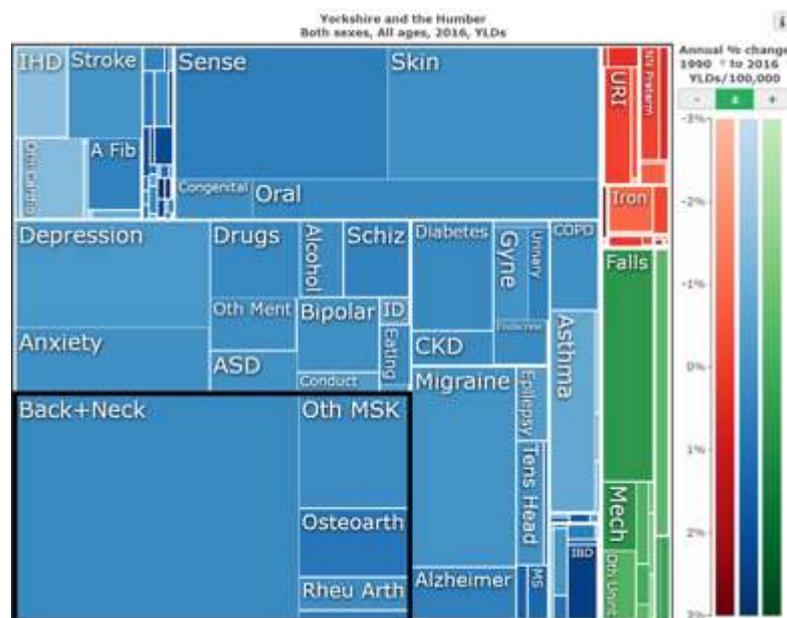
[Statement 7](#) People with rheumatoid arthritis have a comprehensive annual review that is coordinated by the rheumatology service.

2.4 Regional context

2.4.1 Disease Burden

The [Global Burden of Disease Study](#) shows MSK conditions account for 23.84% of all years lived with disability in Yorkshire and the Humber (Figure 2) of which low back and neck pain account for 17.11%, osteoarthritis for 2.05%, rheumatoid arthritis 1.01%, gout 0.28% and other MSK conditions 3.39% (Institute for Health and Metrics Evaluation, 2016).

Figure 2. Years lived with disability in Yorkshire and the Humber by condition according to the Global Burden of Disease Study (2016) (Institute for Health and Metrics Evaluation, 2016)



The [Humber, Coast and Vale Sustainability and Transformation Plan \(STP\)](#) sets out how the Five Year Forward View will be met at a local level by 2020/21 (East Riding of Yorkshire Clinical Commissioning Group, 2016).

They identify the following priorities:

- “Helping people stay well”
- “Place based care”
- “Creating the best hospital care”
- “Supporting people with mental health problems”
- “Strategic commissioning”
- “Helping people through cancer”

There are an estimated 242,610 patients with back pain in the STP area (Arthritis Research UK, 2018b) and the STP has a specific back pain programme to share learning, identify similar opportunities and plans, share resources, enable clinician networking and partner with organisations.



2.5 Local context

2.5.1 The East Riding of Yorkshire Council population

The East Riding of Yorkshire Council covers an area of approximately 930 square miles (East Riding Data Observatory, 2018). Estimates from the Office for National Statistics classify it as approximately 93% rural by area and 44% by population (East Riding Data Observatory, 2018). The mid-2017 population estimate was 338,061 (East Riding Data Observatory, 2018). Health of people in the East Riding of Yorkshire is generally better than the England average (Public Health England, 2018b). Life expectancy in years at birth for males is 80.1 (England 79.5) and for females is 83.5 (England 83.1) (Public Health England, 2018b).

Figure 3. Map of the East Riding of Yorkshire Council area (East Riding Data Observatory, 2018)



2.5.2 The East Riding of Yorkshire Clinical Commissioning Group (CCG) population

Most people in the East Riding of Yorkshire Council are registered with a general practice in the East Riding of Yorkshire Clinical Commissioning Group (Figure 4).

The East Riding of Yorkshire CCG had 301,587 patients registered with general practices in January 2017, and an estimated resident population (mid-2012 estimate) of 313,386 (East Riding of Yorkshire Clinical Commissioning Group, 2018a).



Figure 4. Map of the East Riding of Yorkshire Clinical Commissioning Group (CCG) (CCG shown by orange border, purple and blue lines show additional council border) (Strategic Health Asset Planning and Evaluation, 2018).



Pocklington group practice, to the west side of the local authority area, is part of the Vale of York CCG.

There are significant ongoing changes by the East Riding CCG to alter management for patients with MSK conditions. There is a CCG Rightcare lead for MSK conditions and general practitioner (GP) with a specific role in the CCG to improve care for patients with MSK conditions. Changes include introduction of Get Help Sonner, a care navigation system in which GP appointments will be triaged by reception at the time of making an appointment and patients with an MSK problem can be directed to see a first care practitioner (usually a physiotherapist) as the first point of contact rather than general practitioner. In addition, there is work ongoing with leisure services to provide structured community rehabilitation programmes.

3 The East Riding Joint Strategic Needs Assessment

The Joint Strategic Needs Assessment is designed to establish shared, evidence-based consensus on key local priorities to inform the development of a Health and Wellbeing Strategy for the area. It is a ‘process’ and compilation of individual needs assessments which fall under priority areas chosen by key stakeholders and is not one single whole document. The current [East Riding Joint Strategic Needs Assessment](#) priority areas are (East Riding Data Observatory, 2015):

- Parenting
- Unpaid carers
- Isolation and loneliness
- Mental and emotional health across the lifecourse.

This health needs assessment for people with musculoskeletal conditions is relevant to these priority areas because of the isolation and loneliness associated with pain and poor mobility, and the mental and emotional impacts from poor musculoskeletal health.



4 Aims and objectives

4.1 Aim

The overall aim of this Health Needs Assessment is to assess the needs of the population of the East Riding of Yorkshire with respect to musculoskeletal conditions.

4.2 Objectives

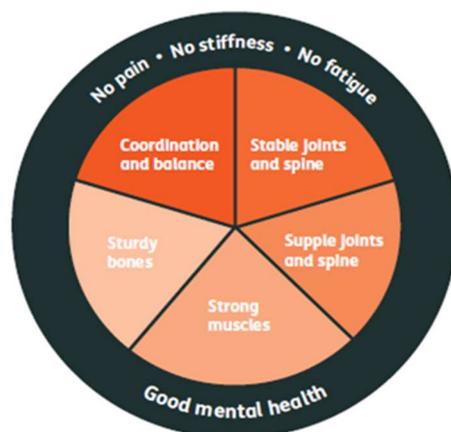
The objectives are:

1. To identify demographic features and prevalence of risk factors for MSK conditions in the East Riding
2. To identify the prevalence of each of the main groups of MSK conditions in the East Riding
3. To quantify current expressed needs in terms of hospital service use
4. To analyse health needs in the context of NICE Quality Standards for each of the main groups of conditions
5. To identify what data is available, appraise the evidence and identify where there are gaps
6. To make recommendations for further action.

5 What contributes to musculoskeletal health?

Arthritis Research UK describe several factors are needed for MSK health. Joints and the spine need to be stable and supple to support the body and carry out movements, muscles need to be strong enough to provide power for movement, bones need to be strong enough to withstand mild forces without breaking, nerves need to be healthy and provide co-ordination and balance, and good mental health is needed to provide energy and motivation to be physically active (Figure 5) (Arthritis Research UK, 2013).

Figure 5. Factors comprising MSK health (reproduced from “[Musculoskeletal health, a public health approach](#)”, Arthritis Research UK, 2013)



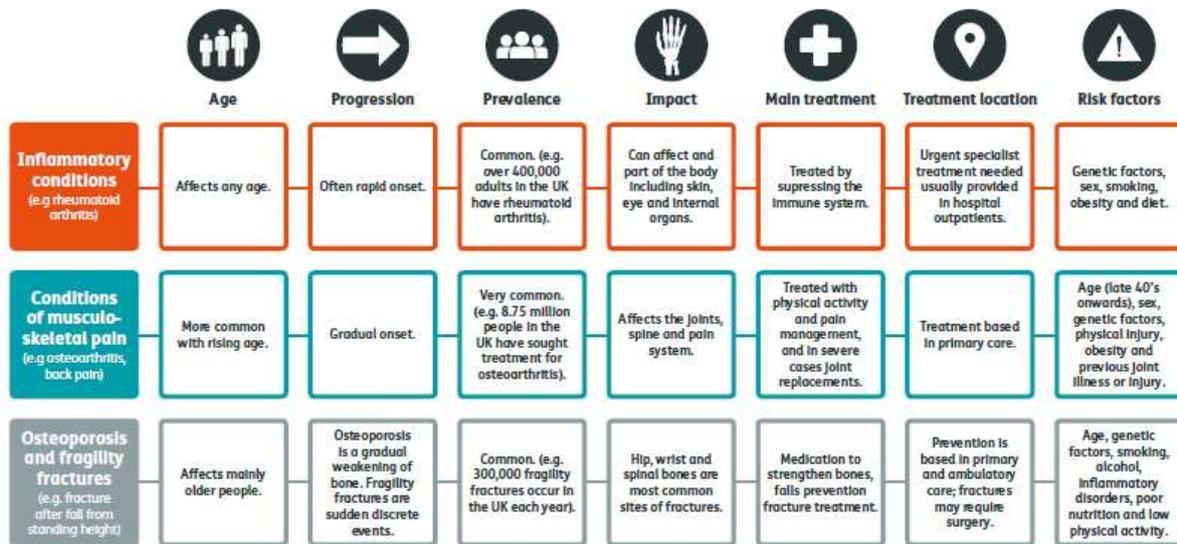
5.1 Key MSK conditions

MSK conditions affect the bones, joints, muscles and spine as well as rarer autoimmune conditions such as lupus (Arthritis Research UK, 2018a) and can broadly be divided into three groups: conditions of musculoskeletal pain, inflammatory conditions, and osteoporosis and fragility conditions (Arthritis Research UK, 2015). Typical disease factors for each of these



major groups such as age affected, progression, prevalence, impact, treatments and risk factors are show in Figure 6.

Figure 6. Typical factors of MSK conditions by group: inflammatory conditions, conditions of MSK pain, and osteoporosis and fragility fractures (reproduced from “[State of Musculoskeletal Health](#)”, (Arthritis Research UK, 2018a)



5.2 Age

The percentage of people reporting a long-term MSK problem significantly rises with age – 3.4% of 18 to 24 year-olds in England report an MSK condition compared with 42.0% in those aged 85 and over (Public Health England, 2018a). Of those that have an MSK condition, 2.7million (15.4%) are aged under 35 years, 9.1 million (51.1%) are aged 35 to 64 years and 6.0 million (33.5%) are aged 65 and over (Arthritis Research UK, 2018a).

5.3 Sex

More women in the UK have MSK conditions than men, as prevalence estimates suggest 10.1 million females have MSK conditions (female prevalence 31.8%) compared with 7.7 million males (male prevalence 25.9%) (Arthritis Research UK, 2018a).

5.4 Deprivation

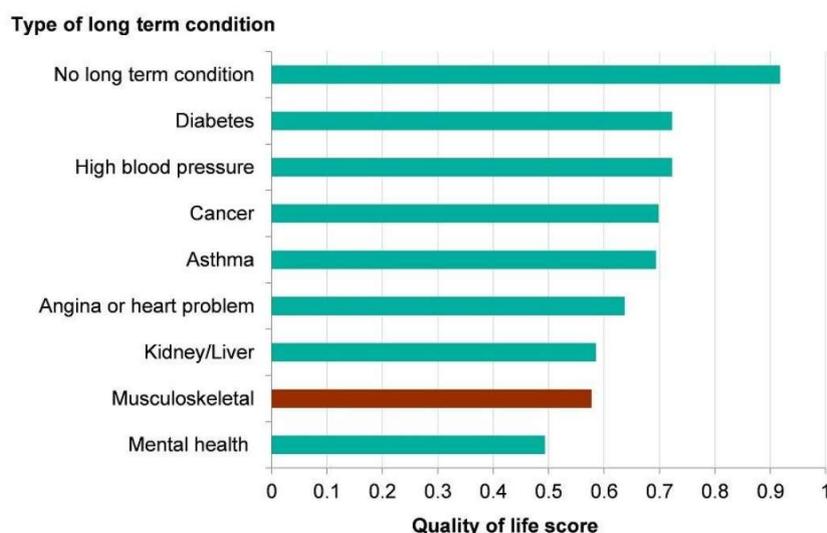
There are health inequalities in the prevalence of long-term MSK conditions by deprivation. Those in the least deprived areas had a prevalence of 14.5% compared to 17.1% in the most deprived areas (Public Health England, 2018a).

5.5 Impact on quality of life

MSK conditions have the second biggest impact on quality of life according to self-reported impact by patients completing the GP Survey when comparing long-term conditions, second only to mental health conditions. The [Health Profile for England: 2018](#) found Quality of life measured using the EQ-5D (a standardised instrument for measuring health status that uses a scale of 0 to 1) for people with a long-term MSK condition is 0.58 compared with a better score of 0.92 for those without a long-term condition, a difference of 0.34 (Figure 7) (Public Health England, 2018a).



Figure 7. Average quality of life scores for adults with a self-reported long term condition in England (2016/17) (Public Health England, 2018a)



Source: PHE Analysis of General Practitioner Patient Survey (GPPS)

5.6 Age, sex and deprivation

There are substantial health inequalities regarding back pain in people of working age (45-64), as those in the most deprived areas are nearly twice as likely to report back pain (17.7%) compared to those in the least deprived (9.1%). Prevalence increases and inequalities narrow with age such that for those aged 75+ prevalence in the most deprived group is 18.6% and in the least deprived 15.1% (Arthritis Research UK, 2017) (Arthritis Research UK, 2018a).

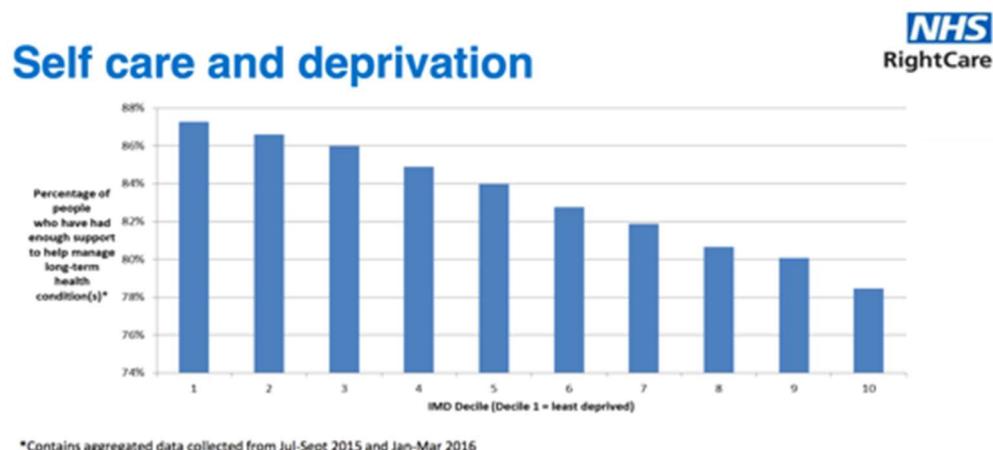
The prevalence of arthritis is more than double in most deprived areas (21.5%) compared to the least deprived areas (10.6%) among people aged 45-64 (Arthritis Research UK, 2017) (Arthritis Research UK, 2018a). 40% of men and 44% of women in the most deprived households report chronic pain, compared to 24% of men and 30% of women in the richest households (Arthritis Research UK, 2018a) (NHS Digital, 2012).

5.7 Self-care and deprivation

More than a third (35%) of people living with long-term conditions have low or very low levels of knowledge, skills and confidence to self-care (NHS Rightcare and Public Health England, 2016). There is a negative correlation between deprivation and the proportion of people who feel supported to manage their condition, highlighting that patients in more deprived areas are less likely to feel as supported to manage their condition than those in areas with less deprivation (Figure 8) (NHS Rightcare and Public Health England, 2016).



Figure 8. Percentage of people who feel they have had enough support to help manage their long-term health condition(s) by indices of multiple deprivation (IMD) decile (NHS Rightcare and Public Health England, 2016)



5.8 Physical activity

People who are inactive are at an increased risk of developing a painful MSK condition in later life. Exercise has been found to be effective for preventing low back pain (Steffens et al., 2016). 37.9% of people aged 40-60 with long term pain are inactive compared to 16.7% of people with no disability or illness (Public Health England, 2017a).

5.9 Mental illness

MSK conditions are closely linked to mental illness, as people with long-term MSK conditions are almost twice as likely to report feeling anxious or depressed on a given day than the general population (24.1% compared with 13.7%) (Public Health England, 2018a).

5.10 MSK issues relating to the working aged population

People with MSK conditions are less likely to be employed than people in good health, and are more likely to retire early (Schofield et al., 2013). 507,000 workers were suffering from work-related MSK disorders in 2016/17 and 8.9 million working days were lost due to work-related MSK disorders (Health and Safety Executive, 2018).

Back problems are the second most common diagnosis on fit notes from general practitioners (9.4%), second to mental health disorders (35.1%). Other MSK problems account for 4.5% and injury a further 4.4%. Whilst 72% of all fit notes issued by general practitioners are for four weeks or less, over 43% of fit notes issued to patients suffering a musculoskeletal disease other than a back problem are for over four weeks duration (Department for Work and Pensions, 2013).

5.11 Wider economic costs

The wider economic costs to the UK economy of combined osteoarthritis and rheumatoid arthritis are estimated to be £30.7 billion per year, of which £6.1 billion are on hospital and other health costs (Oxford Economics, 2010).

5.12 MSK pain and opioid use

MSK pain is linked with opioid use. A study of patients with chronic MSK pain in the UK found 59% of patients were taking opioids, 53% of the drugs prescribed were for strong opioids, and 40% of patients receiving opioids for chronic MSK pain may have been overprescribed (Ashaye et al., 2018). There is substantial national interest in opioid prescribing, and in January



2018 the government commissioned Public Health England to undertake a landmark review into prescription drug addiction (Department of Health and Social Care, 2018).

6 Level of need within the East Riding

6.1 Demographics and risk factors

6.1.1 Age and sex

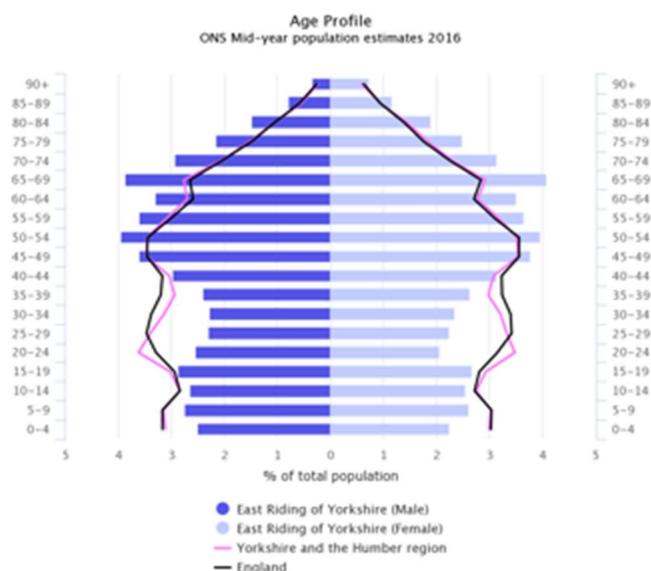
Population groups may have different health and social care needs according to their age. As highlighted above (page 18), the proportion of people reporting an MSK condition increases with age. The East Riding of Yorkshire Council population has a higher proportion of people aged over 65 than the England average (Table 1) (Public Health England, 2018b). In 2015, the dependency ratio ((dependents / working population) x 100) was 73.2% in the East Riding compared to 60.7% in England (Public Health England, 2017b), meaning the East Riding population has a higher proportion of non-working (dependents) than the rest of England.

Table 1. Population breakdown by age (2016) (Public Health England, 2018b)

	East Riding of Yorkshire Council	England
% population under 18	18.6%	21.3%
% population aged 18-64	56.4%	60.8%
% population aged 65+	25.0%	17.9%

Source: Office for National Statistics

Figure 9. Age profile of the East Riding of Yorkshire Council (Public Health England, 2018c)

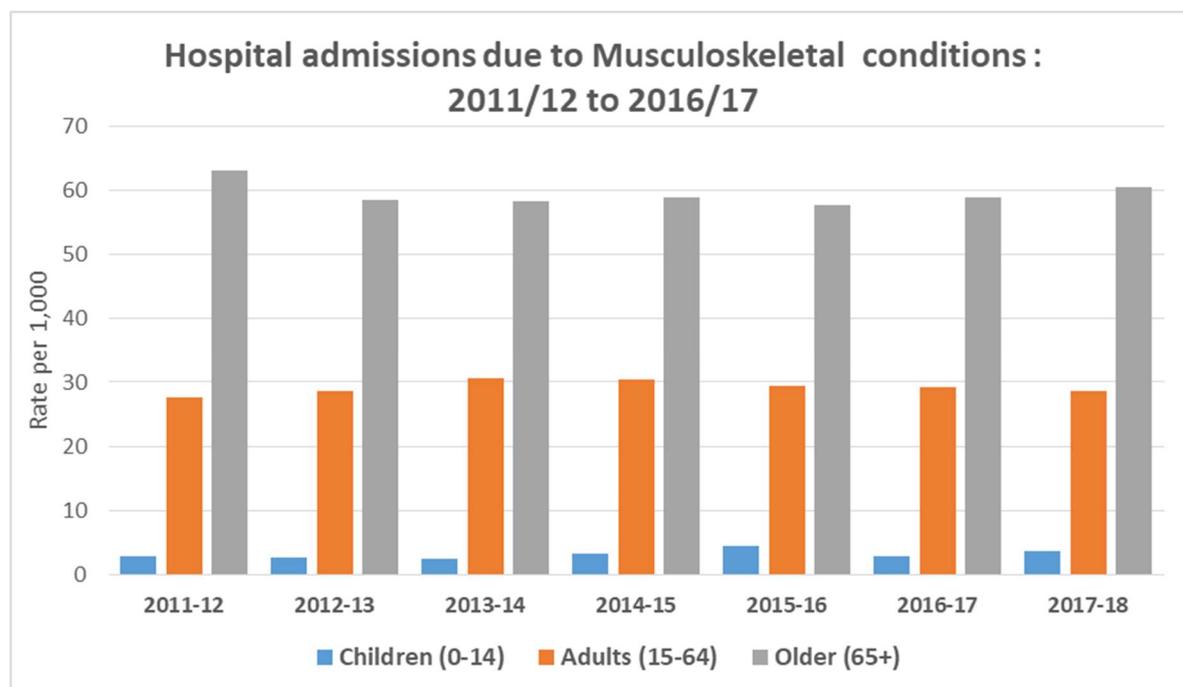


6.1.2 Association of age and hospital admissions:

The number of hospital admissions related to musculoskeletal conditions (ICD10 M00-M99) increases as the age increases (Figure 10). On average per year during 2011/12 to 2017/18 there were 3.2 per 1,000 (163 admissions) in children aged 0-14 yrs, 29 per 1,000 (6000 admissions) in working age adults, 15-64 yrs. and 59.4 per 1,000 (4723 admissions) in older people aged 65+ (NHS digital, 2018).



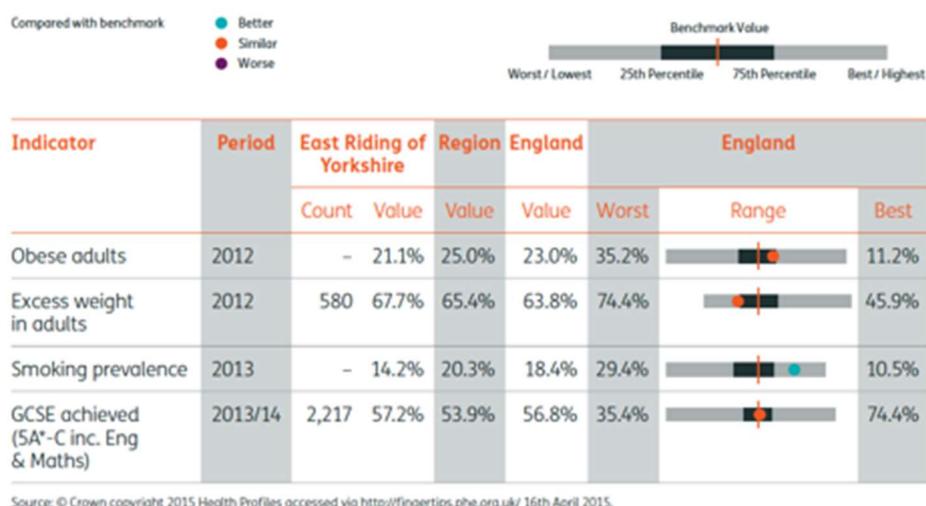
Figure 10. Hospital admissions due to musculoskeletal conditions



6.1.3 Risk factors specific for back pain

Arthritis Research UK provide [bulletins](#) for each local authority area of risk factors for back pain. Their modelling found back pain is related to age, sex, socioeconomic status, body mass index, smoking status and education (Arthritis Research UK and Public Health England, 2018). The bulletin for the East Riding of Yorkshire Council was written in 2015 based on data from 2012 and 2013/14. It found the East Riding had a similar proportion of adults who are overweight or obese compared to the England average, similar education levels and a statistically significantly lower smoking prevalence (Figure 11).

Figure 11. Indicators showing how East Riding of Yorkshire Council compares to England for risk factors relevant to back pain (Arthritis Research UK and Public Health England, 2018)



Many of these indicators have been updated by more recent data, as detailed below.



6.1.4 Obesity

More than two-thirds (67.4%) of adults in the East Riding are overweight or obese, this is statistically significantly higher than the England average (61.3%), higher than the Yorkshire and the Humber average (65.3%) (Figure 12) and one of the highest levels of overweight or obesity when compared to statistically similar neighbours (Figure 13) (Public Health England, 2018c).

Figure 12. Percentage of overweight or obese adults (aged 18+) in the East Riding of Yorkshire Council compared with other areas in Yorkshire and the Humber (Public Health England, 2018c)

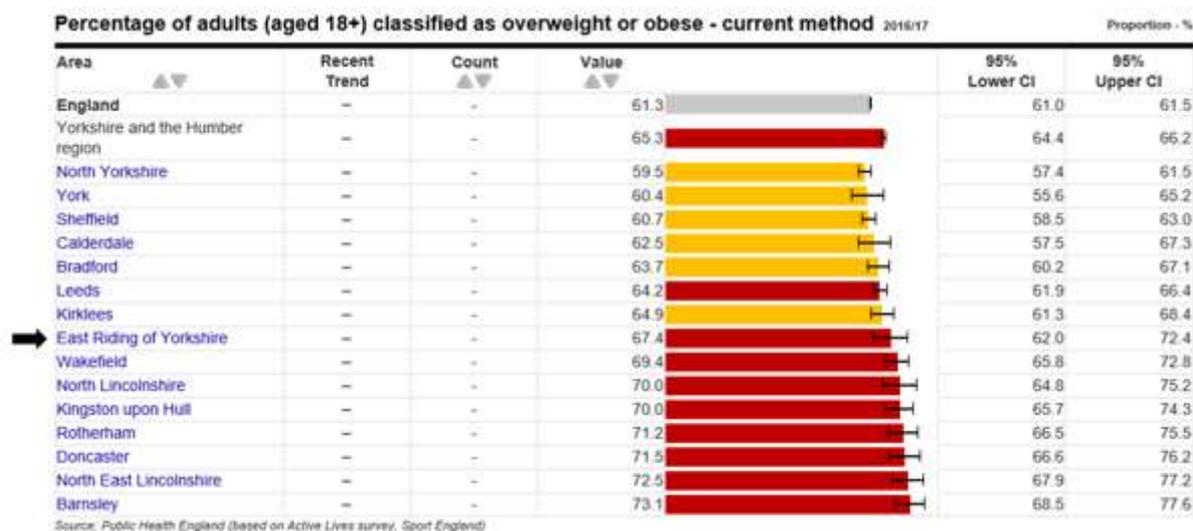
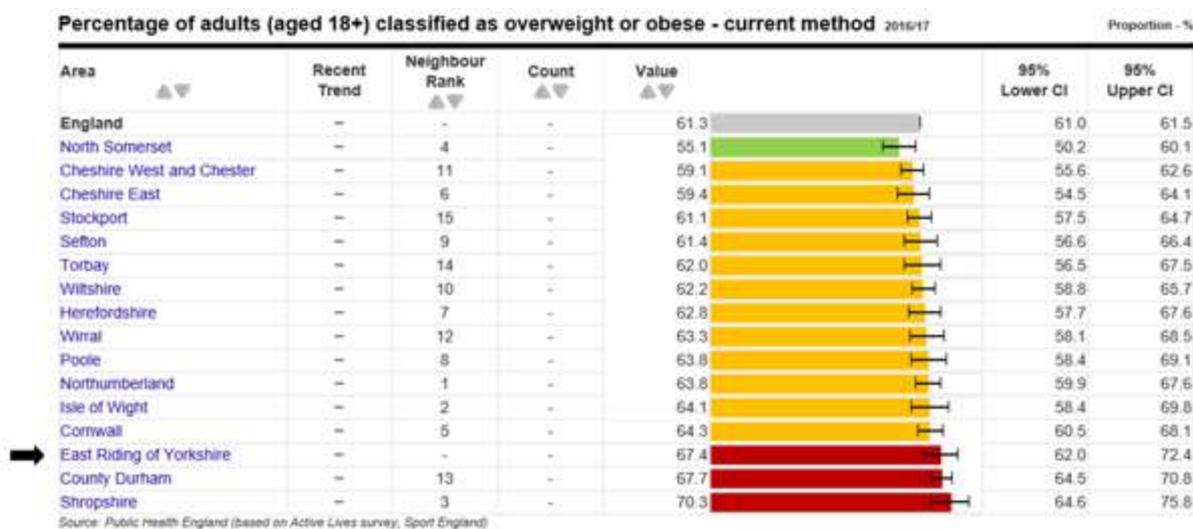


Figure 13. Percentage of overweight or obese adults (aged 18+) in the East Riding of Yorkshire Council compared with other statistically similar areas in England (Public Health England, 2018c)



There has been a change in the method used to define the percentage of adults (aged 18+) classified as overweight or obese, as the Active People Survey was replaced by the Active Lives Survey in 2016, resulting in a change in questions asked and mode of response (from telephone to online or paper completion) (Public Health England, 2018c).

Trends in obesity levels in the East Riding are shown in Figure 14 (Public Health England, 2018c)



Figure 14. Percentage of adults (aged 18+) classified as overweight or obese in the East Riding of Yorkshire Council from 2015/16 to 2016/17 (Public Health England, 2018c)



6.1.5 Physical activity

More than one in five adults (22.9%) in the East Riding in 2016/17 were physically inactive (less than 30 minutes of moderate intensity equivalent minutes per week) which is higher but not statistically significantly different from the England average (22.2%) (Figure 15) (Public Health England, 2018c). The trend in number of people who are physically inactive has been relatively static from 2015/16 to 2016/17 (Figure 16) (Public Health England, 2018c).

Figure 15. Percentage of physically inactive adults in the East Riding of Yorkshire Council compared with other areas in Yorkshire and the Humber 2016/17 (Public Health England, 2018c)

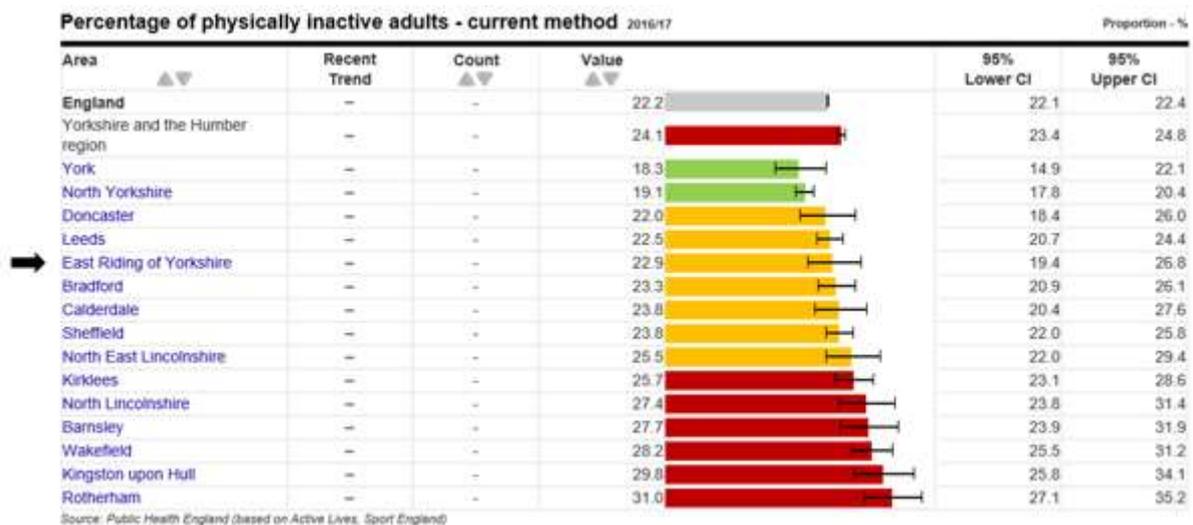
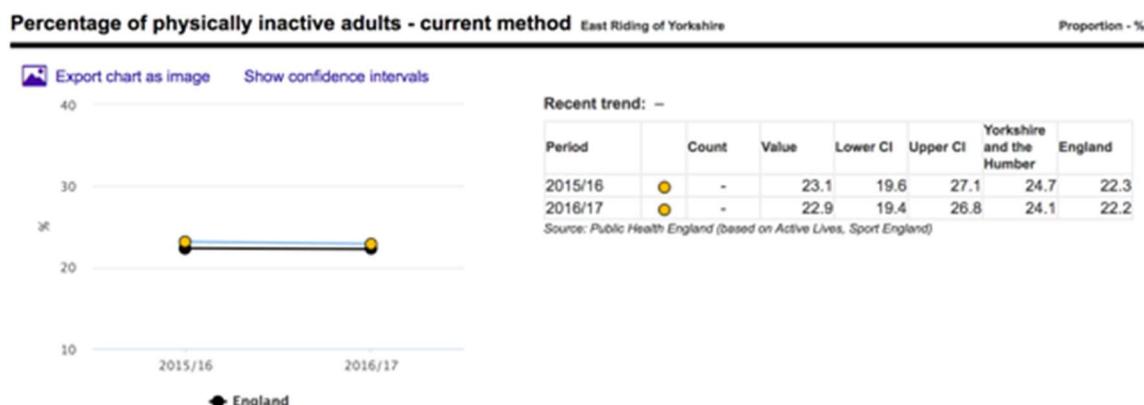


Figure 16. Percentage of physically inactive adults in the East Riding of Yorkshire Council 2015/16 to 2016/17 (Public Health England, 2018c)

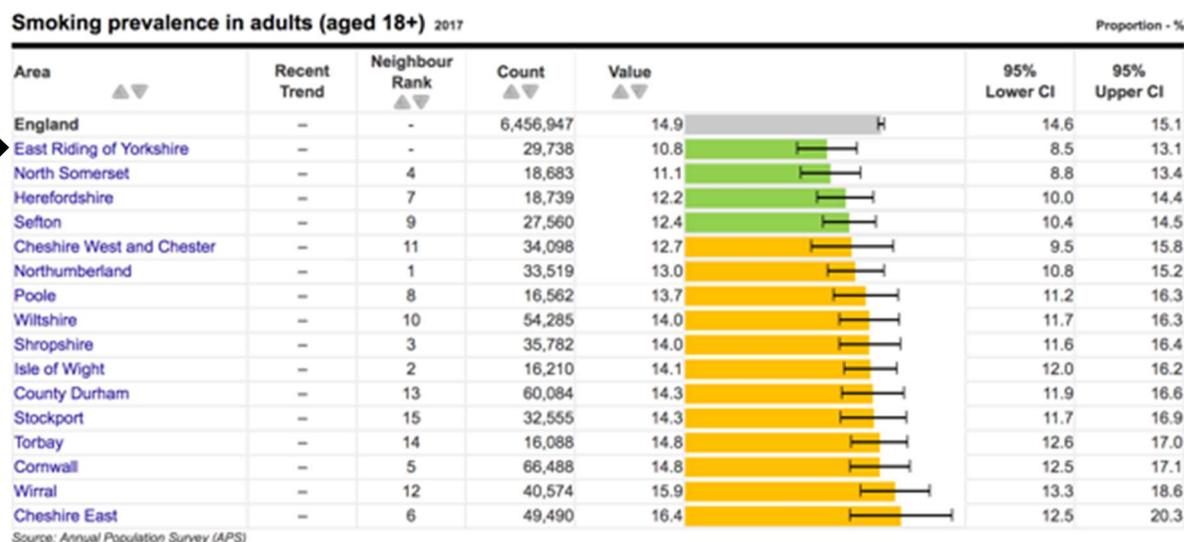


In 2014/15, 50.3% of adults in the East Riding reported doing any walking at least five times a week, which is similar to percentage for Yorkshire and Humber (50.0%) and whole of England (50.6%) (Public Health England, 2018c).

6.1.6 Smoking

Smoking prevalence in the East Riding of Yorkshire Council is statistically significantly lower than the England average and is lower than all other statistically similar areas in England (Figure 17) (Public Health England, 2018c).

Figure 17. Smoking prevalence in the East Riding of Yorkshire Council compared with other statistically similar areas in England (Public Health England, 2018c)



6.1.7 Inequalities

East Riding of Yorkshire Council comprises 210 lower super output areas, of which 13 are in the most deprived national Indices of Multiple Deprivation deciles (Table 2) (Ministry of Housing, Communities and local Government, 2015).

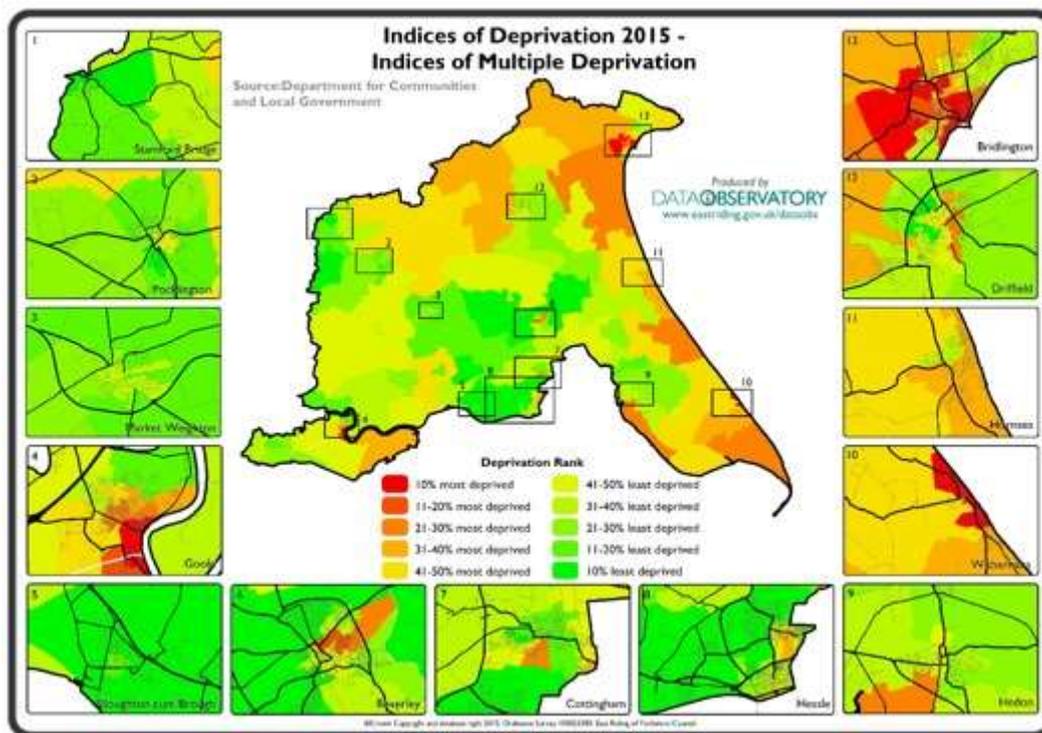


Table 2. Number of lower super output areas in the East Riding of Yorkshire Council of each of the Indices of Multiple Deprivation deciles (Ministry of Housing, Communities and local Government, 2015)

IMD Decile	Lower Super Output Area
1 (most deprived)	13
2	4
3	14
4	16
5	16
6	25
7	32
8	24
9	23
10 (least deprived)	43
Total	210

The areas with lower super output areas of greatest deprivation are in Goole, Bridlington and Withernsea (Figure 18).

Figure 18. Map of Indices of Multiple Deprivation in the East Riding of Yorkshire Council.

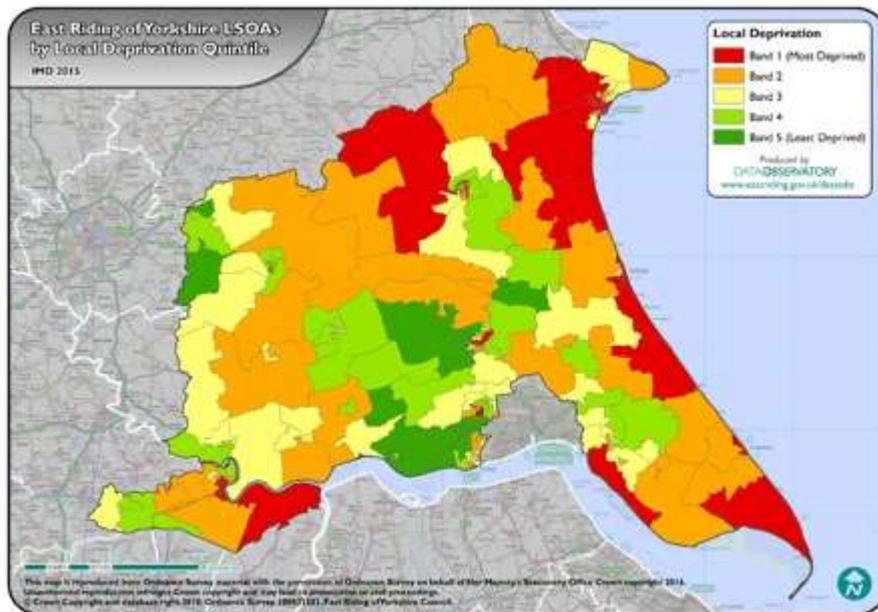


Life expectancy for both men and women in the East Riding is higher than the England average (page 15). Life expectancy is 6.9 years lower for men and 3.8 years lower for women in the most deprived areas of East Riding than in the least deprived areas (Public Health England, 2018b).

When all the lower super output areas of East Riding are ranked from most deprived to least deprived and divided into bands, this highlights the comparative areas of greatest deprivation (Figure 19).



Figure 19. Map of relative bands of deprivation in the East Riding of Yorkshire Council.



6.1.8 Ethnicity

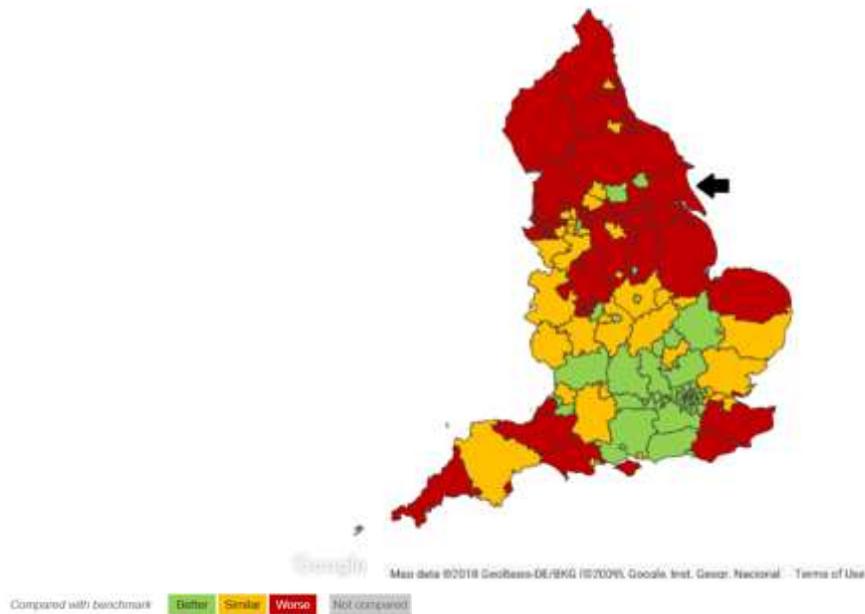
There is low ethnic diversity, as 96.2% of East Riding residents classed themselves as White British in 2011, a decrease of 1.4% since 2001. The largest non-White British groups are 1.6% Other White, 0.32% Indian and 0.27% White Irish (East Riding Data Observatory, 2018).

6.1.9 North-South divide

There is a north-south divide of percentage of people reporting an MSK condition with generally higher prevalence in northern areas (Figure 20) (Public Health England, 2018c).



Figure 20. Map of percentage of people across England reporting a long term MSK problem. The East Riding of Yorkshire Council is highlighted by the black arrow (Public Health England, 2018c)



6.1.10 Co-morbidities

The proportion of people in the East Riding of Yorkshire Council population reporting depression or anxiety is lower than the national average. The percentage of people with a long term MSK problem who also report depression or anxiety is also below the national average and average quality of life for adults in the East Riding reporting an MSK problem is statistically significantly better (Figure 21) (Public Health England, 2018c).

Figure 21. Percentage of people in the East Riding of Yorkshire Council reporting: a long term MSK problem, depression or anxiety, a long term MSK problem who also report depression or anxiety; and average health related quality of life scores for adults with a long term MSK problem (Public Health England, 2018c)



6.2 Sickness absence

There were 1380 employment and support allowance (benefits for people whose illness or disability affects their ability to work) claimants for MSK conditions in the East Riding in 2017



and 30 incapacity benefit and severe disablement allowance claimants, accounting for 14.3% of total claimants for these benefits in the East Riding (Office for National Statistics, 2017).

6.3 Disease prevalence

According to the GP Patient Survey, 17.9% of people reported a long-term MSK problem in the East Riding of Yorkshire Council population, which is statistically significantly higher than the England average of 16.5%, but near Yorkshire and Humber mean (17.4%) and median (Figure 22) and near the median when compared to statistically similar neighbours (Figure 23). The proportion of people reporting a long-term condition has fallen both nationally and in the East Riding since 2014/15, but the East Riding of Yorkshire Council population prevalence has been statistically significantly higher than the England average from 2014/15 to 2016/17 (Figure 24) (Public Health England, 2018c).

Further comparisons can be made using the [Public Health England health profiles tool](#) (Public Health England, 2018c).

Figure 22. Percentage of people in East Riding of Yorkshire Council reporting a long-term MSK problem compared to other areas in Yorkshire and the Humber (2016/17) (Public Health England, 2018c)



Figure 23. Percentage of people in East Riding of Yorkshire Council reporting a long-term MSK problem compared to other statistically similar areas (2016/17) (Public Health England, 2018c)

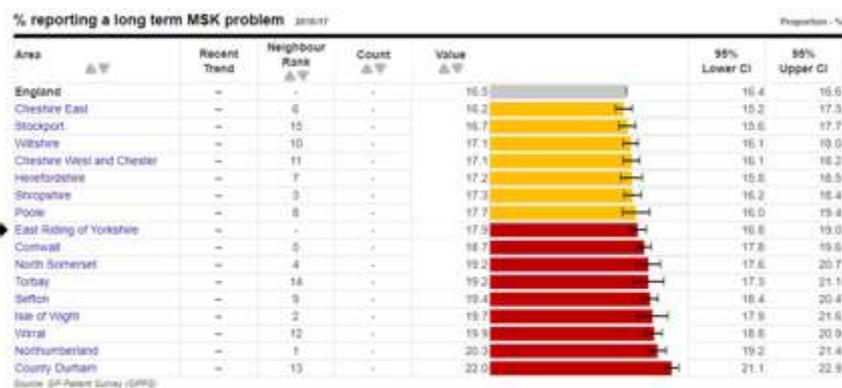
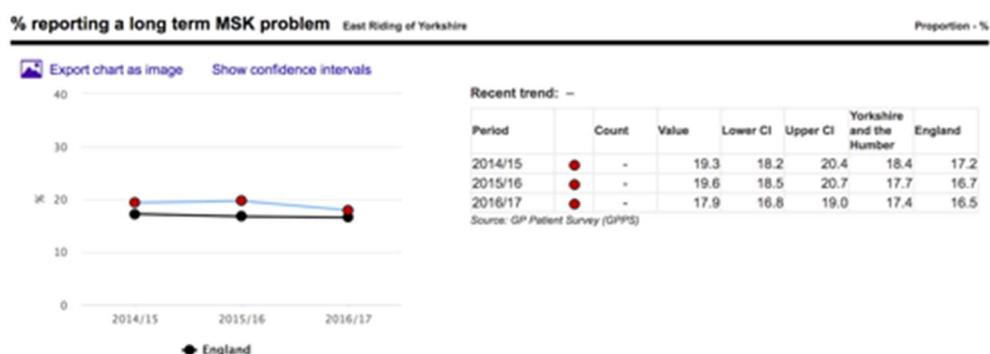


Figure 24. Percentage of people in the East Riding of Yorkshire Council reporting a long term MSK problem from 2014/15 to 2016/17 (Public Health England, 2018c)



6.3.1 Back pain, hip and knee osteoarthritis

Data on individual disease prevalence of MSK conditions is limited by the availability of what is collected. The Quality and Outcomes Framework (QOF) only includes osteoporosis (aged 50+) and rheumatoid arthritis (aged 16+) and as such disease prevalence is limited to other sources of information such as the GP patient survey, Health Survey for England and English Longitudinal Study of Ageing (Public Health England, 2018c).

Arthritis Research UK and Imperial College London have developed the [Musculoskeletal Calculator](#), allowing modelling of prevalence at the local authority and clinical commissioning group level (Arthritis Research UK, 2018b). For back pain they use the Health Survey for England 2011 and mid-year population estimates from 2012 for people of all ages. For osteoarthritis they use the English Longitudinal Study of Ageing and mid-year population estimates from 2012 for people aged 45 and over only. For rheumatoid arthritis they use clinical practice research datalink extracted data and mid-year population estimates for 2015 for people aged 16 and over.

There are an estimated 63,808 people (19%) living in the East Riding of Yorkshire Council area with back pain. Prevalence of back pain and severe back pain is higher than the national average for both the East Riding of Yorkshire Council population and East Riding CCG population (

Table 3) (Arthritis Research UK, 2018b). There are an estimated 18,912 people (10.9% of people aged 45 and over) living in the East Riding of Yorkshire area with hip osteoarthritis, and 31,716 (18.2% of people aged 45 and over) with knee osteoarthritis. Prevalence of hip osteoarthritis is similar to the national average for the East Riding of Yorkshire Council population but lower than the national average for the CCG population and similar for both for severe hip osteoarthritis. Prevalence of knee osteoarthritis is similar for the council population but higher for the CCG population. Prevalence of severe knee osteoarthritis is higher for the council population but lower for the CCG population. Reasons for differences between the East Riding of Yorkshire Council and CCG are unclear, but could suggest narrow confidence intervals (e.g. severe knee osteoarthritis prevalence for the council population is 6.2% which is significantly higher than the national average, compared to 6.0% for the CCG population which is significantly lower than the national average). There are an estimated 2466 people living in the East Riding CCG population with rheumatoid arthritis. This prevalence (0.96%) is higher than the national average.

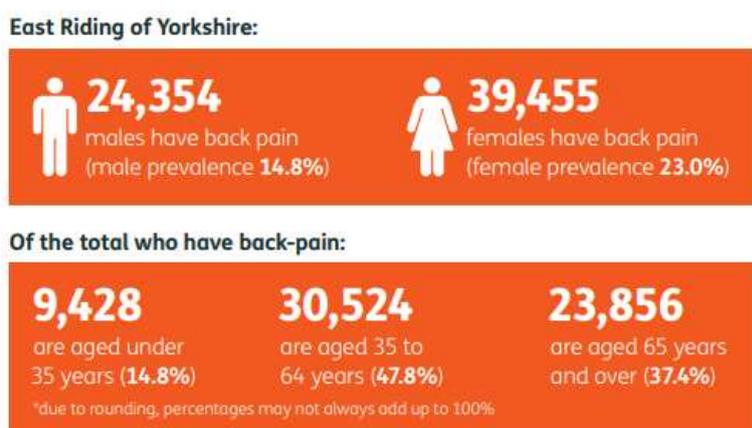


Table 3. Prevalence of back pain, hip osteoarthritis, knee osteoarthritis and rheumatoid arthritis in the East Riding by council and CCG area (Arthritis Research UK, 2018b)

Condition	East Riding of Yorkshire Council			East Riding of Yorkshire CCG		
	Population	Number of cases (%)	Compared to national average	Population	Number of cases (%)	Compared to national average
Back pain	335,887	63,808 (19%)	Higher	280,997	53,568 (19.1%)	Higher
Severe back pain		39,938 (11.9%)	Higher		33,759 (12%)	Higher
Hip osteoarthritis	174,073	18,912 (10.9%)	Similar	145,712	15,802 (10.8%)	Lower
Hip osteoarthritis (severe)		5,618 (3.2%)	Similar		4,691 (3.2%)	Similar
Knee osteoarthritis	174,073	31,716 (18.2%)	Similar	145,712	26,636 (18.3%)	Higher
Knee osteoarthritis (severe)		10,789 (6.2%)	Higher		8,812 (6%)	Lower
Rheumatoid arthritis	Not available	Not available	Not available	256,320	2,466 (0.96%)	Higher

For back pain, Arthritis Research UK and Public Health England estimate 24,354 (14.8%) males and 39,455 (23.0%) females in the East Riding of Yorkshire have back pain (Arthritis Research UK and Public Health England, 2018). Most people with back pain in the East Riding are in the 35 to 64 age group (Figure 25).

Figure 25. Prevalence of back pain the East Riding of Yorkshire Council by sex and age (Arthritis Research UK and Public Health England, 2018)



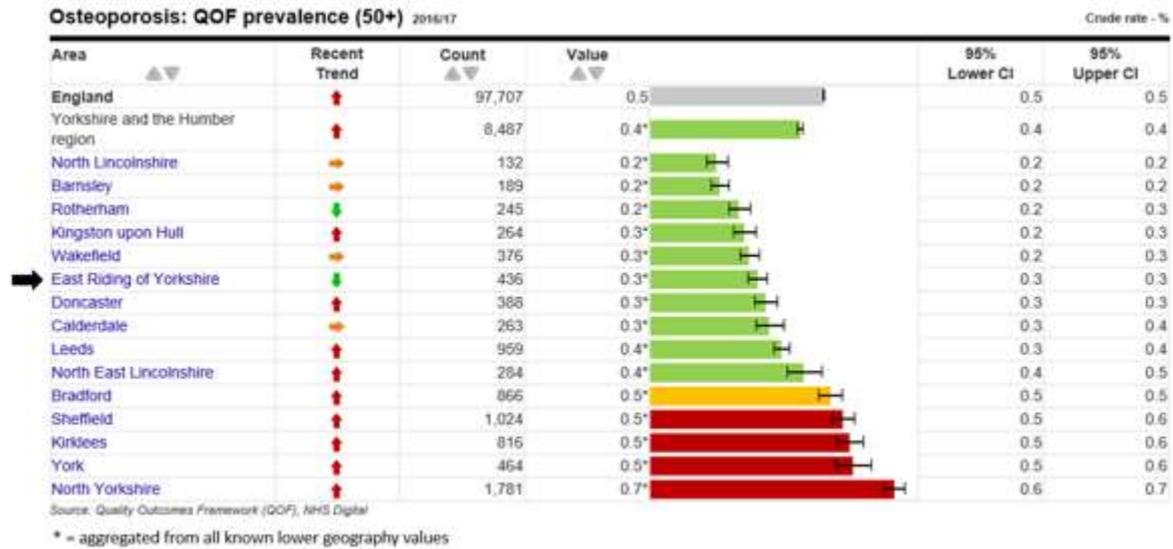
6.3.2 Osteoporosis

There are 436 people aged over 50 with osteoporosis in the East Riding. The estimated prevalence of osteoporosis in the over 50 age group is 0.3% and is statistically significantly lower than the England average (



Figure 26) (Public Health England, 2018c).

Figure 26. Prevalence of osteoporosis in the East Riding of Yorkshire Council compared with other areas in Yorkshire and the Humber (2016/17) (Public Health England, 2018c)



6.3.3 Rheumatoid arthritis

There are 2499 people in the East Riding of Yorkshire Council population aged over 16 with rheumatoid arthritis (prevalence 0.9%). This is statistically significantly higher than the England average, and is the highest prevalence for all regions in Yorkshire and Humber (Figure 27). It is higher than the median when compared to statistically similar regions (Figure 28) (Public Health England, 2018c).

Figure 27. Prevalence of rheumatoid arthritis in the East Riding of Yorkshire Council compared with other areas in Yorkshire and the Humber (2016/17) (Public Health England, 2018c)

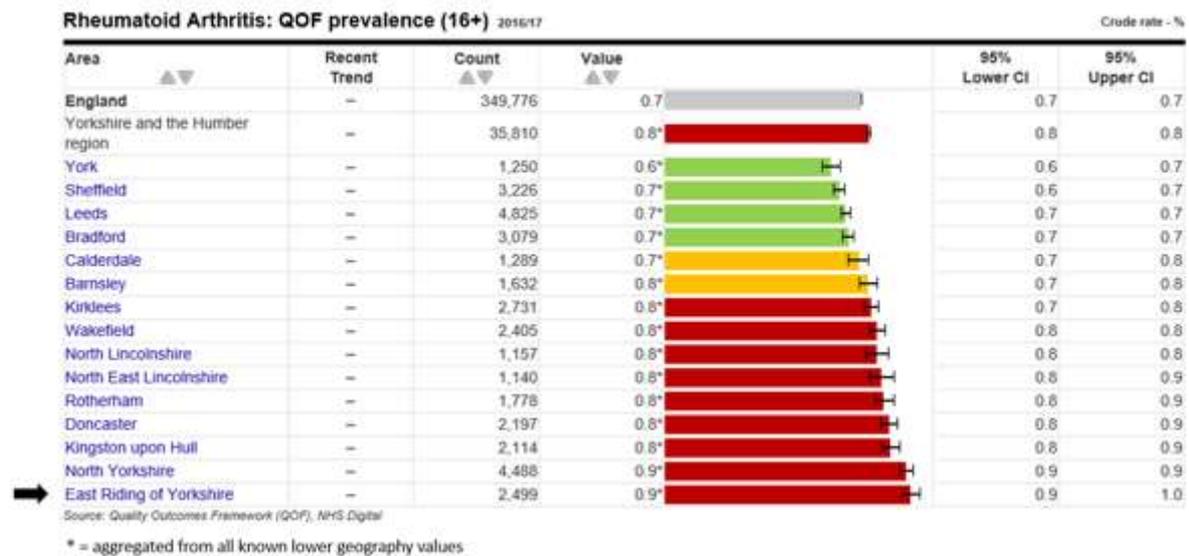
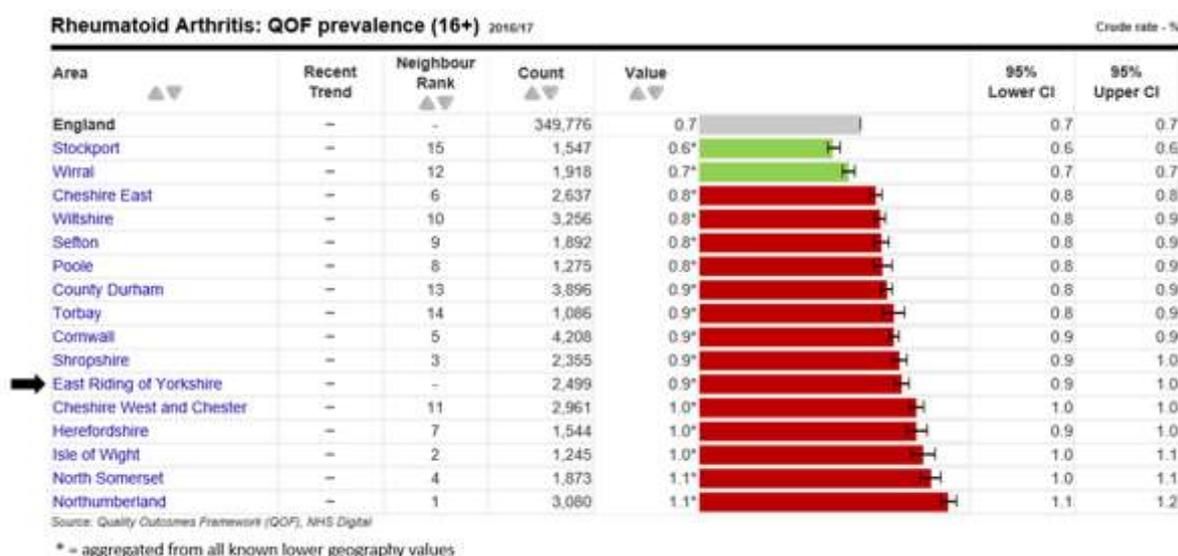


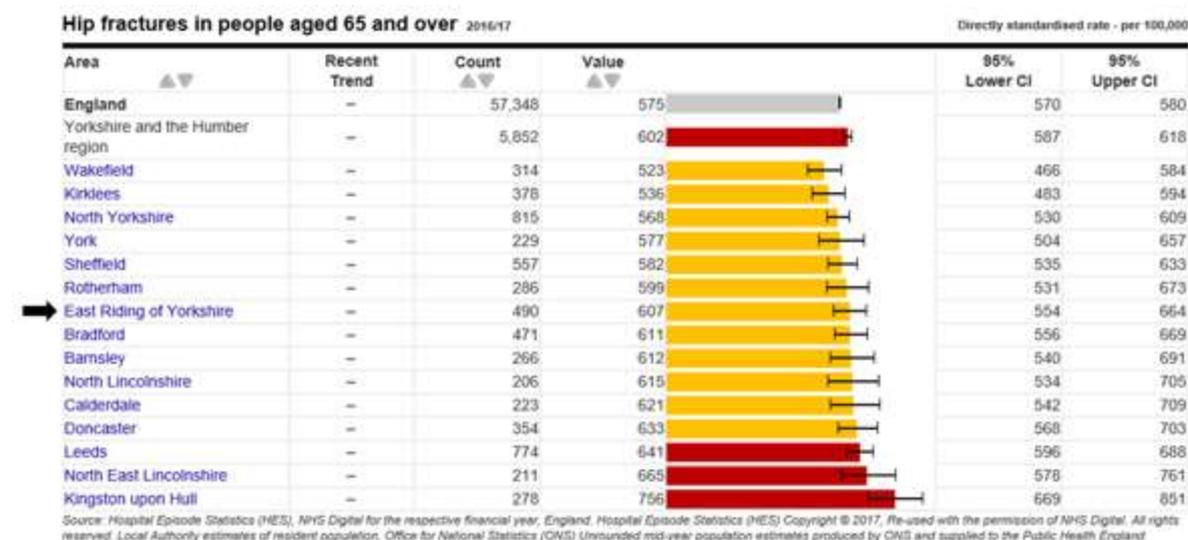
Figure 28. Prevalence of rheumatoid arthritis in the East Riding of Yorkshire Council compared with other statistically similar areas (2016/17) (Public Health England, 2018c)



6.3.4 Hip fractures

Data from Hospital Episode Statistics gives a count of 490 hip fractures for people in the East Riding in 2016/17, equating to a directly age-standardised rate of 607 per 100,000 which is higher but not statistically significantly different from the England mean average of 575 per 100,000 (Figure 29) (Public Health England, 2018c).

Figure 29. Directly age-standardised rates of hip fractures per 100,000 in people aged 65 and over in the East Riding of Yorkshire Council population compared with other areas in Yorkshire and the Humber (2016/17) (Public Health England, 2018c)



7 Health service use

The [Commissioning for Value NHS Rightcare long-term conditions pack](#) compares the East Riding CCG with the 10 most demographically similar CCGs in England (South Worcestershire, Northumberland, South Warwickshire, North Derbyshire, Great Yarmouth and Waveney, West Suffolk, South Norfolk, Ipswich and East Suffolk, Shropshire and South Lincolnshire) to



identify realistic opportunities to improve health for the population. Musculoskeletal conditions and frailty are two of the 16 included conditions (NHS Rightcare and Public Health England, 2016).

The matrix is coloured to identify where East Riding is performing ‘better’ (green), ‘worse’ (red) or ‘balanced’ (amber) compared with peers. Where these judgements are uncertain, ‘needs local interpretation’ (blue) is used. This shows estimated musculoskeletal conditions prevalence, prevention and public health and rehabilitation are performing similar to other CCGs but primary care management, self-care, non-elective and outcomes suggest poorer performance than other similar CCGs (Figure 30).

Frailty is related to the ageing process where our bodies lose their in-built reserves, and is described by NHS England as “the group of older people who are at highest risk of adverse outcomes such as falls, disability, admission to hospital or the need for long-term care” (Young, J, 2013), and as such many people with MSK conditions are frail. For frailty indicators, the East Riding CCG was performing less well for prevention and public health, self-care, non-elective, rehab and end of life care and similar for primary care management, step-up/step-down and outcome measures (Figure 30).

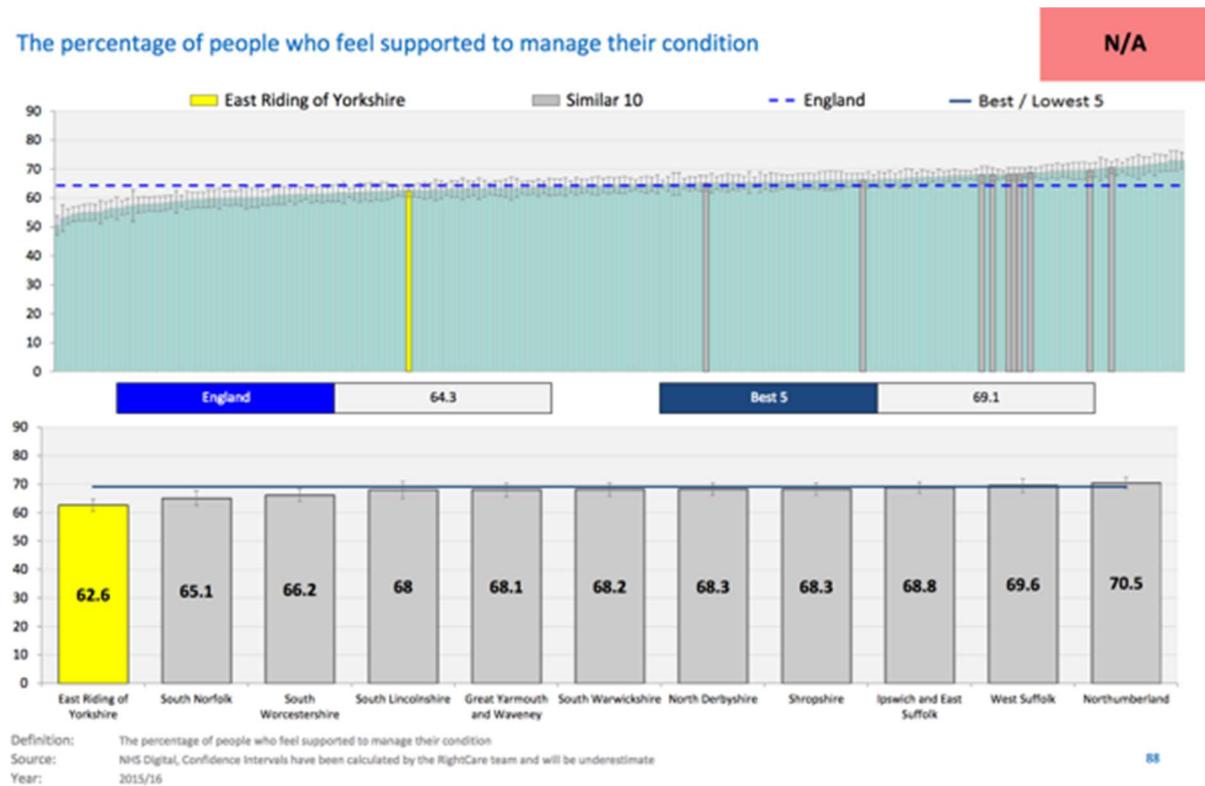
Figure 30. Matrix of how the East Riding CCG compares to peers for musculoskeletal and frailty care where green is better, red is worse, amber is not statistically significantly different and blue needs local interpretation (NHS Rightcare and Public Health England, 2016)

	Prevention & Public Health	Estimated Prevalence	Detection	Primary Care Management	Self Care	Prescribing	Elective	Non-Elective	Step-up/Step-down	Rehab	Outcome	End of Life
Musculoskeletal	Amber	Amber	Blue	Red	Red	Blue	Blue	Red	Green	Amber	Red	Amber
Frailty	Red	Amber	Blue	Amber	Red	Amber	Amber	Red	Amber	Red	Amber	Red

The East Riding is highlighted as being statistically significantly worse than peers for all long-term conditions for the percentage of people who feel supported to manage their conditions, and overall 62.6% of people in the East Riding of Yorkshire CCG population feel supported to manage their condition compared to 64.3% (England) and 69.1% (five best comparator CCGs) (Figure 31) (NHS Rightcare and Public Health England, 2016).



Figure 31. The percentage of people with a long-term condition who feel supported to manage their condition in the East Riding CCG compared to comparator CCGs and the England average (NHS Rightcare and Public Health England, 2016)



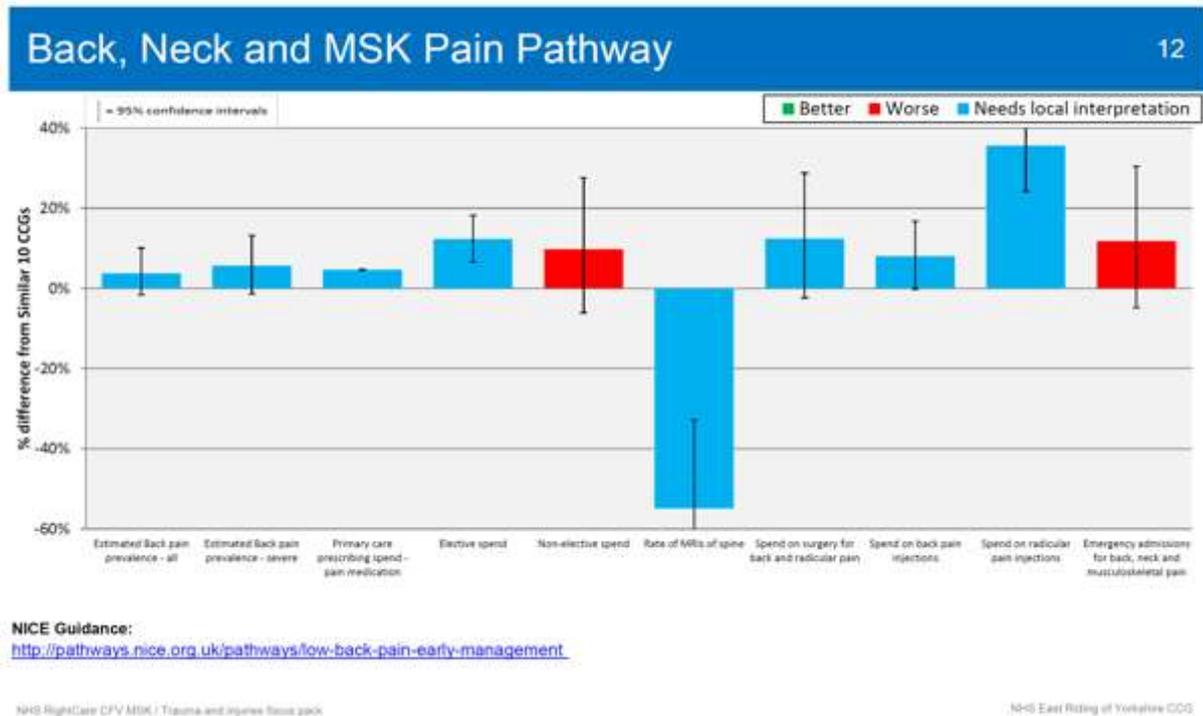
A more detailed [NHS RightCare Commissioning for Value Focus Pack for MSK conditions](#) identifies how the East Riding CCG compares with the 10 most similar CCGs in England in terms of risk, prevalence and detection, service and quality, spend and outcomes using the same colour coding. Pathways are mapped to the relevant NICE guidelines.

7.1.1 Back pain pathway

The East Riding CCG appears to be performing less well than other similar CCGs in terms of back pain prevalence, primary care prescribing spend, elective and non-elective spend, surgery and back pain injection, and emergency admissions, although many of these require local interpretation (Figure 32) (NHS England, 2016).

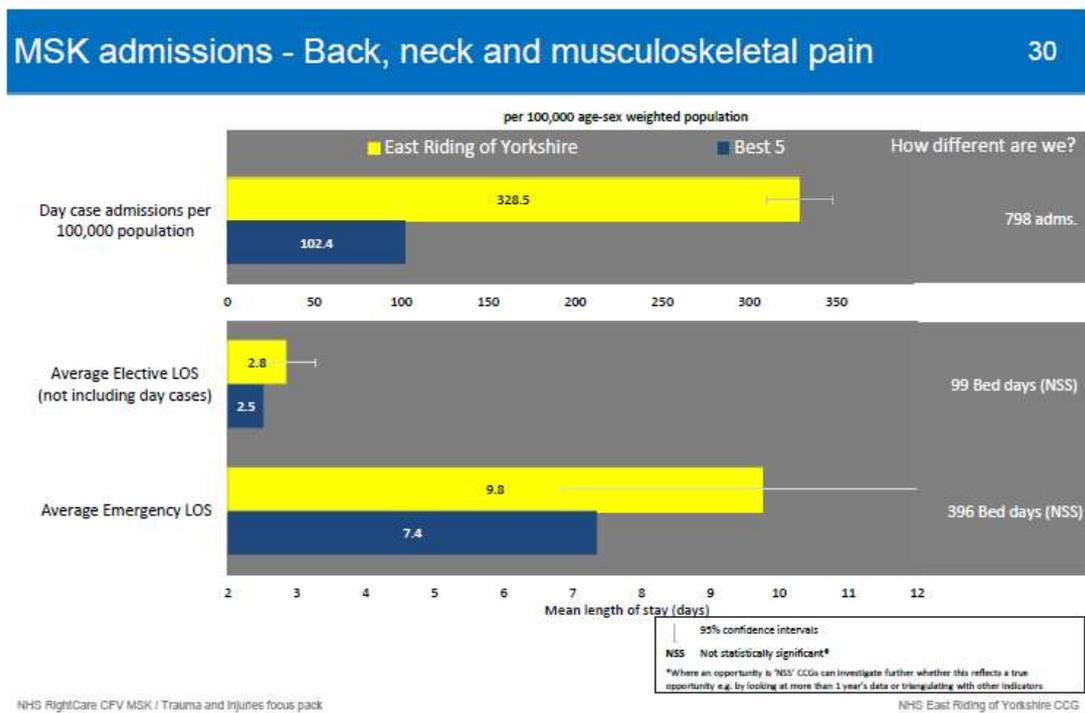


Figure 32. Back, neck and MSK pain pathway, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs (NHS England, 2016)



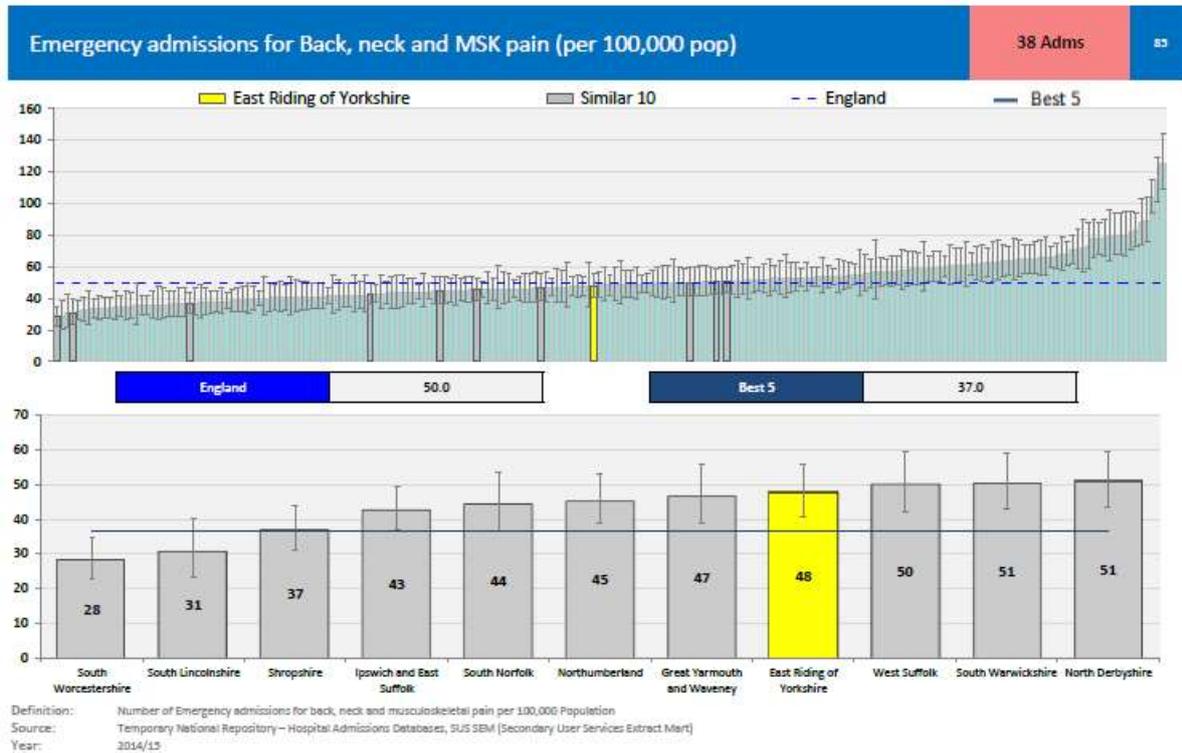
Of particular note, day case admission rates are significantly higher than the best 5 comparator CCGs, and length of stay tends to be (non-significantly) longer (Figure 33).

Figure 33. MSK admissions – back, neck and MSK pain, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs (NHS England, 2016)



The East Riding CCG is performing statistically significantly worse (by 38 admissions) for emergency admissions for back, neck and MSK pain (48 per 100,000) than the 5 best comparator CCGs (37.0 per 100,000) and slightly lower than the England average (50.0 per 100,000) (Figure 34).

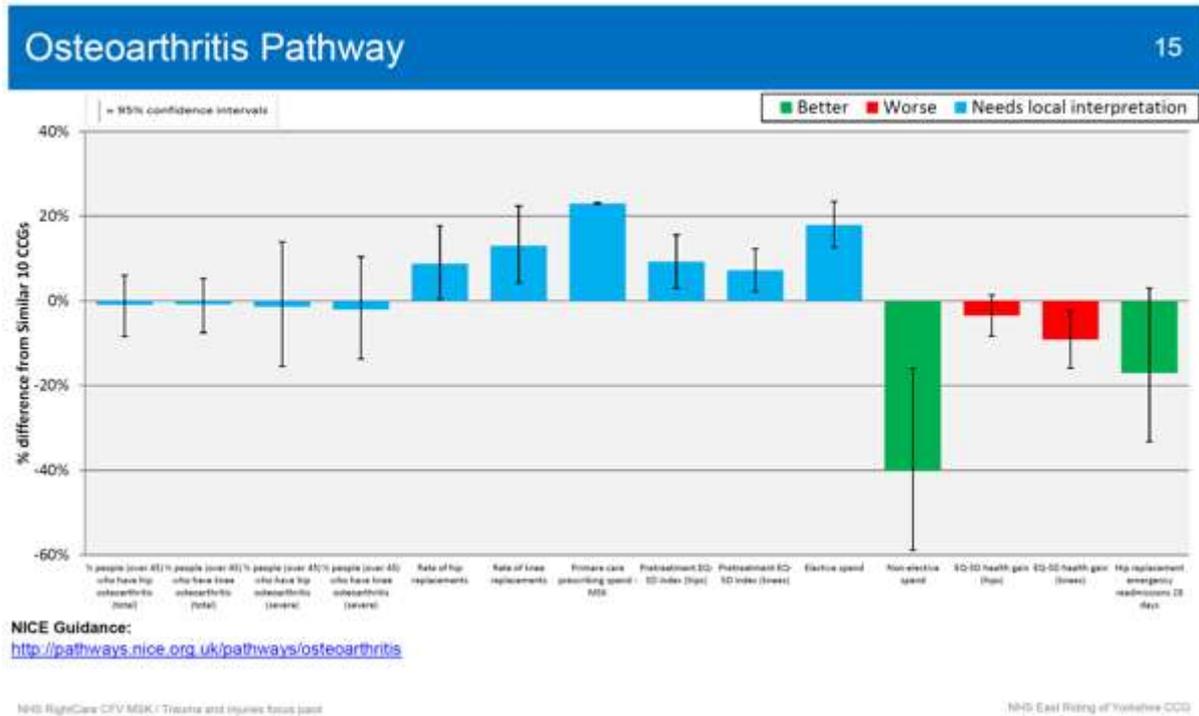
Figure 34. Emergency admissions for back, neck and MSK pain, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



7.1.2 Osteoarthritis

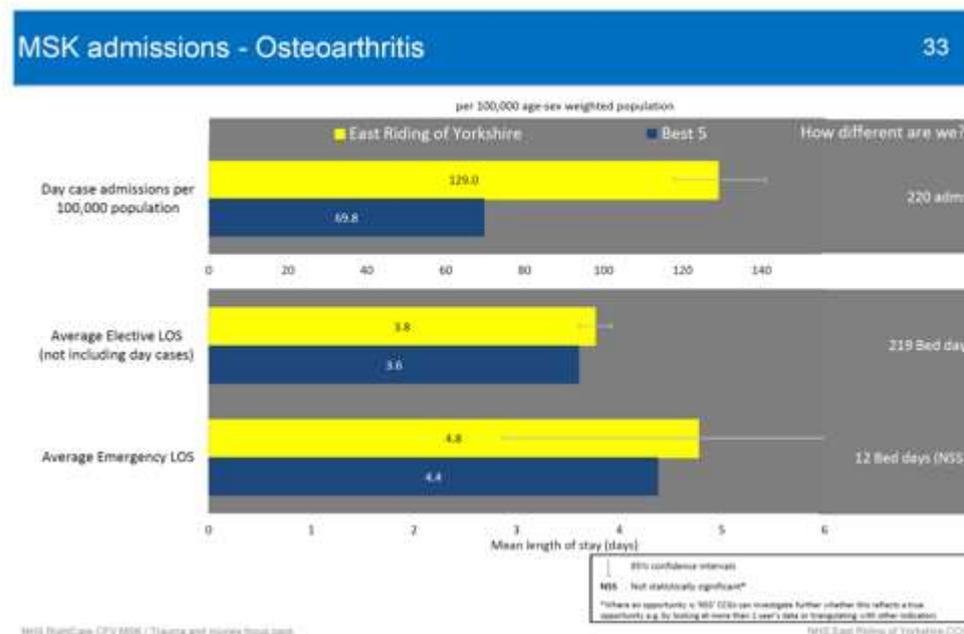
The East Riding CCG is performing statistically significantly better than comparator CCGs in terms of non-elective spend and hip replacement emergency readmissions within 28 days, significantly worse in terms of health gain from hip and knee replacements, and local interpretation is needed for the remainder of indicators in the osteoarthritis pathway (Figure 35).

Figure 35. Osteoarthritis pathway, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs (NHS England, 2016)



Day case admission rates are significantly higher in the East Riding CCG compared with the 5 best comparator CCGs (129 per 100,000 age-weighted population for the East Riding compared to 69.8 per 100,000 age-weighted population), a difference of 220 admissions. Average length of stay is significantly longer for elective admissions for osteoarthritis by an overall total of 219 bed days, and non-significantly longer for emergency admissions for osteoarthritis by 12 bed days (Figure 36).

Figure 36. MSK admissions - Osteoarthritis, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)

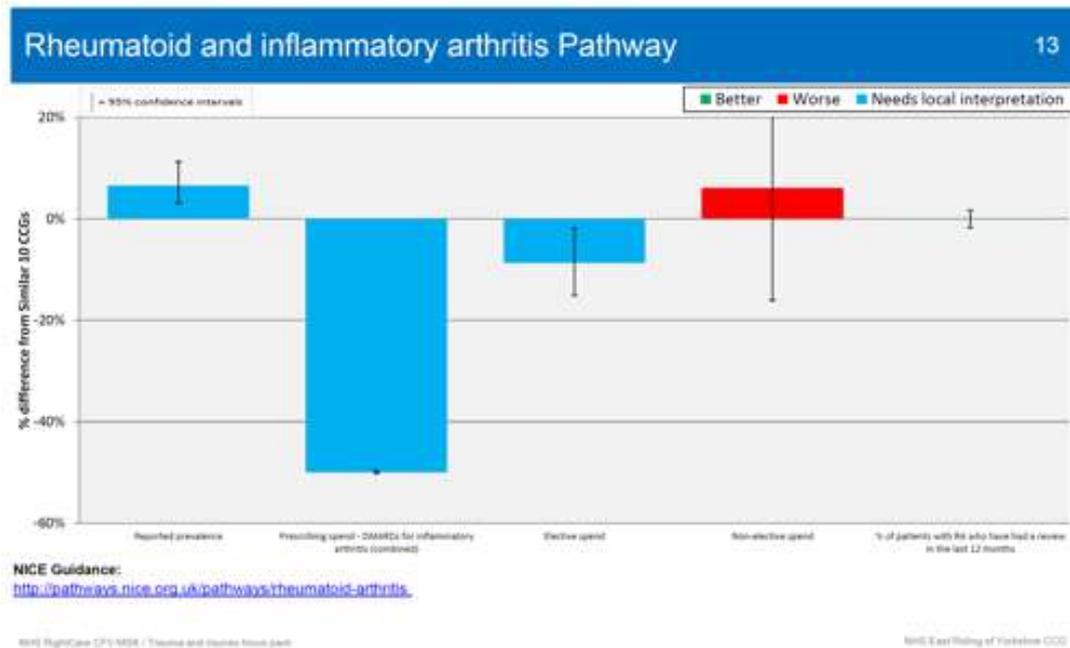


7.1.3 Inflammatory conditions

The East Riding CCG appears to be performing less well than other similar CCGs for rheumatoid and inflammatory arthritis in terms of reported prevalence and non-elective elective spend and better in terms of prescribing spend for disease-modifying antirheumatic drugs (DMARDs), but again local interpretation is needed for some of these (Figure 37).

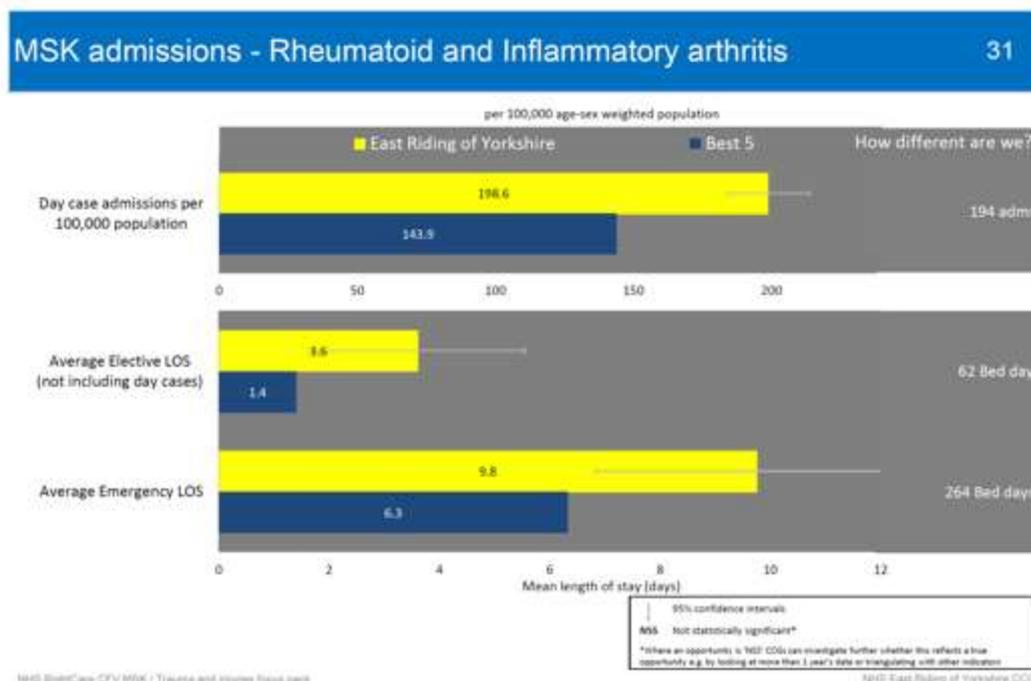


Figure 37. Rheumatoid and inflammatory arthritis pathway comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs (NHS England, 2016)



As for back, neck and other MSK pain, day case admissions for rheumatoid and inflammatory arthritis are significantly higher, length of stay is also (significantly) longer than other comparator CCGs (Figure 38).

Figure 38. MSK admissions - rheumatoid and inflammatory arthritis, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



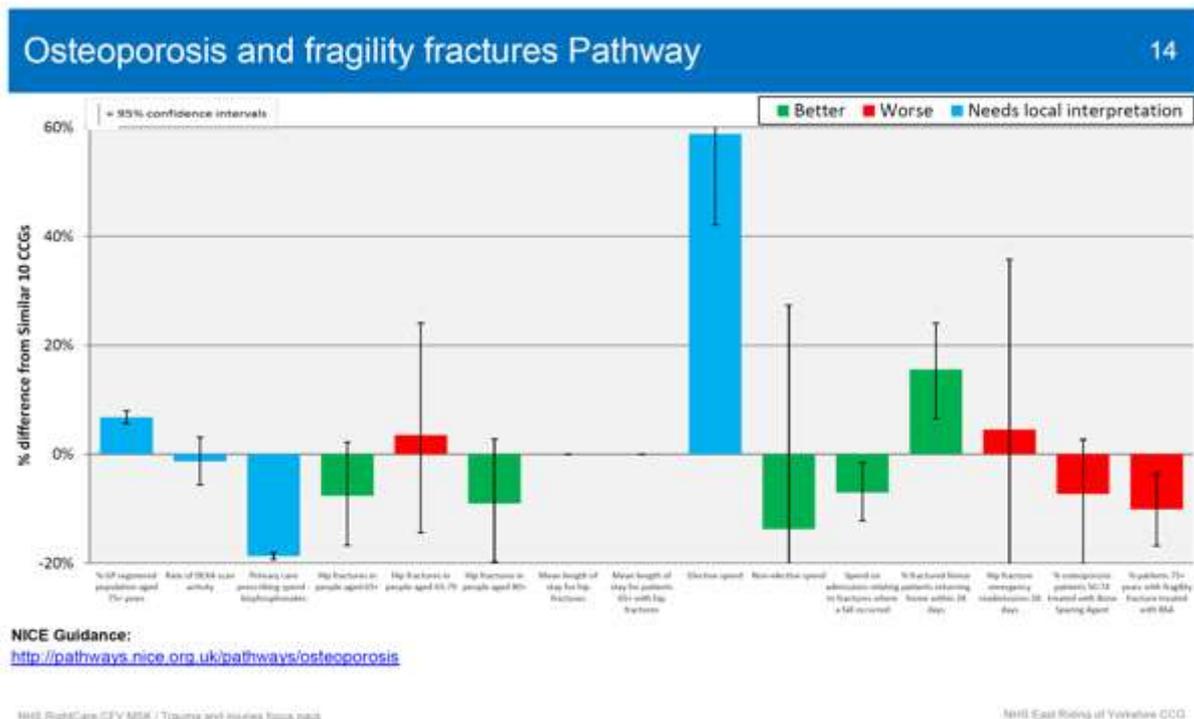
7.1.4 Osteoporosis and fragility fractures pathway

The East Riding CCG is performing statistically significantly better than comparator CCGs regarding osteoporosis care for hip fractures in people aged 65+ and 80+, non-elective spend,



spend on admissions relating to fractures where a fall occurred, and percentage of patients with a fractured femur returning home within 28 days (Figure 39). It is performing statistically significantly worse for hip fracture emergency readmissions within 28 days, percentage of patients aged 50-74 treated with bone sparing agent, and percentage of patients aged 75+ years with fragility fracture treated with bone sparing agent. Local interpretation is needed for rate of DEXA scan activity, primary care prescribing spend on bisphosphonates and elective spend.

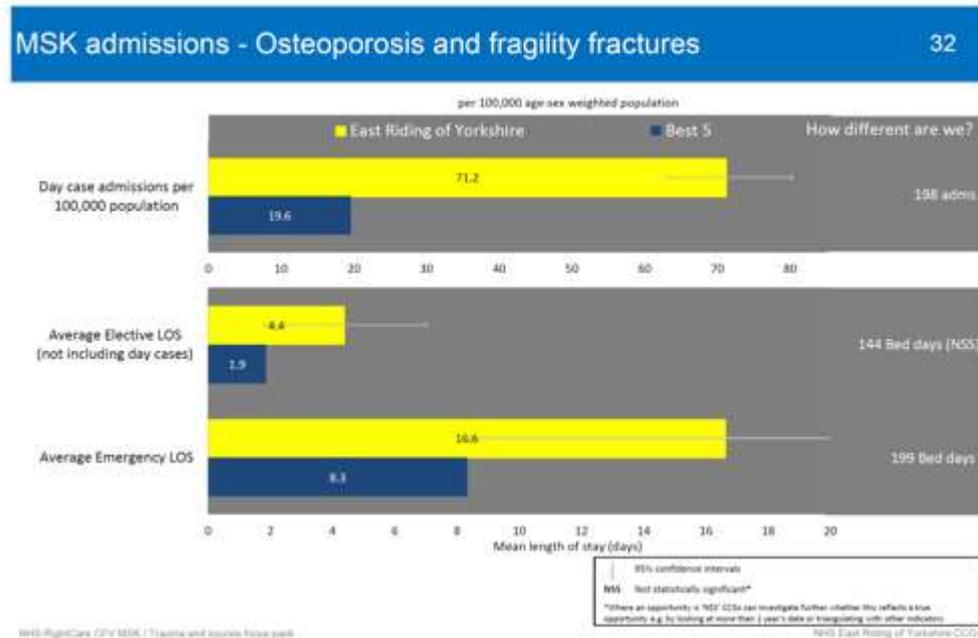
Figure 39. Osteoporosis and fragility fractures pathway, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs (NHS England, 2016)



The East Riding CCG has a much high rate of day case admissions for people with osteoporosis and fragility fractures than the five best comparator CCGs (71.2 per 100,000 age-weighted population compared to 19.6 per 100,000 age-weighted population), a difference of 198 admissions, and double the length of stay for both elective admissions (4.4 days for East Riding CCG compared to 1.9 for the five comparator CCGs) and emergency admissions (16.6 days for East Riding CCG compared to 8.3 for the five comparator CCGs), a total difference of 343 bed days (Figure 40).



Figure 40. MSK admissions - Osteoporosis and fragility fractures, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



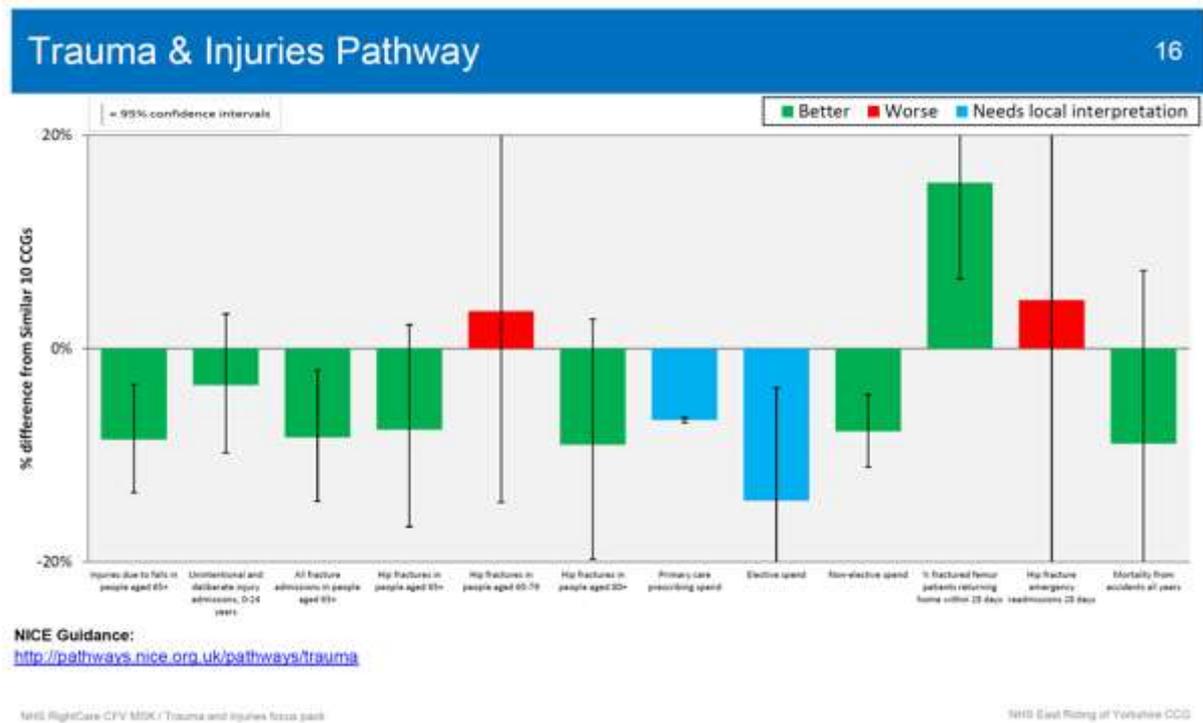
7.1.5 Trauma and injuries

The East Riding of Yorkshire CCG is performing significantly better than similar CCGs in terms of injuries due to falls in people over 65, unintentional and deliberate injury admissions, all fracture admissions in people over 65, hip fractures in people over 65, hip fractures in people over 80, non-elective spend, percentage of people with a fractured femur returning home within 28 days, and mortality from accidents at all ages (Figure 41). It is performing significantly worse



in terms of hip fractures in people aged 65-79 and hip fracture emergency readmissions within 28 days. Local interpretation is needed for primary care and elective spend.

Figure 41. Trauma and injuries pathway, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs (NHS England, 2016)

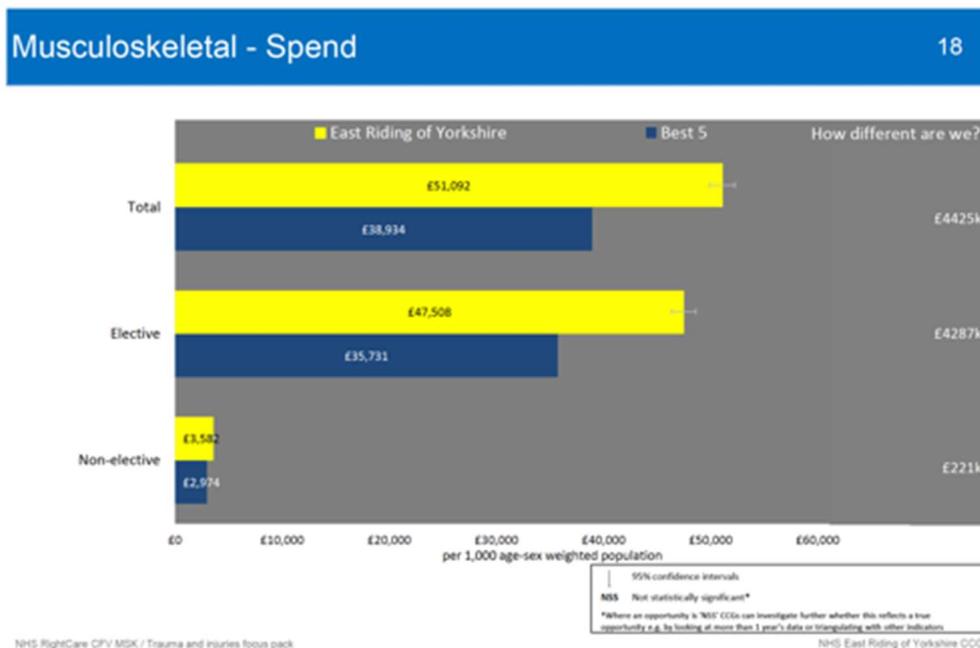


7.2 Health service spend

Total spend at the CCG level for people with musculoskeletal conditions is £51,092 per 1000 age-sex weighted population, statistically significantly higher than the five best CCGs (Figure 42). ASTRO-PUs (Age, Sex and Temporary Resident Originated Prescribing Units) weightings have been used to weight the CCG population for age and sex to allow better comparison. However, they do not include any measures of disease prevalence, special populations (e.g. care home residents), or individual patients on particularly expensive medicine regimens.

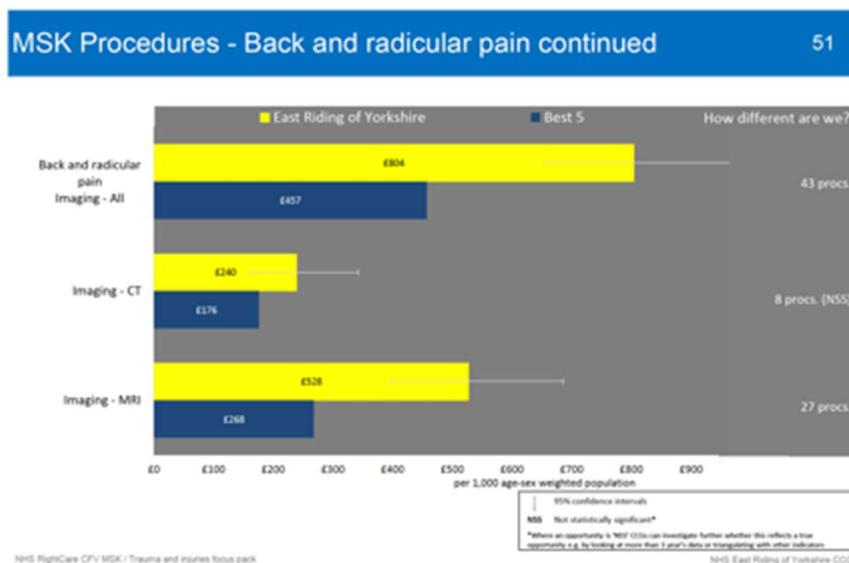


Figure 42. Total MSK spend comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



The East Riding CCG has a statistically significantly higher spend on MRI imaging than the five best comparator CCGs (Figure 43).

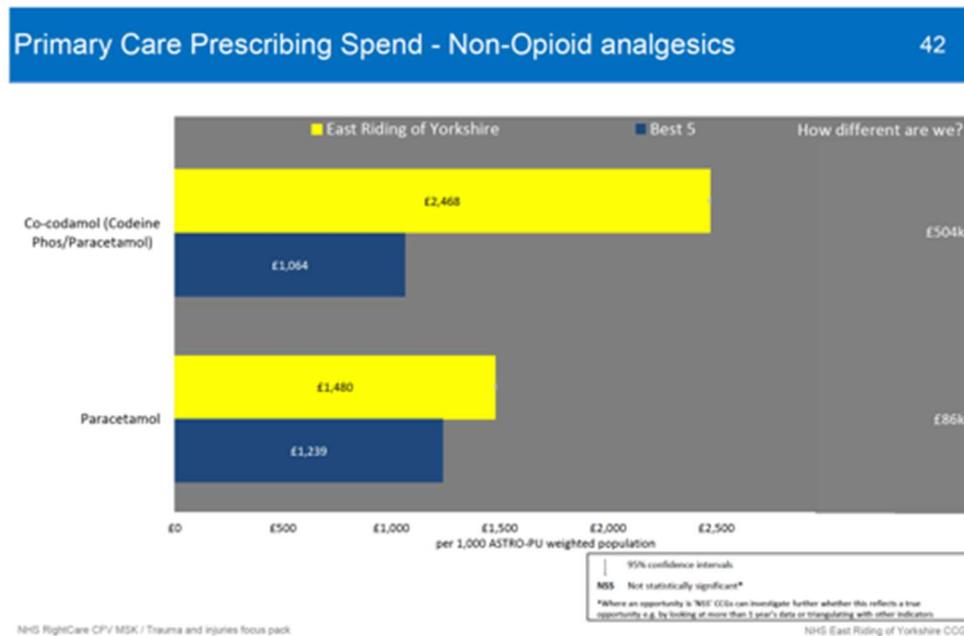
Figure 43. MSK imaging in the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



Total primary care spend on paracetamol and co-codamol (paracetamol and codeine phosphate) are significantly higher than the five best comparator CCGs by a total of £590,000 (Figure 44).

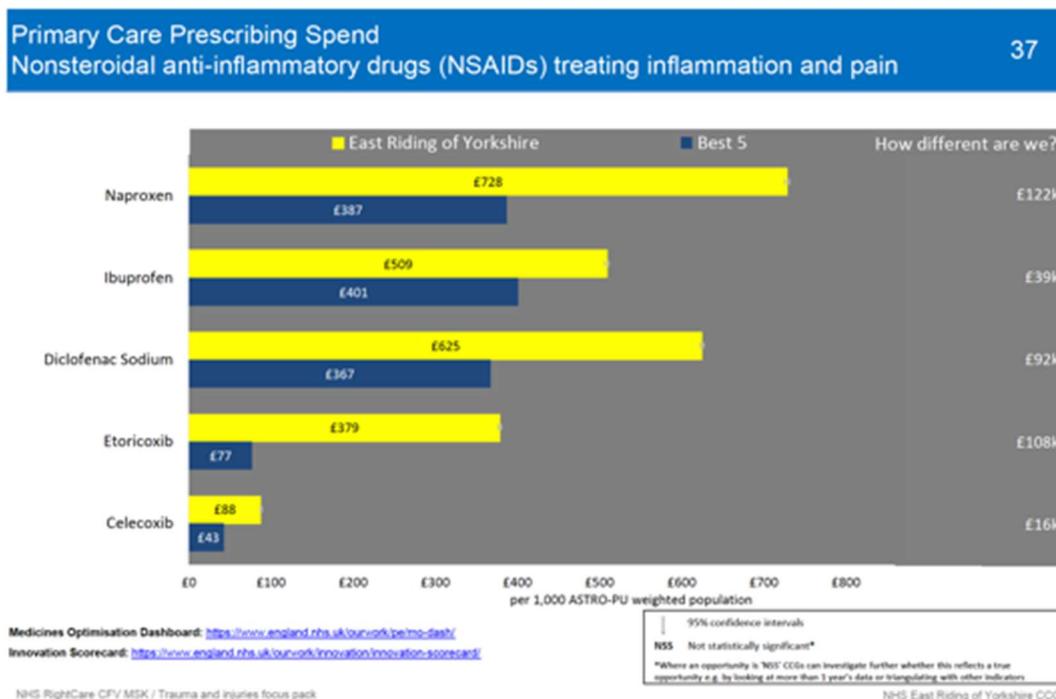


Figure 44. Primary Care Prescribing Spend - paracetamol and co-codamol, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



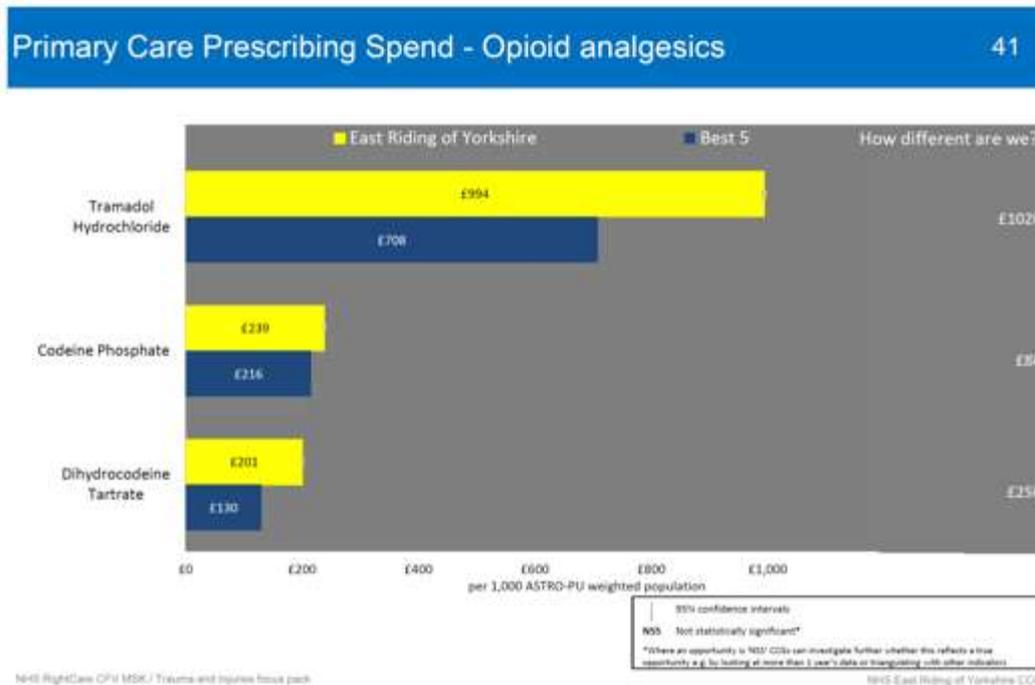
Total spend for nonsteroidal anti-inflammatory drugs (NSAIDs) for treating inflammation and pain is significantly higher for all types of NSAIDs compared with the five best comparator CCGs by a total of £377,000 (Figure 45).

Figure 45. Primary Care Prescribing Spend - Nonsteroidal anti-inflammatory drugs, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



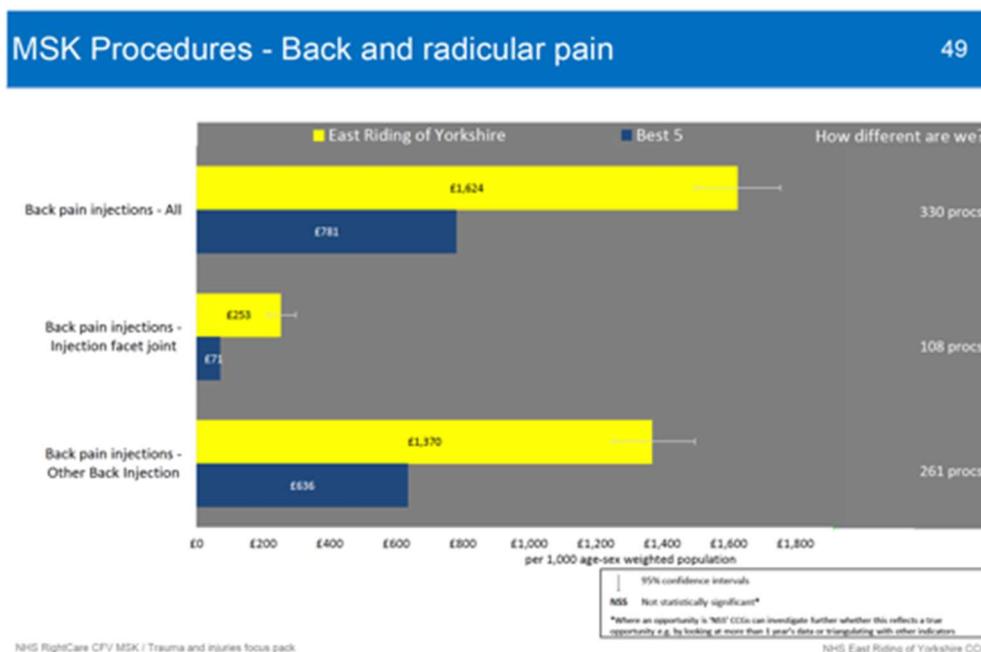
Total primary care spend for opioid analgesics in the East Riding CCG is significantly higher than the five best comparator CCGs by a total of £135,000 (Figure 46).

Figure 46. Primary Care Prescribing Spend - Opioid analgesics, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)

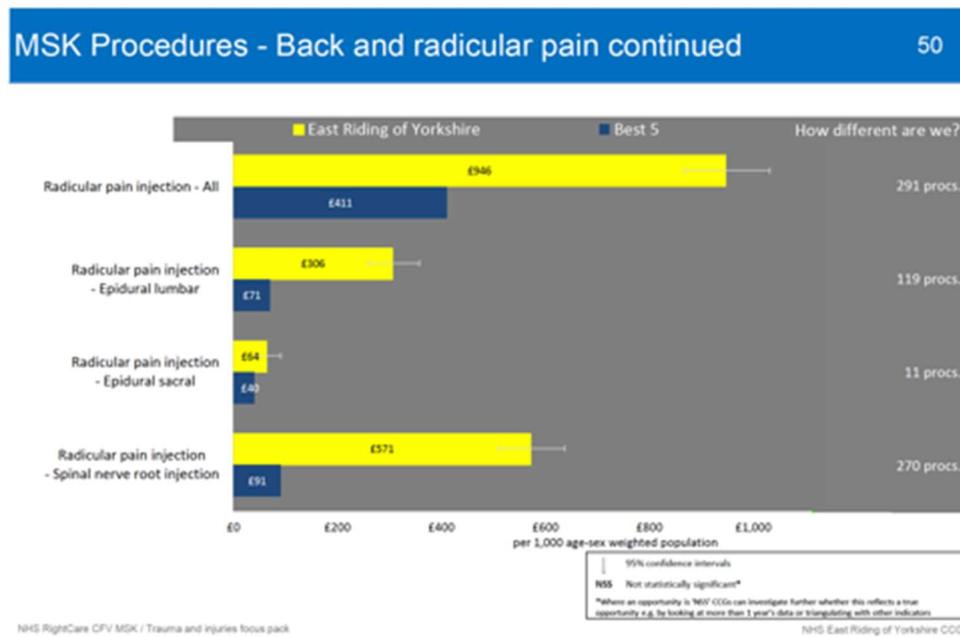


Spend for back and radicular pain injections is significantly higher in the East Riding CCG compared with the five best comparator CCGs, by 330 back pain injections and 291 radicular pain injections (Figure 47).

Figure 47 (a). MSK procedures – back pain, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)

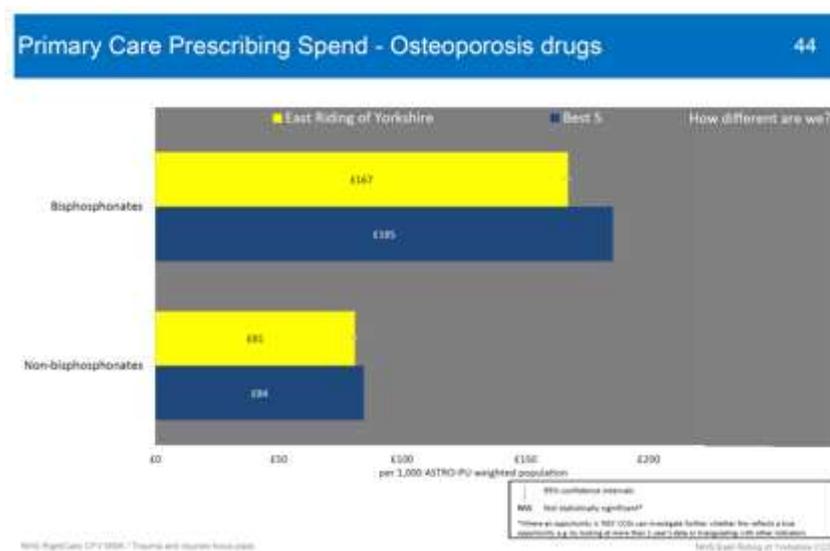


(b) MSK procedures – radicular pain, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



Primary care spend for osteoporosis drugs in the East Riding CCG is statistically significantly lower than the five best comparator CCGs (Figure 48).

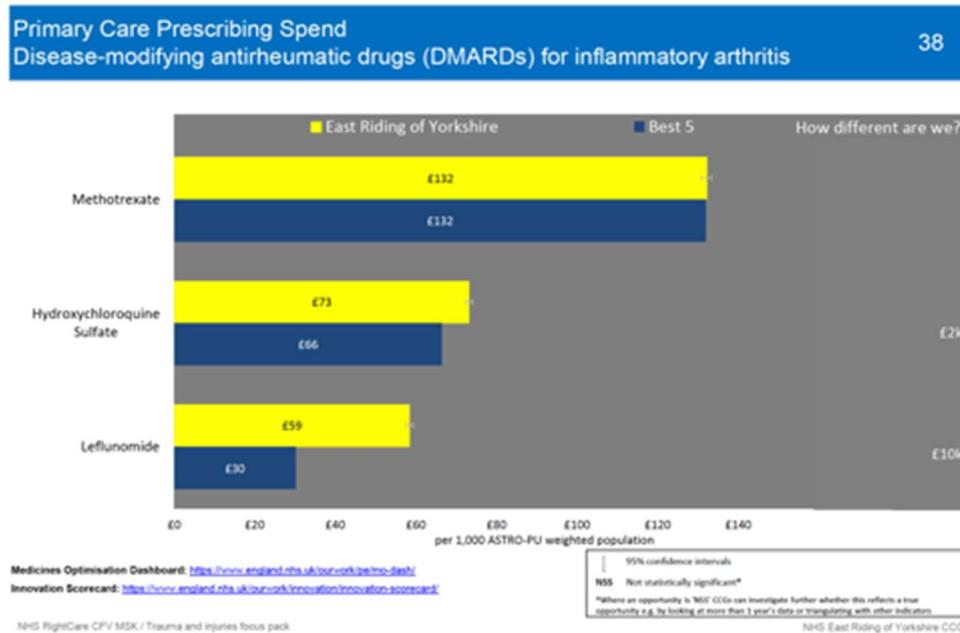
Figure 48. Primary Care Prescribing Spend - Osteoporosis drugs, comparing the East Riding of Yorkshire CCG with the 5 best comparator CCGs (NHS England, 2016)



Primary Care Spend for Disease-modifying antirheumatic drugs for inflammatory arthritis is similar for methotrexate, and higher for hydroxychloroquine and leflunomide in the East Riding compared to the five best comparator CCGs (Figure 49). Spend for prednisolone in rheumatic disease is significantly lower in the East Riding CCG at £531 per 1000 ASTRO-PU compared to £581 per 1000 ASTRO-PU in the five best comparator CCGs (NHS England, 2016).



Figure 49. Primary Care Prescribing Spend for Disease-modifying antirheumatic Drugs (DMARDs) for inflammatory arthritis (NHS England, 2016)



7.3 Opportunities for improvement

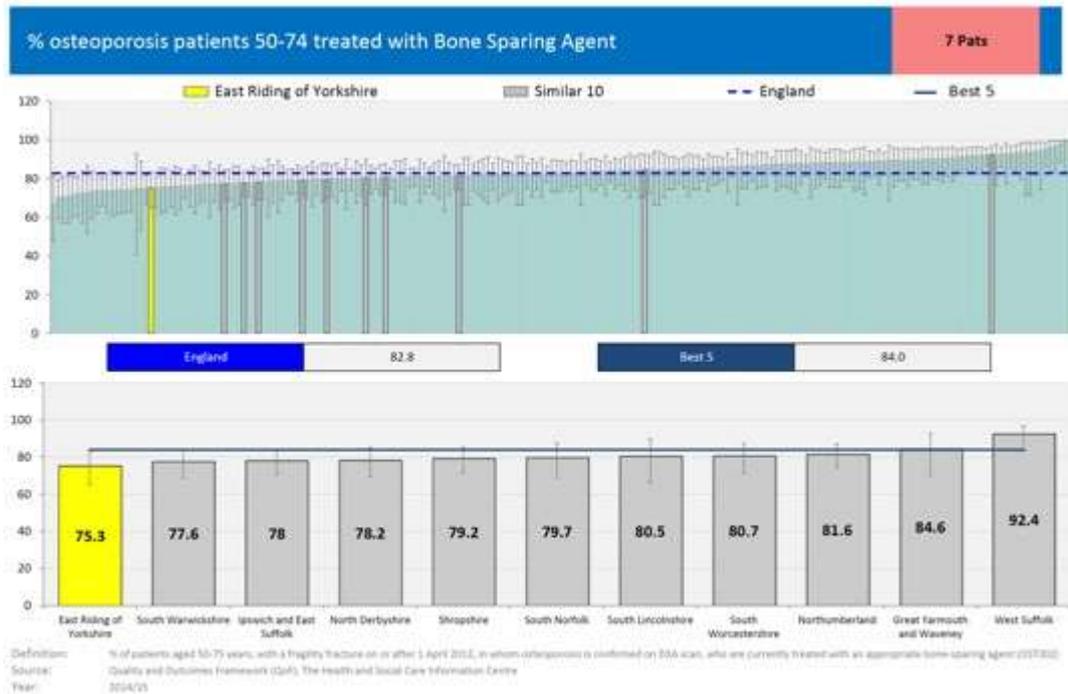
The Rightcare pack identifies a number of areas for potential opportunity for improvement in the East Riding CCG (NHS England, 2016).

7.3.1 Osteoporosis

The percentage of patients aged 50-74, with a fragility fracture on or after 01 April 2012, in whom osteoporosis is confirmed on DEXA scan, who are currently treated with an appropriate bone-sparing agent in East Riding CCG is 75.3%, which is statistically significantly lower (by 7 patients) than the best 5 comparable CCGs (84.0%), and is lower than the England average of 82.8% (Figure 50).



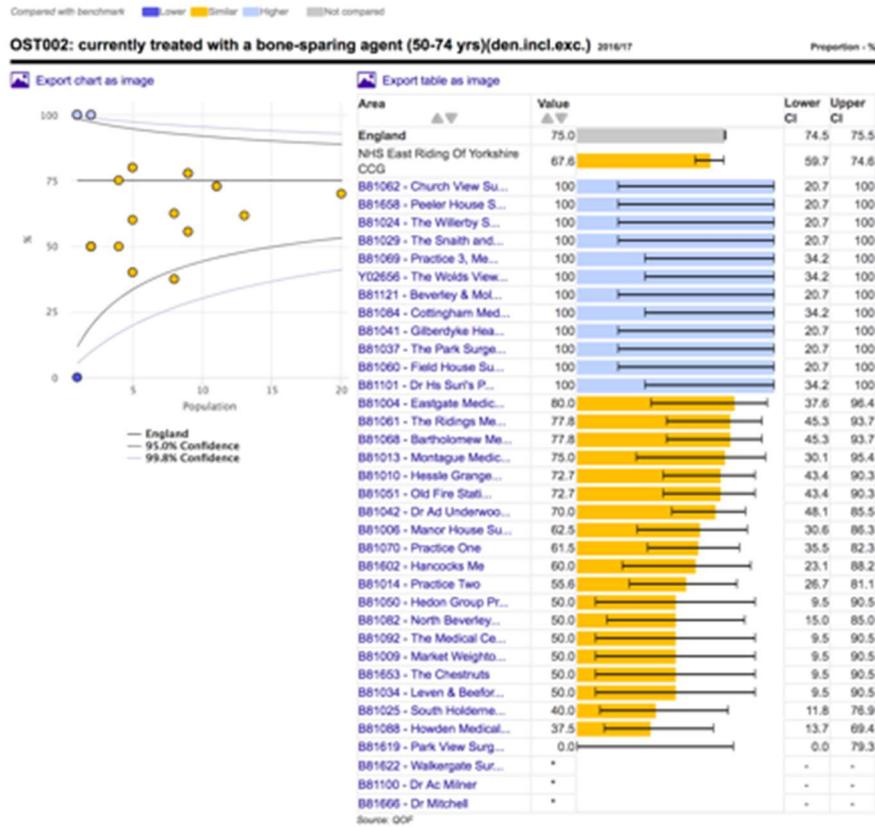
Figure 50. Percentage of patients aged 50-74 with a fragility fracture treated with a bone sparing agent, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



The [National General Practice Profiles](#) can be used to analyse this at a practice level within the East Riding CCG. This shows there is wide variation in terms of what percentage of eligible patients aged 50-74 currently receive a bone-sparing agent by General Practice in the East Riding CCG, from 37.5% to 100% (Figure 51. Percentage of eligible patients aged 50-74 currently treated with a bone-sparing agent by general practice (2016/17). The [National General Practice Profiles](#) also provide data on prevalence of osteoporosis by practice.



Figure 51. Percentage of eligible patients aged 50-74 currently treated with a bone-sparing agent by general practice (2016/17) (Public Health England, 2018d)



The percentage of patients aged 75+ years with a fragility fracture treated with a bone sparing agent in East Riding of Yorkshire CCG is 59.3%, which is statistically significantly lower (by 44 patients) than the best five comparator CCGs (68.3%) and is lower than the England average (67.4%) (Figure 52).

Figure 52. Percentage of patients aged 75+ with fragility fractures treated with a Bone Sparing Agent, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)

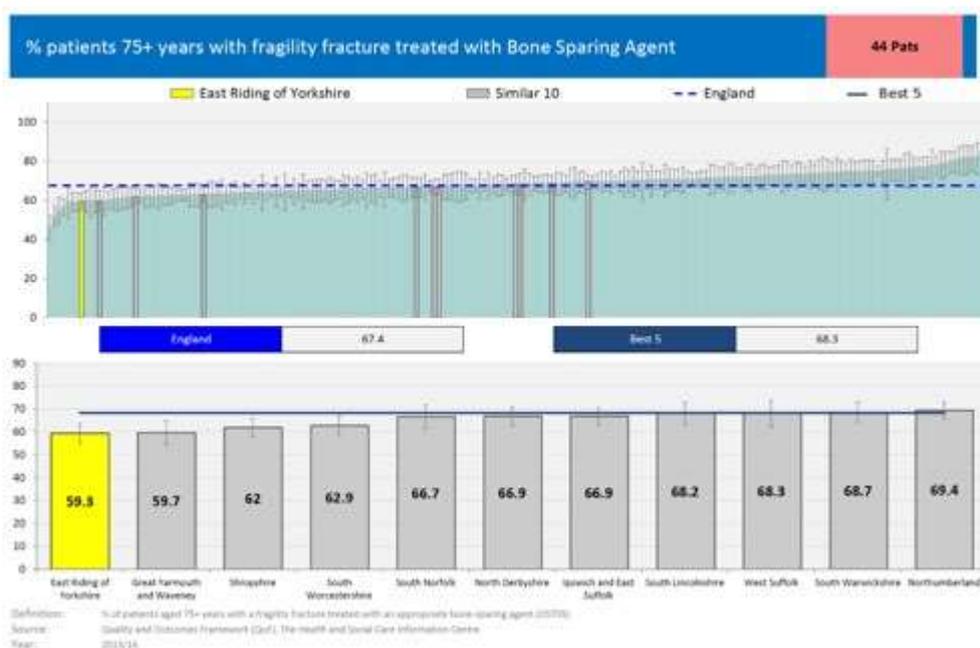
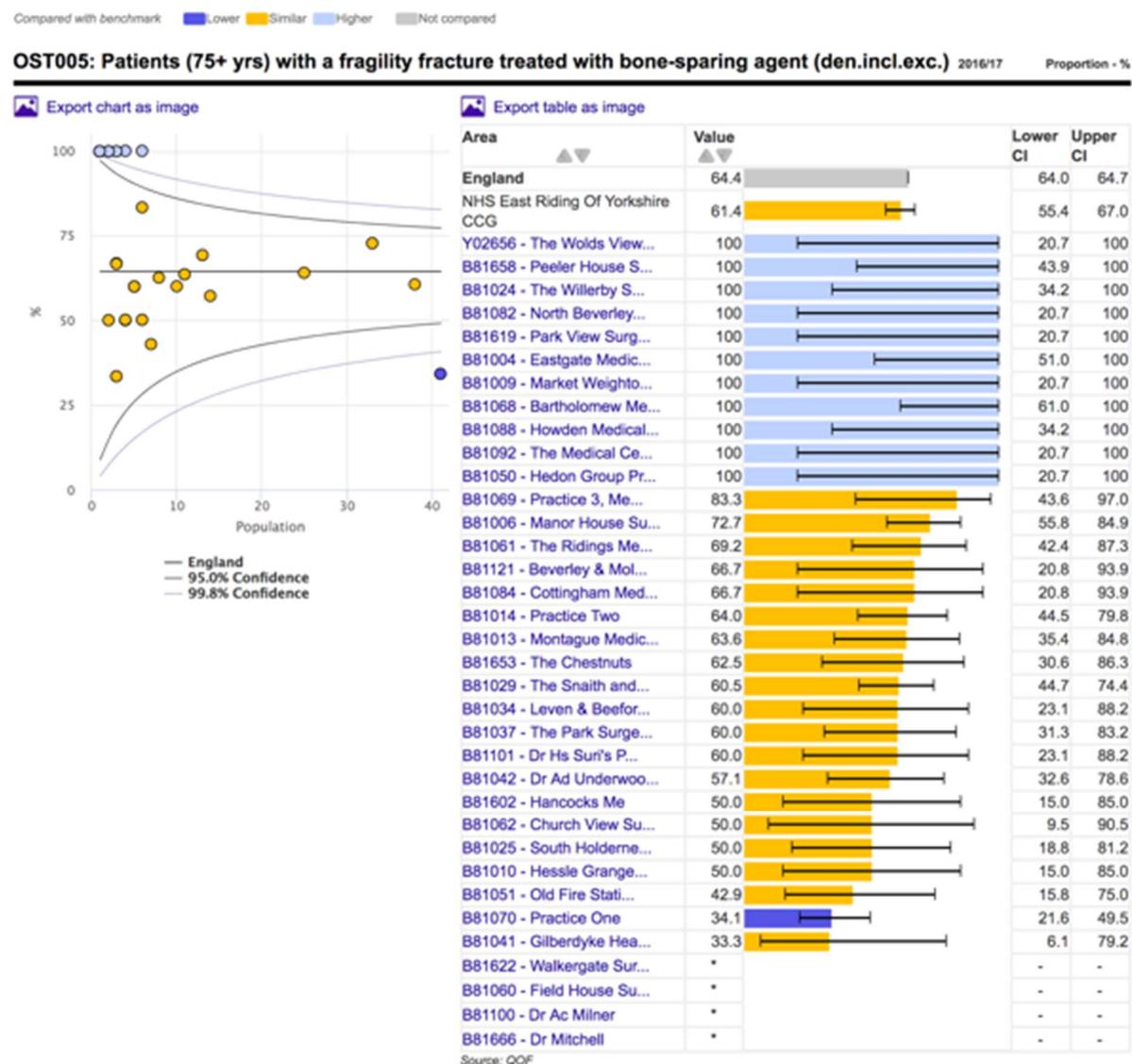


Figure 53. Percentage of patients aged 75+ with a fragility fracture currently treated with a bone-sparing agent by general practice (2016/17) (Public Health England, 2018d)



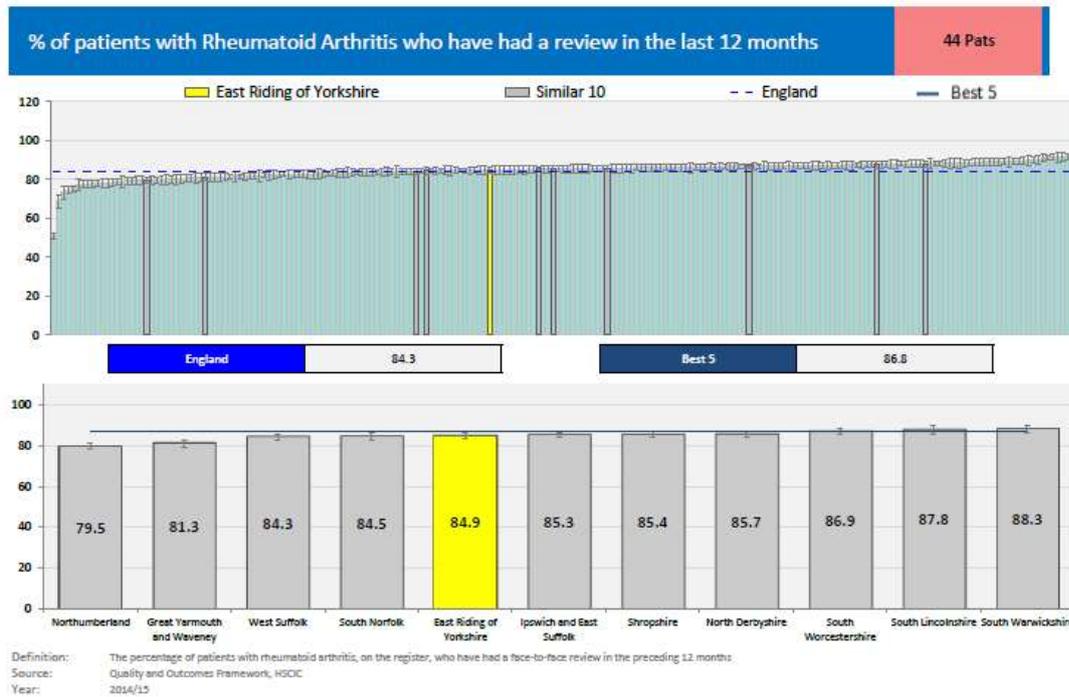
The [National General Practice Profiles](#) again show wide variation in terms of what percentage of eligible patients aged 75+ currently receive a bone-sparing agent by General Practice in the East Riding CCG, from 33.3% to 100% (Figure 53). There is good scope for East Riding general practices to improve how they identify patients and manage them in primary care settings.

7.3.2 Rheumatoid arthritis

The Rightcare pack shows East Riding CCG is performing statistically significantly lower (by 44 patients) for percentage of patients with rheumatoid arthritis who have had a review in the last 12 months (84.9%) than comparator CCGs (86.8%) and but slightly higher than the England average (84.3%) (Figure 54).



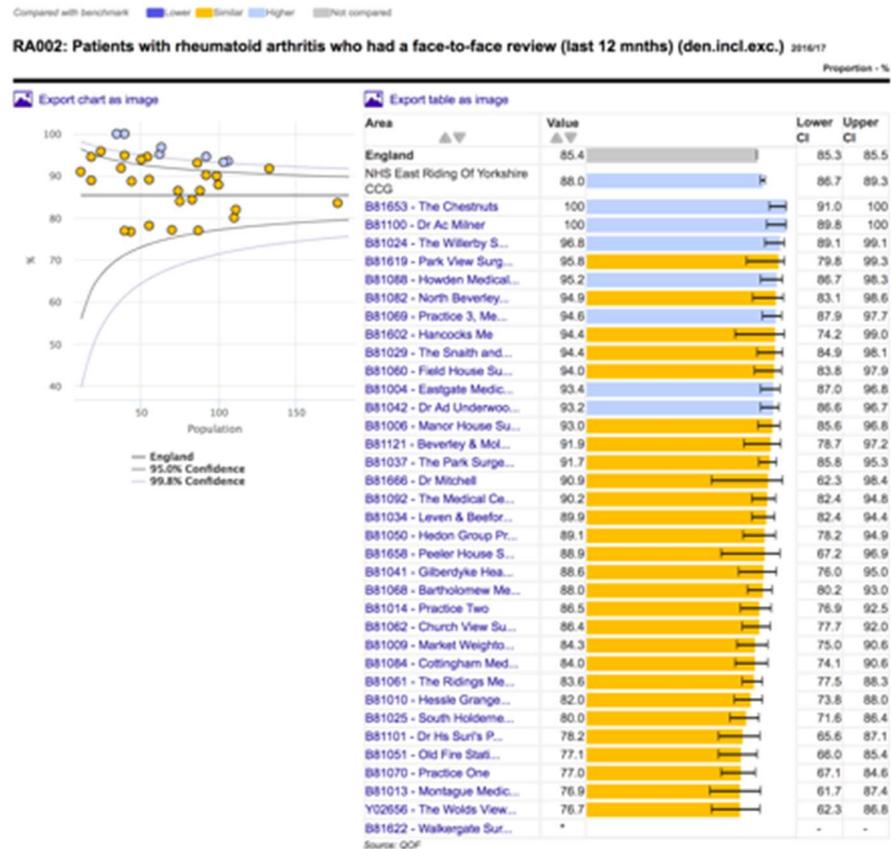
Figure 54. Percentage of patients with rheumatoid arthritis who have had a review in the last 12 months, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



The [National General Practice Profiles](#) show some variation in terms of percentage of patients with rheumatoid arthritis that have had a face-to-face review in the last 12 months from 76.7% to 100% (Figure 54, Figure 55). The [National General Practice Profiles](#) can also provide data on prevalence of rheumatoid arthritis by practice.



Figure 55. Percentage of patients with rheumatoid arthritis who had a face-to-face review in the last 12 months by general practice (2016/17) (Public Health England, 2018d)

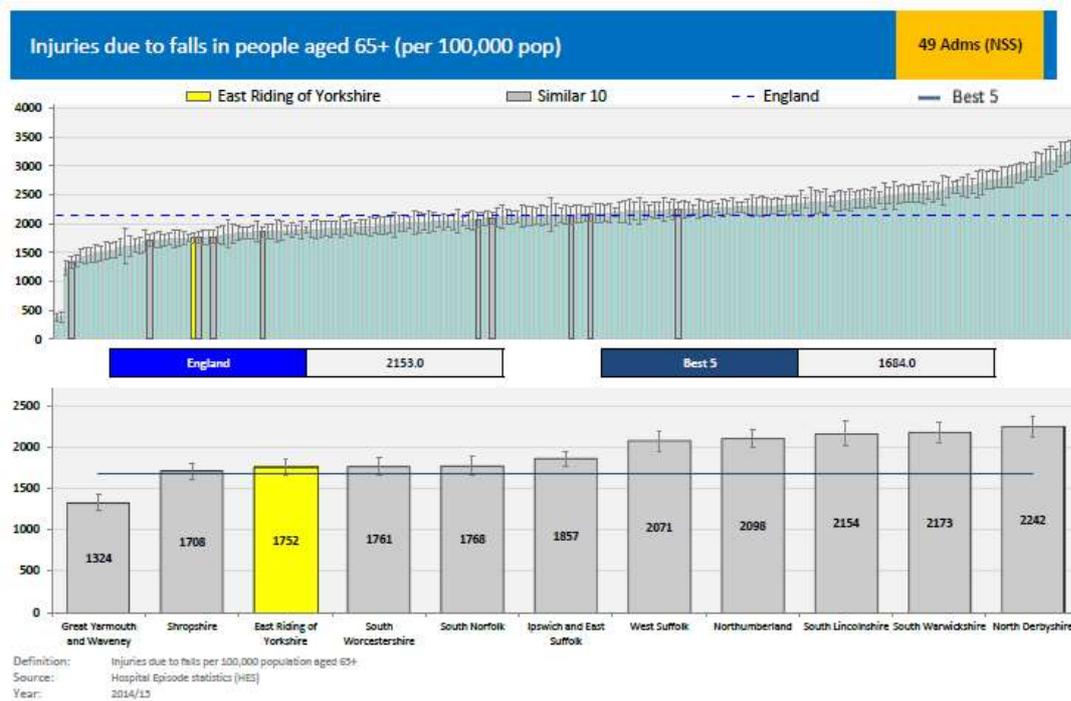


7.3.3 Falls

The number of injuries due to falls in people aged 65+ in East Riding CCG (1752 injuries per 100,000 population aged 65+) is non-statistically significantly higher by 49 admissions than comparator CCGs (1684.0 injuries per 100,000 population aged 65+) but lower than the England average (2153.0 injuries per 100,000 population aged 65+) (Figure 56).

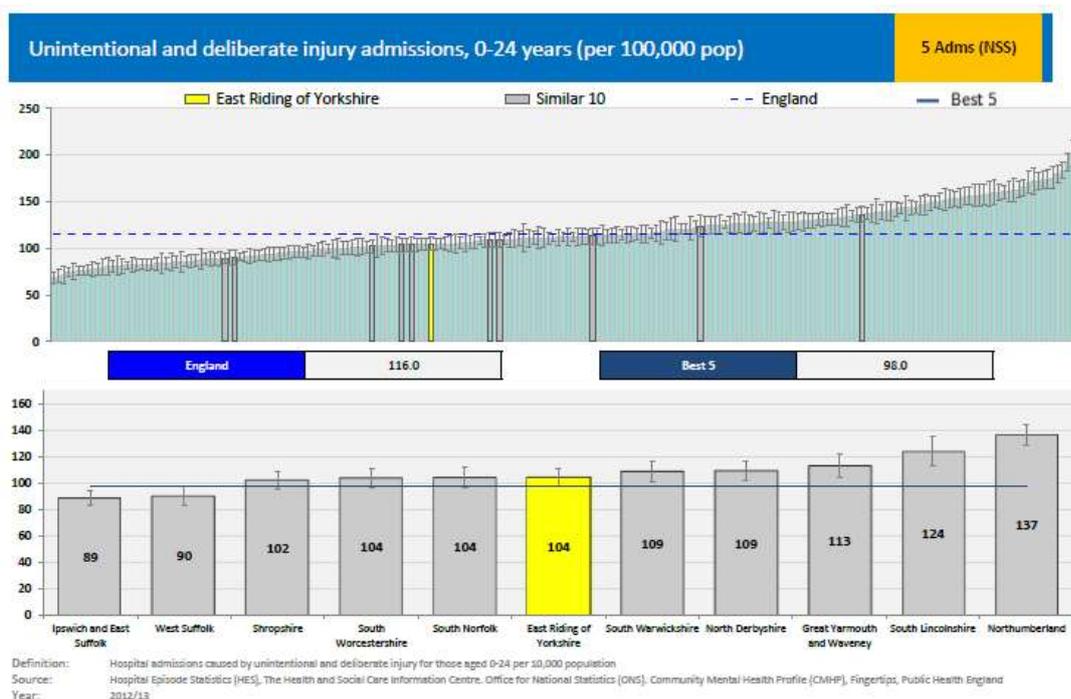


Figure 56. Injuries due to falls in people aged 65+, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



The number of unintentional and deliberate injuries admissions for people aged 0 – 24 years per 100,000 population in East Riding CCG (104 per 100,000) is non-statistically significantly higher by 5 admissions than comparator CCGs (98.0 per 100,000) and lower than the England average (116.0 per 100,000) (Figure 57).

Figure 57. Unintentional and deliberate injury admissions aged 0-24 years, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



7.3.4 Arthritis and back pain

The [National General Practice Profiles](#) allow comparison of prevalence of arthritis or long-and back pain across the East Riding of Yorkshire CCG, which may be useful for commissioners when considering where resources for managing back pain are most needed (Figure 58)(Figure 59) (Public Health England, 2018d).

Figure 58. Percentage of people reporting arthritis or a long-term joint by general practice (2016/17) (Public Health England, 2018d)

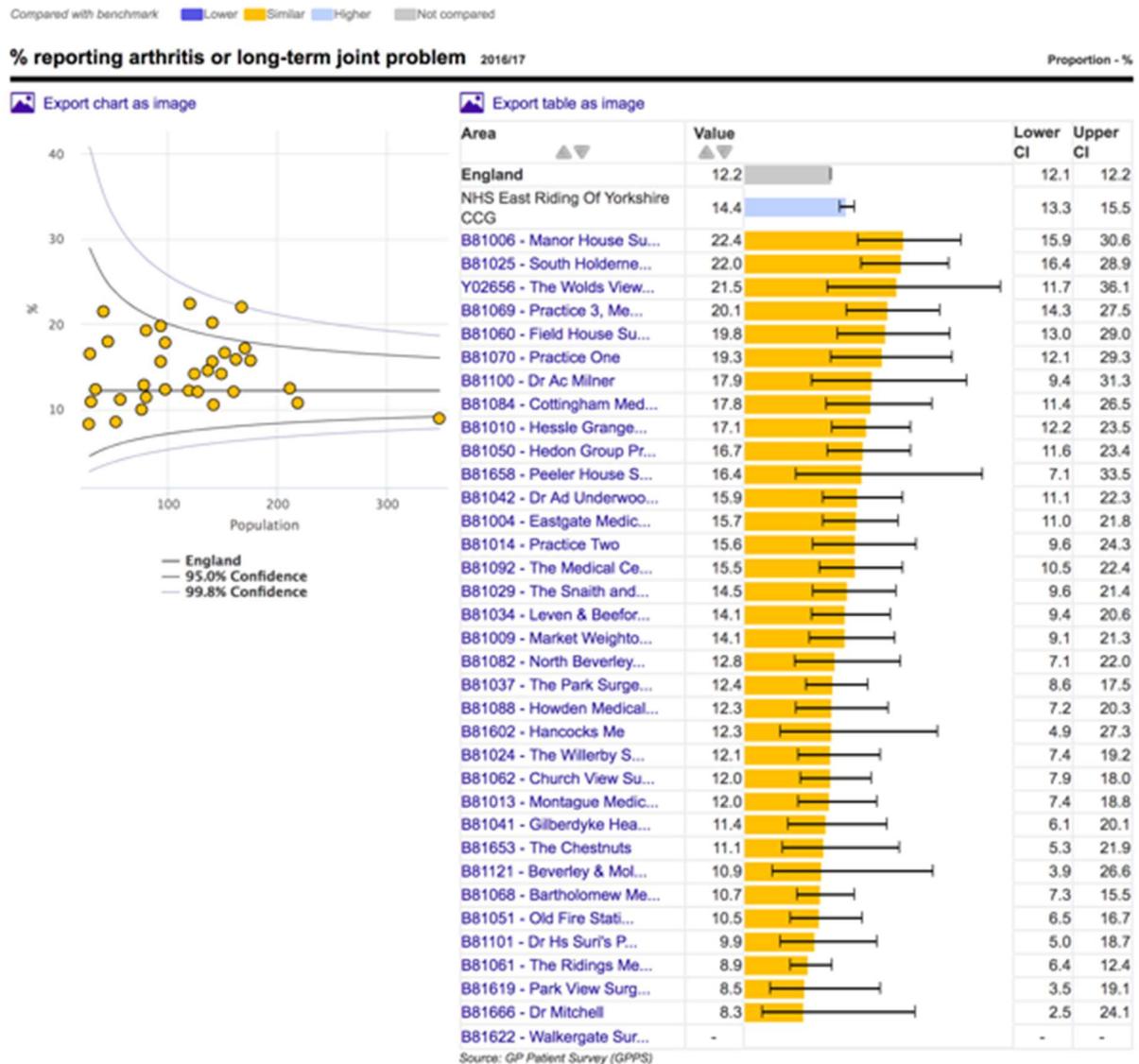
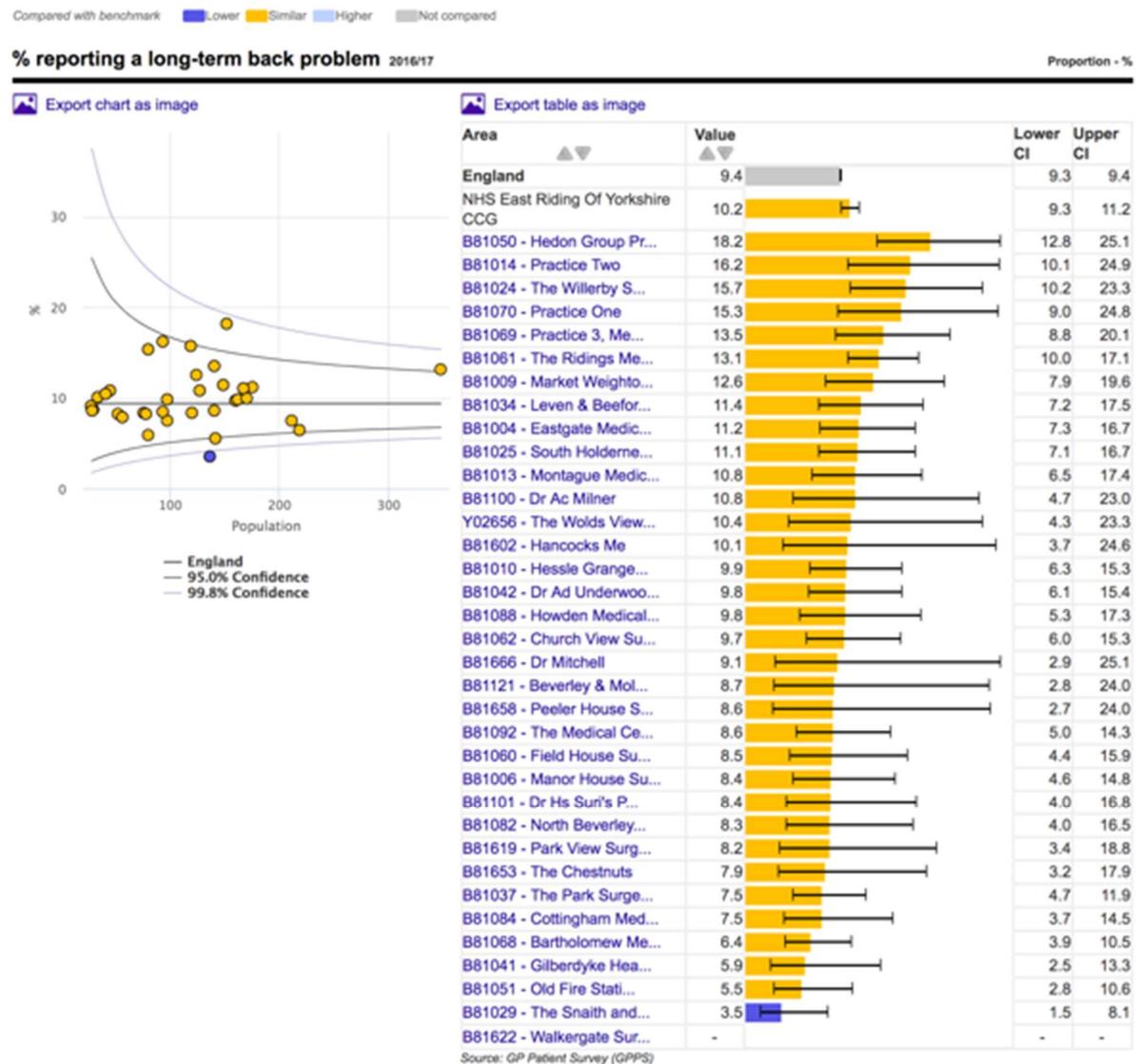


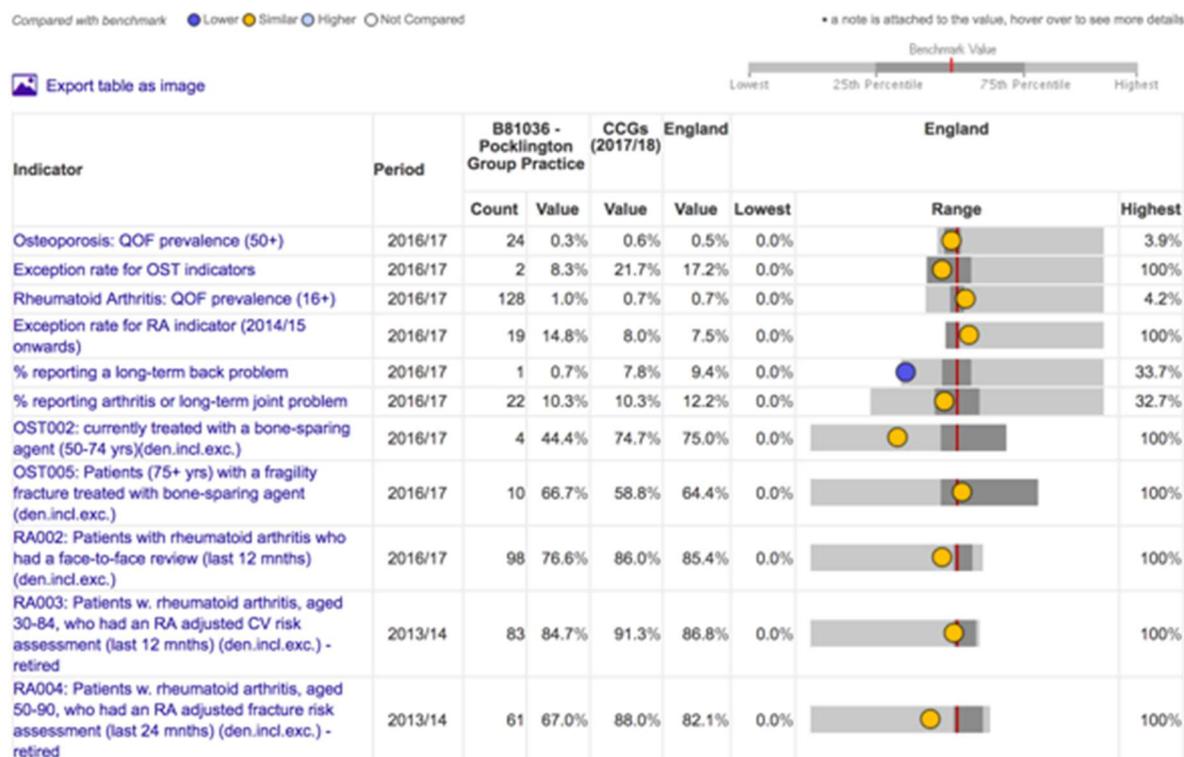
Figure 59. Percentage of people reporting a long-term back problem by general practice (2016/17) (Public Health England, 2018d)



For completion, the [National General Practice Profile](#) for Pocklington Group Practice, which is within the East Riding of Yorkshire Council but not the East Riding of Yorkshire CCG is shown (Figure 60) (Public Health England, 2018d).



Figure 60. National general practice profile for Pocklington Group Practice (Public Health England, 2018d)



8 Patient experience

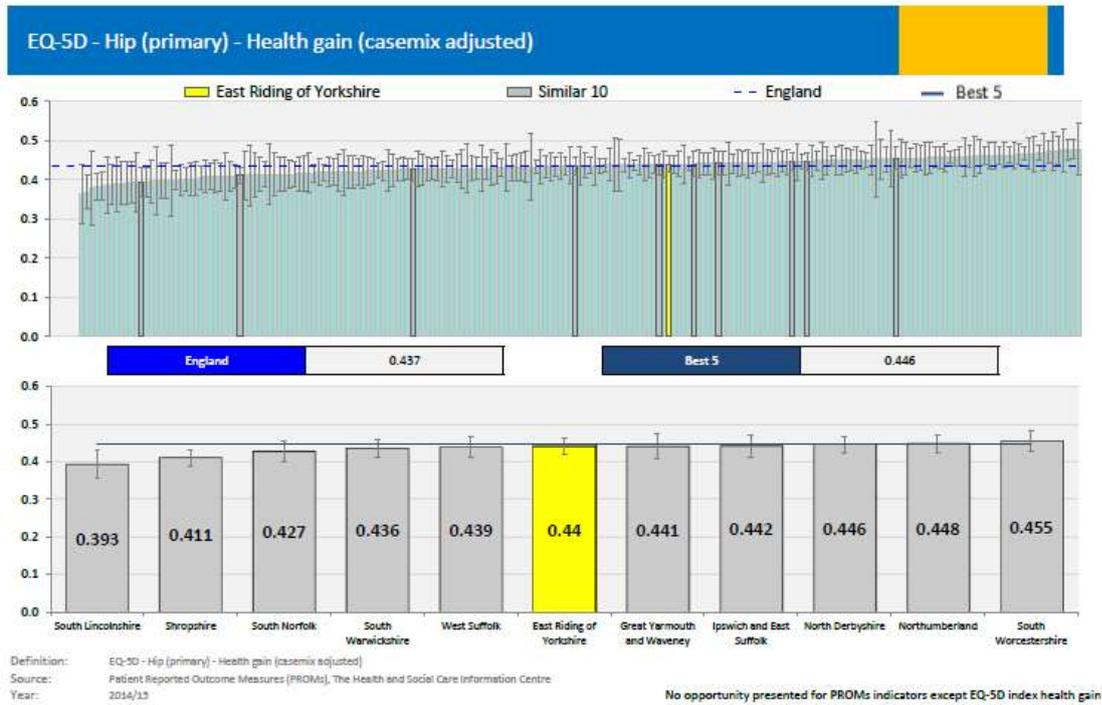
8.1.1 Patient reported outcome measures

[Patient reported outcome measures \(PROMs\)](#) are national measures used to assess NHS patient perspectives on quality of care for four clinical procedures: hip replacements, knee replacements, groin hernia and varicose veins. They calculate health gains using pre- and post-operative surveys (NHS England, 2018).

The EQ-5D health gain (a scale from 0 to 1 where 1 is the best) from hip replacements in the East Riding CCG after adjusting for casemix (e.g. age, sex and other co-morbidities in the population) is 0.44, which is similar to the best 5 comparator CCGs (0.446) and the England average (0.437) (Figure 61).



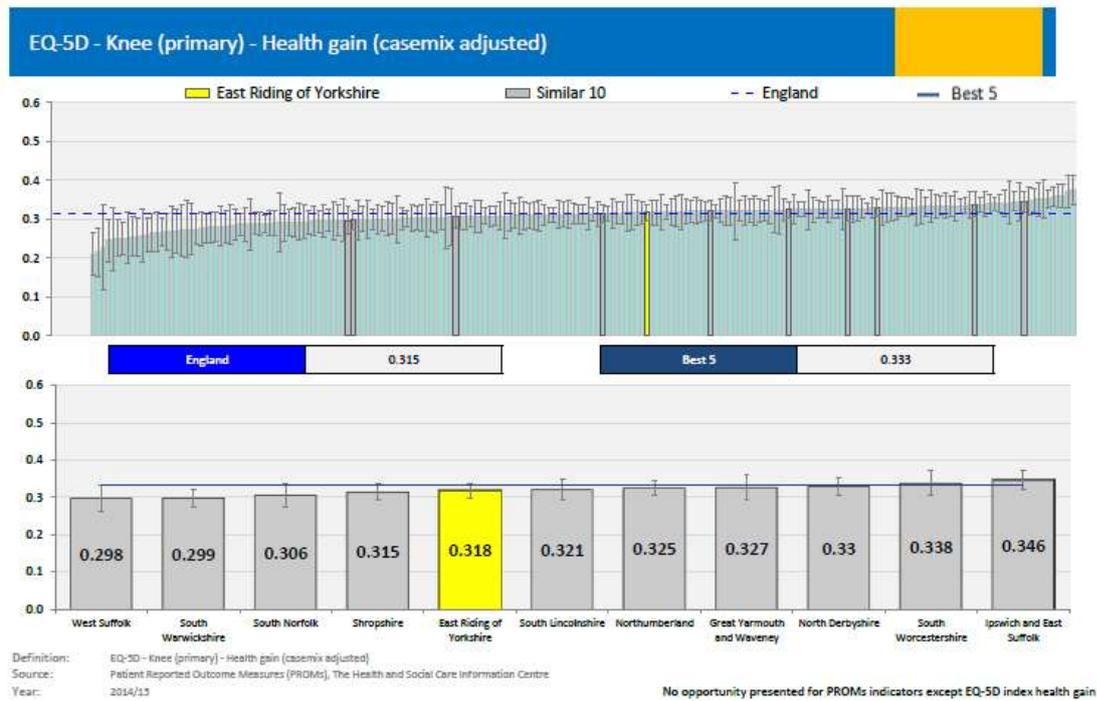
Figure 61. Quality of life scores gained based on EQ-5D for patients following a primary hip replacement, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



The EQ-5D health gain from knee replacements in the East Riding CCG is 0.318, which is lower but not statistically significantly lower than the five best comparator CCGs (0.333) and similar to the England average (0.315) (Figure 62).



Figure 62. Quality of life scores gained based on EQ-5D for patients following a primary knee replacement, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



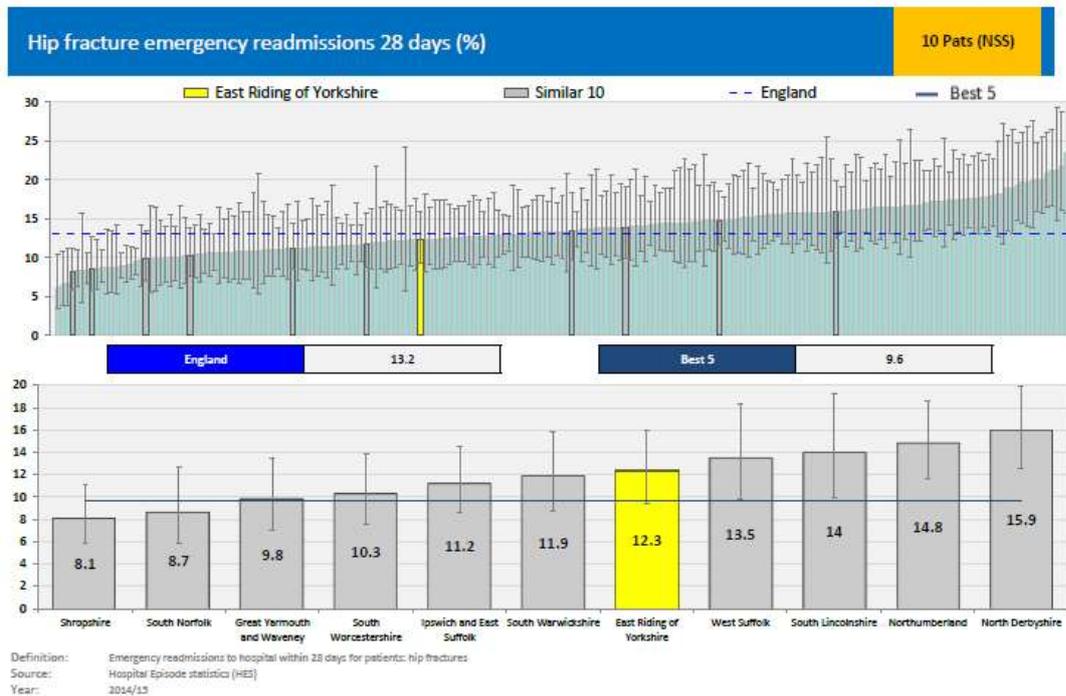
Health gains using the Oxford score, an alternative to the EQ-5D, show similar results for both hip and knee replacements for the East Riding CCG.

8.1.2 Readmission rates

Readmission rates for patients within 28 days post hip fracture for the East Riding CCG (12.3% of all hip fractures) are non-significantly higher by 10 patients than the 5 best comparator CCGs (9.6%) and non-significantly lower than the England average (13.2%) (Figure 63).

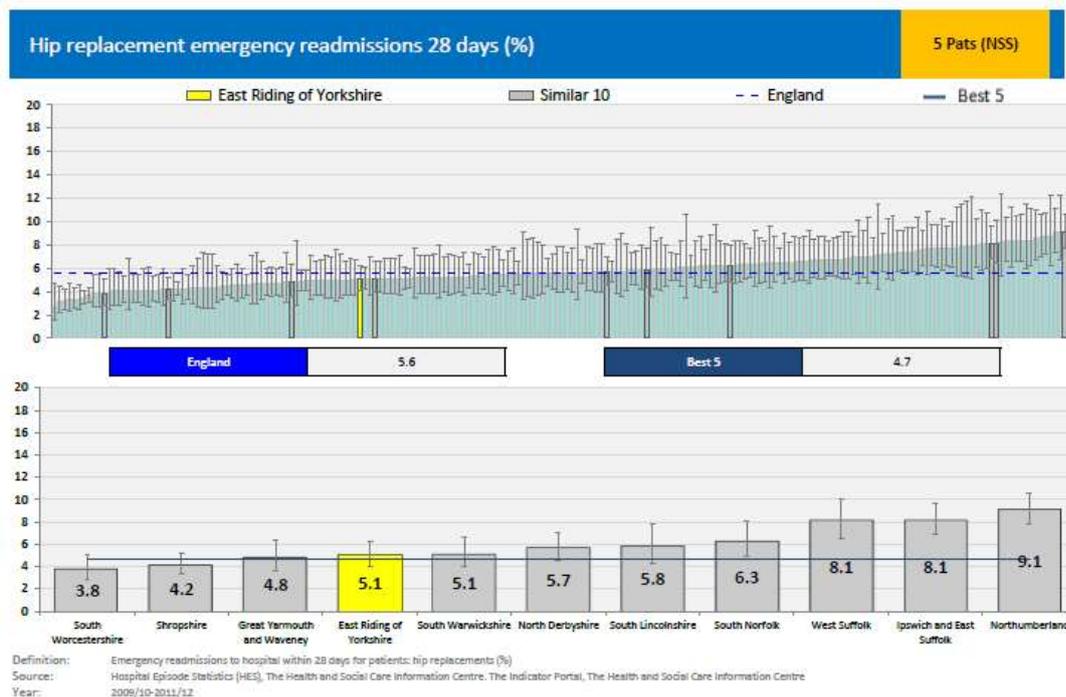


Figure 63. Percentage of emergency readmissions within 28 days following hip fracture, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



Readmission rates within 28 days post hip replacement for the East Riding CCG (5.1% of all hip replacements) are non-significantly higher by 5 patients than the 5 best comparator CCGs (4.7%) and non-significantly lower than the England average (5.6%) (Figure 64).

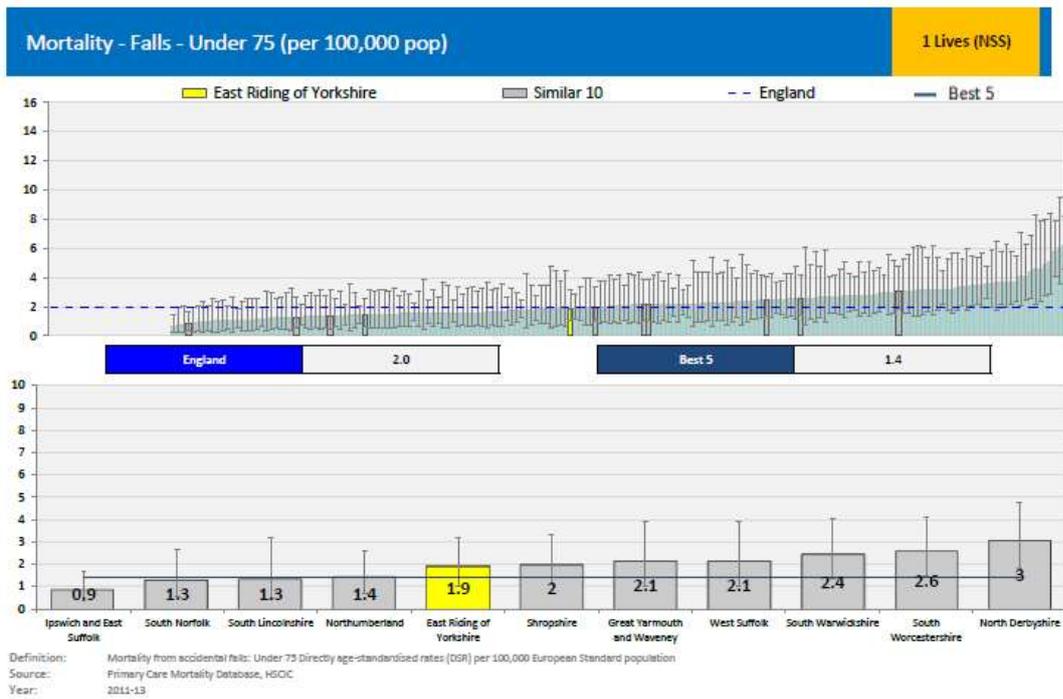
Figure 64. Percentage of emergency readmissions within 28 days following hip replacement, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



8.1.3 Mortality rates post fall

The directly aged-standardised mortality rate for people under 75 in the East Riding CCG is (1.9 per 100,000 European Standard population), is not statistically significantly higher by 1 life compared to the 5 best comparator CCGs (1.4 per 100,000 European Standard population) and similar to the England average (2.0 per 100,000 European Standard population) (Figure 65).

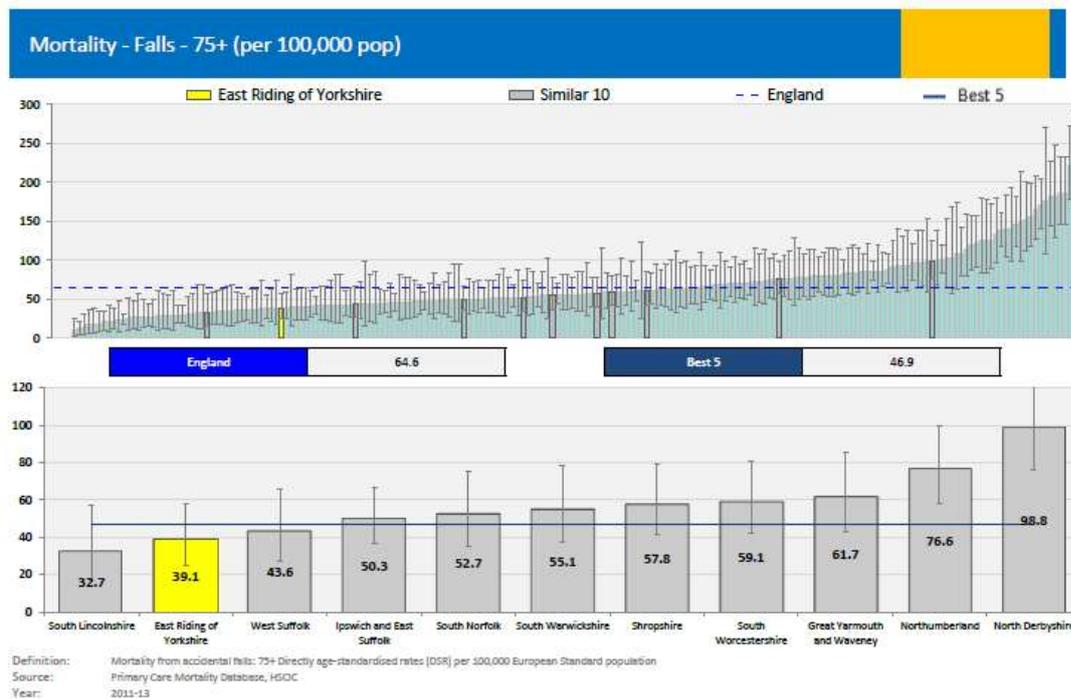
Figure 65. Directly age-standardised mortality rates from falls for patients under 75, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



The directly aged-standardised mortality rate for people 75 and over in the East Riding CCG is (39.1 per 100,000 European Standard population), is not statistically significantly lower than the 5 best comparator CCGs (46.9 per 100,000 European Standard population) and similar to the England average (64.6 per 100,000 European Standard population) (Figure 66).



Figure 66. Directly age-standardised mortality rates from falls in patients aged 75+, comparing the East Riding of Yorkshire CCG with 10 similar comparator CCGs and the England average (NHS England, 2016)



Of note but beyond the remit of this health needs assessment, directly age-standardised mortality rates from transport accidents in East Riding CCG are 4.8 per 100,000 European Standard population, which is statistically significantly higher than the 5 best comparator CCGs (3.1 per 100,000 European Standard population) and the England average (2.7 per 100,000 European standard population). There is a statistically significant difference of 152 life years lost due to transport accidents in the East Riding CCG compared to the five best comparator CCGs.

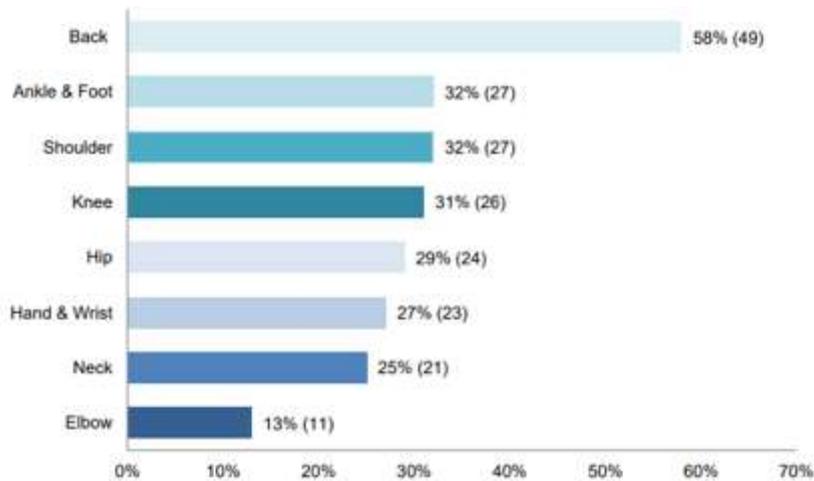
8.1.4 CCG patient survey

The East Riding CCG conducted a patient self-completion survey of patients in the East Riding via their website from May-June 2018 focusing on services that support people with MSK conditions and has 112 responses (East Riding of Yorkshire Clinical Commissioning Group, 2018b).

Of the 84 people that responded to the question ‘which of the following best describes the area that is/was affected’, the most common response (49, 58%) was ‘back’ (Figure 67).

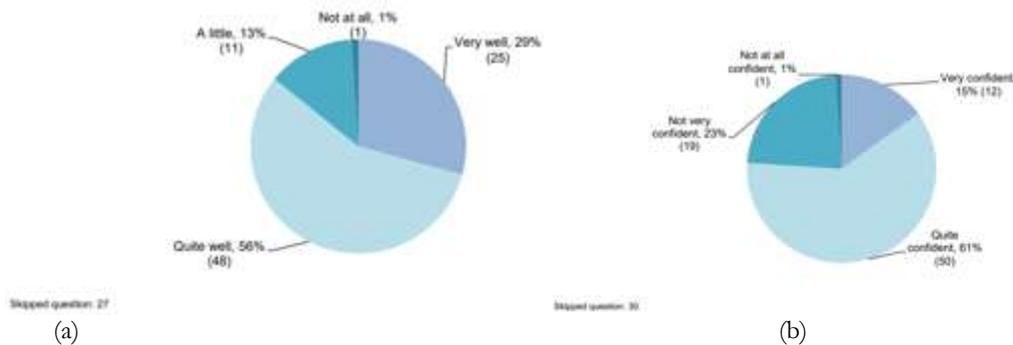


Figure 67. 'Which of the following best describes the areas that is/was affected' (East Riding of Yorkshire Clinical Commissioning Group, 2018b)



76% of respondents said their MSK condition lasted longer than 6 months. 40% of respondents said their condition related to chronic pain. 80% said their daily routine was moderately or extremely affected by their condition. 85% said they understood their condition quite well (56%) or very well (29%) (Figure 68 (a)) and 76% said they were quite confident (61%) or very confident (15%) in managing their condition (Figure 68 (b)).

Figure 68. 'Thinking about your symptoms, (a) 'How well do you think you understand your condition?' and (b) 'how confident were/are you in being able to manage your condition?' (East Riding of Yorkshire Clinical Commissioning Group, 2018b)



If they had a new or flare up of an existing MSK condition, most people would go first to their GP (Figure 69 and Figure 70).

Figure 69. 'If you had a new MSK condition who would you first go to for help and advice?' (East Riding of Yorkshire Clinical Commissioning Group, 2018b)



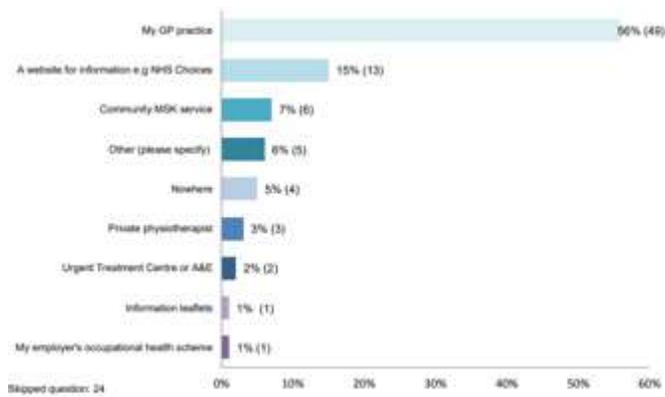
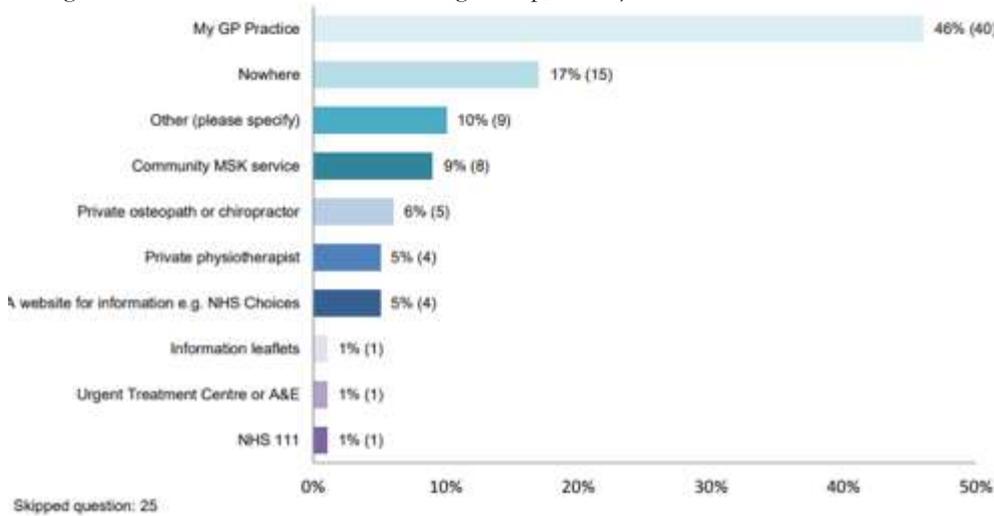


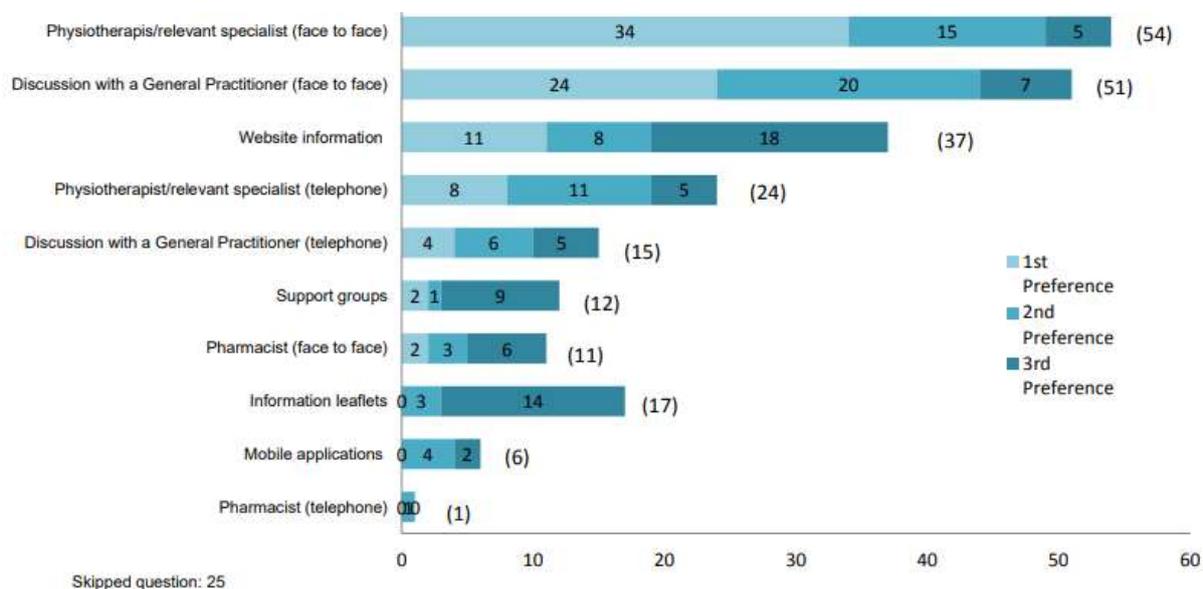
Figure 70. 'If you had a flare up of an existing MSK condition who would you first go to for help and advice?' (East Riding of Yorkshire Clinical Commissioning Group, 2018b)



A face-to-face discussion with a physiotherapist or GP were the most popular first and second choice options as the best way of helping them to understand and manage their MSK condition. Website information was the third most popular preference. A physiotherapist was the most popular choice of health care professional to seek advice from (Figure 71).



Figure 71. ‘What do you feel would be the best way to help you understand and manage your MSK condition (in order of preference rank your top 3 (1-3) with 1 meaning the most preferred?’ (East Riding of Yorkshire Clinical Commissioning Group, 2018b)



Nearly two-thirds (63%) of respondents had not had contact with the community MSK services. More than half (56%) of respondents said they did not know how to access the community MSK service, and a further 13% were unsure. Overall experience of the community MSK service for those that had used it was variable (Figure 72).

Figure 72. ‘How would you rate your overall experience of the community MSK service?’ East Riding of Yorkshire Clinical Commissioning Group, 2018b)



In a question around suggested improvements to the community MSK services, 14 comments were left which included difficulty accessing the service, long waits for appointments and being unable to get through on the telephone. One respondent felt the service saved them a lot of time and avoid an unnecessary GP appointment.

9 Projected population changes

From 2011 to 2017, the East Riding of Yorkshire Council population size has increased by 1.2%, there has been a fall in people aged 0-64 years but increases of 20.2% in those aged 65 and over and 14.9% in those aged 85 and over.



The [Projecting Adult Needs and Service Information \(PANSI\)](#) and [Projecting Older People Population Information System \(POPPI\)](#) tools provide population projections at the local authority level. It shows substantial projected levels of growth for both men and women in the over 65 group, and particularly high increases for the oldest age groups (Table 4) (Institute of Public Care, 2017a) (Institute of Public Care, 2017b). This may have substantial implications for the care of people with MSK conditions that predominantly affect older people such as osteoarthritis, and highlights the importance of keeping our working age population healthy to support the increasing proportion of dependents.

Table 4. Population projections in numbers (and percentage change from 2017) for East Riding of Yorkshire Council 2017 – 2035 by age group and gender (Institute of Public Care, 2017a)(Institute of Public Care, 2017b)

	2017	2020	2025	2030	2035
People aged 18-24	23,500	22,300 (-5%)	21,800 (-7%)	24,000 (+2%)	23,900 (+2%)
People aged 25-34	32,100	33,000 (+3%)	32,700 (+2%)	30,800 (-4%)	31,400 (-2%)
People aged 35-44	36,800	35,700 (-3%)	37,200 (+1%)	38,700 (+5%)	38,100 (+4%)
People aged 45-54	50,900	47,800 (-6%)	41,700 (-18%)	39,200 (-23%)	41,100 (-19%)
People aged 55-64	48,400	51,400 (+6%)	53,700 (+11%)	50,300 (-4%)	44,500 (-8%)
People aged 65-69	25,000	23,100 (-8%)	24,800 (-1%)	28,000 (+12%)	27,400 (+10%)
People aged 70-74	23,000	25,600 (+11%)	22,300 (-3%)	24,100 (+5%)	27,300 (+19%)
People aged 75-79	15,600	17,400 (+12%)	23,100 (+48%)	20,400 (+31%)	22,200 (+42%)
People aged 80-84	11,700	12,800 (+9%)	14,600 (+25%)	19,600 (+68%)	17,500 (+50%)
People aged 85-89	6,800	7,600 (+12%)	9,200 (+35%)	10,800 (+59%)	14,700 (+116%)
People aged 90 and over	3,600	3,900 (+8%)	5,000 (+39%)	6,700 (+86%)	8,500 (+136%)
Total males aged 18-64	95,500	95,200 0%	93,900 (-2%)	92,300 (-3%)	91,000 (-5%)
Total females aged 18-64	96,100	95,200 (-1%)	93,400 (-3%)	90,600 (-6%)	88,100 (-8%)
Total males 65 and over	39,600	41,900 (+6%)	46,400 (+17%)	51,800 (+31%)	55,700 (+41%)
Total females 65 and over	46,300	48,500 (+5%)	52,600 (+14%)	57,800 (+25%)	62,000 (+34%)
Total population - all ages	340,400	344,200 (+1%)	350,600 (+3%)	355,900 (+5%)	359,700 (+6%)

Figures may not sum due to rounding

Figures from Projecting Adult Needs and Service Information System and Projecting Older People Population Information System

10 Environmental Sustainability

Encouraging people to be more active for example using active transport rather than cars reduces carbon emissions. In addition, reducing hospital admissions for musculoskeletal conditions reduces the carbon footprint associated with visits to hospital.

11 Current services

11.1 Primary Care and CCG

There were 35 general practices in the East Riding of Yorkshire CCG (Public Health England, 2018d).

Patients over 18 registered with an East Riding GP can refer themselves for physiotherapy without seeing their GP by ringing the PhysioDirect helpline on 01377 208300.

Patients over the age of 17 from the Vale of York CCG or East Riding GP practice are able to self-refer to physiotherapy at York Teaching Hospital.



There is an ongoing programme of work within the East Riding CCG that includes:

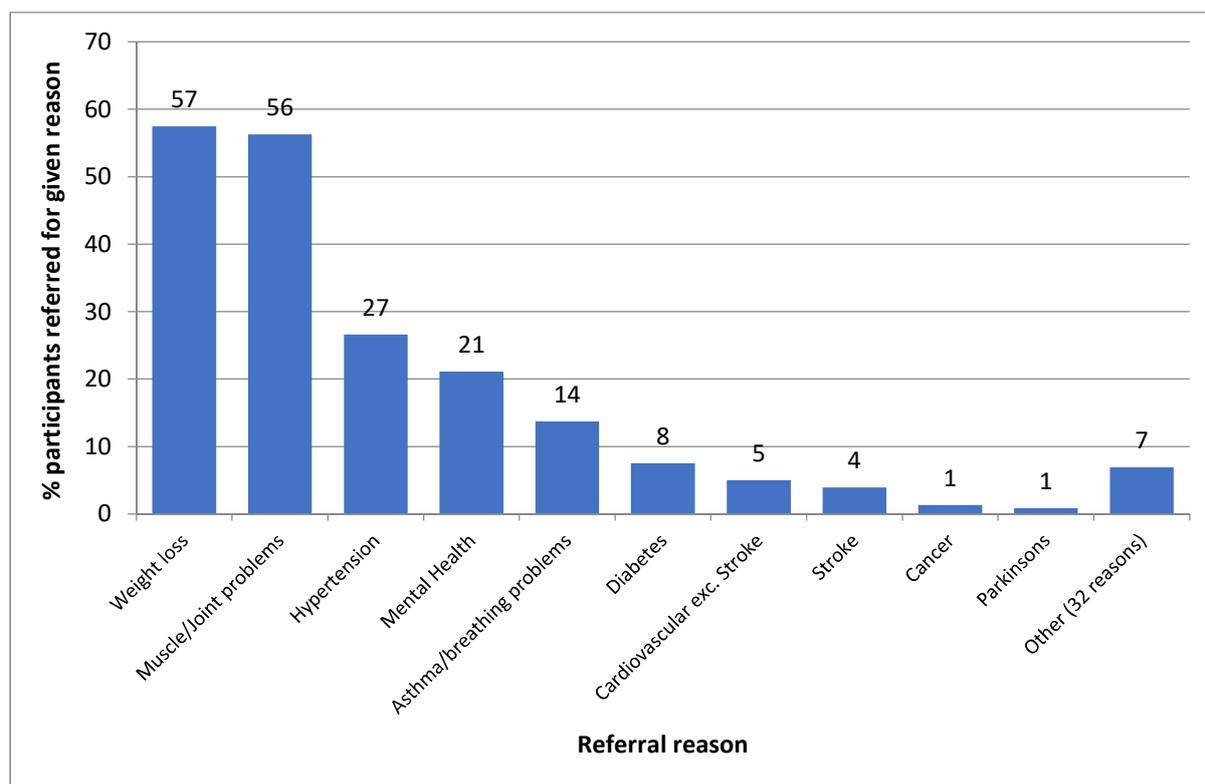
- Get Help Sooner, a care navigation system introduced in October 2018
- First Care Practitioners – are already in place in some general practices and being introduced into others
- ESCAPE Pain – a rehabilitation programme for chronic pain for 600 people will start in conjunction with leisure services in January 2019
- Shared decision making – a programme for 900 people from January 2019

11.2 Exercise Referral

Exercise Referral is a scheme that general practitioners and other health professionals are able to refer people in to a course of two sessions of exercise a week over a period of ten weeks through East Riding Leisure.

There were 839 referrals for this scheme from 01 April 2017 to 31 March 2018. 59% of patients were referred by their GP, 20% by their practice nurse, 15% by a physiotherapist and 7% other. Muscle/joint problems was the second most common reason and mentioned on 472 (56.3%) of referrals (Figure 73).

Figure 73. Percentage of patients being referred to for each given reason for exercise referral



There were 109 people (13.0%) where muscle/joint problems were listed as their only referral reason. Of these, 101 (92.7%) were motivated to continue exercising, 100 (91.7%) described their health as having improved and 85 (78.0%) reported their mood had improved.

11.3 Health Optimisation Programme

There have been 326 people referred to the Health Optimisation Programme from 17 October 2017 – 10 July 2018. 90 (27.6%) referrals were prior to a musculoskeletal intervention.



11.4 Health Trainers

There were 1014 health trainer patient contacts in 2017/18. Reason for seeing a health trainer is a free text option and may be broad such as 'to improve health'. 'Pain' was specifically mentioned by 67 patients, 'mobility' by 50 patients, 'knees' by 41 patients, 'hip' by 34 patients and 'arthritis' by 18 patients.

11.5 Making Every Contact Count

Making Every Contact Count (MECC) is an approach to behaviour change to help people to make positive changes to their physical and mental health and wellbeing.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/515949/Making_Every_Contact_Count_Consensus_Statement.pdf

The NHS Standard Contract requires providers to develop and maintain an organisational plan for Making Every Contact Count. <https://www.england.nhs.uk/wp-content/uploads/2018/05/2-nhs-standard-contract-2017-19-particulars-service-conditions-may-2018.pdf>

The Yorkshire and Humber Public Health Network has developed MECC Link, an online tool to provide Very Brief Intervention and signposting support which links to local authority specific resources for smoking, alcohol, mental wellbeing, suicide prevention, healthy diet and healthy weight, physical activity, sexual health, social isolation and loneliness, falls and frailty, affordable warmth, and problem gambling <https://www.mecclink.co.uk/>

The approach has been adopted by the eleven system leaders organisations in East Riding and is seen as a useful prevention and self care approach. Each organisation has committed to train staff to deliver "Healthy Chats" – opportunistic conversation where signposting can take place. An asset based approach to MECC in relation to falls and frailty is being carried out in the Bridlington area with a view to being rolled out across East Riding. A mapping exercise of local services and support in addition to the Falls Service has been completed and the relevant information has been populated on www.mecclink.co.uk Initial "Healthy Chat" training has been cascaded in Bridlington to include reference to the range of support for MSK problems and the relationship with falls and frailty.

As a result of the mapping further focus is being made on community development to encourage social activity to reduce isolation and which includes strength and balance physical activity.

Other elements of the menu to support MSK self care include:

- Social Prescribing
- Pharmacy
- Lifeline
- Neighbourhood Care
- Substance Misuse
- Safe and Well Visit
- Leisure Centres
- Adult Social Care



11.6 Leisure centres

East Riding leisure centres currently have [this advice](#) on back pain on their website (East Riding Leisure, 2018):

“Exercise and back care

Looking after your back and keeping it pain free and mobile is something we may all adhere to during our lives. Back pain can come in many forms. In our spine, for example, we have gel-filled discs between our vertebrae. Pressure on the nerves of the spinal cord can be very painful. Disc damage can be herniated where the disc bulges, or prolapsed where there is damage to the disc surface.

Causes can be through injury or poor posture and weak muscles (through lack of use) can lead to more chronic conditions. There are many reasons and causes for back pain however sitting for long periods of time such as work or driving put our backs at risk. To combat back pain or lower back muscle weakness, exercise can be very effective.

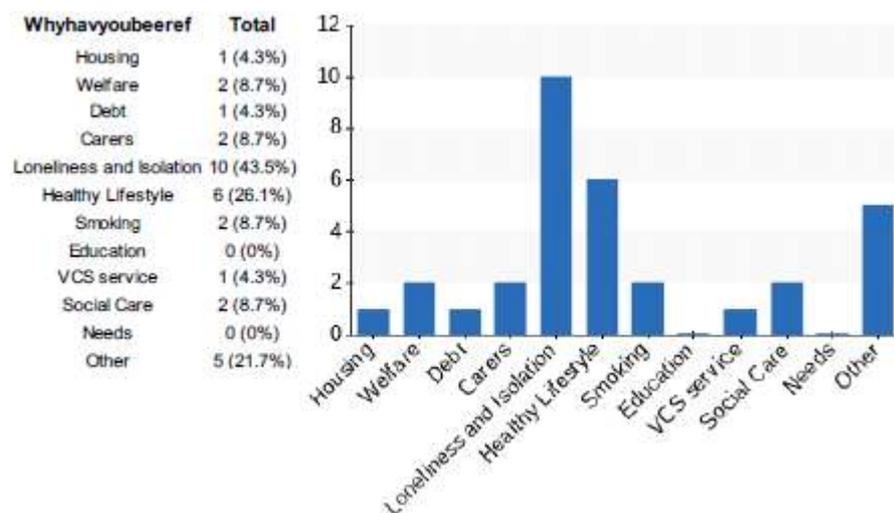
Muscles around the lower back and pelvis provide vital support. If these deep muscles (the core) are not strong or coordinated, other muscles take over leading to imbalance in the body. Exercise in the gym, pilates and Body Balance can really help improve the health of the back. Our fitness team can give you a specific exercise routine to improve posture and back strength.”

The website also includes information about diabetes, but no further health topics including osteoarthritis are included.

11.7 Social Prescribing

From 01 May 2018 to 01 October 2018 (5 months) there were 919 social prescribing encounters, of which 627 (68.2%) were for females, 292 (31.8%) for males. Medical history is not collected for data analysis although this is available to the link worker if the patient has consented to this. A reason for referral is not given by the link worker in the majority of cases. Where referral is given, loneliness and isolation is one of the more common reasons (Figure 74).

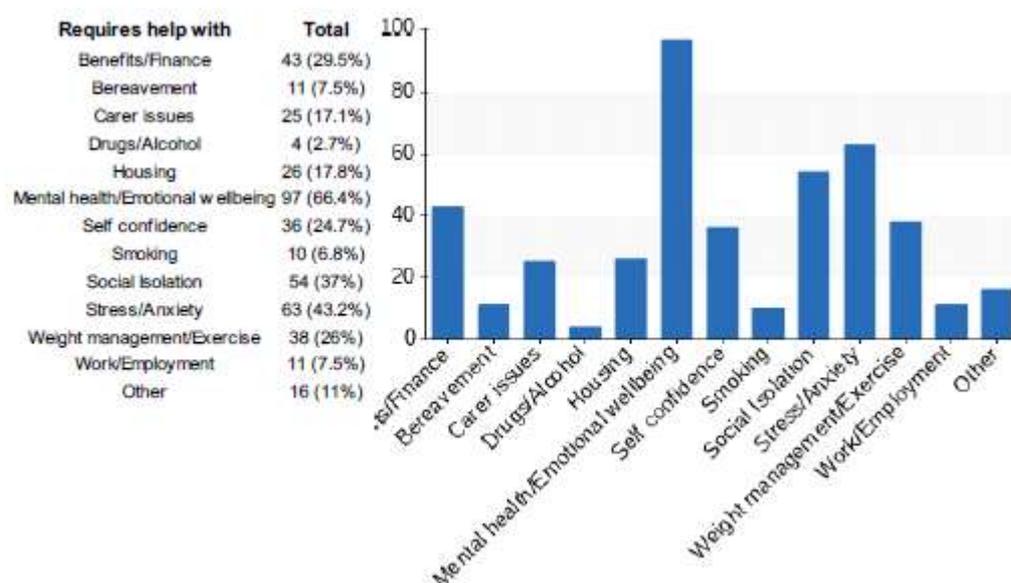
Figure 74. Reasons for referral for social prescribing (01 May 2018 – 01 October 2018)



Not all encounters lead to a referral to a specific service. Of those that did, 97 were referred for mental health/emotional wellbeing support, 54 for social isolation, 38 for weight management/exercise, and 10 for smoking cessation services (Figure 75).



Figure 75. Services offered from social prescribing (01 May 2018 – 01 October 2018)



11.8 100 day back pain challenge

This was launched by Humber, Coast and Vale on 22nd November 2018 and the following priority areas were identified

- Care navigation to physiotherapy first
- Referral guidance for lumbar spinal MRI
- Patient Education programme
- Support for Clinical education campaigns

12 Comparisons with other nearby areas

The Burden of Disease in Northern Lincolnshire Study found a high burden of disease associated with MSK problems both in terms of being a major contributor to YLD and to hospital admissions. However, whilst hospital admissions were dominated by joint replacements and fractures, the years lost due to disability were dominated by back and neck pain. They recognised the high volume of associated problems should make MSK conditions a priority for identification and systematic early management to prevent conditions becoming chronic (North and North-East Lincolnshire Councils, 2017).

Hull Joint Strategic Needs Assessment identifies the importance of staying active and the importance of people with MSK conditions getting the right treatment and being aware of the best way to manage their condition (Hull Joint Strategic Needs Assessment, 2017).

13 How this health needs assessment fits with national recommendations

13.1 Musculoskeletal health – a public health approach (page 9)

- *“When assessing local and national population health, MSK health must be included in the assessment”*
– this health needs assessment specifically assesses MSK health in the East Riding



- *“When designing, implementing and evaluating programmes targeting lifestyle factors such as obesity and physical inactivity, impact on MSK health should be explicitly included”* – this is included when developing East Riding of Yorkshire Council programmes targeting lifestyle factors, but not as explicitly as stated by Arthritis Research UK. East Riding Leisure Services have instructors with special interests and additional qualifications e.g. for people with MSK conditions, who work directly with clients who have these conditions or support the instructors the instructors who do to ensure they receive the correct support tailored to them
- *“When developing health promotion messages, the benefits of physical activity to people with MSK conditions should be emphasised”* - this is included when designing East Riding of Yorkshire Council weight management and physical activity services, but not as explicitly as stated by Arthritis Research UK
- *“All this public health activity must be underpinned by high quality data about MSK health”* – this health needs assessment describes the data currently available in the East Riding regarding MSK health.

13.2 Low back pain and sciatica in over 16s

There are six quality statements (National Institute for Health and Care Excellence, 2017a) (page 12):

“[Statement 1](#) Primary care services have an approach to risk stratification for young people and adults presenting with a new episode of low back pain with or without sciatica.” – work is being done by the CCG to encourage use of the STarT Back Screening tool, a questionnaire that helps clinicians identify modifiable risk factors for back pain disability (Keele University, 2011).

“[Statement 2](#) Young people and adults with low back pain with or without sciatica do not have imaging requested by a non-specialist service unless serious underlying pathology is suspected.” – the rate of MRIs of the spine appear to be substantially lower than other similar CCGs (Figure 32) but local interpretation on this data is advised. This alone does not determine whether MRIs are being performed appropriately. Spend on MRIs for back and radicular pain is significantly higher in the East Riding CCG than the five best comparator CCGs (Figure 43).

“[Statement 3](#) Young people and adults with low back pain with or without sciatica are given advice and information to self-manage their condition” – this health needs assessment has not found any sources of data on how frequently young people and adults with low back pain are given advice and information to self-manage their condition. This may be recorded on individual general practitioner patient records but is not easy to access or analyse.

“[Statement 4](#) Young people and adults are not given paracetamol alone, anticonvulsants or antidepressants to treat low back pain without sciatica” – this health needs assessment has not been able to analyse this directly, but has shown primary care spend for paracetamol is significantly higher in the East Riding CCG than other comparator CCGs (Figure 44).

“[Statement 5](#) Young people and adults are not given opioids to treat chronic low back pain without sciatica” – the data for this has not been available directly, but primary care spend for opioid analgesics is significantly higher in the East Riding CCG than other comparator CCGs (Figure 46).

“[Statement 6](#) Young people and adults do not have spinal injections for low back pain without sciatica with the exception of radiofrequency denervation for people who meet the criteria.” – spend on back pain injections is significantly higher in the East Riding CCG than comparator CCGs (Figure 47), but the data



available here does not determine whether all of these were for radiofrequency denervation for people who meet the criteria.

13.3 Osteoarthritis

There are eight quality statements (National Institute for Health and Care Excellence, 2015):

“Statement 1. Adults aged 45 or over are diagnosed with osteoarthritis clinically without investigations if they have activity-related joint pain and any morning joint stiffness lasts no longer than 30 minutes” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 2. Adults newly diagnosed with osteoarthritis have an assessment that includes pain, impact on daily activities and quality of life” – has not been directly analysed in this health needs assessment as there is no easily accessible data on this. Patient reported quality of life scores for all MSK conditions in the East Riding are higher than the national average (Figure 21). Health gain from hip and knee replacements in the East Riding is lower but not significantly different from comparator CCGs (Figure 61)(Figure 62).

“Statement 3. Adults with osteoarthritis participate in developing a self-management plan that directs them to any support they may need” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 4. Adults with osteoarthritis are advised to participate in muscle strengthening and aerobic exercise” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 5. Adults with osteoarthritis who are overweight or obese are offered support to lose weight” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 6. Adults with osteoarthritis discuss and agree the timing of their next review with their primary healthcare team” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 7. Adults with osteoarthritis are supported with non-surgical core treatments for at least 3 months before any referral for consideration of joint surgery” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 8. Healthcare professionals do not use scoring tools to identify which adults with osteoarthritis are eligible for referral for consideration of joint surgery” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

13.4 Osteoporosis

There are four quality standards (National Institute for Health and Care Excellence, 2017b):

“Statement 1 Adults who have had a fragility fracture or use systemic glucocorticoids or have a history of falls have an assessment of their fracture risk” – the East Riding CCG is performing statistically significantly worse than comparator CCGs and there is wide variation by general practice (Figure 50, Figure 51, Figure 52, Figure 53).

“Statement 2 Adults at high risk of fragility fracture are offered drug treatment to reduce fracture risk” – has not been analysed in this health needs assessment as there is no easily accessible data on this.



“Statement 3 Adults prescribed drug treatment to reduce fracture risk are asked about adverse effects and adherence to treatment at each medication review” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 4 Adults having long-term bisphosphonate therapy have a review of the need for continuing treatment” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

13.5 Rheumatoid arthritis in over 16s

There are seven quality standards (National Institute for Health and Care Excellence, 2018):

“Statement 1 People with suspected persistent synovitis affecting the small joints of the hands or feet, or more than one joint, are referred to a rheumatology service within 3 working days of presentation” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 2 People with suspected persistent synovitis are assessed in a rheumatology service within 3 weeks of referral” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 3 People with newly diagnosed rheumatoid arthritis are offered conventional disease-modifying anti-rheumatic drug (cDMARD) monotherapy within 3 months of onset of persistent symptoms” – has not been analysed in this health needs assessment as there is no easily accessible data on this, although we have found prescribing costs for prednisolone are similar methotrexate (a DMARD), higher for hydroxychloroquine (a DMARD) and higher for leflunomide (a DMARD) in the East Riding CCG than in the five best comparator CCGs (Figure 49).

“Statement 4 People with rheumatoid arthritis are offered educational and self-management activities within 1 month of diagnosis” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 5 People who have active rheumatoid arthritis have their C-reactive protein (CRP) and disease activity measured monthly in specialist care until they are in remission or have low disease activity” – has not been analysed in this health needs assessment as there is no easily accessible data on this.

“Statement 6 People with rheumatoid arthritis and disease flares or possible drug-related side effects receive advice within 1 working day of contacting the rheumatology service” – has not been analysed in this health needs assessment as there is no easily accessible data on this

“Statement 7 People with rheumatoid arthritis have a comprehensive annual review that is coordinated by the rheumatology service” – the East Riding CCG is performing statistically significantly lower than the five best comparator CCGs for this by an estimated 44 patients (Figure 54) and there is some variation by general practice (Figure 55).

14 Promoting MSK health

14.1 Lifecourse approach

Arthritis Research UK advocate for taking a lifecourse approach when promoting MSK health. Their framework has been used as the basis for identifying current East Riding interventions that promote MSK health (Table 5).



Table 5. Modifiable risks to MSK health through the lifecourse (based on recommended table by Arthritis Research UK, 2013)

Stage of life	Risk factors	Associated condition	Opportunities	National interventions	East Riding interventions
Maternal health	Low birth weight	Osteoporosis Reduced muscle strength	Tackle maternal smoking	<ul style="list-style-type: none"> National Campaigns – NHS Choices and One You 	<ul style="list-style-type: none"> Smoking Cessation within the Stop Smoking Service, Health Trainers Smoking in Pregnancy pilot Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Maternity offer of carbon monoxide monitoring, Brief Advice and referral to services
	High levels of vigorous activity during pregnancy/ very low levels of physical activity	Osteoporosis Reduced muscle strength	Promote appropriate physical activity during pregnancy	<ul style="list-style-type: none"> National Campaigns – NHS Choice and One You – Maternity Physical Activity Guidance 	<ul style="list-style-type: none"> Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Maternity services offer healthy lifestyle brief advice and signpost to services e.g. Baby Carousel (antenatal and parenting classes), Exercise referral Leisure services e.g. aquafit
	Maternal nutrition	Osteoporosis Reduced muscle strength	Low pre-conception BMI Promote adequate nutrition (e.g. vitamin D)	<ul style="list-style-type: none"> National Campaigns – NHS Choice and One You 	<ul style="list-style-type: none"> Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Maternity services offer healthy lifestyle brief advice and signpost to services e.g. Baby Carousel, Exercise referral
	Maternal smoking	Osteoporosis Reduced muscle strength	Tackle maternal smoking	<ul style="list-style-type: none"> National Campaigns – NHS Choices and One You 	<ul style="list-style-type: none"> Smoking Cessation within the Stop Smoking Service, Health Trainers Smoking in Pregnancy pilot Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Maternity offer of carbon monoxide monitoring, Brief Advice and referral to services

Stage of life	Risk factors	Associated condition	Opportunities	National interventions	East Riding interventions
Childhood and adolescence	Hip dysplasia	Osteoarthritis	Screening for developmental dysplasia	<ul style="list-style-type: none"> Universal Healthy Child Programme (HCP) 	<ul style="list-style-type: none"> Health and Development Reviews to promote uptake of early intervention or specialist services for those children who are not developing as expected or have additional health needs. Health visitors should check children's screening status during health appointments and refer all missed screening to appropriate agencies.
	Poor early childhood growth and adolescent eating disorders	Osteoporosis	Promote healthy childhood nutrition	<ul style="list-style-type: none"> Universal Healthy Child Programme (HCP) National Campaigns – Change 4 Life 	<ul style="list-style-type: none"> As part of the HCP 4-5-6 model, the Integrated Specialist Public Health Nursing will deliver one of the 6 High Impact areas for Early Years (e.g. healthy weight, healthy nutrition, and physical activity). Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Healthy Lifestyle programmes in schools – Us Kids Can, Rise, Skip4Life, Big Difference (Theatre in Education) Tier 2 Weight Management Service – Young LiveWell
	Obesity	Musculoskeletal pain Osteoarthritis Back pain	Reduce obesity	<ul style="list-style-type: none"> National Campaigns – Change 4 Life National Child Measurement Programme 	<ul style="list-style-type: none"> Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Healthy Lifestyle programmes in schools – Us Kids Can, Rise, Skip4Life, Big Difference (Theatre in Education) Tier 2 Weight Management Service – Young LiveWell Specialist dietitian services
	Physical inactivity	Osteoporosis	Exercise to promote greater bone density and muscle strength in later life	<ul style="list-style-type: none"> National Campaigns – Change 4 Life 	<ul style="list-style-type: none"> Healthy Families Service delivered through Children Centres offering Healthy Lifestyle advice and support through pregnancy to child is school age Healthy Lifestyle programmes in schools – Us Kids Can, Rise, Skip4Life, Big Difference (Theatre in Education) Healthy Lifestyle programmes out of school – Twilight Football, Us Girls Alive, Street Games Tier 2 Weight Management Service – Young LiveWell Organised Running and Athletics Clubs (Fitmums)

Stage of life	Risk factors	Associated condition	Opportunities	National interventions	East Riding interventions
Adult	Musculoskeletal injury	Osteoarthritis	Modify high-risk environments in sports and workplaces Early access to high quality treatment after injury		
	Obesity	Osteoarthritis Back pain Musculoskeletal pain Gout	Reduce obesity	<ul style="list-style-type: none"> National Campaigns – One You, NHS Choices 	<ul style="list-style-type: none"> Health Trainers – Offering Healthy Lifestyle advice and support Exercise on Referral – Tier 2 Weight Management Programme LiveWell – Tier 2.9 (not quite a tier 3 as no MDT) Weight Management Programme Organised Running, Cycling and Walking Clubs (Fitmums, Walking 4 Health) Promotion of Sport and Physical Activity Clubs
	Smoking	Rheumatoid arthritis Musculoskeletal pain Osteoarthritis Gout	Lifestyle changes	<ul style="list-style-type: none"> National Campaigns – One You, NHS Choices 	<ul style="list-style-type: none"> Smoking Cessation Services
	Physical inactivity	Musculoskeletal pain Osteoarthritis Osteoporosis	Improve overall musculoskeletal health High impact physical activity to promote strengthening of the bones	<ul style="list-style-type: none"> National Campaigns – One You, NHS Choices 	<ul style="list-style-type: none"> Health Trainers – Offering Healthy Lifestyle advice and support Exercise on Referral – Tier 2 Weight Management Programme LiveWell – Tier 2.9 (not quite a tier 3 as no MDT) Weight Management Programme Organised Running, Cycling and Walking Clubs (Fitmums, Walking 4 Health, Walking Football & Netball) Promotion of Sport and Physical Activity Clubs

	Risk factors	Associated condition	Opportunities	National interventions	East Riding interventions
Older life	Poor nutrition	Increased falls risk Osteoporosis	Maintain healthy nutrition and body weight	<ul style="list-style-type: none"> National Campaigns – One You, NHS Choices 	<ul style="list-style-type: none"> Health Trainers – Offering Healthy Lifestyle advice and support Exercise on Referral – Tier 2 Weight Management Programme
	Obesity	Osteoarthritis Back pain Gout	Reduce obesity	<ul style="list-style-type: none"> National Campaigns – One You, NHS Choices 	<ul style="list-style-type: none"> Health Trainers – Offering Healthy Lifestyle advice and support Exercise on Referral – Tier 2 Weight Management Programme LiveWell – Tier 2.9 (not quite a tier 3 as no MDT) Weight Management Programme Organised Running, Cycling and Walking Clubs (Fitmums, Walking 4 Health, Walking Football and Netball) Promotion of Sport and Physical Activity Clubs
	Physical inactivity	Increased falls risk Osteoporosis Musculoskeletal pain	Increase physical activity to strengthen bones, muscles and joints and improve balance and co-ordination Remove barriers that prevent older people engaging in activity (inaccessible, lack of transport, social fears)	<ul style="list-style-type: none"> National Campaigns – One You, NHS Choices 	<ul style="list-style-type: none"> Health Trainers – Offering Healthy Lifestyle advice and support Social Prescribing Service – offering holistic assessment of lifestyle, signposting and referral Exercise on Referral – Tier 2 Weight Management Programme LiveWell – Tier 2.9 (not quite a tier 3 as no MDT) Weight Management Programme Organised Running, Cycling and Walking Clubs (Fitmums, Walking 4 Health, Walking Football and Netball) Promotion of Sport and Physical Activity Clubs Strength and Balance exercise classes e.g. Body Balance, Pilates, Chair Based Exercise
	Substance Misuse*	Increased falls risk	Reduce consumption	<ul style="list-style-type: none"> Drinkline, One You, NHS Choices 	<ul style="list-style-type: none"> East Riding Partnership
	Complex Long term conditions and multiple medications*	Increased falls risk	Medicines Management		<ul style="list-style-type: none"> Healthy Living Pharmacy
	Social Isolation and loneliness*	Reduction in mobility, low mood, self-care	Participation in community activities	<ul style="list-style-type: none"> Silverline, Age UK 	<ul style="list-style-type: none"> Social Prescribing Service Men in Sheds

* = not included in the recommendations by Arthritis Research but deemed to be important for the East Riding

14.2 Levels of prevention

Arthritis Research UK also advocate for considering three levels of prevention in MSK health (primary, secondary and tertiary). The areas of particular importance for the East Riding identified in this needs assessment are highlighted in red (Arthritis Research UK, 2013).

Table 6. Levels of prevention in MSK health (Arthritis Research UK, 2013)

	Conditions of MSK pain e.g. back pain, osteoarthritis	Inflammatory conditions e.g. rheumatoid arthritis	Fragility fractures and osteoporosis
Primary prevention (reducing the risk of the condition developing)	Reducing obesity across the whole population to reduce the number of people who develop osteoarthritis and back pain	Reducing smoking prevalence to reduce the proportion of people who develop rheumatoid arthritis	Increasing high impact physical activity in childhood to reduce risk of fractures in adult like
	Increasing appropriate physical activity across the whole population to reduce the number of people who develop osteoarthritis and back pain		Identifying adults who are at high risk of a fracture (for example due to medication, or illness) and promoting adequate nutrition, increasing physical activity and considering medication
Secondary prevention (stopping condition worsening once it has developed)	Increasing physical activity among people with osteoarthritis and back pain to reduce pain and disability in people with these conditions	Rapid referral of people with rheumatoid arthritis to begin urgent, intensive therapy to control the disease and prevent joint damage	Ensuring that people who have had a fragility fracture receive treatment and support to prevent another fracture
	Decreasing obesity among people with osteoarthritis and back pain to reduce pain and disability in people with these conditions	Cardiovascular risk screening and bone health assessment for people with rheumatoid arthritis	
Tertiary prevention (reducing the impact of the condition on the person affected)	Occupational health services to support people to remain at, or return to work	Services such as podiatry, physiotherapy and occupational therapy to help people remain active and independent	Promoting recovery from fracture with re-enablement services after a hip fracture to support return to independent living

14.3 Return on investment

Public Health England has launched a [return on investment of interventions for the prevention and treatment of musculoskeletal conditions tool](#), produced by the York Health Economics Consortium, to help commissioners at a local level identify what they can do to take action. It summarises the financial, health and societal productivity gain for each of cognitive behavioural therapy (CBT) including exercise, STarT Back (stratified risk assessment and care), Physiodirect



(early telephone assessment and advice), self-referral for physiotherapy, yoga for healthy backs, ESCAPE-Pain (exercise rehabilitation program) and vocational advice from physiotherapists in primary care Table 7 (Public Health England, 2017c).

Table 7. Return on investment for interventions for musculoskeletal conditions showing the gain (in £) for every £1 invested (Public Health England, 2017c)

Intervention	Financial gain to healthcare	Financial and health gain (quality-adjusted life years)	Financial, health and societal gain (days of work saved)
Self-referral for physiotherapy	£98.54	£98.54	£98.54
STarT Back	£10.58	£90.92	£226.23
PhysioDirect	£2.08 (-4.05, 8.21)	£47.32 (-11.18, 99.35)	£47.32
ESCAPE-pain	£5.20 (1.03, 11.92)	£5.20	£5.20
CBT including exercise	£0.11 (-0.65, 0.88)	£7.52 (-9, 21.57)	£7.52
Vocational advice	Not reported	Not reported	£11.14
Yoga for healthy lower backs	£-0.98 (-2.54, 0.95)	£6.61 (2.18, 11.61)	£10.17

Vocational advice from a vocational advisor embedded within a general practice has also been found to be beneficial in a cluster randomised trial compared to current best care. People in the intervention arm had fewer days of work absence, a net societal benefit of £733 for the intervention and return on investment of £49 for every £1 invested (Wynne-Jones et al., 2018) (Public Health England, 2017d).

A Cochrane Review of workplace schedules for preventing musculoskeletal disorders has a published protocol, the results have not yet been published (Luger et al., 2017).

15 Data quality

Where possible, data from national sources that have clear definitions and sources have been used to allow robust comparisons between areas and with the national average. Local data has been used where available on indicators of national concern using data analysed and provided by NHS Rightcare. More specific local data has been included where available to give more local detail, such as the patient survey. This combination of using both national and local data aims to bring together the best data we have on current risk factors, disease prevalence and service use for people with MSK conditions.

15.1 National databases

The Quality and Outcomes Framework (QOF) was introduced into the General Medical Services contract for general practitioner in 2004 (NHS Digital, 2018c). Whilst it is a voluntary reward and incentive programme, approximately 25% of practice income was linked to a set of over 100 quality indicators, leading to high levels of data completion on included indicators. Estimates of prevalence of conditions and risk factors based on QOF are therefore highly representative of the population. However, there may still be variations around diagnostic criteria used, coding quality, and how patients are excluded from a given indicator.

Hospital service use data has been collated by NHS Rightcare using Secondary User Services Extract Mart data, a single, comprehensive repository for healthcare data at individual patient level in England (NHS Digital, 2018b) As for QOF data the high level of coverage means robust comparisons between areas can be made, but there may be variations in data quality and coding.



Prescribing spend has been collected using ePACT, another national level database with similar strengths and limitations (NHS Business Authority, 2018). One of the key limitations here is it is not possible to tell whether analgesics prescribed were specifically for MSK conditions.

Local service data collection e.g. exercise referral, health optimisation, health trainers and social prescribing are collected through PharmOutcomes (PharmOutcomes, 2018), a database used by service providers at the time of consultation with clients, therefore captures all referrals and client encounters giving useful data on current service use. However, it is limited by short duration of services, 'MSK' not being a specific option for health trainers to tick and reason for referral is generally not completed for social prescribing.

15.2 National surveys

National survey data has been used for estimating prevalence of obesity (Active Lives Survey), smoking (Annual Population Survey), GP Patient Survey. These surveys aim to be as representative of the population as possible, but as they represent a sample rather than the entire population, may be subject to participation bias (where participants are somehow systematically different from the wider population).

15.3 The musculoskeletal calculator

The musculoskeletal calculator gives the most accurate available estimates for disease prevalence, based on a combination of Quality and Outcomes Framework data, the GP Patient Survey, the Health Survey for England and English Longitudinal Study of Ageing.

The East Riding of Yorkshire CCG survey is useful for giving local patient-level information on support services for people with MSK conditions. Response rates were low, meaning it is unlikely to be fully representative of the whole East Riding population.

15.4 Gaps in the data

A number of gaps in the data have been identified by comparing the data available with how this health needs assessment fits with national recommendations, e.g. specific MSK data on self-care management (see page 70 for full details). Similarly, data is not always collect on MSK health in specific circumstances e.g. impact on adult social care.

The majority of the data available on current MSK health in the East Riding is quantitative, giving useful comparisons and trends, but is limited by not capturing qualitative information such as how and why people use services in a certain way.

16 Recommendations - key points for improving MSK health in the East Riding

MSK health needs to be highlighted and advocated for throughout the lifecourse

1. Musculoskeletal health should be considered for specific inclusion in the Health and Wellbeing Strategy, and put forward for consideration at the Health and Wellbeing Board agenda setting workshop
2. Musculoskeletal health should be considered in the Primary Care Strategy
3. A programme of musculoskeletal health promotion including the benefits of physical activity to prevent and help people with existing musculoskeletal conditions should be implemented



4. A workforce programme targeting musculoskeletal health to prevent musculoskeletal conditions particularly back pain and osteoarthritis should be implemented
5. Musculoskeletal health should be included in the evaluation of programmes around obesity and physical activity
6. Where there is evidence of positive return on investment of programmes benefiting musculoskeletal health, their implementation should be prioritised
7. Risk stratification tools should be used for assessing people with a new episode of back pain
8. People in the East Riding with a musculoskeletal condition need to have access to programmes and resources to help self-management
9. Local partners to share knowledge and data on musculoskeletal health
10. Support upskilling of relevant staff groups on musculoskeletal health
11. Musculoskeletal health should be included in the evaluation of programmes around obesity and physical activity
12. Where there is evidence of positive return on investment of programmes benefiting musculoskeletal health, their implementation should be prioritised
13. Risk stratification tools should be used for assessing people with a new episode of back pain
14. People in the East Riding with a musculoskeletal condition need to have access to programmes and resources to help self-management
15. Local partners to share knowledge and data on musculoskeletal health
16. Support upskilling of relevant staff groups on musculoskeletal health



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