

Evidence Brief: Musculoskeletal (MSK)

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Produced by the Knowledge Management team Evidence Briefs offer an overview of the published reports, research, and evidence on a workforce-related topic.

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Key publications – the big picture

How ICSs are supporting the wider economy - four case studies

NHS Confederation, 8 September 2025

Stories from four systems on their impact on the wider economy

10 Year Health Plan for England: fit for the future

Department of Health and Social Care, July 2025

See p. 114 Robotics to support precision

What works: Health and care interventions to support people from disadvantaged backgrounds with musculoskeletal conditions

Health Equity Evidence Centre, March 2025

17.1 million people in England are estimated to be living with a musculoskeletal (MSK) condition. This evidence brief explores what health and care interventions work to improve outcomes for people from disadvantaged backgrounds, and what approaches are most effective in addressing the inequalities they face.

Major conditions strategy: case for change and our strategic framework

Department of Health & Social Care, Updated 21st August 2023

The model of care which sustained us for the past 75 years must evolve considerably to meet the needs of the public in 75 years' time. We are living longer, but for too many people that life is experienced with many years in poor health. This major conditions strategy begins with one question: how should our approach to health and care delivery evolve to improve outcomes and better meet the needs of our population, which is becoming older and living with multimorbidity?

Guide to adopting remote consultations in adult musculoskeletal physiotherapy services

NHS England, February 2023

This guide supports adult MSK physiotherapy services – delivered by providers across primary community and/or secondary care – to implement evidence informed remote consultations.

An improvement framework to reduce community musculoskeletal waits while delivering best outcomes and experiences

NHS England, January 2023

Integrated high quality community musculoskeletal (MSK) services are integral to a productive high-performing healthcare system supporting the management of MSK conditions. Most people with MSK conditions can be diagnosed and well managed in the community. A smaller number require timely referral to secondary care orthopaedic, rheumatology, spinal or pain management services to enable best outcomes.

Understanding the provision of occupational health and work-related musculoskeletal services

Department for Work and Pensions and Department of Health and Social Care, May 2020

This research maps the existing provision of occupational health across the UK and NHS musculoskeletal services available across England.

Case Studies

Improving staff experience sin the NHS: Buckinghamshire Healthcare NHS Trust

10 Year Health Plan, July 2025

See p. 105 "Designed new health and wellbeing initiatives – including a centralised reasonable adjustment process; a new occupational health and wellbeing hub providing specialist musculoskeletal and mental health support, alongside occupational health clinics; and a dedicated programme to reduce workplace bullying, harassment, and discrimination."

Occupational Health Musculoskeletal Physiotherapy Service

Future NHS log in required

Mid Cheshire Hospitals NHS Foundation Trust, February 2025

Carried out an evidence review on musculoskeletal problems and sickness absence to assist in completing a quality improvement project around staff sickness absence due to musculoskeletal conditions.

Manual Handling Training for Midwives – improvement with evidence

Future NHS log in required

Gloucestershire Hospitals NHS Foundation Trust, January 2025

A literature search was conducted to identify the prevalence of Musculoskeletal (MSK) injuries in midwives to ensure manual handling training was relevant and tailored to their needs.

Rethinking waiting lists: insights from Community Appointment Day

Q Community, July 2024

Q member and physiotherapist Jo Kitchen reflects on a Q lunch and learn event on Community Appointment Days.

A community-centred approach to musculoskeletal care

Safwan Chowdhury, NHS Confederation, September 2023

Sussex MSK Partnership developed a community approach that delivered personalised care, increased access for service users, and boosted staff morale.

Transforming Bedfordshire's podiatry workforce

NHS Employers, May 2023

Bedfordshire have transformed their podiatry services to increase the pipeline into the workforce, develop staff and embed a new leadership approach.

Redesigning orthopaedic outpatient assessments

NHS Confederation, February 2022

New staff-designed assessment clinic has shortened waiting times for orthopaedic patients, increased capacity and improved patient experience.

Restoring elective work and looking to the future at East Sussex NHS Healthcare Trust

NHS Confederation, October 2021

How East Sussex has managed its case mix and increased day-case procedures to manage the backlog.

eLearning

Musculoskeletal Primary Care

NHS England eLearning for Healthcare

The Musculoskeletal (MSK) primary care elearning programme has been developed to support clinicians working in primary care as first contact practitioners (FCP) in a primary care environment. In a primary care setting it has been reported that a GP will see 25% of their case load as MSK in origin and it has also been highlighted that using the wider workforce, such as physiotherapists, can improve outcomes, give high patient satisfaction, save time and ultimately costs. To support these new models of care organisations have been aligned, through community services, with primary care to develop new pathways of patient management. In doing so there is a need for appropriate training and governance to support staff moving into these new forms of practice.

The Star for workforce redesign

More resources and tools are available by searching for **Musculoskeletal** in [the Star](#)

Statistics

You can find relevant statistics on the [Health and Care Statistics Landscape](#) under “**Health and Care**”

National Data Programme

Workforce, Training and Education staff can look at the [National Data Warehouse \(NDL\)](#) SharePoint site to find out more about datasets and Tableau products.

Published Peer Reviewed Research

Advanced Practice

GPs' experience of embedded Musculoskeletal Advanced Practice Physiotherapists in Primary Care: A cross-sectional survey with content analysis Abstract only*

Musculoskeletal Science & Practice 76, 2025

Abstract: BACKGROUND: General Practices across Scotland have expanded their multi-disciplinary teams (MDTs) to include non-medical allied health professionals (NMAHPs) as part of the 2018 General Medical Services Contract (GMS), including musculoskeletal (MSK) Advanced Practice Physiotherapists (APPs). MDT expansion was hoped to reduce General Practitioner (GP) workloads and release their time to care for patients with complex needs. Published research concerning GPs' experiences of these roles is conflicting on whether they perceive this to be the case.

Developing and embedding an advanced practice musculoskeletal physiotherapy service in public specialist outpatient services in Queensland: A health service masterclass

Musculoskeletal Science & Practice 70, 2024

INTRODUCTION: The Musculoskeletal Physiotherapy Screening Clinic and Multi-disciplinary Service (MPSC&MDS) is an advanced practice physiotherapist-led model of care developed

initially to address overburdened specialist orthopaedic outpatient public hospital services across Queensland, Australia.

Advanced practice physiotherapists in Scottish primary care: Axial Spondyloarthritis epidemiology, time to diagnosis, and referrals to rheumatology Abstract only*

Musculoskeletal Care 21(3), 2023

Abstract: Objectives: (1) Generate empirical knowledge of a Musculoskeletal (MSK) Advanced Practice Physiotherapist (APP) Service in Scottish Primary Care; (2) Identify the incidence and baseline time to diagnosis of Axial Spondyloarthritis (AxSpA); (3) Identify APP Rheumatology referral fulfilment of the NICE 2017 Guidelines and Spondylarthritis Diagnosis Evaluation (SPADE) Tool; (4) Calculate APP Rheumatology referral conversion rates for AxSpA diagnosis and further investigation; (5) Contribute towards the current body of literature for informing analysis of MSK APP services within Scottish Primary Care.

Portfolios in practice: Developing advancing practice within a musculoskeletal competency-based model Abstract only*

Musculoskeletal Science & Practice 63, 2023

Abstract: INTRODUCTION: The development of professional portfolios and the relevance of this within professional practice, competency and capability is gaining significant credibility in line with professional requirements. Nursing and medicine in terms of historical perspectives have long held the need for clinicians to maintain a portfolio for professional validation, whilst in other professional groups it is a requirement of registration. The allied health professionals, physiotherapy and ultimately musculoskeletal practice within this context are rapidly developing advancing and consultant practice. This professional development further requires appropriate verification and validation of practice, and achieving this can be through formal and non-formal routes.

The introduction of advanced practice physiotherapy within Dutch primary care is a quest for possibilities, added value, and mutual trust: a qualitative study amongst advanced practice physiotherapists and general practitioners

BMC Health Services Research 22(1), 2022

Abstract: BACKGROUND: Despite the increased deployment and added value of Advanced Practitioner Physiotherapy (APP) in musculoskeletal care internationally, APP is not yet widely accepted within Dutch primary care. This may be due to specific constraints in the implementation of APP within the Dutch healthcare system. This study aimed to explore the experiences and perceptions of Advanced Practitioner Physiotherapists (APPs) and General Practitioners (GPs) with respect to implementing APP within Dutch primary care.

The advanced practitioners' perspective. Exploring the decision-making process between musculoskeletal advanced practitioners and their patients: An interpretive phenomenological study

Musculoskeletal Care 20(1), 2022

Abstract: INTRODUCTION: Advanced practice roles for allied health professionals continue to expand and provide key services within pathways of care for patients with musculoskeletal conditions. Despite the extensive utilisation of these roles and previously reported high patient satisfaction, little is understood about how these practitioners interact with their patients and the factors that influence decision-making conversations.,

Allied Health Professionals

Emergency physicians' perspectives on integrating physiotherapists into emergency departments: a national survey from France Abstract only*

Emergency Medicine Journal: EMJ, 2025

BACKGROUND: Emergency departments (EDs) worldwide are

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facing increasing patient volumes and thus crowding, prolonged waiting times and rising healthcare costs. In France, ED visits rose from 8.5 to 16 million between 2014 and 2024. To address these challenges, several countries (including Australia, the UK and Canada) have integrated physiotherapists into EDs in advanced practice roles-primarily for musculoskeletal (MSK) conditions.

Patients and hospital staff perceive diverting patients from the emergency department to physiotherapy outpatients as safe and effective: a qualitative descriptive study Full text available with NHS OpenAthens account*

Physiotherapy Theory and Practice, 2025

BACKGROUND: It is estimated that 6% to 12% of Australian emergency department (ED) presentations are due to musculoskeletal (MSK) conditions. In response, primary contact physiotherapy roles have developed in many Australian EDs. A further innovation is a diversion pathway for people with MSK conditions to move from the ED to a primary contact physiotherapy outpatient clinic., OBJECTIVE: To explore the perceptions of people with MSK conditions and hospital staff on diverting patients from the emergency department (ED) to receive care from primary contact physiotherapists in the outpatient setting.

Clinicians' perspectives on remote patient management: A qualitative exploration of physiotherapists using the DiAL (Direct Access Line) programme Abstract only*

Musculoskeletal Science & Practice 73, 2024

BACKGROUND: In response to the COVID-19 pandemic, face-to-face consultations within healthcare settings were suspended. Remote consultations became crucial for managing musculoskeletal conditions alongside Patient Initiated Follow-ups, leading to the development of the DiAL programme at a large National Health Service Community Trust. Previous

research has focused on quantitative data, little is known about staff experiences with this programme.

Assessing the barriers and enablers to the implementation of the diagnostic radiographer musculoskeletal X-ray reporting service within the NHS in England: a systematic literature review

BMC Health Services Research 23(1270), 2023

INTRODUCTION: The United Kingdom (UK) government's healthcare policy in the early 1990s paved the way adoption of the skills mix development and implementation of diagnostic radiographers' X-ray reporting service. Current clinical practice within the public UK healthcare system reflects the same pressures of increased demand in patient imaging and limited capacity of the reporting workforce (radiographers and radiologists) as in the 1990s. This study aimed to identify, define and assess the longitudinal macro, meso, and micro barriers and enablers to the implementation of the diagnostic radiographer musculoskeletal X-ray reporting service in the National Healthcare System (NHS) in England.

Education and Training

Musculoskeletal Learning and Knowledge Retention Among Postgraduate Physicians: Evaluating the Long-Term Impact of a New Preclerkship Curriculum at a Nationally Accredited Medical Program Full text available with NHS OpenAthens account*

JB & JS Open Access 9(4), 2024

Introduction: Musculoskeletal (MSK) injuries and disorders are exceptionally prevalent in the clinical setting. Despite this, physician training in MSK medicine has been historically inadequate contributing to a lack of MSK knowledge, confidence, and clinical skills among postgraduate physicians. The goal of this investigation was to examine the long-term impact of a new preclerkship MSK curriculum implemented by a nationally

accredited medical program on postgraduate physician's learning and knowledge retention in the area of MSK medicine.

Digital human ergonomics training for remote office workers: Comparing a novel method to a traditional online format Abstract only*

Applied Ergonomics 117, 2024

Abstract: OBJECTIVE: This randomized controlled trial investigated the effectiveness of an online ergonomics training program with a digital human compared to an online ergonomics training program without a digital human., METHOD: Remote office workers (n = 138) were randomly assigned to either a digital human training, a traditional webpage training without a digital human, or a control group. Musculoskeletal discomfort, knowledge retention, and behavior change were measured., RESULTS: The overall group differences for increased behavior change and knowledge retention were statistically significant (p 0.05)., CONCLUSION: Digital humans have the potential to meet large-scale remote worker training needs. Copyright © 2024 Elsevier Ltd. All rights reserved.

Development of a structured musculoskeletal and rheumatic disease continuing education program for nurse practitioners

Abstract only*

Journal of the American Association of Nurse Practitioners 35(9), 2023

Abstract: The workforce shortage of musculoskeletal and rheumatic disease (MSK-RMD) trained providers has led to the need for additional education for nurse practitioners (NPs) in MSK-RMD. An educational certificate was developed and implemented collaboratively between an academic medical center and a college of nursing. The NP-focused MSK-RMD education program enhanced the assessment and treatment of a variety of common RSK-RMD conditions.

Many physiotherapists lack preparedness to prescribe physical activity and exercise to people with musculoskeletal pain: A multi-national survey

Physical Therapy in Sport 49, 2021

Abstract: Objectives: Determine physiotherapists' (i) awareness of physical activity, and exercise prescription guidelines; (ii) perceived role, knowledge, confidence, skills and training in prescribing and progressing aerobic exercise and resistance training to people with musculoskeletal pain; (iii) professional development preferences; and (iv) perceived influences of external factors on exercise prescription for people with musculoskeletal pain.

The professional development and career journey into musculoskeletal first contact physiotherapy: a telephone interview study

Physiotherapy Theory and Practice, 2021

Abstract: (a)Background: Musculoskeletal (MSK) first contact physiotherapy (FCP) is being rolled out in the National Health Service, but limited research exists on career pathways into MSK FCP, or on pre-and-post-registration educational preparation for the knowledge and skills that are required for musculoskeletal first contact physiotherapy.

Advanced musculoskeletal physiotherapy practice: Informing education curricula Full text available with NHS OpenAthens account*

Musculoskeletal Science and Practice 48, 2020

This study identifies the common themes relating to professional and clinical capabilities expected of MSK APPs internationally. Findings indicate that it would be feasible to adopt standardised MSK APP competencies and education standards using these common themes as a foundation. This would likely enhance workforce mobility, role legitimacy and service quality, and facilitate lobbying for recognition and remuneration.

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Musculoskeletal radiology training in the UK: a national survey by the British Society of Skeletal Radiologists Abstract only*

Source: Clinical Radiology 76(9), May 2021

Core MSK radiology training remains widely variable across the UK. 50% of core and 86% subspecialty trainees are satisfied with current exposure. 95.5% core and all subspecialist trainees believe MSK training could be improved.

Interprofessional Musculoskeletal Education: A Review of National Initiatives from the Department of Veterans Affairs

Abstract only*

Rheumatic Disease Clinics 46(1), February 2020

This article reviews several national programs in musculoskeletal education initiated by the Department of Veterans Affairs over the past decade. These programs have become sustained interprofessional opportunities for learners across disciplines and along the continuum of health professions education (HPE) and training pathways.

Developing clinical expertise in musculoskeletal physiotherapy: Using observed practice to create a valued practice-based collaborative learning cycle Abstract only*

Musculoskeletal Science and Practice 50, 2020

Regular observed clinical practice was found to facilitate the development of clinical expertise by enabling a valued practice-based collaborative learning cycle.

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Musculoskeletal Science and Practice 50, December 2020

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Preparing pre-qualifying students for work and wellbeing competencies in the context of newly emerging physiotherapy roles: a national qualitative study Abstract only*

Physiotherapy 107(1), May 2020

Pre-qualifying education provides the foundations for physiotherapists having the necessary competencies to manage and assess the impact of acute and long-term conditions for patients' participation in, or return to work. Findings from the DA and focus groups could be examined further in greater depth in qualitative interviews with final year pre-registration physiotherapy students and university physiotherapy programme educators.

Equality, Diversity and Inclusion

Women in Orthopaedics: How Understanding Implicit Bias Can Help Your Practice Abstract only*

The purpose of this chapter is to provide an overview of the current status of women in orthopaedics, describe ways to improve diversity in the field, and make surgeons aware of how implicit bias can contribute to discrepancies seen in orthopaedic surgery, including pay scale inequities and women in leadership positions.

Academic musculoskeletal radiology: influences for gender disparity

Full text available with NHS OpenAthens account*

Skeletal Radiology 47 pp. 381-387, 2018

The gender gap seen in the discipline of diagnostic radiology in general and MSK radiology in particular might be addressed with the following suggestions:

1. Expose medical students to radiology at earlier stages of their training.
2. Develop a structured mentoring process for all radiology residents, including women musculoskeletal radiologists.
3. Women radiology mentors might choose to provide personal insight and encouragement to women trainees.
4. All MSK radiologists with interests in achieving leadership positions should examine their strengths and weaknesses, and work towards their goals.

Where Are the Women in Orthopaedic Surgery?

Clinical Orthopaedics and Related Research 474(9), September 2016

Data suggest that the relatively few women currently practicing orthopaedics were attracted to the field because of their individual personal affinity for its nature despite the lack of role models and exposure. The latter factors may impact the continued paucity of women pursuing this field. Programs designed to improve mentorship and increase early exposure to orthopaedics and orthopaedic surgeons may increase personal interest in the field and will be important to attract a diverse group of trainees to our specialty in the future.

Interprofessional Collaboration

Improving musculoskeletal health for children and young people - A 'call to action'

Best Practice and Research: Clinical Rheumatology 34(5), October 2020

Inter-disciplinary and cross-sectional collaborative efforts, extending beyond the remit of individual healthcare providers and countries, is crucial. Using the tools and opportunities offered by the 'fourth industrial revolution', the effort to 'improve MSK health for all' can be energised through sharing of novel ideas and 'working better together'. By breaking out of silos, we can transfer skills, knowledge, models of care and education to engineer change in society and to optimise impact on a wider scale – 'stay local, think global'.

Conference abstract: Medical students' attitudes to non-medical clinical supervision in an interprofessional orthopaedic community of practice model

Abstract only*

Physiotherapy 105(1), January 2019

At the University of Liverpool, a medical undergraduate practice placement is situated within an authentic interprofessional orthopaedic Community of Practice in the Royal Liverpool Hospital, where Extended Scope Physiotherapists (ESPs) deliver and lead the organisation of clinical supervision alongside a named orthopaedic consultant. Formal placement evaluation and anecdotal evidence indicate that students significantly value this experience but a more detailed exploration is important to generate an understanding of the real impact of non-medical supervision within the context of an ICP model and add to the clinical education evidence base.

Conference Abstract: Leader's behaviors for promoting innovation in a multidisciplinary musculoskeletal service

Abstract only*

Physiotherapy 105(1), January 2019

Knowledge gained through Informal interaction, respectfulness, understanding each other professional strengths and weaknesses are implicit strengths of an MDT. When an MDT member perceived their skills as less valuable compared to a senior clinician or a medical consultant, they hold less power and

influence, and this provides an obstacle for knowledge creation and translation. Therefore, a flat hierarchy provides a more effective structure for maximising the MDT productivity.

[Acceptance of primary practitioner physiotherapists in an emergency department: A qualitative study of interprofessional collaboration within workforce reform](#) Full text available with NHS OpenAthens account*

Journal of Interprofessional Care 31(2), 2017

Acceptance of the PP service by ED staff was not automatic, unconditional, or implied and represented a continuum from PPs being tolerated as transient visitors to being subsumed as integrated members of the ED team. Acceptance of the service and its members was contingent upon the PPs demonstrating three interdependent qualities: being trustworthy, valuing learning, and complementing (not competing with) ED practices to achieve ED goals.

Learning from Covid-19

[Working through the COVID-19 outbreak: Rapid review and recommendations for MSK and allied health personnel](#)

Journal of Clinical Orthopaedics and Trauma 11(3), 2020

Abstract: The coronavirus (COVID-19) pandemic has caused the world to undergo unprecedented change in a short space of time. This disease has devastated the economy, infringed personal freedom, and has taken a toll on healthcare systems worldwide. This review aims to highlight aspects of this pandemic with a specific emphasis on musculoskeletal work within the secondary care setting. Copyright © 2020 Delhi Orthopedic Association

[Conference Abstract: COVID-19: Perspectives of musculoskeletal rehabilitation at low resource setting](#) See p. 215
Source: International Journal of Rheumatic Diseases, October 2020

[p. 215] COVID-19 impacted the overall schedule of rehabilitation services including rheumatological rehabilitation clinics. Low resource settings have multiple challenges to accommodate and adjust rehabilitation team works for patients with MSK problems. Recruiting more manpower, expansion of spacious services and a planned accommodative working environment in the altered situation is warranted.

New ways of working

[347 - Increased clinical capacity within an NHS Musculoskeletal service following implementation of 'Getting it Right: Addressing Shoulder Pain'. a service evaluation](#) Conference abstract – abstract all available

Physiotherapy 126, 2025

To determine the impact on clinical capacity resulting from the implementation of the GRASP (Getting it Right: Addressing Shoulder Pain) trial methodology for managing shoulder rotator cuff disorders (RCDs) within a Community Musculoskeletal (MSK) Service. This entailed utilising a single, one hour appointment for the assessment and management of patients with RCDs (GRASP Pathway). The GRASP trial investigated progressive exercise compared with best practice advice, with or without corticosteroid injection, for the treatment of patients with rotator cuff disorders (GRASP): a multicentre, pragmatic, 2×2 factorial, randomised controlled trial.

[Impact of single multidisciplinary triage system and straight to test process evaluation at surrey integrated musculoskeletal services](#) Abstract only*

Journal of Integrated Care 31(2), April 2023

Purpose: Orthopaedics, rheumatology, pain management, specialist radiology and therapy services were brought under one umbrella to form Northwest Surrey integrated musculoskeletal (IMSK) services and introduced advance clinical practice, a multi-disciplinary team triage with a formalised straight to test (STT) process defined in 2018. Historically, prior to these services' integration, there were a primary and second care triage systems within individual specialities. The aim of this service evaluation is to assess the impact of a single IMSK multidisciplinary triage (MDT) system and the efficacy of STT from triage, which allows patients to be sent for diagnostics based on the cluster of symptoms and past medical history in order to achieve early identification of serious pathologies.

Pelvic and acetabular fracture care in England: current workload and future directions

Annals of the Royal College of Surgeons 103(6), 2021

Introduction: Fractures of the pelvis and acetabulum (PAFs) are challenging injuries, requiring specialist surgical input. Since implementation of the major trauma network in England in 2012, little has been published regarding the available services, workforce organisation and burden of PAF workload. The aim of this study was to assess the recent trends in volume of PAF workload, evaluate the provision of specialist care, and identify variation in available resources, staffing and training opportunity. Methods: Data on PAF volume, operative caseload, route of admission and time to surgery were requested from the Trauma Audit and Research Network. In order to evaluate current workforce provision and services, an online survey was distributed to individuals known to provide PAF care at each of the 22 major trauma centres (MTCs).

Innovations to improve access to musculoskeletal care

Best Practice & Research Clinical Rheumatology 34(5), October 2020

Includes real-world examples of innovative practices including capacity building in consumer and interprofessional musculoskeletal education and practice; recommendations to transform the access and delivery of integrated, person-centred care; and initiatives in musculoskeletal care and implementation of models of care, enabled by digital health solutions including telehealth, remote monitoring, artificial intelligence, blockchain technology and big data. Provides emerging evidence for how innovation can support systems' strengthening and build capacity to support improved access to 'right' musculoskeletal care, and explores some of the ways to best manage innovations.

Measuring Advanced/Extended Practice Roles in Arthritis and Musculoskeletal Care in Canada

ACR Open Rheumatology 2(4), April 2020

Of 141 respondents, 91 identified as practicing in extended role capacities. The mean age of ERP respondents was 48.7; 87% were female, and 41% of ERPs planned to retire within 5 to 10 years. Respondents were largely physical or occupational therapists by profession and practiced in urban/academic (46%), community (39%), and rural settings (13%). Differences in practice patterns were noted between ERPs (64.5%) and non-ERPs (34.5%), with more ERPs working in extended role capacities while retaining activities reflective of their professional backgrounds. Most respondents (95%) agreed that formal training is necessary to work as an ERP, but only half perceived they had sufficient training opportunities. Barriers to pursuing training were varied, including personal barriers, geographic barriers, patient-care needs, and financial/remuneration concerns.

A qualitative study to explore the experiences of first contact physiotherapy practitioners in the NHS and their experiences of their first contact role

Musculoskeletal Science and Practice 50, December 2020

Purpose: First Contact Practitioner (FCP) roles have been developed for health professionals with advanced practice skills to take on many of the musculoskeletal responsibilities currently carried out by general practitioners. FCP roles are new and still developing. Currently there is little research that has investigated the experiences of FCPs. This knowledge could help stakeholders and other clinicians gain an understanding into what makes a successful FCP role. The aim of this research was to explore the experiences of FCP working in North West England to gain insight into the first point of contact service, and their experiences of this developing full time FCP role.

Challenges and Learning Opportunities of Pre-Registration Physiotherapy Placements in First Contact Settings: The Perspectives of Musculoskeletal First Contact Physiotherapists

Musculoskeletal Care 18(2), June 2020

Objectives: As musculoskeletal first contact physiotherapy is rolled out into primary healthcare in Britain, this could offer up new practice-based educational opportunities for pre-registration physiotherapy students. Thus, the present study sought to explore the perceived challenges and learning opportunities of pre-registration physiotherapy placements in musculoskeletal first contact physiotherapy settings from first contact physiotherapists' perspectives.

Development, spread and impact of primary care and musculoskeletal communities of practice to assist rapid translation of evidence into practice Abstract only*

Musculoskeletal Care 19(4), March 2021

Background: Embedding research into practice is challenging. **Barriers include:** a shortage of time, lack of understanding of the evidence and a poor support in the clinical setting. A community of practice (CoP) model has been used to address these issues. Three 'Evidence into Practice' groups use a CoP model to assist the rapid translation of evidence into practice in primary and

secondary care settings. We describe how a CoP model supports the functions, operations and outputs of three 'Evidence into Practice Groups'.

New Models for the Delivery of Musculoskeletal Care in Rural Communities Full text available with NHS OpenAthens account*

The Journal for Nurse Practitioners 16, January 2020

Rural communities have greater health comorbidities, poorer health outcomes, and difficulty recruiting and retaining physicians than their urban counterparts. Strengthening the health care workforce through postgraduate APP education can help provide highly trained clinicians as continuity providers in rural communities. Formal postgraduate education can strengthen relationships between urban and rural centers and improve care for underserved populations across multiple primary care and specialty services. Further evidence is needed to demonstrate how innovative programs enhance patient and provider satisfaction while reducing cost and improving patient outcomes.

Current applications and future directions of deep learning in musculoskeletal radiology Full text available with NHS

OpenAthens account*

Skeletal Radiology 49(2), February 2020

Deep learning advancements in musculoskeletal radiology can be conceptually divided into the categories of lesion detection, classification, segmentation, and non-interpretive tasks. Numerous examples of deep learning achieving expert-level performance in specific tasks in all four categories have been demonstrated in the past few years, although comprehensive interpretation of imaging examinations has not yet been achieved. Interest in deep learning from researchers, radiology leadership, and industry continues to increase, and it is likely that these developments will impact the daily practice of musculoskeletal radiology in the near future.

Advanced musculoskeletal physiotherapy: Barriers and enablers to multi-site implementation Abstract only*

Musculoskeletal Care 16(4), August 2018

Objectives: Advanced musculoskeletal physiotherapy (AMP) services are a safe, effective model of care, but without broad-scale healthcare implementation to date. The aim of the present study was to identify the barriers and enablers to implementation of 12 AMP services from the perspective of clinical staff.

Advanced musculoskeletal physiotherapists in post arthroplasty review clinics: a state wide implementation program evaluation

Physiotherapy 104, March 2018

Objective: To evaluate outcomes following a state-wide implementation of post arthroplasty review (PAR) clinics for patients following total hip and knee arthroplasty, led by advanced musculoskeletal physiotherapists in collaboration with orthopaedic specialists. Design and setting: A prospective observational study analysed data collected by 10 implementation sites (five metropolitan and five regional/rural centres) between September 2014 and June 2015. Main outcome measures The Victorian Innovation and Reform Impact Assessment Framework was used to assess efficiency, effectiveness (access to care, safety and quality, workforce capacity, utilisation of skillsets, patient and workforce satisfaction) and sustainability (stakeholder engagement, succession planning and availability of ongoing funding).

Primary care

Associations between lean maturity in primary care and musculoskeletal complaints among staff: a longitudinal study

BMJ Open 13(2), 2023

Abstract: OBJECTIVE: This study had two aims: (1) to determine the prevalence of musculoskeletal complaints among staff in primary care and (2) to determine to what extent lean maturity of

the primary care unit can predict musculoskeletal complaints 1 year later., DESIGN: Descriptive, correlational and longitudinal design., SETTING: Primary care units in mid-Sweden., PARTICIPANTS: In 2015, staff members responded to a web survey addressing lean maturity and musculoskeletal complaints. The survey was completed by 481 staff members (response rate 46%) at 48 units; 260 staff members at 46 units also completed the survey in 2016.

Research

Enrollment, adherence and retention rates among musculoskeletal disorders rehabilitation practitioners in knowledge translation studies: a systematic review and meta-regression

Implementation Science Communications 5(1), 2024

BACKGROUND: Practitioners' enrollment, adherence, and retention rates influence estimates of effectiveness in knowledge translation (KT) studies and remain important concerns for implementation researchers. This review aimed to systematically summarize the current evidence on feasibility measures as gauged by enrollment, adherence, and retention rates in KT evaluation studies targeting rehabilitation practitioners treating musculoskeletal disorders (MSDs).

Staff MSK wellbeing

Work-related musculoskeletal disorders among healthcare staff in the hospitals of Taif, Saudi Arabia Abstract only*

Journal of Bodywork and Movement Therapies 43, 2025

BACKGROUND AND OBJECTIVES: Work-related musculoskeletal disorders (WMSDs) are a major problem for healthcare professionals and workplaces. Thus, this study assessed the prevalence of WMSDs among healthcare professionals and explored their relationship with the job risk

factors (JRFs)., METHODS: A total of 496 healthcare professionals at hospitals in Taif city participated in this cross-sectional study. The Nordic Musculoskeletal Questionnaire was used to identify the occurrence of musculoskeletal complaints (MSCs) and Job Factors Questionnaire determined whether they were work-related.

Musculoskeletal disorders in nursing staff

World Journal of Methodology 15(2), 2025

Nursing staff provides patient care in an occupational environment that often imposes challenges that affect significantly the musculoskeletal system. Work-related musculoskeletal disorders are common in nursing staff and have a negative impact in their professional and daily activities.

Musculoskeletal Symptoms, Job-Related Stress, and Burnout in Nurses: A Cross-Sectional, Observational Study Abstract only*

Workplace Health & Safety, 2025

BACKGROUND: Musculoskeletal symptoms, stress, and burnout contribute to nurse attrition. This study builds on previous research about physical strain in nurses by exploring the relationship between musculoskeletal symptoms and two occupational psychological factors: job-related stress and burnout.

Working conditions, health status, and musculoskeletal disorders among hospital cleaning workers: a cross-sectional study in Turkey Full text available with NHS OpenAthens account*

Medycyna Pracy 75(5), 2024

BACKGROUND: Cleaning workers face many workplace risk factors and may experience many health problems. In this context, this study aimed to evaluate the musculoskeletal disorders, the health status of hospital cleaning workers, and the working conditions and risk factors affecting the workplace environment.

A systematic review of programs and interventions for reduction of sickness absence in nursing staff with work-related musculoskeletal disorders Full text available with NHS

OpenAthens account*

Journal of Education and Health Promotion 13, 2024

Negative consequences of musculoskeletal pain and injuries on the nurses' health and well-being can increase job dissatisfaction and impose high costs on healthcare centers due to lost workdays and compensation claims. This study aimed to identify policies, programs, and interventions that might be effective in the prevention and reduction of sickness absence and improvement of work outcomes in nursing staff with these problems.

Do sleep and psychological factors influence musculoskeletal pain among nurses? Abstract only*

Work (Reading, Mass.) 75(4), 2023

Abstract: BACKGROUND: The physical factors associated with musculoskeletal pain in nursing personnel have been largely investigated, although the role of sleep and psychological factors resulting in musculoskeletal pain has not been addressed thoroughly., OBJECTIVE: This study aimed to explore the prevalence of musculoskeletal pain and investigate how sleep and psychological factors influence musculoskeletal pain in a nursing group.,

Burnout, psychological wellbeing, and musculoskeletal complaints in UK GPs: an observational study

BJGP Open 7(4), 2023

Background Healthcare systems are under unprecedented pressure. GPs are crucial to the health of the population, yet their own health and wellbeing is often overlooked. Aim To investigate feelings of burnout, psychological wellbeing, and musculoskeletal complaints in GPs across the UK and to examine whether these health outcomes vary according to the

time GPs spent sitting, their participation in physical activity each day, and the time spent working per day or week. Design & setting Observational study involving GPs located across the UK.

Prevalence of musculoskeletal disorders among dental healthcare providers: A systematic review and meta-analysis

F1000Research 11, 2022

Abstract: Background: Work-related musculoskeletal disorders (MSD) are common in dentistry due to the prolonged static work involved during patient care, making dental health care personnel vulnerable to musculoskeletal complaints. We aimed to pool the prevalence estimates of MSD among various dental healthcare providers, including dentists, dental students, dental hygienists, and auxiliaries.

Supply

Economic evaluation of patient direct access to NHS physiotherapy services Abstract only*

Physiotherapy 111, 2021

Objectives: Our aim was to undertake an economic evaluation of patient direct access to physiotherapy in the UK NHS by comparing the number of patients treated, waiting time, cost and health gain from a direct access pathway versus traditional GP-referral to NHS physiotherapy.

Conference abstract: Characteristics of physiotherapists working in advanced practice roles: descriptive UK survey Abstract only*

Physiotherapy 107(Supplement 1), May 2020

APP roles across various clinical settings illustrates that physiotherapists and organisations are following recommendation to create a more patient-focused health system. Physiotherapists are acquiring new skills and capabilities incorporating procedures formerly fulfilled by other professionals. All physiotherapists in APP roles are involved in

clinical duties alongside the other key elements of the role (leadership, research, education). Not all physiotherapists had completed a MSc qualification, and this may represent uncertainty about the minimal requirement for “entry level” into APP, or illustrate the transition of the physiotherapy profession into APP roles. These findings present current valuable information regarding the current APP workforce and roles; and provides a benchmark to support the future shaping of APP roles in the UK.

The skills, knowledge and attributes needed as a first-contact physiotherapist in musculoskeletal healthcare Abstract only*

Musculoskeletal Care 17(2), April 2019

Objectives: The provision of musculoskeletal assessment and pathway management by physiotherapists in primary care is an expanding innovation within the UK National Health Service. This new model of care is challenging physiotherapists to work in new ways, and so an understanding of these roles is timely and will contribute to the growing knowledge regarding these practitioners and their impact.

An audit of the utilization of physiotherapy assistants in the musculoskeletal outpatients setting within a primary care physiotherapy service

Musculoskeletal Care 16(3), March 2018

Background: Physiotherapy assistants account for approximately 20% of the physiotherapy workforce across a community health service in North Staffordshire. Although their job descriptions state that the post is primarily clinical, their role depends heavily on the qualified physiotherapists and how they utilize their clinical skills.

Musculoskeletal Workforce Needs: Are Physician Assistants and Nurse Practitioners the Solution? AOA Critical Issues Abstract only*

Journal of Bone & Joint Surgery American 98(11), June 2016
This American Orthopaedic Association (AOA) symposium report investigates models for advanced practice provider integration, considers key issues affecting PAs and NPs, and proposes guidelines to help to assess the logistical and educational possibilities of further incorporating NPs and PAs into the orthopaedic workforce in order to address future musculoskeletal care needs.

Advanced musculoskeletal physiotherapy clinical education framework supporting an emerging new workforce Full text available with NHS OpenAthens account*

Australian Health Review 39(3), 2015
A project, funded by the Department of Health and Human Services, was conducted with the aim of developing a clinical education framework that included an agreed competency standard and credentialing process to support advanced musculoskeletal physiotherapy roles. This paper describes the process undertaken to achieve this and presents the outcomes of implementation. A multistep approach was taken. Initial steps included conducting a scoping review of the literature and focus groups of advanced musculoskeletal physiotherapists. The project team mapped out the structure of the framework.

Technology

How AI May Transform Musculoskeletal Imaging Full text available with NHS OpenAthens account*

Radiology 310(1), 2024
While musculoskeletal imaging volumes are increasing, there is a relative shortage of subspecialized musculoskeletal radiologists to interpret the studies. Will artificial intelligence (AI)

be the solution? For AI to be the solution, the wide implementation of AI-supported data acquisition methods in clinical practice requires establishing trusted and reliable results. This implementation will demand close collaboration between core AI researchers and clinical radiologists. Upon successful clinical implementation, a wide variety of AI-based tools can improve the musculoskeletal radiologist's workflow by triaging imaging examinations, helping with image interpretation, and decreasing the reporting time.

Competency Frameworks

Nursing Competency Framework in Specialist Rehabilitation

British Society of Physical and Rehabilitation Medicine, 2025
Cheshire and Mersey Rehabilitation Network (CMRN) will be launching its 'Nursing Competency Framework in Specialist Rehabilitation' across its 7 inpatient units in March 2025. The framework was developed by the CMRN MDT in recognition of the British Society of Physical and Rehabilitation Medicine (BSPRM) Rehabilitation Service Standard that 30-45% of nursing staff working in rehabilitation should receive specialist training.

Evaluating the importance of a core competency and capability framework for advanced practice physiotherapy: A cross-sectional survey Abstract only*

Physiotherapy Theory Practice 41(4), 2025
Introduction: The need for a global core competency and capability framework for advanced practice physiotherapy is important due to the rapidly changing nature of health care delivery internationally and the need to standardize advanced practice physiotherapy.

Multiprofessional Musculoskeletal Capability Framework for Primary Care

NHS Wales, October 2024

In collaboration with musculoskeletal (MSK) professionals from health boards, trusts, higher education institutions and professional bodies across Wales, Health Education and Improvement Wales (HEIW) have developed a multiprofessional [MSK capability framework](#) for practitioners providing care to people with MSK conditions in primary and community care adult settings in Wales.

APA National Advanced Practice Physiotherapy Competency Framework

Australian College of Physiotherapists, August 2024

The development of the National Advanced Practice Physiotherapy Competency Framework (the National AP Framework) has been actively supported and funded by the Australian Physiotherapy Association (APA) to provide a nationally relevant framework to improve the consistency of Advanced Practice standards for the benefit of patients, health service providers and physiotherapists working in or preparing to work in Advanced Practice roles.

Developing an international competency and capability framework for advanced practice physiotherapy: a scoping review with narrative synthesis Abstract only*

Physiotherapy 122, March 2024

Introduction: The need to address increasing numbers of people seeking care, insufficient numbers of physicians, and providing high-value and sustainable care has contributed to changing [physiotherapy practice](#) across the world, often referred to as advanced practice physiotherapy. Currently, there is no internationally standardized competency and capability framework to support advanced practice physiotherapy.

A Paediatric Musculoskeletal competence framework for physiotherapists working in the UK

Association of Paediatric Chartered Physiotherapists, 2020
Children and young people are different from adults. They are continually developing physically, emotionally and psychologically. Due to the physiology and biomechanics of growth, young people show a unique set of age-related symptoms. Whilst many conditions seen in childhood are self-limiting; some more serious pathology can occur. Delays in diagnosis may lead to long term disability or mortality (1). The differential diagnosis relevant to musculoskeletal symptoms is so broad that adequate paediatric training is essential. Clinicians working in this specialist field must have a clear understanding of the biological differences between children and adults. (2)

Ultrasound governance for clinicians and allied health professionals in rheumatology

British Society for Rheumatology, 2019?

Point-of-care ultrasound by non-radiologists has been expanding over the last few years. Musculoskeletal ultrasound and by extension rheumatology-focused ultrasound by rheumatologists and allied health professionals has become part of the diagnostic process in arthritis and vasculitides such as temporal arteritis. Rheumatology ultrasound lends itself, like many other medical specialties, to a modular training approach.

Musculoskeletal Core Capabilities Framework

Health Education England and NHS England, 2018

The framework provides a focus on the workforce capability to support shared decision-making, person-centred care and fitness for work. As such, there are synergies with other frameworks, such as the Person-Centred Approaches framework (Health Education England and Skills for Health 2017) and the need to make work a health outcome.

For practitioners working in, or preparing for, a first contact practitioner role for adults presenting with MSK conditions, the framework can be used to demonstrate many of the clinical capabilities set out in the multi-professional framework for advanced clinical practice in England (Health Education England 2017).