Arthritis Research UK

UNDERSTANDING ARTHRITIS

A parliamentary guide to musculoskeletal health

CONTENTS

1. WHAT IS MEANT BY ARTHRITIS AND OTHER MUSCULOSKELETAL CONDITIONS?

Arthritis is a general term that most people use to mean painful joints. Medically, it refers to a number of different conditions leading to inflamed or damaged joints. The term *musculoskeletal conditions* is often used by policymakers to include the whole category of health conditions affecting bones, joints and muscles, pain syndromes and rarer conditions of the immune system such as lupus.

Arthritis and other musculoskeletal conditions are primarily long term conditions. Common features of these conditions are pain, joint stiffness and limitation in movement. The symptoms fluctuate in severity over time and are often associated with psychological problems. The symptoms are often not visible to the eye and therefore people are sometimes not aware how severely musculoskeletal conditions can impact on people's lives.

Broadly there are two groups of musculoskeletal conditions. The first group are inflammatory conditions such as rheumatoid arthritis, where the immune system attacks and destroys the joints and sometimes the internal organs. These conditions are usually treated in hospitals by specialists known as rheumatologists and require drug treatments.

The second group includes conditions of musculoskeletal pain such as osteoarthritis where there is painful wear and degeneration of joints over time. These conditions are normally treated in primary care, affect large numbers of people and interventions usually involve physical activity and pain management. Severe cases of osteoarthritis can result in the need for joint replacement, which can give people back their mobility. Regardless of the cause, untreated arthritis leads to pain, disability and lost quality of life.

Figure 1: What are the common characteristics of musculoskeletal conditions?

Arthritis and other musculoskeletal conditions include over 200 conditions.

Common symptoms across musculoskeletal conditions include pain, joint stiffness, limitation in movement and fluctuation in severity over time.

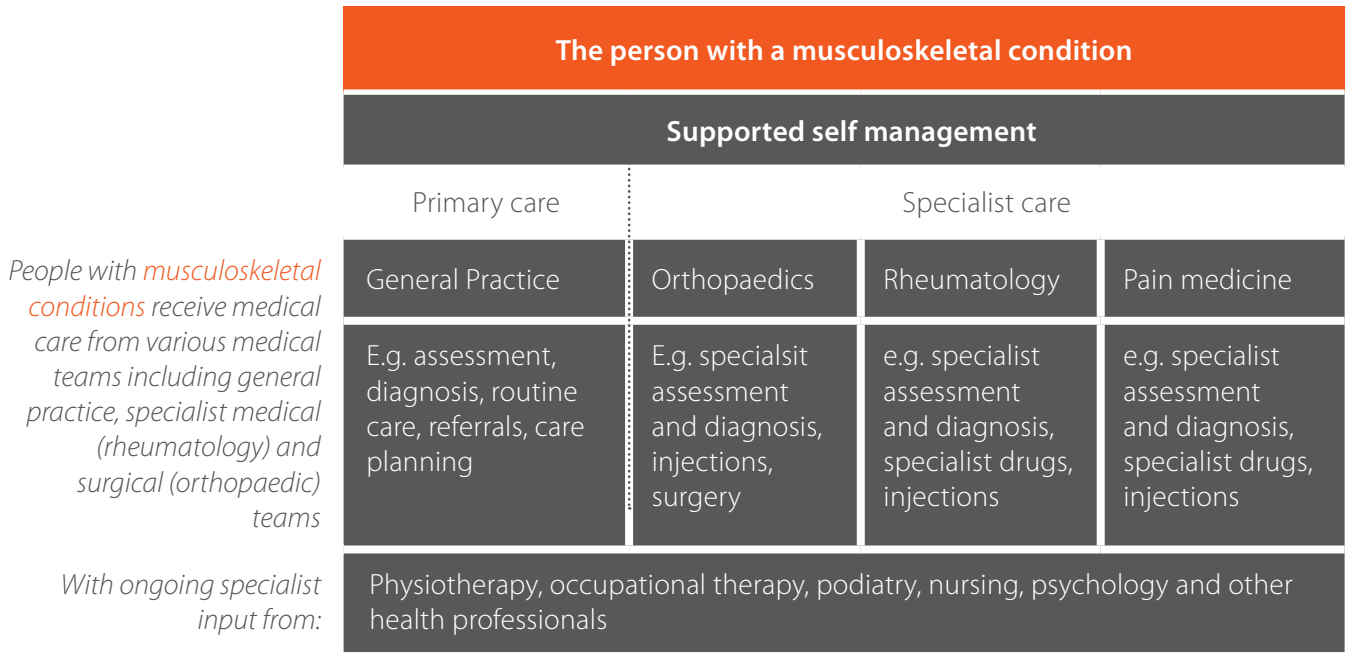
Group one: inflammatory conditions	Group two: conditions of musculoskeletal pain
Example: rheumatoid arthritis Common features: » **Age:** affects any age » **Progression:** often rapid onset » **Prevalence:** less common » **Impact:** internal organs can be affected » **Location of treatment:** urgent specialist treatment needed including drugs » **Interventions:** treated by suppressing the immune system » **Risk factors:** genetics, smoking	*Example: osteoarthritis* Common features: » **Age:** rare in the young » **Progression:** gradual onset » **Prevalence:** very common » **Impact:** affects the joints and pain system » **Location of main treatment:** treatment based in primary care » **Interventions:** treated with physical activity and pain management » **Risk factors:** age, physical injury, obesity, gender

Please see sections five and six for more details about the impact of the two groups of conditions.

2. WHO ARE THE HEALTH PROFESSIONALS INVOLVED IN MUSCULOSKELETAL HEALTH?

There are a number of different health professionals involved in the treatment of people with arthritis and musculoskeletal conditions. Inflammatory conditions need to be treated by rheumatologists and will be referred to specialist care. Orthopaedic surgeons operate on severely damaged joints. Conditions of musculoskeletal pain such as osteoarthritis and back pain will mainly be treated in primary care. Not every person with the same condition will need support from the same health professionals.

Figure 2: Diagram of health professionals involved in the treatment of people with musculoskeletal conditions



3. WHAT IS THE IMPACT ON INDIVIDUALS, THE HEALTH SERVICE AND WIDER SOCIETY?

Arthritis and other musculoskeletal conditions account for the fourth largest budget within the NHS of £5 billion a year, smaller only than cancer, mental health and cardiovascular health[1]. Arthritis and other musculoskeletal conditions are mostly long-term conditions that can cause persistent pain resulting in substantial impact on quality of life over decades. Their impact and burden is recognised by the World Health Organization which describes them as 'leading causes of morbidity and disability, giving rise to enormous health-care expenditures and loss of work[2]'.

Impact on the individual

The impact on the individual and their quality of life can be substantial. More than one third of the population aged over 50 have arthritis pain that interferes with their normal activities[3]. In terms of the most common form of arthritis, osteoarthritis, 71% report some form of constant pain; whilst one in eight people describe their pain as often "unbearable[4]". Osteoarthritis of the knee causes pain and disability to one in five people in their 50s, rising to one in three people by age 75[5].

Back pain is a major cause of individual distress and lost work, with one in six adults aged over 25 years reporting back pain lasting over three months in the last year[6]. Over five million people in the United Kingdom live with osteoarthritis of the hand[7]. Women are twice as likely to experience this painful condition that limits the ability to perform and enjoy everyday activities[8].

Impact on the health service

Each year around 20% of the general population consult with their GPs about a musculoskeletal problem such as arthritis[9]. The majority of these consultations will be for osteoarthritis and back pain. It is clear that these conditions account for a substantial attendance and burden in primary care. Musculoskeletal conditions are often long term conditions and therefore the needs of people with arthritis will form a growing part of GPs' workload.

In 2008, the estimated annual direct health service costs of osteoarthritis were £5.2 billion[10]. The high cost of osteoarthritis reflects both the very large numbers of people affected and the high cost of joint replacement for severely damaged joints, with over 76,000 hip and nearly 82,000 knee replacements performed in 2010[11].

There are 1.5 million hospital specialist consultations with rheumatologists for people with severe arthritis each year in England[12]. The NHS does not currently collect information on the conditions for which people are seen in rheumatology departments. The most common inflammatory arthritis is rheumatoid arthritis and the estimated 2008 annual direct health service costs of this condition were £900 million[13]. Increasing use of effective new treatments for inflammatory arthritis is expensive, with an estimated £160 million spent on these in 2009 alone[14].

Impact on society

Arthritis and musculoskeletal conditions have a wider impact on society beyond the health service. Around 7.6 million work days are lost each year owing to musculoskeletal conditions[15]. This is second only to stress, depression and anxiety which were the leading cause of work days lost (of 10.8 million each year)[16].

There is also a relationship between musculoskeletal conditions and depression. Pain is a common symptom of musculoskeletal conditions. Living in chronic pain can lead to depression, which is four times more common for those people with persistent pain than without[17-20]. The indirect costs of arthritis* on society have been estimated at £14.8 billion[21], which includes the cost of lost work for those affected and their carers, adding to the lost quality of life experienced by those living with musculoskeletal conditions.

** This figure reflects the burden of osteoarthritis and rheumatoid arthritis.*

4. ARTHRITIS AND MUSCULOSKELETAL CONDITIONS IN NUMBERS

£5 BILLION NHS SPEND

4th LARGEST
NHS PROGRAMME BUDGET

7.6 MILLION
WORKING DAYS LOST

Each year ***20%*** *of the general population consults a GP about a musculoskeletal problem*

£14.8 BILLION indirect costs to the economy of osteoarthritis and rheumatoid arthritis

ONE IN FIVE PEOPLE IN THEIR 50s HAS OSTEOARTHRITIS IN THEIR KNEE

£5.2 BILLION is the annual direct health service cost of osteoarthritis

Over 76,000 hip replacements and nearly 82,000 knee replacements in 2010 alone

5. WHAT ARE INFLAMMATORY CONDITIONS?

There are two main groups of musculoskeletal conditions. In the first group, inflammatory conditions, the immune system attacks the body's own tissues, causing inflammation and damage to joints and internal organs. These conditions affect around 1% of the population, can occur at any age including childhood, fluctuate in severity over time and can be life threatening. They require lifelong specialist treatment and early treatment prevents permanent disability and early death.

People with inflammatory arthritis experience joint pain, stiffness and swelling. The unpredictable fluctuation of symptoms over time can make it difficult for people to plan their work, social and intimate lives.

What are the challenges in the diagnosis and treatment for people with inflammatory conditions?

Diagnosis of inflammatory conditions can be challenging. As early, intense treatment has a major impact on long term outcomes, it is critical that GPs are able to recognise the features of these conditions and refer people for an urgent specialist opinion from a rheumatologist.

Although many of these conditions are uncommon, treatment costs to the NHS can be high. For example, the newer biologic therapies such as anti-TNF therapy* have transformed the lives of people with inflammatory arthritis, but are expensive: the estimated cost is of around £8,000 per year on a continuing basis for life[22]. In many hospitals, anti-TNF is the largest single drug group expenditure[23]. These treatments have transformed the lives of many people with rheumatoid arthritis by slowing the progress of the condition. Early intensive treatment also reduces the need for more costly later therapies.

A challenge is integration between primary and specialist care. Under National Institute for Health and Clinical Excellence (NICE) clinical guidelines for treatment of people with rheumatoid arthritis, there should be an annual review. Much care and treatment of people with rheumatoid arthritis requires specialist input from the rheumatology team, who are based in secondary care. At the same time, GPs would be involved in the care of people with long term conditions from a holistic perspective.

There is an opportunity for GPs to become more involved in care planning for people with rheumatoid arthritis: Quality and Outcomes Framework (QoF) indictors for rheumatoid arthritis are being considered. This would involve GPs keeping a register of all people with the condition alongside capturing information about who has had a face to face annual review about their condition in the last 15 months. We believe this would be an important way of embedding care planning for people with rheumatoid arthritis throughout the system.

A view of a personal experience of living with rheumatoid arthritis

'Since being diagnosed with rheumatoid arthritis four years ago my life has changed beyond all recognition – but one of the difficulties I face is that on the outside I still look to everyone else the same as I would have done five years ago. The other main problem is the variability of my condition. Some days I have been able to do 'normal' things, but sometimes even the most simple task like a supermarket shop feels like how I imagine running a marathon must feel.

'This makes it very difficult to plan – I am permanently nervous about making commitments that I don't know I can keep. It's one of the main reasons why I am now on long term sick leave from the job I loved. The emotional side of having a musculoskeletal condition such as rheumatoid arthritis is, in my opinion, also much ignored. I have found the loss of my career and previous lifestyle very hard to come to terms with and have been treated for depression.

Overall my condition is constantly changing, as is the way in which I and those around me are able to cope with it.' (Eleanor Goddard, 38, person with rheumatoid arthritis)

6. WHAT ARE CONDITIONS OF MUSCULOSKELETAL PAIN?

Conditions of musculoskeletal pain such as osteoarthritis involve painful wear and degeneration of joints over time. These include osteoarthritis and back pain, and affect millions of people across the UK. These conditions are uncommon in the young and the onset is often gradual. Pain is usually due to damage to joints and surrounding tissues. These conditions are generally treated in primary care and community settings, and physical activity improves symptoms and progression of these conditions.

Osteoarthritis is the most common type of arthritis, affecting 8 million people nationwide[24]. The risk of developing a musculoskeletal condition increases with age, and the growing ageing population will have implications for the numbers of people consulting their GPs with osteoarthritis.

What are the challenges in the care of people with conditions of musculoskeletal pain?

Most treatment for these conditions does not require specialist input. Effective care involves focusing on improving symptoms such as pain management, physical activity and weight loss, while supporting self-management.

The NICE clinical guidelines for the treatment and care of people with osteoarthritis** include co-development of a 'care plan' between patient and their health professional (this could be a GP or a nurse). However, only an estimated 18% of people with osteoarthritis have an agreed care plan[25], raising the concern that people with osteoarthritis are not benefitting from a systematic approach to their care.

Depression and anxiety are strongly associated with these conditions and should be identified and addressed to prevent lost quality of life. Joint replacement surgery is a highly effective treatment for severe osteoarthritis and is one reason for a referral to a specialist.

Given the large numbers of people affected, the costs of painful and degenerative musculoskeletal conditions to the NHS and the wider economy are substantial. This is expected to increase considerably in an ageing, more obese population, remaining at work until an older age.

Figure 3: What is osteoarthritis and what are the risk factors?

Healthy joints move painlessly due to an even layer of smooth cartilage coating the ends of bones. In osteoarthritis, cartilage becomes thinned and pitted, and can wear away completely, which can cause severe pain and disability. The causes of osteoarthritis are not fully understood, but there are many factors which increase the risk of osteoarthritis:

Risk factors for osteoarthritis

** Research started at Arthritis Research UK Kennedy Institute of Rheumatology laboratories discovered that a single protein mediator, TNF-alpha, was important in driving the disease process behind rheumatoid arthritis. These findings eventually led to successful trials of anti-TNF therapy in patients with rheumatoid arthritis and subsequent NICE approval of this treatment.*

*** As part of this process people with osteoarthritis should be offered access to appropriate information and advice on appropriate physical activity, including specific interventions if the person is not maintaining a healthy body weight.*

7. WHAT ARE COMMONS 'MYTHS' ABOUT ARTHRITIS?

There are many misconceptions about arthritis and in this section we tackle some common myths.

Myth: Arthritis only affects older people
Reality: Arthritis can affect people at any time in their life

Arthritis is often wrongly perceived as a disease of older people. The risk of developing arthritis does increase with age, especially from the late 40s. However, arthritis can affect people of all ages.

People can be diagnosed with arthritis as children or teenagers[26]. Each year, at least 1,000 children under 16 years of age develop the condition in this country. Over one third of these children and young people will live with lifelong pain and disability.

Myth: Arthritis is inevitable
Reality: People can take steps to reduce their risk of developing arthritis

There is also a perception that all older people get arthritis, and that it is an inevitable part of ageing. Although the likelihood of developing the commonest form of arthritis, osteoarthritis, rises with age, age is only one of several 'risk factors' which combine to determine how likely it is that arthritis will develop. Some factors, including age and genetics, cannot be changed. However, others including obesity, physical inactivity, and joint injury can be reduced or avoided. Research from Arthritis Research UK revealed that obese people have a 14 times greater risk of developing osteoarthritis of the knee[27]. This indicates that there are important steps that some people can take to reduce their risk of developing osteoarthritis, including weight loss and exercise.

Myth: If you have arthritis you shouldn't exercise
Reality: At the right level, exercise can ease stiffness, improve joint movement and strengthen muscles

Many people with arthritis are afraid to exercise because they believe, mistakenly, that it will cause further damage to their joints. It is important to remember that the body is designed to move and inactivity can actually be harmful to the tissues in and around the joints. Regular exercise is very important for people with arthritis, as it can reduce pain and keep people healthy and independent.

Myth: Nothing can be done to treat arthritis
Reality: Much can be done to reduce pain, ease movement and address joint damage

A common misperception is that for people with arthritis 'nothing can be done'. This can lead to people living with pain in silence and trying to 'get by'. In fact there is much that can be done. The approach to treatment will depend on the kind of arthritis involved.

In recent years, a new generation of drugs called 'biologics' has been developed for rheumatoid arthritis. This severe form of arthritis affects almost 1% of the adult population and is caused by inflammation due to immune system attack. These new treatments include anti-TNF therapy, which directly targets molecules involved in inflammation and joint damage in this condition. Biologics have led to major improvements in quality of life for people with this severe form of arthritis.

A range of medications are available to help people with arthritis that involves joint strain, wear or joint damage, including drugs to relieve pain and to reduce inflammation. In severe cases, joint replacement may be used. Joint replacement, such as of the hip or knee, is a highly successful treatment that brings freedom from pain, and greatly improves mobility and quality of life.

Regardless of the type of arthritis, it is very important to look after the muscles, bones and joints and physical activity is key to this. Regular exercise can also help in achieving weight loss. Therapies including hydrotherapy or physiotherapy can build strength and alleviate pain. For many people with arthritis there is a process of discovery and learning about which interventions can help to address their on-going pain and mobility.

Myth: Arthritis causes discomfort but is mainly an inconvenience and does not have a major impact on people's lives

Reality: Arthritis and other musculoskeletal conditions can destroy quality of life and in some cases lead to early death

Arthritis can cause persistent pain resulting in substantial impact upon quality of life over decades. Living with chronic pain can lead to depression, which is four times more common for those people in persistent pain than in those without such pain. The inflammatory forms of arthritis also affect life span. Patients with rheumatoid arthritis are at an increased risk of heart disease and for the rarer immune diseases that affect joints, such as lupus, some develop severe life threatening complications.

Myth: Arthritis does not have a substantial impact on society and need not be a priority for policy makers
Reality: Arthritis has a significant impact on society: placing significant demands on the health system and on the economy, but most of all on people's lives.

Each year 20% of the general population consult a GP about a musculoskeletal problem and around 7.6 million work days are lost each year due to musculoskeletal conditions. Arthritis often fluctuates and the unpredictable nature of the condition can make life, including working life, difficult. Challenges in the work environment can include not being able to perform the tasks required, stress causing the condition to flare-up and getting fatigued easily. This means that many people with arthritis feel obliged to give up work. This has an impact on the individual, their families and society.

However, much can be done to enable people with arthritis to continue working and enable them to benefit from the positive effects of work[28]. The four 'Ps' approach (problem solving, planning, prioritising and pacing) includes adapting the way people approach tasks they find difficult, and changing their working position and activity regularly. People with arthritis may also benefit from equipment or adjustments to their work spaces.

8. WHAT ARE THE KEY POLICY CHALLENGES?

This section provides a brief overview of policy challenges in musculoskeletal health services, highlights some areas of current activity, and indicates areas for involvement.

1. A care planning approach: NICE clinical guidelines for the treatment and care of people with osteoarthritis, include co-development of a 'care plan', between the patient and their healthcare professional (this could be a GP or a nurse), but only an estimated 18% of people with osteoarthritis have an agreed care plan[29]. We believe that a systematic care planning approach to support people with osteoarthritis is the best way of delivering improvements in care.

2. Data: Much of musculoskeletal health is a 'data poor' area. Currently, there are good data available for surgery, such as on joint replacement for arthritis or following a hip fracture. However, in over 1.5 million consultations, when people with severe arthritis are referred to specialists, data is not collected about the person's arthritic condition. We would like the Department of Health to work with partners to investigate how NHS datasets could be expanded into these data poor areas to support improvements in care and outcomes. For example, as a long term condition musculoskeletal health is one area which has the potential for use of 'Patient Reported Outcome Measures' (PROMs). Arthritis Research UK recently hosted a community wide event to discuss how a Musculoskeletal PROM could be brought to fruition.

3. Commissioning of musculoskeletal health services: These health services will need to be commissioned across both primary care and in specialist settings. To achieve this will require both primary and secondary care to work together to commission services along the patient pathway. The absence of a dedicated 'strategic clinical network' must not disadvantage the development of musculoskeletal commissioning expertise. Rather, tackling some of the challenges is crucial, such as developing best practice guidelines for Clinical Commissioning Groups, and toolkits to aid Health and Wellbeing Boards in conducting local needs assessment. Arthritis Research UK is working to develop a tool, the 'musculoskeletal calculator' to estimate local disease patterns to help paint a picture of musculoskeletal conditions locally.

4. Awareness, diagnosis and early treatment: Rheumatoid arthritis is the most common type of inflammatory arthritis, affecting 1% of the population. Urgent referral, diagnosis and treatment of this type of inflammatory arthritis are crucial, as recognised in the NICE clinical guidelines for treatment and care. However, many people do not recognise the warning symptoms of this type of inflammatory arthritis and so do not seek treatment. Too many GPs do not recognise the need for urgent specialist referral, leading to unnecessary delays. Early intensive treatment can prevent permanent pain and disability, and reduce the need for costlier biologic therapies. There is an opportunity to further improve people's care through a best practice tariff for early inflammatory arthritis, which will incentivise specialists who follow best practice guidelines for treating people who have only just developed inflammatory arthritis.

How can Parliamentarians help?

1. By raising awareness of arthritis and its impact in Parliament through asking parliamentary questions.
2. By raising awareness of these conditions locally by asking their Health and Wellbeing Boards, and Clinical Commissioning Groups, how they are planning their musculoskeletal services locally.

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