Allied Health Professionals Musculoskeletal Pathway Minimum Standards

A FRAMEWORK FOR ACTION 2015-2016

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Allied Health Professionals Musculoskeletal Pathway Minimum Standards

A FRAMEWORK FOR ACTION 2015-2016

The Scottish Government, Edinburgh, 2015

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Foreword

This document contains a national minimum standard framework applicable to Allied Health Professional (AHP) musculoskeletal services across Scotland. Musculoskeletal conditions include a diversity of complaints and diseases localised in joints, bones, cartilage, ligaments, tendons, tendon sheaths, bursae and muscles[1].

The document is predominately aimed at those AHPs involved in delivering the national '4 Weeks AHP Rapid Access to Musculoskeletal Services' target, namely Occupational Therapists, Orthotists, Physiotherapists and Podiatrists. The purpose of the document is to ensure that people requiring musculoskeletal services, receive the quality of care and the support they require, at the appropriate time by the appropriate person. The document focuses on AHP services and the interface requirements both into and out of AHP services.

The framework has been developed by a group of AHP musculoskeletal clinicians, originally providing a pathway framework for low back pain, which has evolved to a minimum standard framework for all AHP musculoskeletal pathways. It is not condition specific.

The aim of the framework is to reduce unnecessary variation within musculoskeletal services provision and facilitate delivery of key quality policy directives, in particular the triple aim outlined in the NHSScotland 2020 Vision; quality care, value and sustainability, and a healthy population[2].

Allied Health Professionals working in close collaboration with service users, medical and other colleagues are essential to enhancing musculoskeletal services and fostering engagement with stakeholders at all stages of the musculoskeletal pathway. The national standards will underpin redesign of the service user clinical pathway and support clinicians in the process. Application of the framework will provide consistency of approach and outcome.

Senga Cree
National Lead Musculoskeletal Pathways/Musculoskeletal Waiting Times

1 'Musculoskeletal Problems and Functional Limitation – Indicators for Monitoring Musculo`skeletal Problems and Conditions – The Great Public Health Challenge for the 21st Century'. European Commission Directorate-General Health & Consumer Protection Directorate General Public Health University of Oslo Department of General Practice and Community Medicine. The Bone and Joint Decade 2000-2010, Oslo, October 2003. http://ec.europa.eu/health/ph_projects/2000/monitoring/fp_monitoring_2000_frep_01_en.pdf

2 Scottish Government (2013) 'A Route Map to the 2020 Vision for Health and Social Care' http://www.scotland.gov.uk/Resource/0042/00423188.pdf

Executive Summary

1. Purpose

The purpose of this document is to provide a minimum standard for Allied Health Professionals (AHPs) musculoskeletal service delivery. The work aims to support the national musculoskeletal redesign work streams in enhancing musculoskeletal services and reducing unnecessary variation for service users and staff in the National Health Service (NHS) Scotland.

2. Background

Musculoskeletal conditions are one of the most common causes of severe long-term pain and disability in Europe and lead to significant Healthcare and social support costs. As a major cause of work absence and incapacity they also have a major economic cost through lost productivity[3]. Recent times have seen increasing pressure on musculoskeletal and orthopaedic services to adapt and change to meet various external and internal pressures, which include amongst others demographic changes, increasing service user demand, advancements in technology, socioeconomic changes, drives to maximise healthcare efficiency and improve service quality, employment law and contractual alterations and changes in historical professional boundaries.

3. Situation

Policy makers have searched for innovative ways to try and cope with the increasing demand for musculoskeletal services. While the intent of many of these innovations have been admirable they have often historically been introduced in an inequitable manner, leading to widespread unnecessary national variation between health boards and even within the same health board. Reasons for this variation arguably include differences in historical investment in musculoskeletal services, management structures, skill mix, facilities, geography, socioeconomic factors, local innovations, previous local service prioritisation, variation in the local availability of orthopaedic specialties and links with tertiary services.

The key aims of the current orthopaedic and AHP musculoskeletal redesign programmes, for example Transforming Outpatient Services and the 4 Week Rapid Access to AHP Musculoskeletal Services, is to establish musculoskeletal services that provide person-centred, equitable and seamless musculoskeletal management pathways for all service users.

3 Eumusc net (2013). 'Musculoskeletal Health in Europe Report v5.0. Driving Musculoskeletal Health in Europe'. http://www.eumusc.net/myUploadData/files/Musculoskeletal%20Health%20in%20Europe%20Report%20v5.pdf

4. Objectives

The objective of this document is to initiate a process to reduce unnecessary variation between health boards in the provision of musculoskeletal care and act as catalyst for further discussion for future enhancements. It does not provide advice about the management of specific musculoskeletal conditions.

5. Recommendations

The focus of the document is on AHP Services, however, given that musculoskeletal services should provide a seamless pathway for service users then the framework details the interface requirements both into and out of AHP services. The standards outlined are:

First Contact Considerations (GP or Other Suitably Qualified Healthcare Professional)

Standard A Screen for Serious Pathology Indicators (Red Flags)
Standard B Consistent Advice from all Contact Points Utilising NHS Inform Resources
Standard C Medication/Analgesia as Appropriate
Standard D Appropriate Investigations
Standard E Equal Opportunities to Access MSK Pathways via Self or Healthcare Professional Referral

Routine AHP Service Provision

Standard F NHS Board Working to Current National Waiting Time Targets
Standard G Appropriate Use of Different Modes of Clinical Consultations
Standard H Management Plan Discussed and Agreed as per Pathways

Potential Onward Referral Work Up

Standard I Clinical Supervision Framework with Case Review Policy
Standard J MSK Service Access to Investigations as Appropriate
Standard K Process for Onward Referral

6. Conclusions

The outlining and implementation of these standards is only one step in improving musculoskeletal care in Scotland. It is hoped that the framework will stimulate debate and evolve as the national musculoskeletal redesign programme progresses in the coming years.

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Glossary

Advanced Nurse Practitioner
A registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice. A Master's degree is recommended for entry level.

Allied Health Professional Advanced Musculoskeletal Practitioners
Advanced practitioners are experienced professionals who have developed their skills and theoretical knowledge to a very high level which is supported by evidence. They perform a highly complex role and continually develop practice within Musculoskeletal Services.

Allied Health Professionals
Allied Health Professionals are a specific group of Health and Social Care professionals regulated by and registered with the Health and Care Professions Council. They include the following professions: Arts Therapies (including Art Therapy, Drama Therapy, Music Therapy) Diagnostic Radiography, Dietetics, Occupational Therapy, Orthoptics Orthotics, Paramedics, Physiotherapy, Podiatry, Prosthetics, Speech and Language Therapy, Therapeutic Radiography.

Extended Scope Practitioners (ESPs)
Expert physiotherapy practitioners trained and competent to work in their specialised clinical area.

General Practitioners (GP)
General Practitioners (GP) are qualified medical practitioners who treat acute and chronic illnesses and provides preventive care and health education to patients.

Musculoskeletal Conditions
Musculoskeletal conditions include a diversity of complaints and diseases localised in joints, bones, cartilage, ligaments, tendons, tendon sheaths, bursae and muscles.

Healthcare Professional
In this document refers to a medically trained doctor registered with the General Medical Council, an Allied Healthcare Professional registered with Health and Care Professions Council or a nurse registered with the Royal College of Nursing.

NHS 24
NHS 24 is the name of the national confidential health advice and information service provided by NHSScotland.

NHS Inform
NHS Inform provides a co-ordinated, single source of quality assured health and care information for the people of Scotland.

Occupational Therapists
Occupational therapists take a whole-person approach to both mental and physical health and wellbeing, enabling individuals to achieve their full potential. Occupational therapy provides practical support to enable people to facilitate recovery and overcome any barriers that

prevent them from doing the activities (occupations) that matter to them. This helps to increase people's independence and satisfaction in all aspects of life.

Orthopaedic Surgeons

Orthopaedic surgeons provide both elective and trauma care. In trauma their work includes treating fractures following accident in the home, on the road, at sport and those related to falls in the elderly, often associated with osteoporosis. Their elective work includes treating patients with arthritis of bones and joints and the soft tissues, and congenital, hereditary, developmental and metabolic disorders that affect the musculoskeletal system. Surgeons are able to replace worn-out joints, repair torn ligaments, remove abnormal or damaged tissue and stiffen those joints that are severely damaged.

Orthotists

Orthotists design and fit orthoses (braces etc) which provide support to part of a patient's body to compensate for paralysed muscles, provide relief from pain or prevent physical deformities from progressing.

Pain Management

Pain management is a growing multidisciplinary specialty dedicated to treating acute, sub-acute, and chronic pain. The goal of pain management is to improve quality of life and help patients return to everyday activities without surgery.

Physiotherapists

Physiotherapists are concerned with human function and movement and maximising potential. Physiotherapy uses physical approaches to promote, maintain and restore physical, psychological and social wellbeing, taking account of variation in health states.

Podiatrists

Podiatrists assess, diagnose and treat foot and ankle pathologies to maintain and enhance locomotion function of the feet and legs, to alleviate pain, and to reduce the impact of disability. Specialist roles are developing in biomechanics/ musculoskeletal care, surgical podiatry in the foot and rheumatology.

Radiology

Radiology provides diagnostic imaging services to assist doctors and other healthcare professionals in both diagnosis and deciding upon the best management of a patient's problems. When appropriate radiologists use minimally invasive methods to treat disease.

Rheumatology

Rheumatology is multidisciplinary branch of medicine that deals with the investigation, diagnosis and management of patients with arthritis and other musculoskeletal conditions. This incorporates over 200 disorders affecting joints, bones, muscles and soft tissues, including inflammatory arthritis and other systemic autoimmune disorders, vasculitis, soft tissue conditions, spinal pain and metabolic bone disease. A significant number of musculoskeletal conditions also affect other organ systems.

Self-Referral
A system of access that allows patients to refer themselves to an AHP service directly, without having to see or be prompted by another healthcare practitioner.

SIGN Guidelines
The Scottish Intercollegiate Guidelines Network (SIGN) develops evidence-based clinical practice guidelines for the National Health Service (NHS) in Scotland.

Suggested Self-Referral
A system of access that allows patients to refer themselves to an AHP service directly, having been prompted by another healthcare practitioner.

Allied Health Professionals Musculoskeletal Pathway Framework – (A Minimum Standard)

1. Introduction

Musculoskeletal conditions are one of the most common causes of severe long-term pain and disability in Europe and lead to significant Healthcare and social support costs[1]. It is estimated that between 20 to 30% of all General Practitioner (GP) consultations are about musculoskeletal complaints[2,3], with spinal and soft tissue disorders within the top 10 of conditions ranked by annual contact rates per 1000 practice population[4]. Musculoskeletal conditions are associated with the worst quality of life scores compared with a myriad of conditions, including mental health, cardiovascular and respiratory diseases, visual and hearing impairment renal disease and cancer[5].
Musculoskeletal conditions are a major cause of work absence and incapacity they also have a major economic cost through lost productivity[1]. Some 10 million working days are lost on average per annum through musculoskeletal problems[6] and musculoskeletal patients are the second largest group of patients (22%) in receipt of incapacity benefits after patients suffering from mental ill-health[7]. Orthopaedic activity is high and continues to increase with activity growing in some countries in the region of 12% in 10 years for both inpatients and outpatients[8]. Elective joint replacement surgery is predicted to rise by 4.2% per year[2]. The number of people in Scotland having hip and knee joint replacements has grown from about 7,000 to 15,000 in the last 10 years[8]. The cost in Scotland for orthopaedics has risen from £178 million 1999-2000 to £360 million in 2008-9[8]. Possible causes for the rise in activity includes the ageing population and increased longevity[9,10], expansion of new procedures and technology in orthopaedics[11], obesity and increased use of alcohol[12], perceived increased patient demand due to a greater awareness of diagnostic and therapeutic advances[13]. In 2007 it was estimated that the total cost to society of musculoskeletal conditions was in the region of £7 billion[14]. With this increased activity it is estimated that the demand for Trauma and Orthopaedic surgeons will overtake supply in the next five to 10 years[12].

Policy initiatives to improve the patient experience, for example the 18-week Referral to Treatment Standard[15], Shift in the Balance of Care agendas[16,17], and also to respond to socioeconomic pressures, for example the European Working Time Directive[18], the limitation of junior doctors' hours[19], changes to

the GP and Consultant contracts[20,21], and the financial pressure on public services[22] have put further pressure on services to redesign or reconfigure traditional musculoskeletal services.

These demands on future services have been further compounded by the rise in complexity and sub-specialisation of trauma and orthopaedic surgery[12], the reduction in orthopaedic spinal surgeons (owing to changes in medical training, fear of litigation, perceived low success of spinal surgery and reduced opportunity for private income)[23], and the increased litigation culture[24]. Rising GP referral rates[25] to acute services has also been suggested as contributing to increase demand possibly owing to altered referral thresholds secondary to guideline implementation.

Policy makers have searched for innovative ways to try and cope with increasing demand for musculoskeletal services[2,28]. While the intent of many of these innovations are often admirable they are commonly introduced unilaterally and locally, leading to widespread national variation[8,29] between health boards and even within the same health board. Possible reasons for this variation include differences in historical investment in musculoskeletal services, management structures, skill mix, facilities, geography, socioeconomic factors, local innovations, previous local service prioritisation, variation in local orthopaedic specialties and links with tertiary services. The wide variation resulted in a 'post code lottery' of care for those with musculoskeletal conditions in the National Health Service (NHS) Scotland[30].

It has been estimated that between 10% to 40% of new orthopaedic referrals do not require a surgical opinion and of patients on a waiting list, between 5% and 15% do not want or need surgery[31]. It has therefore been considered important that General Practitioners (GPs), orthopaedic services and AHP services work in unison to ensure that referrals are appropriately reviewed to ascertain which patients require acute hospital referral and those patients who could benefit from rapid access to more locally based community services[28,33].

Many healthcare services have acknowledged the expertise of AHPs with extended roles and reconfigured their services to incorporate AHPs into patient management models working in collaboration with the medical team[33,34,35].

The idea of AHPs supporting orthopaedic services is not new. The concept was thought to be first reported in the United Kingdom (UK) by Byles and Ling[36]. These authors noted the increasing rise in surgical workload of orthopaedic surgeons and suggested that physiotherapists could effectively see many patients who required conservative orthopaedic management. This was backed up by numerous studies highlighting that many patients who were referred to orthopaedic outpatient departments either failed to attend (often because their condition had improved), were referred for physiotherapy or a simple appliance, or received treatment that they could have received from a general medical practitioner[37,38,39]. Historically, it was estimated up to 60% of all referrals to an

orthopaedic outpatient clinic could be managed safely by a physiotherapist and to the satisfaction of most patients[36]. The subsequent introduction of AHPs undertaking musculoskeletal extended scope roles termed Extended Scope Practitioners (ESPs) or Advanced Practitioners has been widely regarded as a positive development[33,35,36,40,41,42] and anecdotally successful[43,44].

In Scotland the term Advanced Practitioner has now been used to encompass the work of ESPs and also the extended/enhanced work of other AHPs. Advanced AHP Practitioners have been defined as "experienced professionals who have developed their skills and theoretical knowledge to a very high level which is supported by evidence. They perform a highly complex role and continually develop practice within Musculoskeletal Services"[45].

Most health boards in Scotland have developed their services to incorporate these advanced practice AHP roles to varying degrees, acknowledging the expertise and efficiency that they bring to delivering services fit for the future. These roles are proving critical to the development and delivery of evidence-based pathways of care.

2. Purpose of Framework

This document marks the start of a journey towards reducing unnecessary variation in musculoskeletal care by outlining a minimum standard framework for the management of musculoskeletal conditions across NHSScotland. Its aim is to outline minimum standards for NHS Boards providing musculoskeletal services to help guide organisations in meeting national musculoskeletal and orthopaedic improvement initiatives. These service redesign initiatives are detailed in the Transforming Outpatient Services[46] and 4 Week Rapid Access to AHP Musculoskeletal Services[47] plans. Boards should be working to full implementation of the standards detailed in this document within the timescales outlined in local Musculoskeletal Service Delivery Plans, related to achieving the wider objectives of these work streams[46,47,48]. The document acknowledges that there may be necessary variation in the delivery of these standards and that additional resource may be required in some areas to support the implementation of the standards. The framework provided will help identify those service gaps and support the case for additional resource, where necessary. Many of the standards are already recognised professional standards that should currently be in place or be in the process of being implemented.

The focus of the document is on AHP Services, however, given that musculoskeletal services should provide a seamless pathway for service users then the framework details the expectations on referrers to AHP services, the expectations on AHPs and their role in the work up of patients who require onward referral, if necessary and appropriate.

The document does not provide management advice on specific musculoskeletal and associated conditions. Any references to any specific conditions or management recommendations are cited for explanatory purposes only. The document does not replace specific clinical guidance provided by professional or regulatory bodies. The need for separate work has been identified to define and develop AHP pathways for patients requiring early onward specialist assessment in rheumatology (inflammatory disease) and similarly implementing the national standards related to chronic pain services.

3. Musculoskeletal (MSK) Pathway Framework

The Musculoskeletal (MSK) Pathway Framework and the individual components detailed in the document are shown in Figure 1. The term framework is used as each health board will have some necessary variation in musculoskeletal pathways, owing to historical and present service provision as previously described. It is intended, however, that this framework will be the beginning of a process to reduce variation in all musculoskeletal pathways and is not condition-specific. Service users should be involved in the local coproduction and implementation of these pathway standards. Standards A to D are aimed at healthcare professionals (GP, Advanced Practice AHPs or Advanced Practice Nurses) who initially clinically assess the service user. Traditionally, this role was undertaken by GPs, and, for a large number of patients, will continue to be so, however, in contemporary Healthcare delivery this role may be undertaken by a suitably qualified Advanced Practitioner AHP or Advanced Nurse Practitioner with enhanced skills, for example independent prescribing qualifications. Standard E refers to the mode of referral to routine AHP services through GP referral, GP suggested self-referral, self-referral either directly or through a central referral access telephony service, for example NHS 24. Standard F to H detail standards pertaining to a routine AHP musculoskeletal consultation. Standards I, J and K outline the work up of routine patients who require possible escalation or onward referral to secondary care services, for example orthopaedic surgery, neurosurgery, rheumatology or specialist pain management services.

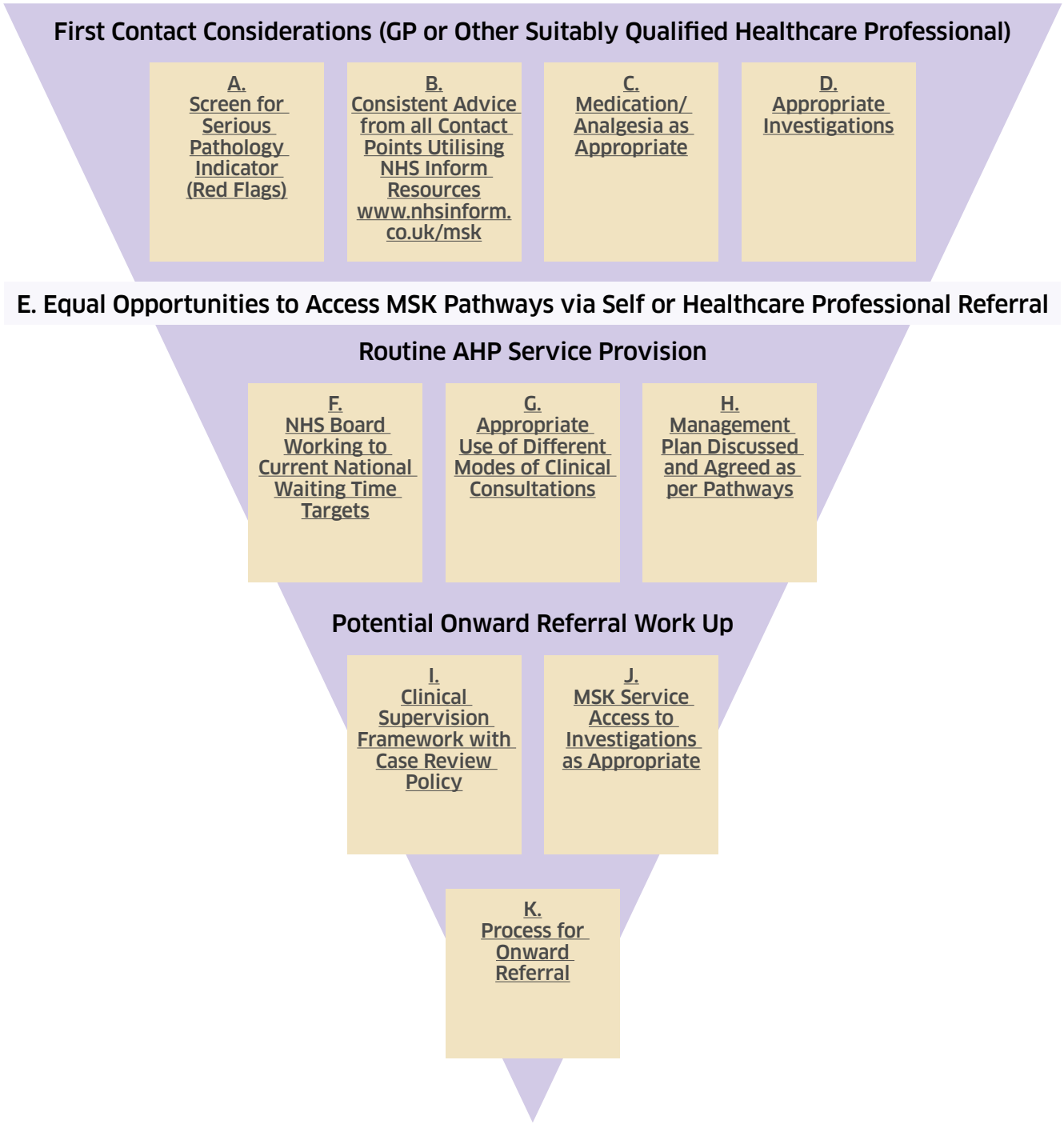

Figure 1: Musculoskeletal (MSK) Pathway Framework – (A Minimum Standard)

4. First Contact Considerations

4.1 Standard A – Screen for Serious Pathology Indicators (Red Flags)

NHSScotland is focused on improving quality, addressing excessive variation in practice, and ensuring the highest standards of patient safety[49]. It is therefore imperative to identify conditions or co-morbidities that may deter a patient's recovery and function or place the patient at risk of serious medical consequences[50]. The clinician must remain alert to potential clinical indicators that require more extensive testing than that afforded by a basic clinical examination[51]. The term 'red flags' refers to clinical features that may be associated with the presence of serious, but relatively uncommon conditions, requiring urgent evaluation. Such conditions include tumours, infection, fractures and neurological damage[52]. Previous scoping in NHSScotland highlighted that clinicians required to improve their assessment and documentation of serious pathology indicators[53].

Screening for serious conditions occurs as part of a history and physical examination and should occur at the initial assessment and subsequent visits along the service user pathway[54].

Rather than recording an exhaustive list of serious pathology indicators ('red flags'), clinicians should consider a small numbers of disorders in which early diagnosis might make a large difference (i.e. cauda equina syndrome, major intra-abdominal pathology, focal infections, and fractures)[55] and cancer[52]. Other musculoskeletal conditions that may benefit from early specialist referral should also be considered at this point, for example spondyloarthropathies[56,57], inflammatory joint disease[56,57,58,59], specific foot conditions[60] and poor bone health[61,62,63,64,65].

Common serious pathology/red flag indicators for low back pain are shown as examples in Table 1.

Standard A
Screen for Serious Pathology Indicators ('Red Flags')

Quality Indicator
Serious pathology indicator/'red flags' to be agreed and evidence of dissemination to all members of the musculoskeletal team documented.

Table 1: Serious Pathology Indicators (Red Flags) Using Low Back Pain as an Example[52,56,66,67,68]

Possible Indicators of Serious Pathology

History:

- age 16< or >50 with NEW onset back pain
- on-mechanical pain (worse at rest, interferes with sleep)
- thoracic pain
- previous history of malignancy (however long ago)
- weight loss (unexplained)
- previous long-standing steroid use
- recent serious illness
- recent significant infection
- fevers/rigors
- urinary retention/incontinence
- faecal incontinence
- altered perianal sensation (wiping bottom)
- violent trauma
- limb weakness
- IV drug use, recent infection, immunocompromised patients
- band-like trunk pain
- previous history drug abuse, osteoporosis
- recent onset of structural deformity/loss of height
- osteoporosis risk factors (family history of osteoporosis, previous fractures, gender, age, race and body weight)

Examination:

- limb weakness
- generalised neurological deficit
- hyper-reflexia, clonus, extensor plantar responses
- saddle anaesthesia (loss of pinprick sensation unilaterally or bilaterally)
- reduced anal tone/squeeze
- new/progressive spinal deformity
- urinary retention

Possible Indicators of Spinal Inflammatory Disease

- Onset less than 40 years of age
- No improvement with rest
- Insidious onset
- Improvement with exercise
- Pain at night (with improvement on getting up)

Four or more of the above indicates possible inflammatory back pain and should be referred to the rheumatology services.

Other useful indicators include a history of uveitis, colitis or psoriasis

4.2 Standard B – Consistent Advice from All Contact Points Utilising NHS Inform Resources

A large body of evidence consistently indicates that patients who gain knowledge and skills improve their ability to manage self-care, enhance decision making and improve their quality of life[69,70,71]. For some conditions, such as neck pain[72,73] and shoulder pain[74], there is evidence that supplementation of physiotherapy exercises with manual therapy may be of additional benefit, for other conditions such as osteoarthritis the main recommended treatment is advice about maintaining physical activities and provision of a structured exercise programme[75]. Furthermore, the consensus of evidence suggests that supporting self-management can have benefits from people's attitudes and behaviours, quality of life, clinical symptoms and use of Healthcare resources[71,76]. NHS Inform (www.nhsinform.co.uk/msk) has a current work programme that is developing a range of web-based enhanced information, advice and self-management options for musculoskeletal conditions. This also includes the option to supply appropriate exercise regimes. National pain resources should also be promoted (www.chronicpainscotland.org). Musculoskeletal services should provide service users maximum opportunity to access and benefits from these extensive resources.

Standard B
Consistent Advice from All Contact Points Utilising NHS Inform Resources

Quality Indicator
NHS Inform (www.nhsinform.co.uk/msk) resources to be made available to all members of the musculoskeletal team and evidence of dissemination documented.

Service user Information and related resources to be available to all members of the musculoskeletal team on common musculoskeletal conditions.

4.3 Standard C – Medication/Analgesia as Appropriate

Acute and chronic pain are significant problems in musculoskeletal disorders[77]. Pain is the most common symptom that causes patients to seek the help of health professionals[78]. Many service users seek advice and treatment for acute episodes of self-limiting pain, but many others experience ongoing discomfort[79]. It is estimated that approximately 50% of those with chronic pain have a musculoskeletal problem[80]. The benefits and risks of medications, in acute and chronic pain, are complex and probably dependent on the type and duration of the condition, underlying pain mechanisms involved and co-morbidities[81,82]. Nevertheless, appropriate analgesia has the potential to ease pain, and reduce disability[83,84]. Furthermore, appropriate pharmacological treatments are either the treatment of choice or a useful adjunct to non pharmacological therapies, for example in neuropathic pain conditions[85,86,87,88]. It is important that national advice on pain management should be followed[89] to enhance effectiveness and reduce abnormal side-effects, including dependency. An appropriate systematic pain history will help determine the mechanisms producing pain and factors influencing the painful experience[90].

Table 2: Pain History P Q R S T Approach[90]

- **P**recipitating/Alleviating Factors:
  What causes the pain? What aggravates it? Has medication or treatment worked in the past?
- **Q**uality of Pain:
  Ask the patient to describe the pain using words like 'sharp, dull, stabbing, burning'
- **R**adiation
  Does pain exist in one location or radiate to other areas?
- **S**everity
  Have patient use a descriptive, numeric or visual scale to rate the severity of pain.
- **T**iming
  Is the pain constant or intermittent, when did it begin, and does it pulsate or have a rhythm

Standard C
Medication/Analgesia as Appropriate

Quality Indicator
Consistent advice on the use of medications in acute and chronic musculoskeletal conditions to be made available to all members of the musculoskeletal team.

4.4 Standard D – Appropriate Investigations

The Scottish Government National Access Policy aims to ensure consistency of approach in providing access to services[91]. It advocates that wherever possible patients should be referred for appropriate diagnostic tests prior to the referral being made for the first outpatient appointment[91]. It has previously been estimated that at least 30% of patients attend an orthopaedic outpatient clinic either to find the 'cause' of their pain or to discover that there is nothing 'seriously wrong' with them[37]. If these expectations can be addressed to the satisfaction of service users, this will reduce these inappropriate demands on musculoskeletal services.

The purpose of pre-referral investigations is to inform whether or not referral is required and to make the most appropriate use of AHP and medical services.

Standard D
Appropriate Investigations

Quality Indicator
If indicated, appropriate diagnostic tests should be carried out prior to any referral being made to routine AHP service.

4.5 Standard E – Equal Opportunities to Access Musculoskeletal Pathways via Self or Healthcare Professional Referral

In the UK health service, patients with a musculoskeletal problem usually consult in general practice initially[92]. Providing timely access to AHP services has been a long-standing problem in the NHS, with waiting times of several weeks or months for access in many areas of the UK[93]. Waits for assessment, advice and appropriate management can result in patients' problems becoming chronic which may have consequences for their health and wellbeing[95] and for the economy[95]. Conversely, prompt and timely treatment and/or advice may mean that individuals are able to remain at, or return to, work whilst receiving treatment or return faster with more prompt management by AHP services[96]. In recent years, access has been improving and the efficacy for patient self-referral established[97,98,99,100,101,102], under the right circumstances[103]. During this time, examples have also emerged of physiotherapists offering initial assessment and advice by telephone and internet technologies using algorithms with self-management and/or face-to-face treatment options, where necessary[92,104]. Early research findings around telephone assessment and advice services for patients with musculoskeletal conditions are promising, although these innovations require further evaluation[92,104]. The vision would be to widen these opportunities and modes of access for patients, if appropriate.

Standard E
Equal Opportunities to Access Musculoskeletal Pathways via Self or Healthcare Professional Referral

Quality Indicator
AHP services should provide evidence that they are working towards self-referral, where appropriate.

5. Routine Allied Health Professional Service Provision

5.1 Standard F – NHS Board Working to Current National Waiting Time Targets

The National Delivery Plan for Allied Health Professionals (AHPs)[105] defines the future vision for AHPs and the services they deliver. In doing this, it focuses specifically on a number of high-level outcomes that AHP services will effect, with key actions defined[105]. Given the significant variation in musculoskeletal waiting times across Scotland[105] NHS Boards will deliver a maximum waiting time of no more than 4 weeks for AHP musculoskeletal treatment[105]. The Scottish Government will thereby work with NHS Boards on a 4 Week Rapid Access to AHP Musculoskeletal Services waiting time target[47].

Standard F
NHS Board Working to Current National Waiting Time Targets

Quality Indicator
AHP services should provide evidence that they are working to National Waiting Time targets.

5.2 Standard G – Appropriate Use of Different Modes of Clinical Consultations

For a number of patients, access to AHP services will continue to include referral from a GP and a face-to-face clinical consultation with an AHP. The NHS in Scotland, similar to the rest of the UK is being challenged to provide high quality, safe and timely access to the right services with greater efficiency and improved productivity. It has never been so important and timely to establish appropriately responsive and acceptable clinical and cost-effective modes of access for the benefit of patients, their carers, NHSScotland and the wider societal economy. Advances in technology continue to provide real and feasible solutions to such challenges[107]. Access to a range of AHP services need to be explored and NHS 24 (NHSScotland's Healthcare Confidential Helpline Service) is committed to exploit available technology in support of this and improving access to musculoskeletal services represents the first consideration in what is seen as a portfolio of service developments. Therefore telephony platforms and other Information Services (IT) resources may be used in the provision of clinical assessment and management of musculoskeletal conditions.

Standard G
Appropriate Use of Different Modes of Clinical Consultations

Quality Indicator
AHP services should provide one-to-one clinical consultation within an appropriate timeframe which may not necessarily be face to face, but may include telephone or video consultation.

5.3 Standard H – Management Plan Discussed and Agreed as per Service Pathways

The European Pathway Association (2007)[108] defines care pathways as "a complex intervention for the mutual decision making and organisation of predictable care for a well-defined group of patients during a well defined period". Characteristics of care pathways include:

- An explicit state of the goals and key elements of the case based on evidence, best practice and patient expectations;
- The facilitation of the communication, co-ordination of roles and sequencing the activities of the multi-disciplinary care team, patient and their relatives;
- The documentation, monitoring and evaluation of variances and outcomes and the identification of the appropriate resources;
- The aim of a care pathway is to enhance the quality of care by improving patient outcomes, promoting patient safety, increasing patient satisfaction and optimising the use of resources[89].

When developing a pathway, one needs to take into account the evidence-based key interventions, the interdisciplinary team work, service user involvement, and the available resources[109]. Care pathways are a concept to introduce person-centred care[109]. Every patient is unique, but they should have enough in common to ensure care pathways are a useful norm, and patient and clinicians are able to make choices that differ from these pathways as needed[110]. As Kravitz and Melnikow (2001; p585)[112] commented "most patients want to see the road map, including alternative routes, even if they don't want to take over the wheel". Goal setting is considered key to person-centred care[113] and thus integral to pathway management. Goal setting is specifically outlined in the Health and Care Professions Council (HCPC) Standards of Proficiency for all AHPs (2012) [114,115,116,117] Table 3.

Table 3: Goal Setting Outlined in Allied Health Professions Standard of Proficiency Statements[114,115,116,117]

All AHPs (Podiatry, Physiotherapy, Occupational Therapy and Orthotics)

- To understand the need to engage service users and carers in planning and evaluating diagnostics, treatments and interventions to meet their needs and goals.

Physiotherapists

2b.3 Be able to formulate specific and appropriate management plans including the setting of timescales:

- understand the requirement to adapt practice to meet the needs of different groups distinguished by, for example, physical, psychological, environmental, cultural or socio-economic factors;
- be able to set goals and construct specific individual and group physiotherapy programmes;
- understand the need to agree the goals, priorities and methods of physiotherapy intervention in partnership with the service user;
- be able to apply problem solving and clinical reasoning to assessment findings to plan and prioritise appropriate physiotherapy;
- be able to select, plan, implement and manage physiotherapy treatment aimed at the facilitation and restoration of movement and function.

Occupational Therapy

14. Be able to draw on appropriate knowledge and skills to inform practice
    - Be able to formulate specific and appropriate care or case management plans including the setting of timescales
    - Understand the need to agree goals and priorities of intervention in relation to occupational needs in partnership with service users, basing such decisions on assessment results.

Professional conduct means adhering to professional regulations[118]. As such, the purposes of goal setting has been identified as to meet contractual, legislative and or professional requirements, and to either improve outcomes or evaluate them[119].

A goal is an intended future state; this will usually involve a change from the current situation although, in some circumstances, maintenance of a current state in the face of expected deterioration might be a goal. Secondly, and of equal importance, a goal refers to the intended consequence of actions undertaken by the clinician(s)[97].

NHS Boards should define and implement clearly defined pathways with agreed goals, with patients, for the most common musculoskeletal conditions. Pathways, however, do need to be developed locally, for adopting pathways without translating them and adapting them to specific organisations and teams could be unsafe and ineffective[110].

Standard H
Management Plan Discussed and Agreed as per Pathways

Quality Indicators
NHS Boards to clearly define their referral pathways from primary to tertiary care for all common musculoskeletal conditions, e.g. low back pain, knee, foot and ankle conditions.

AHP services to provide evidence of person-centred goal setting.

6. Potential Onward Referral Work Up

6.1 Standard I – Clinical Supervision Framework with Case Review Policy

Goal setting is not, nor should it be, a simple prediction of what will happen; it should be the intended result of some intervention(s)[120]. Moreover, efficiency has been deemed one of the domains in a quality health service[121,122]. If patients are not deemed to be progressing towards the coproduced and agreed goals in the intended manner, then it is important that reasons for this are explored and appropriate intervention implemented. Integral to this process is clinical supervision and a case review policy or standard operating procedure. Clinical supervision has been defined "as a collaborative process between two or more practitioners of the same or different professions". This process should encourage the development of professional skills and enhanced quality of patient care through the implementation of an evidence-based approach to maintaining standards of practice. These standards are maintained through discussion around specific patient incidents or interventions using elements of reflection to inform the discussion[123]. Three main functions of supervision have been identified: educative, supportive and managerial[109,124]. Clinical supervision is not fieldwork/clinical education, mentorship, appraisal/development review, peer review, counselling or preceptorship[123].

The 4S model of supervision – structure, skills, support and sustainability – is an example of one model which is intended to help professionals reach excellence in their practice[125]. The embedding and sustaining of supervision schemes is a challenge in MSK services but they should be seen as integral to a culture of learning within developing services. Supervision should be career-long, regular, routine and evaluated[126].

To ensure that any clinical supervision policy/standard operating procedure is purposeful to promoting a quality and efficient service it should include a specific *case review or escalation procedure* for patients not progressing within an agreed time frame. Each AHP profession will need to agree its own escalation threshold based on appropriate criteria. For example three review sessions may be an appropriate threshold for physiotherapy given that the average number of physiotherapy contacts in the UK is three[93]. The procedure may outline the process for a telephone discussion and/or face to face discussion with an experienced colleague or other healthcare professional.

Standard I
Clinical Supervision Framework with Case Review Policy

Quality Indicator
AHP services to have a clearly defined and documented supervision and case review policy/standard operating procedure with evidence of its use.

6.2 Standard J – Musculoskeletal (MSK) Service Access to Investigations as Appropriate

NHS Education Scotland (NES) (2012)[45] outlined the role of AHP Advanced Practitioners in relation to advanced musculoskeletal practice. An example of one of the core knowledge and skills in relation to the requesting of investigations such as imaging is shown in Table 4.

Table 4: Advance Practice Framework Clinical Practice – Investigations[45]

Pillar of Practice 1: Clinical Practice

- request relevant investigations within the scope of their practice and where they are the most appropriate person to make the request in the specific clinical context – requiring:
  - advanced knowledge of the role of investigations in facilitating a diagnosis;
  - the limitations of the information generated by the investigation, including sensitivity and specificity of tests involved; and
  - knowledge of the legislation, indications and contraindication of the investigation.

Evidence suggests that there is widespread variation in the extended practice of non medically qualified staff with regard to access to investigations, scope of practice, follow-up procedures, training; competencies and clinical governance arrangements[44,128,129,130,131]. Advanced Practitioners are, however, making significant contributions to musculoskeletal pathways in many areas, especially in areas such as in the management of spinal conditions[132].

Given that this contribution is currently happening in some areas and not others, then greater consistency needs to be implemented. Provided that robust and consistent clinical governance arrangements are place, then AHP musculoskeletal services should be able to access the necessary tools and investigations when undertaking roles previously done by medical staff. This practice also ensures that patients are not disadvantaged by seeing a non-medically qualified clinician.

Many services have reported positive outcomes using Advanced Practitioners in terms of reductions in orthopaedic outpatient waiting times[35,133], professional development for the professions[41,134], satisfactory patient management compared with orthopaedic surgeons[135,136,137,138], improved communication between AHP and orthopaedic services[40,139], good patient satisfaction[32,34,35], reduction in use of investigations compared to junior medical personnel[33], freeing up of surgeons' time from outpatient clinics[34], and for increased operating[35,140].

The rules surrounding the legal standing of AHP advanced practice are complex[141,142]. The General Medical Council (GMC) code of practice (2001)[143] states, "When you delegate care or treatment you must be sure that the person to whom you delegate is competent to carry out the procedures or provide the therapy involved." The Chartered Society of Physiotherapy Scope of Practice (2008)[127] document, for example, states, "Non-medically qualified staff who hold a registrable qualification and have undertaken to perform a medically delegated task are responsible for the consequences of performing the task which can be reasonably expected to be within their competence. Advanced practitioners are accountable for their actions done to the patient." Professionals are accountable to their regulatory body for all their professional activities, whatever the level and context of their practice, the title they can use or type of activities they can undertake[144]. Providing that there is evidence of an individual's competence to undertake the role/ activity in question and that the activity sits within the remit of their professional body the individual would be covered by their Professional Liability Insurance (PLI) as working within the scope of the profession and are working to the standard set by the Health and Care Professions Council[145].

Regulation has been defined as "The set of systems and activities intended to ensure that healthcare practitioners have the necessary knowledge, skills, attitudes and behaviours to provide Healthcare safely"[146]. It is, however, the responsibility of the employer to ensure that the creation of any new or extended roles comes with appropriate support and performance management mechanisms[145]. Hence it is imperative that both clinicians and management know what the scope and expectations of the role are and the clinical governance arrangements of the service are clearly defined and documented[129]. Frameworks and defined competencies for clinicians taking on advanced practice roles are available[146]. Services should ensure they have robust clinical governance and service infrastructure in place to support AHP Advanced Practice roles[146]. Clinical governance being defined as "a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish"[147].

Standard J
Musculoskeletal (MSK) Service Access to Investigations as Appropriate

Quality Indicator
AHP Advanced Practitioners/Extended Scope Practitioners should have a documented clinical governance infrastructure, competencies and standard operating procedures in place to allow independent requesting of appropriate investigations.

6.3 Standard K – Process for Onward Referral

Allied Health Professionals have clinical autonomy to best manage their patients. AHPs should be able to refer their patients to the appropriate clinical specialty. Clinical experience, however, suggests that such access is not universally available within all health boards. This variation requires some patients to return to their GP to be referred without any additional benefit to either the patient or GP. It is proposed that all boards should clearly define the process and provide a mechanism whereby AHPs can refer direct to other clinical specialties, where appropriate, for example orthopaedic surgery, neurosurgery, rheumatology and pain management services.

Standard K
Process for Onward Referral from Musculoskeletal (MSK) services to Other Clinical Specialties

Quality Indicator
AHP services should have a documented process for onward referral, when and where appropriate.

7. Evidence of Implementation

Audit and service evaluation are important factors in improving musculoskeletal service provision[28,148]. Some potential examples of implementation of the standards are outlined in Table 5.

Table 5: Evidence of Implementation – Examples	
Standard	**Evidence of Implementation (Examples Only)**
First Contact Considerations	
A: Screen for Serious Pathology Indicators (Red Flags)	Use of GP web-based electronic advice and guidance tools with serious pathology indicators agreed across all musculoskeletal services. Audit of implementation of national pathways such as SIGN Guidelines. Audit of urgent referrals to secondary care linked to GP Quality Outcomes Framework (QOF).
B: Consistent Advice from all Contact Points Utilising NHS Inform Resources	Evidence of dissemination of NHS Inform contact advice, use of NHS Inform posters and wallet cards for service users. Dissemination of NHS Inform details on local Service User Information.
C: Medication/Analgesia as Appropriate	Dissemination and implementation of analgesic advice. Review of prescribing practices.
D: Appropriate Investigations	Audit of referrals to radiology and other diagnostic services.
E: Equal Opportunities to Access MSK Pathways via Self or Healthcare Professional Referral	Evidence of standardised and equitable access to AHP services.

Table 5: Evidence of Implementation – Examples – continued	
Routine Allied Health Professional Service Provision	
F: NHS Board Working to Current National Waiting Time Targets	Evidence of capacity and demand mapping across all AHP services with empirical evidence of waiting time progress.
G: Appropriate Use of Different Modes of Clinical Consultations	Evidence of different modes of consultation, face to face, telephone and video consultations. Standardised assessment procedures and advice, evidence through notes and record audits.
H: Management Plan Discussed and Agreed as per Pathways	Agreed standardised musculoskeletal pathways *in situ* with audit evidence of implementation.
Potential Onward Referral Work Up	
I: Clinical Supervision Framework with Case Review Policy	Supervision standard operating procedures in situ for all AHPs with documented evidence of peer reviews and outcomes.
J: MSK Service Access to Investigations as Appropriate	Agreed access to diagnostic services for AHPs, as appropriate, and audit of implementation.
K: Process for Onward Referral	Agreed pathways for referral from AHP services to secondary care services, where appropriate and evaluation of implementation and use.

8. Conclusions

The outlining and implementation of these standards is only one step in improving musculoskeletal care in Scotland. It is hoped that the framework will stimulate debate and evolve as the national musculoskeletal redesign programme progresses in the coming years.

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Authors
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Tracey Cassidy
Simon Johnstone
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