

WELSH GUIDELINES - Arthritis and Long-term Musculoskeletal Conditions in adults

Number: WG42192

Welsh Government Consultation Document

**Arthritis and Long-term Musculoskeletal
Conditions in adults**

Guidance for health and social care professionals relating to
Arthritis and musculoskeletal conditions in Wales

Date of issue: 22 March 2021

Action required: Responses by 30 July 2021

Mae'r ddogfen yma hefyd ar gael yn Gymraeg. This document is also available in Welsh.

Overview

We are currently developing guidance to replace the Welsh Government's Service Development and Commissioning Directives for Arthritis and Chronic Musculoskeletal Conditions.

This consultation seeks your views on the proposed direction of the draft guidance.

How to respond

This consultation will close on 30th July 2021. You may respond by email or post.

Email

Please complete the consultation response form and send it to:

MSKConsultation@gov.wales

Post

Please complete the consultation response form and send it to:

Population Healthcare

Welsh Government

Cathays Park

Cardiff

CF10 3NQ

Further information Large print, Braille and alternative language and related versions of this document are available on documents request.

Insert any references to the internet, documents or information which might be useful to consultees e.g. consultation web address, detailed appendix to consultation

Contact details For further information:

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Welsh Government

Cathays Park

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The Welsh Government will be data controller for any personal data you provide as part of your response to the consultation. Welsh Ministers have statutory powers they will rely on to process this personal data which will enable them to make informed decisions about how they exercise their public functions. Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about or planning future consultations. Where the Welsh Government undertakes further analysis of consultation responses then this work may be commissioned to be carried out by an accredited third party (e.g. a research organisation or a consultancy company). Any such work will only be undertaken under contract.

Welsh Government's standard terms and conditions for such contracts set out strict requirements for the processing and safekeeping of personal data.

In order to show that the consultation was carried out properly, the Welsh Government intends to publish a summary of the responses to this

document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. If you do not want your name or address published, please tell us this in writing when you send your response. We will then redact them before publishing.

You should also be aware of our responsibilities under Freedom of Information legislation

If your details are published as part of the consultation response then these published reports will be retained indefinitely. Any of your data held otherwise by Welsh Government will be kept for no more than three years.

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For further details about the information the Welsh Government holds and its use, or if you want to exercise your rights under the GDPR, please see contact details below:

Data Protection Officer:

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Cathays Park

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e-mail: Data.ProtectionOfficer@gov.wales

The contact details for the Information

Commissioner's Office are:

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Wilmslow

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0303 123 1113

Website: <https://ico.org.uk/>

Arthritis and Long-Term Musculoskeletal Conditions in Adults



Llywodraeth Cymru
Welsh Government

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Aim of the Document

This document provides definitive models of access and advises health boards on designing, planning and managing person-centred services for adults living with arthritis and long-term musculoskeletal (MSK) conditions. Using a whole-system approach, this framework directs healthcare professionals to appropriate guidance and advises them on the most appropriate service and support available.

Vision statement

This framework seeks to reduce the impact that arthritis and related conditions have on people in Wales by providing a structure for primary and secondary prevention, timely access to diagnosis and treatment, helping

people develop self-management skills and making sure that those who need treatment are seen by the best person at the best time and in the best place.

Actions

A list of actions for use by health boards, local authorities and service providers is available on page 9.

Why this guidance has been developed

This guidance gives all stakeholders – including people with MSK conditions, healthcare professionals, and those involved in service delivery and planning – advice on how to use effective approaches and make informed decisions.

The ‘Service Development and Commissioning Directive for Arthritis and Chronic Musculoskeletal Conditions’ has outlined MSK policy for the past decade, and while the principles it put forward are still relevant, the document needs to be updated to reflect work that has happened since its publication in order to include updated practices and to incorporate the new treatments, medicines and principles (such as supported self-management and independent prescribing for health professionals) that are now more prevalent.

Policy context

Welsh Government national strategies

‘Prosperity for All’[\[1\]](#), the Welsh Government’s national strategy, sets out the Government’s aims, provides clarity about the changes it wants to make in Wales, and explains how it wants the Government and partners to deliver its priorities. The Welsh Government will work with and support the business community to improve the health and well-being of workers and help people to remain in employment, with a specific focus on mental health and musculoskeletal conditions, including through the economic contract.

‘The Well-being of Future Generations (WBFG) Act 2015’[\[2\]](#) acknowledges the contribution that everyone can make to Wales’ shared goals. It also provides a basis for creating a different kind of public service in Wales. The Welsh Government published its Well-being Statement in 2017[\[3\]](#) which

describes in more detail how the Well-being of Future Generations Act will contribute to the seven well-being goals for Wales.

The Parliamentary Review of Health and Social Care in Wales published its report in January 2018. The report recommends actions should be framed around delivering the Quadruple Aim: Improving the health and well-being of the population; improving the experience and quality of care for individuals and their families; improving the well-being and engagement of the workforce; increasing the value achieved from the resources that are invested in services.

In June 2018 the Welsh Government provided a response in 'A Healthier Wales: Our Plan for Health and Social Care', which called for bold new models of seamless local health and social care at local and regional level.

National Clinical Framework

In 2021, the Welsh Government will publish a National Clinical Framework that will deliver the strategic goals of 'A Healthier Wales' using integrated health pathways. Using these pathways will allow healthcare providers to generate meaningful outcomes data that can be used to measure performance.

Value Based Healthcare

The Welsh Government sees value based healthcare - an internationally recognised approach to delivering the best outcomes by providing the right care for individuals - as a way to deliver prudent healthcare principles in a measurable manner.

As services seek to realise the potential offered by prudent healthcare principles and value based healthcare, the NHS must systemise its approach across organisations and care pathways. This will likely include both building local capacity and implementing central support, particularly in the development of data capture and analysis.

Living with Persistent Pain in Wales

This guidance should be read together with 'Living with Persistent Pain in Wales' [\[4\]](#), which provides more advice to people living with pain and to those providing treatment; this guidance's principles align with the approaches discussed in the document.

Clinical Musculoskeletal Assessment Treatment Service (CMATS)

In 2017 Welsh Government published “Recommended Guidelines: Establishment of a Clinical Musculoskeletal Assessment Treatment Service[\[5\]](#)”. The guidelines require that Welsh health boards should operate a referral, assessment and treatment service for all soft tissue and joint conditions that are non-inflammatory and do not require emergency treatment. This should be the default service and first point of contact for all General Practitioners (GP’s), Consultant, Allied Health Professional (AHP), Accident & Emergency (A&E) referrals for assessment and treatment of musculoskeletal (MSK) related pain and conditions that are not rheumatological, urgent suspected cancer or emergency cases.

Strategic Programme for Primary Care

The transformational model for primary and community care, which is a whole system approach to sustainable and accessible local health and wellbeing care, supports the vision set out in ‘A Healthier Wales’ and is now adopted as the Primary Care Model for Wales. Focussing on promoting healthy living; developing a preventative, proactive and coordinated care system; integrating health, local authority and voluntary sector services; and care that incorporates people’s physical, mental and emotional wellbeing.

Primary care, as the first point of contact for the majority of people with arthritis, has a key role in maximizing the opportunities for prevention and self-management. At the heart of the strategic programme for primary care is local services collaborating through the primary care clusters to provide direct access to a wider range of multi-professional practitioners, including Allied Health Professions (AHPs), as a first point of contact. In December 2019 Welsh

Government published its Allied Health Professions Framework for Wales: Looking Forward Together[\[6\]](#) which details six core principles for transformation identifying AHPs need to be utilized more effectively to inspire and enable people to lead healthier lives, be more easily and directly accessible.

Children and young people’s MSK services

Recognising that MSK services for adults and children are significantly different, the Welsh Government will develop separate, similar guidance for children’s MSK conditions after this guidance has been published.

There is a need to ensure that transition and handover between children's and adult services is as seamless as possible and that children and young people have a say in the way they move between services. The Welsh Government will publish guidance relating to transition between services in the summer of 2021.

Introduction

Arthritis and other long-term musculoskeletal (MSK) conditions are the most frequently reported long-term conditions in Wales, and they are the most common cause of severe, long-term pain and physical disability among people of all ages. Services are currently provided for over 100 different types of arthritis and musculoskeletal conditions.

Musculoskeletal Conditions

MSK conditions are persistent and life changing and can affect all age groups.

These conditions can affect everyone in society regardless of age, gender or race and have a significant impact on health, well-being and quality of life.

Conditions are often hidden and unpredictable, and symptoms and disease processes vary significantly.

The term 'MSK conditions' includes a wide range of health conditions affecting the bones, joints, muscles and spine, as well as rarer autoimmune conditions such as systemic lupus erythematosus. Common symptoms include pain, stiffness and a loss of mobility and dexterity, and these symptoms interfere with people's ability to carry out their daily activities.

Broadly speaking, there are three groups of MSK conditions: inflammatory conditions (e.g. rheumatoid arthritis), conditions of MSK pain (e.g. osteoarthritis and back pain) and osteoporosis and fragility fractures (e.g. fracture after a fall from standing height). Further information types of arthritis within these categories can be found in the relevant chapters further in this document.

Risk factors for MSK conditions

While the number of people living with MSK conditions is rising, there are multiple ways people can reduce the risk of developing certain MSK conditions. The main factors that impact development of MSK conditions include inactivity, obesity and aging, and, in rheumatoid arthritis, smoking is a major avoidable risk factor. A public health approach is important in reaching those who are susceptible to developing these conditions. Further information regarding prevention and a public health approach to MSK is provided in Part 2.

Population impact

There are an estimated 887,000 people in Wales living with an MSK condition[\[7\]](#), and an estimated 450,000 of those individuals have osteoarthritis[\[8\]](#). However, data on the precise prevalence in Wales of many MSK conditions is limited.

Wales's population is aging, and provisions for health and social care must adapt to ensure that services are available to all who need them. With an aging population and with the rise in obesity levels, the numbers of people with MSK conditions are expected to rise.

Although musculoskeletal disease are present in all sectors of society, they are the most prevalent conditions in areas of social deprivation. A higher percentage of people in the most deprived areas report a long term MSK condition compared to those in the least deprived. Pain is the most common complaint of those with MSK conditions[\[9\]](#) and chronic pain is more prevalent in people in lower income groups.[\[10\]](#)

Impact on health and social care systems

MSK conditions account for one in four consultations with primary healthcare professionals, making them one of the most common reasons for

people to seek medical help. The majority of people with long-term musculoskeletal pain can be supported to manage their symptoms by primary care when they are supported to develop their self-management skills and knowledge. A minority of people affected have more complex needs and require access to specialist services. When certain MSK conditions are suspected, for example rheumatoid arthritis, the individual should be referred to specialist rheumatology as soon as possible. Many people living with MSK conditions use health and care services frequently, and they commonly have other health conditions (co-morbidities) that occur alongside their MSK conditions

Services are currently provided for over 100 different types of arthritis and musculoskeletal conditions. In 2018 to 2019, MSK conditions were the most commonly reported (15%) among adults in Wales.[\[11\]](#)

Government's management statistics indicate that, from 2018 to 2019, there were nearly than 7,500 hip replacements procedures. The mean hospital stay for each person was 8.4 days, resulting in a total of around than 63,000 bed days. During the same period of time, over 5,000 knee replacements, with a mean hospital stay of 5.1 days, resulting in around 25,500 bed days. The vast majority of these joint replacements relate to MSK conditions. In August 2020 6,600 people were waiting to be seen in rheumatology in Wales.[\[12\]](#)

Local authorities are responsible for providing care and support services, including reablement, equipment and adaptations, housing support and domiciliary care, social work and occupational therapy. Nearly 77,000 people in Wales receive these services for a wide range of conditions, including MSK conditions.[\[13\]](#)

Impact to the economy

MSK conditions pose a significant cost to individuals and to the wider economy. Many people with MSK conditions are in paid employment and want to remain working, and timely access to care and support can help them to remain independent and in work. Data for 2015 and 2016 through 2017 and 2018 show that approximately 600,000 working days were lost in Wales due to self-reported MSK conditions that were either caused by or made worse by work[\[14\]](#).

The financial impact of having to give up or reduce work due to MSK conditions can also be substantial, and many individuals in this situation rely

on the welfare system. In the UK, 42.4% of people who received or were entitled to Attendance Allowance did so as a result of an MSK condition.[\[15\]](#) Furthermore, one-third of those receiving a Personal Independence Payment (PIP) in the UK cited an MSK condition as their primary disability.

Impact on the individual

MSK conditions are a major cause of pain and disability affecting work, family and social life[\[16\]](#). MSK conditions can have a significant impact on a person's quality of life. These impacts are not only related to an individual's physical function and pain experience, but also psychological, social and economic well-being. MSK conditions are often linked with lower self-esteem, increases in the number of co-morbidities, an adverse impact on interpersonal relationships and ability to work. Families and carers of those living with MSK conditions also experience the negative impacts of these conditions and require appropriate support

Long-term conditions have been linked with higher rates of mental ill health. Among people with all types of arthritis, one-third of women and one-fifth of men also have depression. These types of mental health conditions can lead to poorer clinical outcomes, lower quality of life and reduced ability to manage physical symptoms effectively[\[17\]](#).

Management approach to MSK conditions

This guidance sets out a biopsychosocial approach to managing MSK conditions and limiting their impact on individuals, their families and the wider community. There is a recognition for the importance of guiding and supporting the behavioural change process through supported selfmanagement, education and patient activation.

Co-production

Co-production – in which those who use a service and health and social care professionals work together equally to provide the right support for the right person – is key to making sure that the people of Wales receive optimal care. [\[18\]](#) Co-production requires building relationships and focusing on the best possible outcomes for the person using the service.

The principles of co-production in health services are the following:

- value all participants and build from their strengths
- develop dynamic peer-support networks
- build relationships of equality and reciprocity
- create transformative change through shared power and shared responsibility.

Co-production is the concept of genuinely involving people and communities in the design and delivery of public services, appreciating their strengths and tailoring approaches accordingly. It is fundamentally about doing things ‘with’ rather than ‘to’ people.” The Welsh Government expects all relevant organisations to work together with those requiring support to deliver value based healthcare in a co-productive manner.

Part 1: Actions

This guidance requires health boards and health and social care professionals to review current services and behaviours and to enable changes consistent with actions listed below. The Welsh Government will work with health boards, regional partnership boards and local authorities to progress these actions.

Actions

1	Health boards need to ensure people with MSK conditions are seen by the right person at the right time in the right place and should receive ongoing management and treatment according to best practice guidelines, such as NICE guidelines and guidance produced by relevant professional bodies.
2	Local stakeholders should ensure public health initiatives aimed at primary prevention should take into account the need to reduce chances of people developing MSK conditions in the future.
3	Health boards need to ensure principles of co-production should be followed so that that people with MSK are fully involved in decisions that affect their care. Shared decision making and Making Choices Together should also be central to providing services.
4	Health boards must ensure they provide treatment in accordance to the NHS Wales Delivery Framework and Reporting Guidance.

5	Health boards must co-produce local plans to implement this guidance and ensure local MSK pathways are in place.
6	The Welsh Government to convene a national group to monitor and evaluate progress with implementing this guidance.
7	Health boards must ensure services are integrated and work seamlessly to provide a clear diagnosis as early as possible in the patient's journey. Diagnosis should be sensitively communicated, the type of MSK condition should be made clear, and the Health Care Professional (HCP) should provide signposting to information, selfmanagement and additional support appropriate to the individual.
8	Health boards must act upon recommendations and information from clinical audits to their full extent. Health boards must submit complete data sets to the relevant audits, including National Early Inflammatory Arthritis Audit, the National Audit of Inpatient Falls (NAIF), the National Hip Fracture Database (NHFD) and the Fracture Liaison Service Database (FLS-DB).
9	Health boards must ensure the actions within this guidance are considered as part of their Integrated Medium Term Plans.
10	Local needs assessments processes should aim to develop a clearer picture of the prevalence of MSK conditions, the impact on local populations and the needs of people living with these conditions to better inform the development of local provision.
11	Health boards should audit and map programmes that support physical activity, weight management and self-management for people with MSK conditions. Referral pathways,

	retention rates and patient reported outcomes should be evaluated to maximise effectiveness and outcomes for people.
12	Health Boards must ensure that HCPs utilise social prescribing as appropriate to signpost service user to sources of information and community based resources. Services should provide high quality bilingual

	web and paper-based information to help people understand their conditions as well as treatment and self-management options.
13	Health boards, local authorities and other local stakeholders should ensure that people with MSK conditions have access to local programmes, services and information that support self-management, understanding their condition and treatment options, overcoming barriers to exercise and increasing physical activity, smoking cessation and weight management services.
14	Health Boards must ensure that HCPs utilise social prescribing as appropriate to signpost service user to sources of information and community based resources. Services should provide high quality bilingual web and paper-based information to help people understand their conditions as well as treatment and self-management options.
15	Health boards ensure the principles within Healthy Weight, Health Wales are adhered to and ensure that health, care and other professionals engage in regular conversations with patients about being a healthy weight can help to support behaviour change.
16	Service providers must ensure that people living with MSK conditions are signposted as appropriate to workplace support or support to return to work.
17	Service providers must ensure that people living with MSK conditions are signposted as appropriate to assessments for social services support including provision of aids and adaptations.
18	Service providers must ensure that people living with MSK conditions are signposted as appropriate to support to give up smoking.
19	Health boards need to ensure that access to mental health services for those living with MSK conditions adhere to the national guidance Together for Mental Health.
20	Health boards should ensure that CMATS services should continue to be developed in line with national guidance.

21	Health boards must ensure FCP roles are available in primary care as part of a multiprofessional service to provide expert support at the front end of the MSK pathway and for ongoing management for certain MSK conditions within primary care. FCPs should not replace existing core MSK rehabilitation services, but should be integrated with specialist MSK services (e.g. CMATS) to optimise governance and ensure professional and peer support.
22	Health boards should ensure co-produced local care pathways and service provision for people with inflammatory arthritis to facilitate appropriate, timely referrals to specialist services. This includes ensuring people with suspected IA are seen and treated by a specialist rheumatology service within the time specified by NICE guidelines (or other established best-practice guidance) to ensure speedy diagnosis and inception of treatment.
23	Health boards should review shared care protocols for inflammatory arthritis services to ensure that high-quality management and review protocols are in place.
24	Health Boards should ensure that all people with IA are given or are signposted to appropriate information about their conditions, treatment options, peer support and self-
	management and the benefits of smoking cessation, exercise and achieving or maintaining a healthy body weight.
25	Health Boards should ensure that people with IA have access as required to programmes to support people to develop self-management skills, overcome barriers to increasing activity and exercise levels, smoking cessation and achieving or maintaining and a healthy body weight.
26	Health boards should ensure that people with IA can rapidly and directly access a wide multi professional team, including AHPs (physiotherapy, podiatry, occupational therapy, orthotics and dietetics) as needed.
27	Health boards should ensure that they are implementing all actions in the Wales Rare Disease Implementation Plan.
28	Health boards must adhere to the recommendations within the Fracture Liaison Service Clinical audit to be developed and adhered to.

29	Health boards should value and create a culture that supports post-registration continuing professional development.
30	Health boards must ensure that they have appropriate numbers of staff to support a multidisciplinary approach so that people with MSK conditions have access to the right treatment and interventions from the right people at the right time.

Part 2: Prevention, supported self-management and independence

Many factors contribute to the chances of a person developing an MSK condition. These include diet, exercise, smoking, weight management, alcohol intake and social environment.[\[19\]](#)

Healthcare professionals have a role to play in identifying those at risk as early as possible, but effective prevention and management requires the active engagement of the person in minimising their risks.

When an individual develops an MSK condition, there is much that can be done to improve or preserve quality of life and to protect and maximise independence. There is much that the individual can do to limit the impact of their condition if provided with the information and support to become effective partners in managing their own condition. A biopsychosocial approach should be employed to provide holistic support that take into consideration the person's co-morbidities; mental health requirements; overall well-being; and ability to participate in relationships and daily activities, including work.[\[20\]](#)

People living with MSK conditions should receive relevant support and information to develop their understanding of their condition, the treatment options available, the ways in which they can minimise the condition's impact on their quality of life and the choices they can make to slow their condition's progression. Developing such self-management skills can make a significant difference to health and well-being and can reduce demands placed on healthcare services. The following provide examples of methods and approaches to support people to effectively selfmanage.

Making Every Contact Count

Every HCP working with someone with a suspected or diagnosed MSK condition should take every opportunity in every contact to support the individual to understand the importance of their own actions on their conditions.

Making Every Contact Count (MECC) is an approach to behavioural change that uses the millions of day-to-day interactions that organisations and individuals have with other people to support them in making positive changes to their physical and mental health and well-being. MECC enables individuals to engage in conversations about their health at scale across organisations and populations. MECC focuses on the lifestyle issues that, when addressed, can create the greatest improvement in an individual's health.

Further information

Further information about MECC can be found at: <https://mecc.publichealthnetwork.cymru/en/>

Supported self-management

For people living with arthritis, self-management involves making positive and healthy lifestyle choices to help limit the impact that their condition has on their lives. This involves a person developing knowledge about their condition and learning skills and methods that address its unique physical and emotional effects to reduce its impact on day-to-day life. Arthritis impacts people in a variety of ways, self-management therefore involves developing a personal set of tools that complement and supplement treatments and medical interventions.

Self-management can involve a number of different strategies and methods. Examples include using mindfulness techniques to address persistent pain, putting a strategy in place to deal with a flare up, learning to be more active in order to avoid stiffness, trying new exercises or taking steps to maintain or achieve a healthy body weight.

People with MSK conditions may not have heard of self-management as a tool to help with longterm medical conditions, so it is important to guide people to information and support that will help them understand their self-management options. People with MSK conditions develop their

understanding of self-management in a variety of ways, including accessing publications, getting peer support both locally and online, through the development of care plans, and via helplines and training courses.

People with certain MSK conditions experiencing less severe conditions are often able to selfmanage, and seek further support and advice from health professionals only when needed. Selfmanagement is an integral part of managing long-term conditions and works best when the individual is able to take the lead in deciding how they want to live their life and is supported in finding the best ways to manage their condition.[\[21\]](#)

One way people can develop self-management skills is by attending structured educational programmes, which can be delivered through weekly courses, residential programmes or online training.

Diet and weight management

Musculoskeletal conditions are one of the biggest threats to the health of people who are obese. Over 6 in 10 adults (16+) in the UK are overweight or obese.^{10, 11, [\[22\]](#), [\[23\]](#)} Obesity directly damages weight-bearing joints such as knees and hips because of the abnormally high loads they have to carry.

People who are obese are more likely to develop both gout, back pain and osteoarthritis.²² Obesity is also associated with an increased risk of developing inflammatory arthritis, including Psoriatic Arthritis (PsA) and Rheumatoid Arthritis (RA), and with a worse response to treatment.²³[\[24\]](#) Reducing weight or maintaining a healthy weight is important for preventing the development of an MSK condition and once a person has developed such a condition. Where appropriate, supported weight loss programmes can help reduce the risk of exacerbating long-term MSK conditions. Maintaining a healthy body weight across the life course is an important factor to reduce the risk of osteoporosis and fractures, particularly in later life.

The Welsh Government's obesity strategy, 'Healthy Weight: Healthy Wales'²⁵, was published in October 2019. The strategy contains an All Wales Obesity Pathway that outlines service requirements to support individuals to manage their weight. It contains four pathway levels: population-wide prevention, early intervention, weight management services and specialist dietetic, medical and bariatric surgery services. Individuals should be able to access weight management support across the pathway depending on their needs.

Activity and exercise

Inactive people are at an increased risk of developing a painful MSK condition. For example, exercise reduces the risk of developing joint and back pain by 25%.[\[25\]](#)

For those already diagnosed with any MSK condition, remaining active and getting appropriate exercise are core self-management actions. For people with MSK conditions, physical activity can help improve physical function, sleep, mood and pain reduction. However, activity and exercise can be a challenge for people with MSK who may have given it up due to pain. In addition, many people living with arthritis are not aware of the benefits of safe exercise in reducing the impact of their condition, and they may wrongly assume that exercise will worsen their condition.

Information on exercise for people living with MSK conditions is available from a number of thirdsector organisations.[\[26\]](#) Additionally, a number of programmes provide the structured support required to help people with arthritis overcome barriers to increased activity levels and to reengage with exercise:

ESCAPE-pain is an evidence based rehabilitation programme for people with chronic joint pain of the knees and/or hips. The programme integrates education, self-management and coping strategies with a tailored progressive exercise regime.

Further information

Further information on Escape Pain can be found at <https://escape-pain.org/>

Get Active for Arthritis was developed by Cymru Versus Arthritis as an activity-focussed selfmanagement training course that helps people with MSK conditions learn more about the benefits of exercise and overcome barriers to increased activity. The service also signposts individuals to local activity and sports groups, and it supports course participants to develop local, communitybased activity groups to sustain and embed positive lifestyle changes for the long term.

OAK Knee. The self-management program for osteoarthritis of the knee (OAK Knee) offers a 90minute group session delivered by specially trained physiotherapists in community facilities. The OAK knee sessions were developed through co-production in collaboration with GPs, orthopaedic surgeons, physiotherapists and people with osteoarthritis of the knee. OAK Knee focuses on sharing information and experiences that will place people with osteoarthritis of the knee at the centre of decision-making about managing their condition. The programme is currently available in Aneurin Bevan University Health Board.

National Exercise Referral Scheme (NERS) was established to standardise exercise referral opportunities across local authorities and health boards and is managed by Public Health Wales.

NERS enables GPs and other primary care practitioners to ‘prescribe’ to appropriate patients (aged 16 and over who are at risk of developing a chronic condition) a 16 week programme of fully supervised group-based exercise sessions. NERS operates across all 22 local authorities in Wales. The sessions usually run in leisure or community centres, though some outdoor opportunities are available in most areas.

Lets Move with Leon is a free online physical activity programme from Versus Arthritis developed to support people throughout the Covid-19 pandemic and beyond movement sessions covering strength, flexibility, and cardiovascular fitness, and provides people with weekly emails, exercise videos, an activity hub, and peer-to-peer support through online community and social media platforms.[27]

AHPs such as physiotherapists can also help provide tailored advice and support to help people increase their activity and exercise safely where appropriate.

Further information

Further information on NERS can be found at

<https://www.wlga.gov.uk/national-exercise-referral-scheme-ners>

The Royal Osteoporosis Society have developed guidance on the key principles of physical activity and exercise for people with osteoporosis, or significant fracture risk. The quick guide, promoting fewer fractures and improved wellbeing can be downloaded from the link below.

Further information

Further information on Strong, Steady and Straight, a Quick Guide can be found at:

<https://theros.org.uk/healthcare-sector-news/2019-03-15-new-exercise-information-andresources-for-patients-with-or-at-risk-of-osteoporosis/>

Smoking

Smoking is the most consistently reported environmental risk factor for developing RA, and a published meta-analysis showed a 40% higher risk of developing RA among people who had ever smoked compared with people who had never smoked.^[28]

Education Programmes for Patients (EPP) Cymru³⁰ provides a range of self-management health and well-being courses and workshops for people living with health conditions or their carers. These courses help people to develop skills to manage their health and well-being, and also give them the confidence they need to take responsibility for their own care and to make better use of health services. The courses encourage people to work in partnership with health and social care professionals, which should improve people's quality of life and reduce pressure on NHS services. The programme gives participants the skills they need to coordinate their health management and to stay active.

Further information

Further information about EPP Cymru can be found at <https://www.wales.nhs.uk/sites3/home.cfm?orgid=537>

Making Choices Together and shared decision making

Making Choices Together encourages a change in attitudes and culture so that clinicians can find out what is important to people, offer choices about management or support and explain options that lead to shared decisions while identifying and reducing low-value interventions.

The approach is a clinician-led movement, taken on by healthcare practitioners together with those who use services. It seeks to create and

foster cultural change to the way healthcare is measured and considered, moving away from the notion that more is always better.

Information and advice

People living with a MSK condition should receive appropriate information and advice at every step of their journey living with a chronic long term conditions. HCPs providing information and advice to people with MSK conditions must make sure that people can understand and use the information effectively. HCPs need to reflect on a person's competency, capacity and literacy.[\[29\]](#)

Many third-sector organisations can provide useful information and support to people with MSK conditions through helplines, local peer support groups, publications and digital resources including online forums and apps. For example, the charity Versus Arthritis has developed an artificial intelligence-powered virtual assistant for people with arthritis that answers frequently asked questions.[\[30\]](#) Services providers should make people aware of these organisations – a list of which can be found in appendix 2.

Social prescribing

Social prescribing is a mechanism that systematically links people to community-based well-being services, peer support, local activities, information and other relevant services. It has become an umbrella term to describe methods of connecting individuals to sources of non-medical support and activities in the community.

Social prescribing recognises that numerous factors – including social, economic and environmental issues – affect people's health, and helps enable GPs, nurses and other care professionals to direct people to a range of local, non-clinical support.

Non-clinical care and support, including Book Prescriptions and Green Gyms, play a role alongside clinical care, and can be an alternative approach to improving a person's individual health and well-being.

People with MSK conditions may need to be made aware of schemes such as infoengine[\[31\]](#), Community Connectors and Dewis.Wales. Some people may need support to begin engaging with community actions that are available.

Enabling and maximising independent living

Allied Health Professionals (AHPs) are often the first point of contact for advice, treatment and interventions to maximise independent living. AHPs are natural leaders of rehabilitation and through their expertise, resourcefulness and solutions-based approach[\[32\]](#). They should be directly and easily accessible at a preventative, early intervention, active treatment and rehabilitative stages of pathways of care for people with MSK conditions.

Prehabilitation, rehabilitation, self-management, exercise, reablement and recovery interventions can be valuable ways to help a person with a long-term MSK condition to maximise their ability to do the things that matter to them. These approaches can help a person to preserve or regain skills and movements, and they may also reduce pain and further damage or deterioration.

Prehabilitation and rehabilitation programmes are based on an individual goal-setting process in which goals are developed together with the person, and a tailored programme is developed to meet those goals. Such programmes are offered by a range of AHPs and can include practical and physical, cognitive and emotional, and social and environmental help. A range of different approaches and interventions may be involved in a person's rehabilitation programme, depending on what matters to the person and to their family.

Social prescribing can help link people with services, training, information and support that can help maximise their independence. AHPs can help to signpost or establish contact with community activities and assets, grading support to increase independence and confidence as required.

People with long-term MSK conditions may also benefit from carrying out their daily activities in different ways, using techniques that reduce symptoms, using assistive technologies and equipment or adapting either their environment or their tasks. Many people find equipment and adaptations help increase their energy and stamina and reduce their pain or difficulty moving. These interventions empower people to self-manage their condition in the long-term.

AHPs such as occupational therapists are often the first point of contact for advice about equipment, aids and adaptations, which may be provided directly by health boards or local councils. Where housing adaptations are appropriate, councils, housing providers and health boards must work together to provide suitable solutions. The Welsh Government has published 'Housing adaptations: standards of service' that organisations delivering adaptations are expected to follow.³⁵

The Welsh Government wants people to have access to a wide range of support services, both at home and in the community, to prevent isolation and support inclusion. This includes working with the NHS and councils to ensure that everyone can access high-quality Technology Enabled Care services (TECs)^[33] that support the self-management of long-term chronic conditions and improve health outcomes through increased independence and well-being.

MSK health in the workplace and in-work support

As the workplace provides an ideal setting to promote health and wellbeing, supporting employers to provide a working environment conducive to good health, through promoting healthy behaviours, providing 'fair work' and enabling the retention of employees with health conditions in work, service providers should be encouraged to engage with the Healthy Working Wales programme and support their employers to do likewise. Allied Health Professionals (AHPs) should work with individuals and their employers to consider how to improve the working environment and maximise individuals' ability to remain working effectively.

People living with MSK conditions are less likely to be in work than people without health conditions, and more likely to retire early. Approximately 63% of working age adults with an MSK conditions are in work compared to 83% of people with no health condition.³⁷

Below are number of schemes available to support people with MSK conditions to remain or return to employment.

- **In-Work Support Service** helps people with mental and physical health conditions to remain in work.

Further information

More details on the In-Work Support Service can be found at <https://businesswales.gov.wales/skillsgateway/skills-and-training-programmes/workplace->

- **Out of Work Service** focuses on helping people recovering from mental health or substance misuse to gain employment.

Further information

More details on the Out of Work Service can be found at

<https://gov.wales/employment-support-if-you-have-mental-health-alcohol-or-drug-problemsout-work-service>

- **Access to Work (AtW)** is a long running UK Government employment support service that aims to help more disabled people start or stay in work. It can provide practical and financial support for people who have a disability or long term physical or mental health condition.

Further information

More details on the Access to Work Scheme can be found at <http://www.healthyworkingwales.wales.nhs.uk/home> **Healthy Working Wales** is a Welsh Government funded programme delivered by Public Health Wales. The programme helps employers to develop and sustain environments, policies and cultures that promote good health and support the appropriate and timely return to work of people who have been absent due to sickness or ill health. Healthy Working Wales provides support related to risk behaviours including alcohol use, physical activity, nutrition and smoking, and it works to reduce the impact of both mental health conditions and MSK conditions.

There are opportunities to explore communications and cross-sector support from HCPs, third sector and employment services to better develop support mechanisms and communications to provide improved structures that will allow people with MSK conditions to remain in or return to employment.

Further information

More details on the Healthy Working Wales can be found at <http://www.healthyworkingwales.wales.nhs.uk/home>

AHPs can assist with assessments of fitness for work and work with people with MSK conditions and their employers to agree helpful adaptations of environment or task that enable people to remain effective in work.

ACTIONS

1. Health Boards, local authorities and other local stakeholders should ensure that people with MSK conditions have access to local programmes and services that help them overcome barriers to physical activity.
2. Health boards should work collaboratively with stakeholders and community partners to increase access to – or provision of – information and support to help people with MSK conditions develop their self-management knowledge and skills.
3. Health Boards should audit and map programmes that support physical activity, weight management and self-management for people with MSK conditions. Referral pathways, retention rates and patient reported outcomes should be evaluated to maximise effectiveness and outcomes for people.
4. Health Boards must ensure that HCPs utilise social prescribing as appropriate to signpost service user to sources of information and community based resources. Services should provide high quality bilingual web and paper-based information to help people understand their conditions as well as treatment and self-management options.
5. Health boards ensure the principles within Healthy Weight, Health Wales are adhered to and ensure that health, care and other professionals engage in regular conversations with patients about being a healthy weight can help to support behaviour change.
6. Service providers must ensure that people living with MSK conditions are signposted as appropriate to workplace support or support to return to work.
7. Service providers must ensure that people living with MSK conditions are signposted as appropriate to assessments for social services support including provision of aids and adaptations.
8. Service providers must ensure that people living with MSK conditions are signposted as appropriate to support to give up smoking.

Part 3: National Pathway for Arthritis and MSK conditions- excluding osteoporosis

This chapter provides guidance to support healthcare organisations in developing a model of access for adults who have arthritis or other long-term MSK conditions.

One challenge in developing such a model is the diversity of MSK conditions. A one-size-fits-all approach is not appropriate and different conditions will require a different care pathway. However, the recommendations and key points made in following sections can and should be delivered in models tailored, via co-production, to the needs of local populations. The resulting whole-system approach should support people to have better health by anticipating needs, preventing illness and reducing the impacts of MSK conditions.

The model MSK pathway should include mechanisms that help people access key therapy services or specialist MSK advice in the primary care setting as and when required. It is important to note that when certain conditions are suspected, people should be referred to the relevant specialism immediately.

A diagrammatic outline of the model of access for adult MSK conditions is shown in Figure 1 (page 28). It provides a high-level overview that illustrates how MSK services can be accessed. It does not attempt to show all possible connections between services that should exist as part of mature service models with established clinical networks.

Health promotion and supported self-management

Empowering people to look after their own health and supporting communities to do so by using a social model of health is a proactive approach to physical, mental and social well-being.

For a social model to succeed, a multi-faceted approach must include the NHS, social services, housing, education, transport, environment, leisure and third-sector parties working together to create community environments that promote affordable opportunities for all people to embrace healthy lifestyles.

Supported self-management involves providing people with MSK conditions with the information and support required for them to make positive changes in their daily lives to limit the impact of their condition. It supports and supplements medical and other interventions.

For further information, see Part 1: Prevention, self-management and independence. (page 12).

Enhanced multidisciplinary teams in primary and community care

Primary care encompasses a wide range of staff and accounts for 90% of people's contact with the NHS in Wales[\[34\]](#). Approximately 20% to 30% of GP consultations relate to MSK conditions, but a large proportion of these consultations could be managed by other professional groups.[\[35\]\[36\]\[37\]\[38\]](#) The Welsh Government strategic programme for primary care[\[39\]](#) will lead to a new sustainable primary care service utilising the skills of a wider range of healthcare professionals.

People with MSK conditions will continue to have contact with a range of health and care professionals, including GPs, advanced nurse practitioners, pharmacists, AHPs and social workers. This contact is appropriate, as people may have increasing levels of complexity and comorbidities with their MSK conditions that are often identified as part of assessments focusing on other medical issues.

Allied Health Professionals should be directly and easily accessible at every stage of MSK pathway, whether they work in primary and community care, secondary care, community rehabilitation or integrated health and social care community/ locality teams and services.

First Contact Practitioners (FCP)

AHPs are increasingly leading effective MSK services and working as First Contact Practitioners (FCPs) in primary care. Using FCPs enables people with MSK conditions to go directly to the right professional without necessarily having to see the GP first. They have the clinical expertise to assess, diagnose and treat patients with a range of conditions.

AHPs such as physiotherapists, podiatrists and occupational therapists are ideally placed to support a broad spectrum of people with MSK conditions in the primary care setting[\[40\]\[41\]](#). The development of FCP roles has been widely demonstrated as a high-quality, effective means of providing early specialist support to people with MSK conditions. There is a strong body of evidence that demonstrates these experienced clinicians are able to manage high levels of complexity, uncertainty and risk[\[42\]](#). They have a wide breadth of clinical experience, knowledge and skills, which may include the ability to

provide a diagnosis, order investigations such as blood tests and radiology services and are often able to independently prescribe as well. This scope of practice allows them to provide expert, high quality care, reduces the need for multiple referrals and shortens the pathway of care, leading to better outcomes for people.

Patients who require ongoing treatment will be referred to the other services only when appropriate, such as in the case of a suspected inflammatory arthropathy. People with long-term MSK conditions will experience fluctuations in their conditions throughout their lives, and FCPs will be available when they need to re-access support. However, if an individual presents with symptoms suggestive that they have an undiagnosed inflammatory arthropathy, the FCP will refer to them directly to a secondary care consultant led rheumatology team. These services will provide ongoing reviews and management.

FCPs should not replace existing MSK AHP services, but should help support access to these services when appropriate. For example, FCPs may provide onward referral or signposting to physiotherapy, podiatry, dietetics, occupational therapy and speech therapy, NERS, third-sector groups, EPP, consultant-led or specialist services including CMATs, orthopaedics, pain services, rheumatology, oncology and neurology.

People with MSK conditions will continue to have contact with a range of healthcare professionals, including GPs, and advanced nurse practitioners. This contact is appropriate, as people may have increasing levels of complexity and co-morbidities with their MSK conditions that are often identified as part of assessments focusing on other medical issues.

FCPs will also provide education and peer support within primary care teams, helping to develop sustainable multidisciplinary teams that can adapt to changes in the workforce.

FCPs' need to be integrated into clinical governance frameworks alongside other professional MSK services (such as wider health board MSK physiotherapy services and CMATS) with clear lines of professional support.

Direct access to AHP MSK services

Health Boards should enable patients to directly access AHP services including, physiotherapy, podiatry, occupational therapy and dietetics to

support them with diagnosis, rehabilitation and management of painful MSK conditions when needed.

These services provide a range of support provision for people in managing their MSK condition. The service people use will depend on the type, severity and complexity of their conditions and other factors. Clinical assessment should align with standards set by professional bodies and NICE and should use risk-stratification tools that inform clinical decision making, such as the

Keele STarT Back Tool.[\[43\]](#)

Services should offer a range of clinical support tailored to a person's level of need. Services should offer a range of treatment options to support and up-skill patients to self-manage. Treatments may include one-to-one therapy or group-based interactive education and rehabilitation programs, such as ESCAPE-pain[\[44\]](#)[\[45\]](#). Such programs should be tailored to the individuals' needs and to local demand. They should also take a person-centred approach and include shared decision making[\[46\]](#), information, exercise, weight management advice and lifestyle advice.

Access to these services may vary depending on the local service and geography, but should include self-referral via telephone, digital or walk-in clinics.

A range of high-quality publications have discussed detailed pathways and condition management advice for specific MSK conditions. For more information, see appendices 1 and 2 at the end of this guidance (page 61).

Other primary care, local authority and community based services and support for people with MSK conditions.

Obesity Pathway

Achieving and maintaining a healthy body weight is important in reducing the impact and progression of MSK conditions. Further information regarding weight loss and the Obesity Pathway can be found in the Prevention, Self-management and Independence chapter. Direct access to dietitians as needed will support people to improve their weight management.

Programmes to support increasing activity and exercise

Increasing activity levels and engaging with safe exercise is a core part of treatment for MSK conditions. Many people with MSK require support to reengage with exercise due to the nature of MSK symptoms. Further information regarding the benefits of exercise and programmes available to support people to overcome barriers to exercise can be found in the Prevention, Self-management and Independence chapter.

Self-management training

Individuals can learn self-management skills to help them reduce the impact of their condition and to maximise their access to independence. Peer support groups, helplines and training courses are available to support people to learn more about self-management skills they can employ in their everyday lives. Further information can be found in the Prevention, Selfmanagement and Independence chapter.

Third sector information and support (e.g. local support groups)

There are many organisations and local groups in the third sector dedicated to providing support and information to people living with MSK. Many of the charities provide written and online publications, helplines, local peer support groups and self-management training. Useful information can include condition information, self-management, treatment options, support availability including benefits, employment and assessments for social care and aids and adaptations and self-management. Further information can be found in the Prevention, Selfmanagement and Independence chapter.

Social care

Local authority occupational therapy services

Occupational therapy services in community social services are already directly accessible for people with long-term MSK conditions. These services use a psychosocial model of disability: they focus on supporting people in their daily activities and occupational performance. They also can advise and help design environmental and home adaptations to maximise independence. A number of grants and funding sources can contribute to the costs for aids and adaptations. HCPs should work closely with social services to ensure that people can get the aids and adaptations they need to live at home, reduce the chance of injury and improve mobility.

Every local authority provides an information, advice and assistance service supporting those living with persistent pain. The majority use www.DEWIS.Wales, a resource which the public can directly access.

Social work, care and support

The Social Services and Wellbeing (Wales) Act 2014 provides everyone with the right to an assessment of need. Any required care and support will be discussed and agreed with the person and their family as appropriate, support might include; social work, domiciliary or residential care, aids and equipment, occupational therapy (as described above). Local authority housing support is also available. A range of other providers may be involved in adaptation or equipment services.

Community mental health services

People with arthritis and other MSK conditions may be at higher risk of experiencing anxiety and depression. The NHS and Social Services are key government agencies and work with the third sector to support people with low level mental health conditions.

People with anxiety and depression can get help and support from a number of universal services that can be accessed without the need for a referral from a GP, these services can include the following:

[Reading Well Wales](#) - books are available from local libraries on a variety of mental health conditions including anxiety and depression. The books have been approved by clinicians and provide evidenced based information and self-help strategies.

[5 Ways to Well Being](#) - provides information about self-help strategies that people can use to improve their mental health and wellbeing.

ACTivate Your Life - provides free courses that are delivered by the NHS across a number of Health Boards in Wales. The course is taught over four sessions; with the aim being to teach people about stress and suffering caused by emotional issues such as chronic pain.

Stress Control Groups - provide free courses which are available in a number of locations across Wales, they aim to teach people ways to manage and reduce stress, anxiety levels and low mood.

People may also want to consider practicing mindfulness and consider accessing online self-help material.

People whose needs cannot be managed via self-help and group strategies can access support from their GP. If the GP believes that there is a clinical need, they can refer onto Local Primary Mental Health Support services (LPMHSS) which can offer assessment, signposting, support and interventions. The latter may include 1:1 counselling and a range of psychological interventions such as cognitive behavior therapy, family therapy, stress management and education.'

Individuals can discuss their individual needs in an assessment with a MH practitioner via Local Primary Mental Health Support Services who will signpost or provide brief intervention as appropriate (via GP referral only). AHPs also provide a range of mental health interventions.

Additional programmes such as EPP are available. Further information can be found on page 15.

Social prescribing

A more structured approach to social prescribing is being developed in many areas of Wales, with a central hub service available that acts as a signposting service for the local community to find services, support and activity that will improve their quality of life. HCPs should signpost people with MSK to such services, but to other sources of reliable information support and guidance. Further information can be found in the Prevention, Self-management and Independence chapter.

Clinical Musculoskeletal Assessment and Treatment Service (CMATS)

Orthopaedics represents the single largest planned care service in Wales, and the demand for treatment was increasing significantly prior to the covid-19 pandemic. Reasons for growing demand include an aging population, a rise in obesity and advancements in clinical practice.

CMATS represents a long-established service model that evolved to reduce inappropriate demand on consultant-led orthopaedic and pain services, and

to provide primary care with specialist support for patients with complex MSK conditions. The service interfaces with primary care and with secondary and tertiary care. This service model is well established across the UK with some variations in the service titles used. Recommended Guidelines: Establishment of a Clinical Musculoskeletal Assessment Treatment Service[\[47\]](#) advise CMAT Services be developed in all Health Boards across Wales, and a national specification gives detailed guidance regarding the service model and reporting metrics[\[48\]](#).

The service ensures that people with complex MSK conditions (excluding those suspected inflammatory and auto immune conditions who should be referred directly to specialist rheumatology services) are supported to explore all appropriate conservative, non-surgical management before any onward referral to specialist secondary care or tertiary specialties. This includes providing expert diagnosis, ordering required investigations, providing condition management advice and giving injection therapy.

The model pathway currently requires that all orthopaedic referrals from primary care to secondary and tertiary care be subject to triage by CMATS. As the Primary Care model is extended and there is increasing use of FCPs this may change to provide a more streamlined pathway to suit individual's needs,

Secondary care and specialist services

When healthcare providers suspect that people presenting to primary care have undiagnosed inflammatory arthropathies (such as rheumatoid arthritis), they should refer these individuals directly to rheumatology secondary care specialties as per NICE guidelines.

Rheumatology services

Rheumatology services provide diagnosis and therapy of rheumatic diseases. Rheumatology services deal mainly with immune-mediated disorders of the musculoskeletal system, inflammatory arthritides, connective tissue diseases and vasculitides. Where inflammatory conditions are suspected, the patient is referred directly from primary care to a rheumatology service as per NICE guidance. In such cases early referral, assessment and inception of treatment is important.

Best practice in rheumatology is the provision of services as part of a multidisciplinary team and many services offer helpline support. Ongoing

management of inflammatory conditions usually resides with the rheumatology service, though shared care protocols with local primary care providers are employed in some areas for some aspects of ongoing care, such as blood monitoring when a patient's disease is stable and well managed. Rheumatology services also take referrals for people with non-inflammatory conditions, when diagnosis is uncertain including rare MSK conditions as well as patients with complicated multi-morbidities or failed to respond to standard treatment. Primary care physicians, acute care physicians, other secondary care clinicians and CMATS teams often refer patients to rheumatology for help diagnosing these conditions. Many autoimmune MSK conditions are systemic inflammatory disorders with many extra-articular features. Rheumatology services should co-ordinate appropriate multi-disciplinary care including physiotherapy, occupational therapy, podiatry, and other medical specialties (Dermatology, Renal, Neurology, Ophthalmology, Respiratory, Cardiology and Gastroenterology).

Multidisciplinary pain services and pain management programmes

Some people with long-term MSK conditions will experience significant ongoing pain despite conventional therapies including surgery. Chronic MSK pain impacts a person's quality of life, physical or psychological function, social well-being and financial position. These patients may benefit from support from secondary care pain services. National guidance describes the types of services that can support people with ongoing pain. Such services can help people develop life skills and coping strategies to live with persistent pain. Pain management services should involve multidisciplinary teams that provide a range of one-to-one services and group-based programs to support pain management strategies.

The Welsh Government guidance 'Living with Persistent Pain in Wales'[\[49\]](#) provides a detailed overview of how pain management services should be delivered and provides key recommendations.

Orthopaedics

Surgery should only be offered when it is consistent with the principles of best practice as outlined in publications such as the Getting It Right the First Time[\[50\]](#) report and NICE guidelines. It is important that secondary care consultant specialties also forge strong networks with access to primary care, local authority and community services.

Mental and emotional well-being

HCPs must consider both the physical and psychological effects of MSK conditions when providing treatment and support. Impaired mental and emotional well-being is common in patients with MSK conditions especially in patients with inflammatory arthritis and chronic ongoing pain. Healthcare professionals should evaluate both physical and mental well-being in patients with MSK conditions. Treatment plans must consider how a condition impacts on a person's relationships, body image, risk of isolation, connectivity and general well-being in coping with everyday life. Directing people to local support groups for those with MSK conditions or persistent pain, as well as to relevant third-sector helplines, can help people connect with peer support and gain access to information and skill to help self-manage the emotional impact of MSK conditions. Some patients may require referral to clinical psychologist or mental health services.

ACTIONS

1. Health Boards should ensure there are co-produced care pathways for MSK conditions and that all relevant HCPs and service providers locally are aware of the pathways.
1. Direct access to AHPs, including FCPs must be available in primary and community care to provide expert support at the commencement of the MSK pathway. FCPs do not replace existing MSK rehabilitation services, but should be integrated with other community and specialist services (e.g. CMATS) to optimise governance, professional and peer support and thus ensure the highest quality of outcome and experience for patients.

Part 4: Diagnosis, treatment and management of inflammatory conditions

Inflammatory arthropathies (IA) are a group of diseases characterized by inflammation of the joints and, often, other tissues. These include Rheumatoid Arthritis (RA), PsA, ankylosing spondylitis and Juvenile idiopathic arthritis (JIA). Many of these diseases are autoimmune in nature: an individual's own immune system mistakes parts of the body as foreign and releases auto-antibodies that attack healthy cells. Although genetics play an important role, genes alone do not determine who gets the autoimmune diseases. Environmental factors, including infectious agents and tobacco smoke, are important.

Typical symptoms of inflammatory arthritis are pain, swelling, warmth and morning stiffness that lasts for more than one hour.

In IA, chronic inflammation causes irreversible cartilage and bone damage characterised by joint deformities and disability. In most of these conditions, inflammation is systemic and affects other parts of the body. These extra-articular manifestations can include depression, fatigue, skin rashes, respiratory symptoms, ocular disease and cardiovascular disease.

Fatigue is also a common symptom of IA, and it can be difficult to treat because it often does not respond well to conventional therapy and requires a more holistic approach, such as CBT where appropriate.

Finally, many studies have established a greater risk of mental health problems in patients with an underlying inflammatory arthropathy.

Life expectancy in people with RA can be reduced on average by 10 years compared with healthy individuals.[\[51\]](#) Cardiovascular disease is the major cause of mortality in patients with inflammatory arthritis. For example, the risk of cardiovascular events is nearly twice as high for people with RA (the most common form of chronic inflammatory arthritis) than it is for the general population. For these reasons, the European League Against

Rheumatism (EULAR) and the British Society for Rheumatology (BSR) recommend cardiovascular screening for people with inflammatory arthritis.

Impact on the individual

Inflammatory conditions can impact significantly on quality of life and can impact on aspects of a person's day-to-day activities, independence and work and social life. Further information on the impact of MSK conditions on individuals and their families can be found in this document's introduction chapter.

Population impact

IA is common. The prevalence of RA, AS and PsA is 0.5%, 0.2% and 0.1% respectively.

Impact on health and social care services.

There are 18 rheumatology services located across all health boards, with the exception of Powys, where rheumatology outpatient clinics are provided by neighbouring health boards. There has been a substantial increase in demand for rheumatology service in Wales. In April 2016, the number of referrals in one month surpassed 3,000 across all services for the first time, representing a significant increase compared with the 1,810 referrals in April 2012. Since then, the number of referrals each month has averaged between 2,600 and 2,800 each month. In 2018/19, there were 23,963 new attendances to rheumatology.

Societal impact

Work disability is common in patients with inflammatory arthritis affecting 36%-49% of people with RA. Effective treatment, particularly achieving remission, reduced work disability (Vestappen SMM et al Working status in patients with rheumatoid arthritis, ankylosing spondylitis and psoriatic arthritis.⁵⁶ In Wales, 30% of patients with Axial Spondyloarthritis and Psoriatic Arthritis had sick notes issued by their GPs.

Treatment and approach

Prompt diagnosis

Prompt diagnosis and treatment are imperative with inflammatory arthropathies. Overwhelming evidence shows that early diagnosis leads to improved patient outcomes. A window of opportunity to achieve remission through appropriate therapy exists early in the course of the condition. When individuals achieve remission, they have improved symptoms, reduced disability, an increased ability to remain in work and reduced mortality. Given these factors, people with suspected IA, other than gout, should be referred promptly to rheumatology specialists for diagnosis. NICE guidelines state that, when a HCP suspects RA, an individual should receive a referral to a speciality rheumatology unit within three days and should be assessed within three weeks. Recent data from Wales showed that the average time from onset of symptom to diagnosis in patients with Axial Spondyloarthropathy and Psoriatic Arthritis was 8 years. Diagnosis and treatment reduced sick notes by 50%.

On-going management, treatment and support

While lifestyle changes, self-management and physical therapy are important, medications, including disease-modifying anti-rheumatic drugs (DMARDs) are necessary for most patients. DMARDs, including biologics, dramatically improve prognosis in inflammatory arthritis, reducing mortality and disability.

However, even when individuals achieve early remission, they can continue to experience periods of increased disease activity (commonly called a 'flare up'), and symptoms can fluctuate significantly over time. Life-long management, with regular reviews to monitor disease activity and potential side effects of medications, is critical, and given the multi-system nature of inflammatory arthritis integrated multidisciplinary care is essential. Healthcare providers must coordinate care across the primary and secondary care settings, with additional support from key stakeholders, including voluntary-sector and public-sector services.

5656 British Society for Rheumatology Biologics Register. Rheumatology (Oxford). 2010 Aug; 49(8): 1570–1577.)

Inflammatory arthritis should be managed in accordance to NICE and BSR guidelines. Rheumatology departments should offer coordinated multidisciplinary care (including medical, nursing, physiotherapy,

occupational therapy, orthotics, podiatry and psychology) and linked support specialist services (including dermatology, orthopaedic services, and renal and respiratory services) in cases in which people have extra-articular manifestations.

Supported self-management

Patient education and empowerment is central to managing inflammatory arthritis and reducing its impacts[\[52\]](#). Third sector organisation such as Versus Arthritis, the National Rheumatoid Arthritis Society and the National Ankylosing Spondylitis Society (NASS) provide a range of services for people with IA conditions, including publications, training courses and helplines

Educating people with IA on lifestyle changes they can make to help manage their conditions is also vitally important. For example, many patients with RA do not realise the negative impact that smoking can have on their condition and its progression, as well as smoking's negative impact on their likely response to treatment. Advice to help people stop smoking is an important part of educating these individuals.

Further information on supported self-management is provided in the Prevention, Selfmanagement and Independence chapter of this document.

Increasing activity levels

People with IA conditions can benefit from exercise. Therefore, educating and empowering people to self-manage their condition through increased activity is a vital part of supporting individuals. Further information regarding programmes available to support with MSK conditions, including IA, is provided in the Prevention, Self-management and Independence chapter of this document.

Diet and weight

Gout. For people with gout, weight loss can reduce blood uric acid levels and the frequency of acute gout attacks. However, it is important that people with gout avoid rapid weight loss or going without food for long periods, as these approaches can raise uric acid levels and trigger painful gout attacks. The UK Gout Society recommends gradual, moderate weight loss that follows from balanced, healthy eating and regular physical activity[\[53\]](#). People with gout should consume less of some types of alcohol, including beer, and foods such as red meat, offal and seafood. Diets rich in low-fat dairy products and vitamin C may offer some protection against gout[\[54\]\[55\]\[56\]\[57\]](#).

PsA. People with PsA are more likely than people without PsA to have obesity, and in those with PsA, obesity is linked with higher disease activity, a poorer response to treatment and increased cardiovascular morbidity. In a recent study, short-term weight loss treatment using a low-energy diet was associated with reduced disease activity in joints, entheses and skin in people who had with PsA and obesity. The study supports the hypothesis that obesity promotes disease activity in PsA.[\[58\]](#)

Rheumatoid Arthritis. Obesity is a strong predictor of worse clinical outcomes and poorer treatment responses in people with early RA. In a recent study, comparing treatment outcomes, people with both RA and obesity were significantly less likely to achieve remission of their RA at 24 months of standard therapy compared with patients who had a healthy weight and who received the same treatment. [\[59\]](#)

Primary and intermediate care

People with the early stages of IA are most likely to present to primary care practitioners. When an IA is suspected (other than gout), the individual should be referred to specialist rheumatology services as quickly as possible.

Established best practice referral protocols exist for many inflammatory conditions. For example, NICE has developed guidance for RA and ankylosing spondylitis. These guidance documents help GPs, FCPs, primary care nurses, CMATS teams and other HCPs to identify possible IA.

Educating other HCPs about symptoms that may indicate an inflammatory condition is a key role of many rheumatology teams, and rheumatologists also provide advice via email and telephone.

Other referral pathways to rheumatology for IA exist beyond primary care. Examples include other secondary care specialties, such as dermatology, gastroenterology and ophthalmology. CMATS can also make referrals, often in cases in which people experience mechanical back pain that, upon further assessment, suggests inflammatory processes.

Local pathways of care for MSK conditions should be available to ensure that all patients are seen by the right health professional at the right time.

Shared care

Rheumatology and primary care teams routinely collaborate through shared care after a person is diagnosed. An example of shared care is when a patient begins taking a DMARD such as methotrexate. Secondary care providers will initially prescribe the drug and monitor for safety. Once the individual is stable, the monitoring and prescribing can be safely transferred to primary care with input from the rheumatology team as needed. Shared care protocols and pathways have been developed in some areas to facilitate such activity.

Secondary care rheumatology services

Rheumatologists care for people with long-term inflammatory conditions. In most cases, these individuals need regular contact with a range of health professionals beyond the standard rheumatology multidisciplinary team (rheumatologist, specialist nurse, physiotherapist and/or occupational therapist). These additional services may include podiatry and orthotics management, hydrotherapy, orthopaedic interventions, pain management and psychology services.

Acute hospitals require ready access to specialist medical rheumatology opinion for advice on inpatients on medical wards with rheumatological conditions, complications or for advice about rheumatology drugs. Patients can become life threateningly unwell, requiring the support of the rheumatology team whilst admitted under the care of the acute medical and surgical teams.

A range of specialities regularly seek rheumatology advice for individuals who are unwell with unknown illnesses that may have an underlying inflammatory, autoimmune or connective-tissue basis. Combined clinics and shared care typically take place with other hospital-based specialties, including dermatology, orthopaedics, respiratory and gastroenterology.

Rheumatology services need to work closely with colleagues in radiology and orthopaedics, and they often manage patients jointly among these specialties. However, strong links with all the medical specialties and their support services are important given the extra-articular manifestations of some inflammatory conditions.

One example of multi-speciality care for people with IA include combined rheumatology and local maternity services, which support people with rheumatic diseases during pregnancies and breast feeding. Another example is the Health and Well-being Centre at University Hospital of Wales, Cardiff. The service is led by Professor Christine Bundy (clinical psychology) in collaboration with Professor Ernest Choy (rheumatology) and Dr John Ingram (dermatology) provides psychological interventions to support smoking cessation, weight loss and management of affective disorders such as depression and anxiety, which are common in patients with arthritis.

NICE and the BSR recommend routinely screening for mood disorders. NICE guidelines suggest that people with RA should be screened annually to check for the development of co-morbidities, including mental health conditions.

Radiology

The importance of a quick turnaround regarding scans. Rheumatologists are being trained in performing ultrasound, but many others rely on local MSK radiology services to

Building and maintaining quality services

Those who plan and deliver services should consider NICE quality standards as part of a general duty to improve quality.

NICE provides a robust target for early access to treatment. The target is built on evidence that delayed treatment (later than 3 months) for inflammatory arthritis can result in irreversible joint damage and a lost opportunity for remission.

The National Early Arthritis Audit (NEIAA) checks for compliance with NICE guidance and benchmarks Welsh rheumatology units according to these standards. The first round of the audit was published in November 2016.

Types of inflammatory conditions

The most common inflammatory conditions can be categorised into six areas:

- acute inflammatory rheumatic diseases manifested by arthritis
- remitting inflammatory disease such as polymyalgia rheumatica
- long-term inflammatory rheumatic diseases manifest by arthritis
- autoimmune connective tissue diseases (AICTDs) systemic vasculitis (SV) conditions
- rare inflammatory conditions.

- **Acute Inflammatory rheumatic diseases manifest by arthritis o Crystal arthritides.** Some types of inflammatory arthritis are acute. These conditions include calcium pyrophosphate (CPP) arthritis and gout. Gout is one of the most common forms of arthritis and affects approximately 1 in 40 people in Wales.^[60] Gout causes acute, intensely painful attacks if suboptimally managed, and can lead to a chronic, potentially destructive form of the condition. Unlike most other IA conditions, gout can be successfully managed in primary care, but rheumatology specialist input is needed if a diagnosis is uncertain if a person does not respond well to treatment.

Relevant standards, guidance and further information

BSR guidance and quality standards for gout can be found at the following link:

<https://academic.oup.com/rheumatology/article/56/7/e1/3855179>

o **Septic arthritis.** This is a rare condition, where a joint becomes infected. This condition, septic arthritis, is a medical emergency. People with this condition must be given fast-tracked referrals to rheumatology or orthopaedics specialist services. All MSK services require protocols for identifying and managing suspected joint sepsis.

Relevant standards, guidance and further information

BSR and BHPR, BOA, RCGP and BSAC Guidelines (2006) for management of the hot swollen joint in adults can be found here: <https://academic.oup.com/rheumatology/article/45/8/1039/1784962>

Remitting Inflammatory Disease

Polymyalgia Rheumatica (PMR) is a common inflammatory condition among older people. People with PMR typically have shoulder and hip girdle pain, significant morning stiffness, fatigue and inflammatory blood markers. Their symptoms usually respond well to moderate doses of oral steroids, which are gradually tapered over time to reduce the risk of side effects. Most people can be successfully treated in primary care, with referral to secondary care when there is diagnostic uncertainty or when a person has difficulty reducing their steroid dose.

Relevant standards, guidance and further information

<http://cks.nice.org.uk/polymyalgia-rheumatica>

<https://www.rcplondon.ac.uk/sites/default/files/giant-cell-arteritis-concise-guideline.pdf>

Long-term inflammatory rheumatic diseases manifested by arthritis

If a diagnosis of one of these inflammatory arthritis is missed or delayed, people can quickly experience damage to joints, tendons and bones. This damage can, in turn, lead to lifelong symptoms and disability.

The effect of service configuration, clinical pathways and care of patients with these inflammatory arthritis conditions is assessed through national audit. Guidance for the use of Biologic drugs for treating these conditions has been published by NICE. Disease Modifying Anti Rheumatic Drugs, including the newer more costly drugs and biologic medications must be prescribed with oversight by a rheumatology specialist. This is a core specialist activity for a rheumatology department.

Relevant standards, guidance and further information

A range of NICE guidance policies are available with regard the use of biologic therapies. These can be downloaded from the NICE website.

Rheumatoid arthritis (RA) is an inflammatory disease that typically affects the small joints of the hands and feet, but it can also affect any other joint. It is a systemic disease, which means that it does not just affect the

musculoskeletal system but can affect the whole body, including the cardiovascular system, lungs, heart, eyes and small blood vessels. When these blood vessels are affected, the condition is called vasculitis.

RA is often complicated by debilitating fatigue. Medical management with drug therapy can relieve symptoms, modify the progress of the condition and the functional impairment associated with it, and reduce the risk of potential comorbidities. RA can result in a wide range of complications, and it has a significant personal impact on people with the disease and on their families and carers. It also has an economic impact on the NHS and society in general. Approximately one-third of

Relevant standards, guidance and further information

NICE Quality Standards for Rheumatoid Arthritis

Guidance relating to Rheumatoid Arthritis in adults can be found here:

<https://www.nice.org.uk/guidance/ng100>

people with RA stop work because of the disease within two years of onset of the condition and the proportion of people who stop work rises after two years.

Spondyloarthropathies are a group of inflammatory MSK conditions with shared features that affect axial and peripheral joints. Most people with these conditions have either axial (spine) spondyloarthritis (which includes ankylosing spondylitis and non-radiographic axial spondyloarthritis) or PsA.

Relevant standards, guidance and further information

NICE Quality Standards for spondyloarthropathies

Guidance relating to Spondyloarthritis in over 16s can be found here:

www.nice.org.uk/guidance/ng65

Axial spondyloarthritis primarily affects the spine, in particular the sacroiliac joint. Axial presentations of spondyloarthritis are often misdiagnosed as mechanical low back pain, leading to delays in access to effective treatments. Peripheral presentations are often seen as unrelated joint or tendon problems and can be misdiagnosed as problems can move around between joints. People with predominantly axial spondylarthritis may have additional peripheral symptoms and vice versa.

Psoriatic arthritis (PsA) can have several forms, including involvement of small joints (in the hands and feet), large joints (particularly the knees) or combinations of both. PsA may also involve the axial, finger and toe joints, and may also involve inflammation of the connective tissue between tendons or ligament and bones.

Enteropathic spondyloarthritis is a less common subgroup of conditions. These conditions are associated with inflammatory bowel disease (Crohn's disease and ulcerative colitis).

Reactive arthritis, which is a form of peripheral arthritis, can occur following gastrointestinal or genitourinary infections.

Autoimmune connective tissue diseases (AICTDs)

AICTDs are relatively rare. These conditions include systemic lupus erythematosus (SLE), systemic sclerosis (also called scleroderma), polymyositis, dermatomyositis, primary Sjögren's syndrome, antiphospholipid syndrome and mixed connective tissue disease, overlap and undifferentiated AICTDs.

Each of these conditions has a spectrum of severity. They can be acute and life-threatening, or they can have nonspecific symptoms including muscle and joint pain. If a healthcare provider suspects that a person has one of these conditions, they must give the individual rapid access to a rheumatology assessment. Milder manifestations of all AICTDs can be diagnosed and managed in all local rheumatology units, but rarer disorders or more severe manifestations may need the involvement of a tertiary or specialised rheumatology service (SRS) particularly for access to coordinated multispecialty clinics and for advice about biologics therapies.

SRSs coordinate care for those who have complex or severe AICTDs on a network basis. These networks are centred on a few hubs that link with other regional rheumatology service providers. The budget and accountability for commissioning SRS care is currently a responsibility of the Welsh Health Specialised Services Committee (WHSSC), but it is also important to develop collaborative commissioning with health boards because all rheumatology units are likely to be involved in caring for people with these conditions.

Relevant standards, guidance and further information Systemic Lupus Erythematosus. 2017 NICE Accredited

<https://academic.oup.com/rheumatology/article/57/1/14/4318864>

Systemic sclerosis. 2016 NICE Accredited

<https://academic.oup.com/rheumatology/article/55/10/1906/2196591>

Primary Sjögren's Syndrome. 2017 NICE Accredited <https://academic.oup.com/rheumatology/article/56/10/1643/3895124>

Systemic vasculitis (SV) conditions

SV conditions are rare, and include antineutrophil cytoplasmic antibody-associated (ANCA-associated) vasculitis, such as granulomatosis with polyangiitis, microscopic polyangiitis and eosinophilic granulomatosis with polyangiitis. Other SV conditions include Behcet's disease, immunoglobulin A (IgA) vasculitis, polyarteritis nodosa, Takayasu arteritis, giant cell arteritis, vasculitis associated with an AICTD, nonspecific aortitis and peri-aortitis.

In most hospitals, care for people with SV conditions will be coordinated, if not solely managed, by a rheumatologist. SV may be mild and self-limiting or secondary to other medical problems (for example, side effects of drugs or infection), but some cases are severe, long-term or lifethreatening. Treatment should be centred in a secondary care setting with the rheumatology team working closely with other medical specialities depending on the organ systems that are affected.

People who have symptoms or signs that suggest SV conditions should be referred to secondary care services immediately. Rheumatology services are typically appropriate, but there are some exceptions. For example, Antineutrophil cytoplasmic antibody-associated vasculitis (AAV) with renal involvement and no other systemic involvement would usually be managed by nephrology.

People with these conditions are often acutely unwell, and it is appropriate to seek input from a number of different specialties, including critical care.

However, people with SV conditions may also present with non-specific MSK symptoms, so all MSK healthcare professionals need to be aware of these conditions and have clear, quick links to rheumatology advice and referral.

Relevant standards, guidance and further information

For further information see BSR Guideline for the management of adults with ANCA associated vasculitis. In revision 2018-19 <https://academic.oup.com/rheumatology/article/53/12/2306/1802843>

Giant Cell Arteritis (GCA) is an emergency condition that is usually managed by rheumatology or ophthalmology departments. People with GCA usually present with headache, scalp tenderness and/or vision loss, and are generally first assessed by a GP, acute medicine professional, Accident and Emergency department or local optician. Local pathways of care are therefore important. GCA is the most common type of vasculitis, affecting approximately one in every 4,500 people in the UK. It most commonly occurs in adults over 50 years of age. Vision loss occurs in up to one-fifth of people with GCA, but vision loss may be preventable if people are treated promptly. GCA is an emergency because vision loss often occurs early, prior to steroid treatment. The increasing use of specialist ultrasound scanning to diagnose GCA could reduce the need for inpatient admissions for urgent temporal artery biopsy. Evidence is emerging for new treatment options, including biological therapies, as recommended by NICE. It is unlikely that specialists other than rheumatologists will be familiar with using biologic drugs in line with the NICE guidance (TA518 April 2018).

Relevant standards, guidance and further information

BSR guidelines <https://academic.oup.com/rheumatology/article/59/3/e1/5714024>

Rare autoimmune rheumatic diseases.

Rare diseases impact on one in 17 people. Autoimmune rheumatic diseases, include systemic sclerosis, Sjögren's syndrome, myositis, Behcet's disease and SV conditions are rare, potentially life-threatening, multisystem conditions that require coordinated multidisciplinary specialist care coordinated by rheumatologist.

Patients with suspected rare autoimmune rheumatic diseases should be referred to specialists in secondary care for diagnosis and management. The majority of people with rare rheumatological diseases in Wales receive most of their care at their local hospitals. However, in cases in which access to specialised centres is either not possible or not desirable, national standards of care should still be available to all people. This includes care delivered across multiple sites.

Developing coordinated networks between the specialised centres in England and all local providers can support this objective. Standardised protocols for care and agreed thresholds for referral for specialised advice are important, and using remote conferencing can help facilitate consultation. WHSSC is central to this process; currently, rheumatologists complete Individual Patient Funding Requests (IPFR), but networks and pathways would be an ideal to standardise care for patients across Wales.

Specialist nurses and AHPs leading on coordinating care – for example, a specialist nurse may act as a case manager who arranges access to treatment across the settings of care – is becoming more common. Where this happens, a specialist nurse acts as a case manager to coordinate access to treatment and support across secondary, community and primary care for their patients. Alongside the physical impacts of the conditions, people living with rare conditions face other significant difficulties. Uncertainty over symptoms, conflicting or incorrect information, false diagnoses and frequent trips to different doctors and specialists all cause stress and anxiety and have significant impacts on work and home life.

Relevant standards, guidance and further information

The UK Strategy for Rare Diseases -

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/260562/UK_Strategy_for_Rare_Diseases.pdf

Welsh Rare Diseases Implementation Plan -

<https://gov.wales/sites/default/files/publications/2019-05/welsh-implementation-plan-for-rare-diseases-annual-update-2018.pdf>

ACTIONS

1. Health Boards should ensure co-produced integrated local care pathways and service provision for people with inflammatory arthritis and rare diseases are in place to facilitate appropriate and speedy referrals to specialist services and that local services meet relevant NICE guidelines.
1. Health Boards should ensure that people with suspected IA are seen by a specialist rheumatology service within the time specified by NICE guidelines (or other established best-practice guidance) to ensure speedy diagnosis and inception of treatment.

1. Health Boards should review shared care protocols for inflammatory arthritis services to ensure that high-quality management and review protocols are in place.
1. Health Boards should ensure that they are implementing all actions in the Wales Rare Disease Implementation Plan.
1. Health Boards should ensure that all people with IA are given or are signposted to appropriate information about their conditions, treatment options, peer support and selfmanagement and the benefits of smoking cessation, exercise and achieving or maintaining a healthy body weight.
1. Health Boards should ensure that people with IA have access as required to programmes to support people to develop self-management skills, overcome barriers to increasing activity and exercise levels, smoking cessation and achieving or maintaining and a healthy body weight.
1. Health boards should ensure that people with IA can rapidly and directly access a wide multi professional team, including AHPs (physiotherapy, podiatry, occupational therapy, orthotics and dietetics) as needed.

Part 5. Diagnosis, treatment and long-term management of Conditions of MSK Pain

This chapter provides an overview of non-inflammatory conditions of MSK pain, the impact these conditions have on people living with them and the most appropriate approaches to limiting their impact.

There are many different types of non-inflammatory rheumatological conditions, here categorised as 'conditions of MSK pain', including osteoarthritis; back and neck pain, with or without radiculopathy; shoulder pain, (such as capsulitis and rotator cuff tendinopathy), hypermobility and Ehlers-Danlos syndrome (EDS), fibromyalgia, plantar fasciitis, and lateral epicondylalgia and This chapter does not cover osteoporosis, please see Part 6 of this document (page 50) for approaches to treating osteoporosis.

Impact on the individual

Conditions of musculoskeletal pain can have a significant impact on many different aspects of a person's life. The conditions can affect a wide range of joints and, depending on joints affected, can impact mobility, dexterity, sleep quality and the ability to complete day-to-day tasks. As a result, these disorders often create challenges for a person's independence, social and family life and employment. Living with these painful conditions can also have a significant impact on mental and emotional health. The effects of MSK disorders are wide-ranging and include a negative impact on mood and a reduced ability to complete everyday tasks [\[61\]](#) or participate in exercise and social activities. ⁶⁷ Nearly three quarters of people with osteoarthritis report some form of constant pain, with 1 in 8 describing their pain as often unbearable.⁶⁸

Impact on society

A third of people with osteoarthritis retire early, give up work or reduce the hours they work because of their condition.[\[62\]](#) Musculoskeletal conditions including arthritis and back pain affected an estimated 18.8 million people across the UK in 2017 and accounted for more than 22% of the total burden of ill health (measured in terms of morbidity) in the UK. Low back and neck pain were the biggest cause of ill health overall across all ages.

As people age, their risk of having an MSK condition rises. People with MSK conditions are less likely to be in work than people without health conditions, and more likely to retire early. Around 63% of working-age adults with MSK conditions are working compared to 82% of people with no health condition. Having good employment protects good health, whereas unemployment contributes to poor health. In 10 years' time 40% of the working-age population will have a longterm condition.

An estimated 275,000 people (17.2%) of people aged over 45 years in Wales have osteoarthritis of the knee, 71,000 of whom have severe knee osteoarthritis.[63] 180,000 people (11.2%) of people aged over 45 years in Wales have osteoarthritis of the hip, 48,000 of whom have severe hip osteoarthritis.[64] The number of people living with osteoarthritis is predicted to rise by 3.8% per year. A third of women and almost a quarter of men between 45 and 64 have sought treatment for osteoarthritis, this rises to almost half of people aged 75 and over.[72]

Primary prevention

For conditions of musculoskeletal pain there are several risk factors that can be addressed. Lifestyle factors play a role in the occurrence of some MSK conditions. For lower limb (knee and hip joint) osteoarthritis, one of the key risk factors is being overweight. Compared to people who are of a healthy weight people who are overweight are more likely to suffer from knee and hip osteoarthritis and back pain. Combined with this people who are active are less likely to suffer from knee and hip OA and back pain.

Assessing and addressing the ergonomic work environment can often help cases of neck, upper limb and back pain. Regular breaks from working at a screen and simple movement exercises can alleviate muscle fatigue. Where appropriate referral to occupational health can help address these issues and provide advice.

For other conditions MSK pain such as Achilles tendinopathy and lateral epicondylalgia occurrence that are related to sports activity can be minimised by attending to training loads, appropriate equipment and footwear and orthotics where relevant.

Osteoarthritis

Evidence shows that people with obesity are more than twice as likely to develop osteoarthritis of the knees as those who have a healthy body weight, although many estimates suggest that their risk is significantly higher[65] [66]75. More than two in every three knee replacements and one in every four hip replacements in middle-aged women in the UK are attributable to obesity[67], and evidence shows that people with morbid obesity benefit less from joint replacement surgery than those of a healthy weight. Those with morbid obesity also have increased risk of surgical complications.[68]

Throughout their lives, people should be supported to maintain a healthy body weight. This support should include access to a balanced and varied diet and opportunities for regular physical activity. Welsh Government sets out Dietary guidelines to maintain optimum health in the 'Eatwell Guide'.⁷⁸ They should have direct access to AHPs, including physiotherapists and dietitians as appropriate

For people who are overweight or obese, a modest reduction in weight (a loss of 5% to 10% of body weight) together with increased physical activity can help to prevent the development of MSK conditions and provide symptomatic relief of osteoarthritis.

Diagnosis

Prompt diagnosis and treatment of conditions of MSK pain can reduce people's disability and improve their quality of life. Most such conditions are able to be diagnosed on symptom presentation and examination. In most cases further investigations such as x-rays and scan are not required.

The diagnosis should be communicated in a sensitive manner with an appropriate amount of information and signposting to relevant sources of support. Pharmaceutical management is detailed in the NICE guidelines.

Supported self-management

People living with osteoarthritis and other conditions of MSK pain should be supported to develop self-management knowledge and skills. This involves providing appropriate information to help people better understand their condition and to counter the misconception that their condition will only worsen and cannot be treated. People should receive a positive message that selfmanagement, including specific exercises and behavioural changes (including weight loss, wearing appropriate shoes and pacing activities) are important and can help reduce the impact of their condition. Self-management strategies should include advice on how to deal with symptom flare-ups. Further information on supported self-management, including programmes and services available to support people to improve their self-management skills, such as ESCAPE pain, Get Active for Arthritis, NERS, EPP and Oak Knee, can be found in Part 2.

Co-production of management plans.

Involving people with conditions of MSK pain in decision-making about treatment options is necessary to help them engage in and continue their management plans. Core treatment and management approaches, including education, pain relief treatments, mobility and strengthening exercises, aerobic exercise and weight loss support (if needed), should be offered to everyone, regardless of age, co-morbidities or pain levels. Management plans should take co-morbidities into consideration.

Multidisciplinary approach.

Most people with conditions of MSK pain should be managed in primary care. (For more information, see page 20.) FCPs and AHPs should provide on-going management and support and/or triage for appropriate onward referral.

FCPs Physiotherapists should also be integrated with specialist MSK services, such as CMATS, to optimise governance and ensure professional and peer support. (For more information on CMATS, see page 4.) Services should provide high-quality bilingual information in digital and paper formats, and these materials should include information on treatments and treatment choice.

Primary care

Primary care practitioners should offer treatment first unless they have compelling evidence that leads them to make a referral to secondary care or orthopaedics. Radiography can establish the degree of joint changes, particularly in the lower limb, but should not be regularly used for low back pain. Self-referral for physiotherapy for MSK conditions should be available in all health boards, and self-referral forms should be readily available in multiple sites, such as in leisure centres, libraries, community centres and primary care centres and surgeries.

Some people may need referral to specific services, such as to podiatry for lower limb or foot osteoarthritis that would benefit from orthotics, to dietetics for weight loss support or to pain specialists if pain has become intractable. Some people may need to be referred to occupational therapists if they need assistive devices or techniques to maintain their daily independence. Others may need referral for joint replacement surgery if symptoms – including pain, stiffness and reduced function – have a substantial impact on their quality of life and have not responded well to conservative measures.

Secondary care

Secondary care services for conditions of MSK pain such as osteoarthritis are under continuous demand. It is estimated that 50% of the population will need orthopaedic surgery at some point, and referrals for orthopaedics have increased by 30% since 2005, according to 'A Review of Orthopaedic Services, Wales Audit Office 2015'.[\[69\]](#) People with conditions of MSK pain may also need a number of other specialist interventions as stated above.

Rheumatology

Conditions of MSK pain are a significant proportion of referrals to rheumatology services. Very often these conditions give mild or self-limiting symptoms and can be dealt with by the primary care team. However, in some cases, a diagnosis needs clarification, or a management plan may need a rheumatologist's endorsement.

Rheumatologists are experienced in making plans to manage these conditions, so those who need to be referred to rheumatology will often only need one appointment with a rheumatologist. Many will be discharged within one or two visits, although some with long-term conditions will need intermittent re-referral as new issues arise. Primary care will continue most management, sometimes with input from other specialities such as orthopaedics, genetics, pain management and therapy professions. Overall, this pathway will account for a significant proportion of new patient activity for most rheumatology services, but only a small part of follow-up activity. People should be managed via a holistic management plan.

Pain Management Services

Persistent pain can result from conditions of MSK pain and is a significant health problem for a substantial proportion of the population. Between 11% and 20% of adults are affected with symptoms ranging from mild discomfort to debilitating pain.

Living with persistent pain can negatively impact on a person's quality of life and ability to function, not only physically, but also psychologically, socially and economically. It can limit potential well-being, lower self-esteem, increase co-morbidities due to inactivity, have adverse effects on relationships and work.

Pain management services are available in Health Boards across Wales. For further details regarding these services and referral protocols, see the Welsh Government's Living with Persistent Pain.[70]

Relevant guidance and further information

Living with Persistent Pain in Wales

Welsh Government April 2019 – <https://gov.wales/people-experiencing-persistent-painguidance>

AHPs services

People with conditions of MSK pain will benefit from access to a number of AHPs, specifically Dietetics, Occupational Therapy, Podiatry, mental health services, CMATS. Goal focussed rehabilitation and treatment programmes will be set in collaboration with patients to maximise outcomes, reduce the experience or and impact from pain. These will include health promoting programmes (weight management, increased activity and smoking cessation for example) as well as education and new techniques to improve pain management, maximise activity and occupational engagement, psychological and stress relieving interventions as well as practical, environmental, work or home orientated adaptations.

Orthopaedic Services for elective orthopaedic surgery

Orthopaedic services deal with many conditions of MSK pain, including joint replacement and surgery for spinal disorders. It is estimated that 50% of the population will require orthopaedic surgery at some point. The number of fractures and resulting costs will rise by 1% per year simply due to ageing of the Welsh population.[71]

Orthopaedic procedures, such as total hip replacement and total knee replacement, are among the commonest surgical procedures in UK. The rates of joint replacement have risen substantially over the last 10 years and orthopaedic referrals from primary to secondary care have increased by 7-8% each year. In 2015 an extensive 'Get it right first time' (GIRFT)[72] review (Briggs. 2015) reviewed the overarching service provided in Wales for Orthopaedic Services and recommendations can be viewed in the document.

Headline recommendations are for an integrated service linking clinicians and managers together with limited variation in care, adoption of best practise and delivery of an economic viable service. There is a need to reduce infection, reduce re-admission and reoperation rates. Timely access to high quality elective care which is consistent across Wales is a key priority. Access to AHPs proactively prior to planned surgery, for post-surgery rehabilitation and to maximise return to independent living as quickly as possible is critical.⁸³ [\[73\]](#) [\[74\]](#)

Reducing length of stay can substantially improve efficiency- examples include:

- Joint schools can be utilised to offer education/lifestyle changes and familiarization with post -operative exercises for patients undergoing joint surgery to help earlier discharge.
- Reducing delays of transfers of care i.e. back to community.
- A well- established rehabilitation service as well as pre-operative planning and early supported discharge can improve patient outcomes and benefit carers.

Building and Maintaining Quality Services

Services need to focus on implementing preventative measures to deliver an efficient service. There is a need to undertake early intervention to sustain services, in line with National waiting time targets. NICE quality standards should be considered when planning and delivering services for people with osteoarthritis and for other NIRC's where NICE guidelines are available, as part of a general duty to secure continuous improvement in quality.

Types of conditions of MSK pain

List of conditions in the UK may be split broadly into six areas:

- Osteoarthritis.
- Back,neck and shoulder pain.
- Soft tissue disorders (i.e. lateral epicondylalgia).
- Hypermobility / EDS.
- Fibromyalgia.

Osteoarthritis

The definition of OA, is based upon symptoms of activity-related joint pain. OA should be considered as a prime diagnosis if the patient is 45 or over **and** has activity-related joint pain **and** has either no morning joint-related stiffness or morning stiffness that lasts no longer than 30 minutes. Most self-reported joint pain in older adults has been shown to be due to OA, with alternative clear diagnoses being relatively uncommon. Atypical features such as trauma, night pain, sweats prolonged morning joint stiffness, rapid worsening of symptoms, a hot swollen joint may indicate another cause. Differential diagnosis could include malignancy, infection, inflammatory arthritides or septic arthritis.

The most commonly affected joints are the hip, and knee, but the ankle, foot, shoulder, hand and spine are also affected. The common presentation of OA of most of the joints are pain and limited range of movement, and muscle weakness which impacts on function. Osteoarthritis is one of the most common MSK conditions.

NICE OA guidelines, particularly focused on the knee, hip, foot, suggest that there is a core of treatments that should always be offered to everyone, no matter what age, accompanying comorbidities and degree of pain. These core treatment are education regarding osteoarthritis, exercise and weight loss.

Relevant standards, guidance and further information

NICE Clinical Guideline

Guidance and statements relating to Osteoarthritis can be found here:
<https://nice.org.uk/guidance/cg177>

Back and neck pain

Over 10 million people in the UK have persistent back pain and back and neck pain is one of the most common conditions that present to General practice^[75]. Neck and back pain are common. In most patients, symptoms are self-limiting and precipitated by worry or stress, sleeping awkwardly, sprain/strain, accident such as a whiplash or a flare-up of spondylosis due to degenerative disease of the discs and joints in the spine from aging.

When symptoms persist, physical and topical therapy with or without simple analgesia and NSAIDs are beneficial. Most patients should be managed in the Primary Care. However, if patients have symptoms and signs of nerve root entrapment which failed to resolve suggestive of cervical radiculopathy and sciatica, they may require referral to secondary care specialists, Rheumatologists, Orthopaedics or Pain Specialists for investigation and management.

Relevant standards, guidance and further information

<https://www.nice.org.uk/guidance/ng59> - Low back pain and sciatica in over 16's. Assessment and management.

Neck pain non specific and with radiculopathy Clinical Knowledge summaries <https://cks.nice.org.uk/neck-pain-non-specific> <https://cks.nice.org.uk/neck-pain-cervical-radiculopathy> <https://cks.nice.org.uk/neck-pain-whiplash-injury>

Shoulder pain

Shoulder pain can be due to many reasons. Common shoulder conditions are Rotator Cuff Tendinitis, Frozen shoulder and acromioclavicular joint disorders. Less common are instability disorders, which are most common in young people who play sports and glenohumeral joint OA most common in the elderly. Differential diagnosis can include pain referred from cervical spine and serious pathology must be excluded.

These disorders can be diagnosed by clinical assessment and treated by FCPs in Primary Care and in some cases (for example OA glenohumeral joint) x- ray may be required and further referral to secondary care services as required.

Relevant standards, guidance and further information

Clinical Knowledge summaries - <https://cks.nice.org.uk/topics/shoulder-pain/>

Plantar fasciitis

Commonly presents as pain on the under surface of the foot. It accounts for about 80% of cases of heel pain, with a lifetime prevalence of around 10% and is most common in people 40–60 years of age.[76] Diagnosis is by clinical presentation alone. Most cases can be treated with physiotherapy consisting of stretching, foot wear advice, advice regarding standing and referral to and provision of orthotics as appropriate. Resolution is usually within 6-12 months. Differential diagnosis can include achilles tendinopathy and calcaneal stress fracture.

Relevant standards, guidance and further information

Clinical Knowledge summaries - <https://cks.nice.org.uk/topics/plantar-fasciitis/>

Lateral Epicondylalgia

Commonly known as tennis elbow presenting as pain on the lateral aspect of the elbow which may refer down the forearm. Other symptoms include loss of grip strength and inability opening jars for example. Diagnosis is by clinical presentation. The condition is prevalent in the sporting population particularly those playing racquet sports and those in manual jobs that involve repeated arm movements. Differential diagnosis must exclude referred pain from the cervical spine. Treatment by FCP's may include specific exercises, desisting from aggravating factors and occasional a strap may be useful. Corticosteroid injection may be required if first treatments fail.

Relevant standards, guidance and further information

Clinical Knowledge Summaries - <https://cks.nice.org.uk/tennis-elbow>

Fibromyalgia

Fibromyalgia is a common condition affecting 2-5% of the population. Chronic widespread pain is the dominant symptom. Other symptoms include fatigue, poor sleep quality, difficulties with concentration and memory. Comorbid conditions including anxiety, depression, irritable bowel syndrome and migraine are common. Fibromyalgia is common in patients with inflammatory arthritis and osteoarthritis.

In the past fibromyalgia was considered a diagnosis of exclusion. In 2016, Revised American College of Rheumatology diagnostic criteria for fibromyalgia removed the need to exclude other musculoskeletal disease. For most patients, diagnosis and management could be carried out in primary care. The diagnosis can be established using a patient self-completed questionnaire. Management of fibromyalgia should follow the principles and recommendations detailed in Living with Persistent Pain in Wales.

Relevant guidance and further information: Living with Persistent Pain in

Wales (<https://gov.wales/people-experiencing-persistent-pain-guidance>)

Ehlers-Danlos syndrome and Hypermobility Spectrum Disorder (EDS/HSD)

EDS/HSD are a group of hereditary connective tissue disorders which mainly affect collagen. The nomenclature of these conditions has undergone a number of iterations which makes discussion of their prevalence complicated.^[77] A recent study in Wales found over 6,000 individuals EDS or JHS with a point prevalence of 194.2 per 100,000 in 2016/17 or roughly 10 cases in a practice of 5000 patients.⁸⁹ Common symptoms are arthralgia, soft tissue injury and joint instability. Comorbid conditions e.g. mental health, nervous and gastro-intestinal conditions are common. In severe cases of EDS, cutaneous and cardiac involvement require multi-disciplinary care. Early diagnosis is found to be crucial to patients to enable the provision of appropriate treatment, as well as to prevent later onset complications. Establishing the diagnosis of EDS/HSD is often problematic for patients, which interferes with the early detection, treatment and prevention of further escalations of recognised symptoms, disability and more elaborate complications. The Royal College of General Practitioners have produced a toolkit to facilitate diagnosis and management in primary care.

Relevant guidance and further information:

Royal College of General Practitioners Ehlers-Danlos Syndromes Toolkit:

<https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/ehlers-danlossyndromes-toolkit.aspx>

ACTIONS

1. Services must ensure access to multidisciplinary services as appropriate e.g. podiatry, dietetics, etc.
1. Health Boards must ensure that relevant NICE Guidance is being implemented and adhered to in relation to conditions of MSK pain.
1. Health Boards should ensure all people with conditions of MSK pain should be supported to develop their understanding of their own condition and treatment options.
1. Health Boards should provide access to evidence based interventions to overcome barriers to increasing activity levels and exercise.
1. Health boards should ensure that people can rapidly and directly access a wide multi professional team, including AHPs (physiotherapy, podiatry, occupational therapy, orthotics and dietetics) as needed.
1. Health Boards should ensure WG targets on waiting times are met in relation to service accessed by people with conditions of MSK pain, including pain management and orthopaedic services.

1. Health Boards must ensure mental health screening/services are available.

Part 6: Diagnosis, treatment and long-term management of osteoporosis and fracture risk in adults (aged 18 and over)

Osteoporosis in Wales

Osteoporosis is the most common long-term bone disease affecting women and men. It is characterised by low bone mass and deterioration of bone microarchitecture, which results in fragile bones and an increased risk of fracture[\[78\]](#).

Osteoporosis is common in people aged over 50. The Royal Osteoporosis Society estimates it that the condition affects more than 181,000 people in Wales who are older than 50. This group is estimate to have 27,170 new fragility fractures – fractures that happen after minimal trauma – each year. [\[79\]](#)⁹² While osteoporosis does not typically cause symptoms, it does raise the risk of fragility fractures, and one in two women and one in five men over the age of 50 are expected to break a bone during their lifetime[\[80\]](#).

Hip fracture represents the most serious and costly fragility fracture related to osteoporosis. Data published by the Royal College of Physicians 2018[\[81\]](#) within the National Hip Fracture database (NHFD) demonstrates that people who have had a hip fracture occupy 325 hospital beds in Wales at any one time. Additionally, 25% of this group will die within one year.

Every year hip fractures alone account for:

- nearly 4,000 unplanned hospital admissions in Wales
- over 133,380 bed days in Welsh hospitals
- approximately £60 million in costs to health and social services in Wales
- a total cost that equals approximately 1% of the whole NHS budget.

Fragility fractures impact people in many ways – they can lead to social isolation, loss of independence, disability, long-term pain and premature death. For these reasons, osteoporosis is a substantial burden on older people in Wales, on the health and social care systems and on the Welsh economy.

However, osteoporosis is manageable, and the risk of fragility fracture for people in Wales can be reduced. This can be achieved by supporting people to make lifestyle changes to improve their bone health and by taking a targeted approach to reducing fracture risk. This approach involves diagnosing and treating osteoporosis and helping people to remain strong and steady to minimise the chances of falling[\[82\]](#). There is a range of treatments available to reduce fracture risk, and these treatments can reduce the cost of care associated with fractures.

Additionally, up to 25% of fractures could be prevented if people with osteoporosis are identified in a consistent way[\[83\]](#). As high-risk groups are diverse and people are treated in a wide variety of healthcare settings, this chapter provides an explicit referral, diagnosis and treatment pathway to meet the needs of many different patients.

Improving bone health

Many factors impact the risk of developing osteoporosis and the risk of fragility fractures. While some are modifiable factors, others are not, so adults of all ages should be encouraged to lead a healthy lifestyle that encourages bone health.

Adults should eat a full and varied diet which includes at least 700mg of calcium and 10 µg (400 IU) of vitamin D per day. Vitamin D is also synthesised through safe exposure to sunlight so adults should consider how to improve their safe exposure.

Bone is a living tissue that reacts to increases in loads and forces by growing stronger. Any increase in loading above normal levels can increase bone strength, so weight-bearing exercise should be part of all adults' lives, and every adult should avoid a sedentary lifestyle. Progressive resistance exercises can also improve bone strength.

The UK's chief medical officers issued updated national guidance on physical activity in 2019, and this guidance includes a focus on muscle and bone health. The report emphasizes the fact that adults should minimise sedentary time and build up levels of aerobic activity. They should also do muscle-strengthening exercises twice a week – examples include lifting weights or using resistance bands – to help them stay active for longer. These updated guidelines will help people to improve their health and their

bone strength.[\[84\]](#) The Royal Osteoporosis Society has also issued a consensus statement on physical activity and exercise for osteoporosis.[\[85\]](#)

Maintaining a healthy weight is important for everyone. A healthy weight improves bone health and also reduces the risk of developing other conditions. Having a low body mass index is a particular risk factor for developing osteoporosis and fragility fractures.

Smoking is known to harm general health and to worsen many conditions. It has been shown to slow down the activity of bone-building cells (osteoblasts). Smoking may also cause earlier menopause (which raises the chance of osteoporosis) in women and can increase the risk of hip fracture later in life, while giving up smoking reduces the risk of osteoporosis and fragility fractures.

Excessive alcohol consumption is also a significant risk factor for osteoporosis and fragility fractures. All adults should aim to have an alcohol consumption of no more than 14 units per week.

A healthy lifestyle helps reduce the risk of osteoporosis and fragility fractures, but social deprivation can make it harder for adults to achieve a healthy lifestyle. Good evidence links deprivation with an increased risk of hip fractures, so measures to reduce inequality in Wales directly contribute to reducing the risk of osteoporosis and fragility fractures.

The policies of the Welsh Government encourage and help all adults to eat a healthy diet, maintain activity levels and a healthy weight, avoid smoking and limit alcohol consumption. All these policies contribute to improved bone health.

Who is affected by osteoporosis?

- Women are more susceptible to osteoporosis than men because bone loss becomes more rapid for several years after the menopause, when sex hormone levels decrease. The risk of developing osteoporosis may also be increased due to an early menopause.
- Men are also affected by osteoporosis. In fact, one in five men break a bone after the age of 50 years because of low bone strength.
- Risk factors for all adults include increasing age, smoking, alcohol use, parental history of hip fracture and body mass index of less than 18.5 kg/m² plus some medications (e.g. corticosteroid tablets, some breast

- and prostate cancer treatments) and medical conditions (such as rheumatoid arthritis and bowel diseases) that affect bone strength.
- Younger men and women (who have not yet experienced the menopause) can also, but more unusually, have osteoporosis and fragility fractures. Diagnosing and treating osteoporosis in younger people is complex and generally a referral to a hospital specialist is necessary.

High-risk groups in Wales who should be assessed for fragility fracture risk

The risk of having a fragility fracture depends on the person's bone strength, their risk of falls and other risk factors. Primary and secondary care services should assess high-risk groups according to the NICE Clinical Knowledge Summary 'Osteoporosis – prevention of fragility fractures' [\[86\]](#).

Managing those at the highest risk for fragility fracture in Wales

Having any fragility fracture approximately doubles the risk of another fracture [\[87\]](#). Therefore, people who have sustained a fragility fracture should be systematically and proactively identified and offered assessment to reduce the risk of further fractures.

Audits of preventive care for patients at risk for fragility fractures (including 'The All Wales Audit of Secondary Prevention of Osteoporotic Fractures 2015' [\[88\]](#) and the 'The Falls and Fragility Fracture Audit' programme run by UK Royal College of Physicians [\[89\]](#)) have shown that in the absence of a robust system, the majority of patients fail to receive osteoporosis assessment, treatment where appropriate or intervention to prevent falls.

However, two complementary service models have been demonstrated to reduce fracture risk in those who have already had a fracture:

Fracture Liaison Services

The Fracture Liaison Service (FLS) is among the most effective interventions in Wales to help people aged over 50 who have had fragility fractures and who may benefit from assessment and treatment to prevent future fractures. The service identifies, treats and refers people to appropriate services to prevent subsequent fractures. An FLS is led by a coordinator, usually a Nurse Specialist. The Fracture Liaison Service Database (FLS-DB), which

was established in 2015, provides a means for services to benchmark care against national guidance and standards of care[\[90\]](#).

As many fragility fractures happen as the result of a fall, a two-way referral pathway between FLS and Falls Prevention Services is an integral part of the pathway. 'The state of the Nation – Wales Report 2019'[\[91\]](#) highlighted the difference in care quality among different health boards, demonstrated by the Fracture Liaison Service Database, and showed that most patients who suffer a fracture do not receive appropriate assessment and treatment to reduce the risk of future fractures.

Vertebral fractures, the most common osteoporotic fractures, are also a powerful predictor of further fractures – over 55% of patients with hip fractures have evidence of a prior vertebral fracture. However, in 2018, up to 70% of osteoporotic vertebral fractures were undiagnosed, and future effective case-finding and management of these patients requires that diagnostic imaging departments develop robust links with FLS[\[92\]](#).

Orthogeriatric services

Hip fractures tend to affect people who are older and have frailty. Collaboration between geriatricians and orthopaedic surgeons is essential to deliver improved hip fracture care, including reducing the risk of a further fracture. Orthogeriatric services in Wales are well positioned to deliver secondary preventive care for hip fracture patients. The NHFD, which was established in 2007, provides a means for hospitals in England and Wales to benchmark care against NICE guidance106.

'The State of the Nation – Wales Report 2019' highlighted that NHFD key performance indicators in Welsh hospitals suggested poor provision of orthogeriatric assessments. The report makes it clear that health boards should ensure that all people receive multidisciplinary assessment, including AHPs and orthogeriatrician-led care.

How osteoporosis and fragility fractures are managed in Wales

This objective can be achieved by using 'The Pathway for the Diagnosis, Treatment and LongTerm Management of Osteoporosis (and Prevention of Fragility Fractures) in Wales'.

107 The Pathway for the Diagnosis, Treatment and Long-Term Management of Osteoporosis (and Prevention of Fragility Fractures) in Wales - the Royal Osteoporosis Society

This pathway is adapted from 'Quality Standards for Osteoporosis and Prevention of Fragility Fractures', developed by the National Osteoporosis Society¹⁰⁸. It is applicable to adults and explains good practice for Welsh health services in primary and secondary care for the diagnosis, treatment and long-term management of osteoporosis and the prevention of fragility fractures.

The pathway offers Wales the opportunity to reduce the number of fragility fractures and the cost to citizens in terms of pain, disability, loss of

independence and mortality. In parallel with the personal cost to everyone affected by a fragility fracture, fractures also result in high costs for health boards, social care providers and the Welsh Government.

Implementing this pathway across all health boards will reduce the number of fragility fractures and improve quality of life for people in Wales while also delivering cost savings. Implementation will need to include universal access to FLS and orthogeriatric services.

Help and support is available from the Royal Osteoporosis Society for Healthcare Professionals, patients and the public. Website:
www.theros.org.uk

Free osteoporosis helpline: 0808 800 0035

Part 7: Workforce Development and education

The aim of this framework is to ensure that people receive a speedy diagnosis and timely access to appropriate treatment, care and support to self-manage. The document will help to ensure that people with MSK conditions are treated as quickly and effectively as possible in order to prevent long-term problems. Ensuring a competent, skilled and continually developed workforce is critical to achieving this goal.

The ambition of 'A Healthier Wales' is for health and social care systems to work together to help people live well in their communities, meet their health and care needs effectively and provide more services closer to or at home, ensuring that people only need to use a hospital for treatment that cannot be provided safely anywhere else.

A fundamental part of this framework is one of the Quadruple Aims: to 'Enrich the wellbeing, capability and engagement of the health and social care workforce' so that staff well-being is paramount and is developed together with skills and competence.

Shifting health and care provision from secondary to primary and community settings presents a number of challenges for the workforce.

There are significant shortages in some professions, leading to use of high-cost agency workers, excessive workloads and long waiting times.

This framework gives Wales an opportunity to take an innovative approach to service delivery by creating new roles. This includes expansion and extension of advanced roles for a wider range of health and care professionals that enable prudent and effective use of the workforce.

The Welsh Government is promoting a multi-professional approach to managing arthritis and other MSK conditions. 'A Healthier Wales' notes that multi-professional teams are a characteristic of the best new workforce models being developed in Wales. The associated 'Workforce Strategy for Health and Social Care' also favours this seamless approach that puts the person at the centre of care and support.

By creating a stable workforce in which workers feel valued and have opportunities for development, Wales can establish the health and social care as the sector of choice for its future workforce.

People living with MSK conditions should receive care through an approach that includes a wide range of professionals as well as the ability to directly refer patients to appropriate specialties. The strategic programme for primary care promotes the development of primary care multiprofessional teams, and this development should take place alongside the development of inter-professional teams in secondary care. A seamless approach must embrace multi-professional and multi-agency work to deliver excellent services that support new person-centred models.

Wales aims to recruit and retain the best people to support and treat those living with MSK conditions. It also involves ensuring that multiprofessional teams have consistent and appropriate staff types, skill levels and numbers. To help retain the workforce, it is important to ensure that professionals are working to the top of their professional licence and that teams have visible and transformational leadership.

Healthcare professionals should be afforded time to do the work only they can do and provide the wider multiprofessional team the opportunity to obtain more experience. Key to this approach is leadership which is compassionate with a focus on quality improvement.

The Welsh Government commissioned Health Education and Improvement Wales (HEIW) and Social Care Wales (SCW) to develop a long-term

workforce strategy in partnership with NHS Wales and Local Government, the voluntary and independent sectors as well as regulators, professional bodies and education providers. The forthcoming Workforce Strategy for Health and Social Care from (HEIW) will provide advice and actions to help facilitate these goals.

The Welsh Government's national and international marketing campaign, Train Work Live, supports health boards, trusts and Health Education and Improvement Wales in their activities to attract high quality staff to work and train in Wales. The campaign, supported by a range of stakeholders, showcases the benefits of training, working and living in Wales.

In addition to recruiting staff, Wales must make effective use of the skills of each profession and should support staff to work as part of sustainable multi-professional teams. This includes ensuring development of a competent, capable and confident workforce that is supported to meet current and future service needs and to advance in their careers.

Health boards should provide working environments that enable workforce development. Health boards must reflect on their workforce to plan effectively. This reflection must include clarity of roles, seamless working, addressing gaps in skills and knowledge and assured access to digital resources. Inclusivity officers should review job descriptions to ensure appropriateness.

Health boards should continually measure the impacts of the changes they make. These impacts include those that affect the public, the workforce, recruitment, development and education. Boards should use the evidence they gather to ensure that they are making progress with retention.

Actions

1. Health boards should value and create a culture that supports staff development. This will help meet AHPs' needs for continued professional development and lifelong learning within modern career pathways.
1. Health boards should support healthcare professionals through continuing professional development and should ensure that education and information are available for staff.

1. Health boards must ensure that they have appropriate types, levels and numbers of staff within a multi-professional teams so that people with MSK conditions have access to the best treatment from the best people in the right place.
1. Health Boards should undertake capacity and demand analysis to understand the demand on Rheumatology services.

Part 8: Evidence-based care, research and innovation

Health and social care professionals need evidence of the highest quality and reliable guidance to develop shared decision making and give the best possible care to people with MSK conditions.

Healthcare professionals should understand individuals' health goals, work together with people with MSK conditions to agree on what they want to achieve and support them in meeting these goals. By taking this approach, healthcare professionals can reduce the inherent risk in taking action, reduce the chance of harm and improve outcomes while practising evidence-based medicine. This approach should take into account individual people's needs and wishes, along with the best available evidence, and should be achieved jointly.

The MSK-HQ is a validated patient report outcome measure (PROM) for clinical practice that can be used to evaluate the health status (and to monitor changes) of patients with a range of musculoskeletal (MSK) disorders. The tool is free to the NHS for healthcare professionals to utilise^[93] and should be used routinely.

Versus Arthritis has produced 22 indicators that are included in the 'MSK Recommended Indicator

Set for People with Arthritis'. These indicators focus on how to measure MSK system performance and can be found at the following link: <https://www.versusarthritis.org/policy/resources-for-policy-makers/for-healthcare->

[practitionersand-commissioners/msk-recommended-indicator-set/msk-recommended-indicator-set-forpeople-with-arthritis/](#)

Clinical audit

The findings and recommendations from national audit and outcome reviews are among the principal mechanisms for assessing the clinical quality and effectiveness of healthcare services provided by health boards and trusts in Wales.

Audit reports and comparisons among Wales and other UK, European and international healthcare systems year on year helps determine how compliant Wales is with best practice recommendations and measures achievement of healthcare outcomes relative to national and international benchmarks.

The relevant national clinical audits Wales participate in are as follows:

- the National Early Inflammatory Arthritis Audit (NEIAA)[[94](#)]
- the National Joint Registry[[95](#)]
- the Falls and Fragility Fractures Audit Programme[[96](#)], including the following:
 - Inpatient Falls
 - National Hip Fracture Database ◦ Fracture Liaison Service Database

The Welsh Government and the NHS consider audit results through a number of forums, including quality and delivery meetings with medical directors and chief executives. Health boards must utilise information and must act upon recommendations from clinical audits to their full extent

Patient-reported outcome and experience measures

It is vital to ask people what matters to them in order to understand their concerns, help them set realistic health goals and help them to meet those goals.

A national program collects patient-reported outcome and experience measures (PROMs and PREMs, respectively). Capturing this information is crucial to understanding the true value of a healthcare intervention from an individual's point of view, and introducing PROMs into orthopaedic care in

the Cardiff and Vale University Health Board has reduced the need for lowvalue follow-up appointments by as much as 70%. More work needs to be done to bring together these means of outcome data collection in a National Data Resource.

An urgent area of need is making services sustainable and improving the individual's experience. Clinicians and those whom they serve need tools to help them make wise choices together – rather than basing decisions on individual conditions – and to deliver improved healthcare to the population. Outcome measures provide key information in achieving this objective.

However, many outcomes measures do not capture true outcomes but rather capture indicators, proxies or process measures that are used as benchmarks of organisational performance. Measurement systems must mature so that we are assessing the success of our healthcare against outcomes that matter to patients.

Healthcare professionals must ask questions including 'What happened to other people who had this intervention?' A balance of evidence, research data and clinical judgment; aligned to the expertise of the patient and their wishes is essential to improve outcomes quality and safety; increase value and reduce unwarranted variation.

It is important to measure whether the individual's health goals are taking into account an individual situation and decide together how best to achieve what matters most to them. Building the capacity to measure and act on patient outcomes is a major undertaking which we are committed to doing at scale in Wales. Allied Health Professions' professional bodies, such as the Royal College of Occupational Therapists and regulators, such as the Health and Care Professions Council HCPC have requirements for practitioners to carry out audits and evaluations within their practice.

Research

In the NHS, over the last 70 years, research has provided techniques, medicines and treatments which are revolutionary. Through diligent testing there is solid evidence that they work. Health and social care research provides new knowledge that leads to changes in treatments, policies or care.

The Welsh Government recognises the critical role research has to play in discovering new treatments, preventing ill health and improving health services for patients and the public. Through Health and Care Research Wales, the Welsh Government funds an excellent and diverse research infrastructure, focussed on developing high quality research that positively impacts on the health, wellbeing and prosperity of people in Wales.

The infrastructure comprises 5 research centres, 3 research units, 3 clinical trials units, and 3 support groups. Health and Care Research Wales NHS R&D services are based at each NHS organisation in Wales, they build local capacity and capability to support high quality research to maximise impact. The Health and Care Research Wales Support and Delivery Centre is a Waleswide service, providing centralised support functions across Health and Care Research Wales and also on behalf of NHS Research & Development services. The Support and Delivery Centre provides the coordinated support for a suite of delivery programmes and projects.

The programme of research can be accessed here: <https://www.healthandcareresearch.gov.wales/funding/>

Part 9: Implementation plan

This guidance seeks to give health and social care professionals and commissioners useful, informative advice. This guidance and its actions have been provided to each health board in Wales.

Health boards should evaluate their services to ensure that they are fit for purpose, and Health Boards will be responsible for taking the actions described in this document. The Welsh Government will work with RPBs and NHS organisations in Wales to support implementation.

An implementation group will provide advice and guidance to the Welsh Government. This group will consider concerns and issues on a local and national basis, and it will ensure that improvements are being taken forward.

The Welsh Government will consider the data available to monitor and measure these conditions and review any audit programmes relating to the relevant conditions. The Welsh Government will also encourage health boards to include MSK conditions within their Integrated Medium Term Plans (IMTPs).

Appendix 1 - Evidence-based clinical pathways and guidelines.

Clinical guidelines are designed using the best available clinical evidence. A guideline aims to standardise treatment options and guide best practice amongst clinicians. Clinical pathways should be constructed to enable appropriate and prudent health care, by reducing unnecessary treatments and referrals, variations in management and allowing effective use of resources such as investigations.

Clinical pathways should have well-defined objectives, be patient centred and ensure that this is monitored and updated to reflect recent evidence and effectiveness. Compliance is essential amongst professions and requires a multidisciplinary approach for maximum benefit.

The National Institute for Health and Care Excellence (NICE) provide information on guidelines pathways Standard and indicators where there is variation of in care management.

There are a wide range of clinical guideline relevant to the framework for Arthritis and Long-term MSK conditions:

General: <https://pathways.nice.org.uk/pathways/musculoskeletal-conditions>

Back pain: <https://pathways.nice.org.uk/pathways/low-back-pain-and-sciatica> <https://pathways.nice.org.uk/pathways/spondyloarthritis>

Arthritis:

<https://pathways.nice.org.uk/pathways/rheumatoid-arthritis> <http://pathways.nice.org.uk/pathways/osteoarthritis> <https://cks.nice.org.uk/knee-pain-assessment>

Systemic Lupus Erythematosus

2017 NICE Accredited <https://academic.oup.com/rheumatology/article/57/1/14/4318864>

Systemic sclerosis.

1. NICE Accredited <https://academic.oup.com/rheumatology/article/55/10/1906/2196591>

Primary Sjögren's Syndrome.

1. NICE Accredited <https://academic.oup.com/rheumatology/article/56/10/1643/3895124>

Bone Health: <https://pathways.nice.org.uk/pathways/osteoporosis>

Whiplash: <https://cks.nice.org.uk/neck-pain-whiplash-injury>

Exercise and Lifestyle choices: <https://pathways.nice.org.uk/pathways/smoking> <https://pathways.nice.org.uk/pathways/walking-and-cycling>

<https://pathways.nice.org.uk/pathways/lifestyle-weight-management-services-for-overweight-or-obese-adults>

<https://pathways.nice.org.uk/pathways/diet> <https://strwebstgmedia.blob.core.windows.net/media/1hsfzfe3/consensus-statement-strong-steady-and-straight-web-march-2019.pdf>

Appendix 2 - Resources for people with MSK conditions Versus Arthritis: www.versusarthritis.org

The Pain Toolkit: <https://www.paintoolkit.org/>

NHS information on arthritis: www.nhs.uk/conditions/arthritis

NHS information on managing chronic pain: <https://www.nhs.uk/live-well/healthy-body/ways-to-manage-chronic-pain/>

NHS information on osteoporosis: www.nhs.uk/conditions/osteoporosis

Age UK information on osteoporosis: <https://www.ageuk.org.uk/information-advice/healthwellbeing/conditions-illnesses/osteoporosis/>

The Royal Osteoporosis Society: www.theros.org.uk

The British Association of Spine Surgeons: www.spinesurgeons.ac.uk

The National Exercise Referral Scheme (NERS): www.wlga.gov.uk/national-exercise-referralscheme-ners

www.selfmanagementuk.org

Education Programme for Patients (EPP Cymru):
<https://www.wales.nhs.uk/sites3/home.cfm?orgid=537> -

National Axial Spondyloarthritis Society (NASS) – www.nass.co.uk

National Rheumatoid Arthritis Society (NRAS) – www.nras.org.uk

Lupus UK – www.lupusuk.org.uk

Professional body information for people with MSK conditions

Chartered Society of Physiotherapy information on back pain:

<https://www.csp.org.uk/publications/10-things-you-need-know-about-your-back>

<https://www.csp.org.uk/public-patient/back-pain-myth-busters>

Chartered Society of Physiotherapy information on arthritis: <https://www.csp.org.uk/publicpatient/common-conditions/arthritis>

Chartered Society of Physiotherapy information on chronic pain: <https://www.csp.org.uk/publicpatient/common-conditions/chronic-pain>

Chartered Society of Physiotherapy information on osteoporosis: <https://www.csp.org.uk/publicpatient/common-conditions/osteoporosis>

British Association of Spine Surgeons: www.spinesurgeons.ac.uk

Appendix 3

Glossary

ESCAPE pain

Rehabilitation programme for people with chronic joint pain that integrates educational selfmanagement and coping strategies with an exercise regimen individualised for each participant.

Educating Patients Programme (EPP) Cymru

EPP Cymru is a programme providing a range of self-management health and well-being courses and workshops for people living with a health conditions or for those who care for someone with a health condition.

Get Active for Arthritis

Get Active for Arthritis is a physical activity project built around a six-week self-management course for people living with arthritis and musculoskeletal (MSK) conditions Integrated Medium Term Plans (IMTPs)

Making Every Contact Count (MECC)

An approach to behaviour change that uses the day-to-day interactions that organisations and people have with other people to support them in making positive changes to their physical and mental health and wellbeing.

Multi-morbidity

A person living with 2 or more long-term conditions.

Musculoskeletal (MSK) conditions

A broad range of health conditions affecting bones, joints and muscles, pain syndromes and rarer conditions of the immune system.

OAK Knee

Sessions run with the person at the centre, sharing information and experiences that will help make those decisions.

Prudent health care

a strategy adopted by the Welsh Government in response to the challenge of improving health care during times of austerity and when needs and demand are rising. Four principles underlie Prudent Healthcare: to achieve health and wellbeing through co production; care for those with the greatest health needs first; do only what is needed; and reduce inappropriate variation. For Prudent Healthcare to be implemented in Wales, it is necessary for health professionals to adopt these principles in practice.

Value based healthcare

The purpose of the VBHC programme is to improve the health outcomes of the people in Wales, in both a financially sustainable and patient value centred way. This can be achieved through the creation of a data-driven system, including patient reported outcome measures, providing timely information to citizens, clinical teams and decision-making organisations alike. This will help identify treatments that are of maximum patient value.

[1] <http://gov.wales/about/programme-for-government/?lang=en>

[2] <http://gov.wales/topics/people-and-communities/people/future-generations-act/?lang=en>

[3] <https://gov.wales/prosperity-all-national-strategy-well-being-statement-2017>

[4] <https://gov.wales/people-experiencing-persistent-pain-guidance> - Living with Persistent Pain in Wales

[5] <https://gov.wales/sites/default/files/publications/2019-07/establishment-of-a-clinical-musculoskeletal-assessment-treatment-service.pdf>

[6] <https://gov.wales/sites/default/files/publications/2019-11/allied-health-professions-framework-for-wales-looking-forward-together.pdf>

[7] The state of MSK Health 2019. Versus Arthritis. <https://www.versusarthritis.org/media/14594/state-of-musculoskeletal-health-2019.pdf>

[8] Versus Arthritis MSK Calculator <https://www.versusarthritis.org/policy/resources-for-policy-makers/musculoskeletal-calculator/>

[9] The State of Musculoskeletal Health, 2019 Versus Arthritis Page 8

[10] NHS Digital. Health Survey for England 2017. Adult Health. Health and Social Care Information Centre, 2018.

[11] Welsh Government. 2017. National Survey for Wales 2018-19: <https://gov.wales/national-survey-wales-results-viewer>

[12] <https://statswales.gov.wales/Catalogue/Health-and-Social-Care/NHS-Hospital-Waiting-Times/Referral-to->

[Treatment/patientpathwayswaitingtostarttreatment-by-month-groupedweeks-treatmentfunction](#)

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