



Rheumatology and Conditions of the Musculoskeletal System (including Trauma)

One in a series of curriculum statements produced by the Royal College of General Practitioners:

- 1 Being a General Practitioner**
- 2 The General Practice Consultation**
- 3 Personal and Professional Responsibilities**
 - 3.1 Clinical Governance
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Authors: Dr Elspeth Wise, Professor Jonathan Leach, Dr Adam Fraser, Professor Steve Field

Contributors: Dr Lesley Kay, Professor Martin Underwood, Professor Tim van Zwanenberg, Dr John Dickson, Dr Michael Burke, Dr Martin Wilkinson, Dr Mairi Scott, Dr Mike Deighan, Professor Hywel Thomas, Dr Amar Rughani, Dr Stephen Kelly, Dr Ian MacDonald, Professor David Wall, Professor Christopher Buckley, Dr Caroline Gordon, Dr Karim Raza, John Shaw, Joy Dale, the Midland Faculty of the RCGP, the Committee of the Primary Care Rheumatology Society, Arthritis Research Campaign (ARC)

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Key messages

- Most musculoskeletal conditions are chronic conditions that cause significant disability and have huge resource implications because of incapacity to work.
- Traditionally general practitioners' training in musculoskeletal problems has been limited.
- Appropriate referral to allied health professionals, complementary therapists and secondary care is a key competence for general practice.

Introduction

For the purpose of this RCGP curriculum statement, ‘musculoskeletal problems’ include orthopaedic conditions, rheumatological conditions and trauma. This statement relates to the clinical management of these problems.

Rationale for this curriculum statement

Musculoskeletal disorders are common, accounting for 15–20% of GP consultations,¹ and cause a significant amount of morbidity and disability. This is predicted to increase as the population ages and the prevalence of risk factors for some musculoskeletal disorders also increases.² As general practitioners (GPs) are the first point of contact for patients in the United Kingdom, it is essential that they are adequately equipped to manage this large part of their workload.

At present it is estimated that around 17.3 million people in the UK, which is over one third of the adult population, have back pain. Up to 8.5 million people have joint pain, over 4.4 million have moderate/severe osteoarthritis and over 650,000 have inflammatory arthritis.³ Three per cent of patients presenting to a children’s admissions unit had a musculoskeletal complaint.⁴

Table 1: Musculoskeletal disease prevalence rates (per 100,000 person years at risk)

<i>Disease</i>	<i>All Ages (>16)</i>	<i>(95% CI)</i>
All musculoskeletal events	13,275	(13,215, 13,336)
Soft-tissue rheumatism and chronic widespread pain	4068	(4034, 4104)
Back pain	3747	(3715, 3779)
Osteoarthritis	1724	(1702, 1746)
Rheumatoid arthritis	215	(207, 223)
Polymyalgia rheumatica	165	(159, 172)
Osteoporosis	135	(129, 141)
Ankylosing spondylitis	37	(34, 40)
Systemic lupus erythematosus SLE	13	(12, 15)
Scleroderma	6	(5, 7)
Gout	6	(4, 7)

The vast number of individuals involved means that musculoskeletal conditions have huge resource implications. The total cost of back pain alone to the economy has been estimated at between 1% and 2% of gross national product and the NHS/community care services spend over £1 billion on services for back pain. In 1999–2000 £2148 billion was spent on Incapacity Benefit payments to people with arthritis and related conditions.³

Musculoskeletal conditions are not only common and costly to the economy but they also have major impacts on patients' lives and in the Health Survey for England of 2001 diseases of the musculoskeletal system are the most common cause of disability (40%).⁵

Educational interventions improve not only GPs' confidence in managing musculoskeletal conditions, but can also, for example, help reduce prescribing of non-steroidal anti-inflammatory drugs (NSAIDs),⁶ a class of drugs that the NHS spent roughly £170 million of the drug budget on in 1999 in England and Wales, and that have a significant side effect profile.⁷ This does not include the costs of co-prescribing gastro-protective agents. Intake of NSAIDs has been associated with an estimated 2000 deaths a year in the UK and a four-fold to five-fold increase in gastrointestinal bleeding.⁷

UK health priorities

Most musculoskeletal disorders are chronic conditions; their management presents a number of challenges to the GP. Chronic conditions have been identified by the Department of Health (DH) as being a focus for primary care.

The 2004 *NHS Improvement Plan for England*⁸ suggested that people with chronic conditions should be supported locally and that they should have high-quality personalised care to meet their needs. Patients should be able to take greater control of their own treatment and to have the majority of their care close to home. Improved management of chronic conditions would lead to fewer emergency admissions and fewer admissions for inpatient care.

National guidance for musculoskeletal disorders includes the *Musculoskeletal Services Framework* (2006)/NICE guidance on falls/ARMA standards of care (see the section on learning resources).

GPs need to lead on the diagnosis and management of common musculoskeletal conditions as well as being aware of uncommon but important conditions and to be able to manage or refer these appropriately. The GP has a particular role in the long-term management of chronic pain and disability. GPs may also be involved in life-saving procedures in patients who have suffered trauma. They are very likely to be involved in the pre-hospital management of less serious trauma and in the post-hospital management of all types of patients. GPs need to be aware of and deal with special situations such as non-accidental injury in both children and elderly people.

In 1995 Lanyon *et al.* published the results of a questionnaire survey of specialty registrars (GP) asking about their musculoskeletal education.⁹ Overall their education was rated as inadequate. There is evidence to show that in junior doctors GALS (gait, arms, legs, spine) teaching improves confidence and encourages examination. A list of core clinical topics has been identified in the ARC (arthritis research campaign) *Learning Guide for General Practitioners and General Practice Registrars on Musculoskeletal Problems*.¹⁰

Learning Outcomes

The following learning objectives describe the knowledge, skills and attitudes that a GP requires when managing patients with musculoskeletal problems. This curriculum statement should be read in conjunction with the other RCGP curriculum statements in the series. The full range of generic competences is described in the *core* RCGP curriculum statement 1, *Being a General Practitioner*.

Primary care management

- Manage primary contact with patients who have a musculoskeletal problem.
- Explain the aetiology and natural history of common and important musculoskeletal conditions.
- Describe the roles of the primary healthcare team, allied health professionals, complementary therapists and secondary care (e.g. in shared-care protocols), and referring to them appropriately.
- Describe the indications for referral within a suitable time frame to the most appropriate healthcare practitioner (e.g. GPwSI, physiotherapist, podiatrist, osteopath, chiropractor, orthopaedic surgeon and rheumatologist).

The knowledge base

Symptoms:

- Inflammation – pain, swelling, redness, warmth
- Lack of function – weakness, restricted movement, deformity and disability
- Injuries – cuts, bruises, wounds
- Systemic manifestations – rashes, tiredness, nerve compression, etc.

Common and/or important conditions:

- Acute back/neck pain
- Chronic back/neck pain
- Shoulder pain
- Knee pain
- Soft-tissue disorders
- Osteoarthritis
- Osteoporosis
- Somatisation/fibromyalgia and allied syndromes
- Pain management
- Acute arthropathies

- Chronic inflammatory arthropathies
- Polymyalgia rheumatica and allied conditions
- Awareness of rare diseases
- Chronic disability
- Common injuries.

NB: these topics should be considered throughout the age range including children.

Investigation:

- Indications for plain radiography, ultrasound, CT and MR scan including the use of tools such as the ‘Ottawa Rules’ⁱ
- General rules of X-ray interpretation
- Implications of ‘Misses’ on X-rays, common errors
- Indications for additional investigations, for example blood tests.

Treatment:

- Understand the principles of treatment for common conditions managed largely in primary care including the use and monitoring of NSAIDs and disease-modifying drugs
- Knowledge of when joint injections and aspirations are appropriate in general practice and the ability to perform when appropriate, e.g. shoulder and knee joints and injections for tennis and golfer’s elbow
- Understand the roles of allied health professionals (nursing, physiotherapy, chiropody, podiatry, occupational therapy, counselling and psychological services)
- Chronic disease management including systems of care, multidisciplinary teamwork and shared-care arrangements.

Emergency care:

- The initial management of the patient who has been burnt
- To be aware of the safety of the patient, the scene of the incident and medical staff
- To be aware of how to summon help in an emergency
- Be competent in basic life support (adult and paediatric), the use of simple airway adjuncts (for example oropharyngeal airway and pocket mask) and the safe use of a defibrillator
- Be competent in stopping haemorrhage
- Be competent in reducing pain by the use of analgesia or other methods
- Be aware of the principles of major incident management
- Recognise referrals requiring emergency action to save life or prevent serious long-term sequelae.

Prevention:

- Advise regarding appropriate levels of exercise
- Health promotion regarding accident prevention.

ⁱ www.gp-training.net/rheum/ottawa.htm

Person-centred care

- Communicate health information effectively to promote better outcomes, e.g. use positive terms such as ‘wear and repair’.
- Communicate truthfully and sensitively to patients for whom therapeutic options have been exhausted, and share uncertainty when the patient wants this.

Specific problem-solving skills

- Intervene urgently when patients present with trauma in a primary care setting, e.g. basic life support, control of haemorrhage, summoning help.
- Describe the epidemiology of musculoskeletal disorders at all ages, and apply this when developing a differential diagnosis.
- Assess the mechanism of injury when considering diagnosis.
- Distinguish inflammatory from non-inflammatory conditions.
- Assess the possibility that musculoskeletal symptoms can be due to psychological causes (somatisation).
- Describe when blood tests and imaging methods are required for diagnosis, how to interpret them and how they influence management.

A comprehensive approach

- Describe problems that can be caused by the treatment of musculoskeletal disorders (e.g. gastrointestinal bleeds, osteoporosis, coronary heart disease, radiation damage) and explain primary and secondary prevention of these.
- Advise patients regarding what they are physically able to do, according to their level of disability.

Community orientation

- Explain how to access available resources, e.g. educational material such as the ARC information leaflets, support groups.
- Facilitate self-help strategies to empower the patient, e.g. self-treatment measures, the expert patient programme (Department of Health), Challenging Arthritis Programme (Arthritis Care) and local exercise programmes.
- Avoid investigations or treatment that are unlikely to alter outcomes, so that availability of these resources is increased (e.g. imaging methods).
- Appreciate the resource implications of incapacity for work due to musculoskeletal conditions.
- Prioritise referrals accurately so people with minor conditions do not potentially compromise the care of those with more serious conditions (e.g. referrals for joint replacements, non-life threatening orthopaedic conditions).
- Identify when referral to complementary medical services is justified, considering that many services have limited NHS availability or are only available privately.

A holistic approach

- Recognise that psychosomatic symptoms are commonly described as musculoskeletal problems, and that musculoskeletal problems often have an important psychological component.
- Consider the physical, psychological and social impact of musculoskeletal conditions on individuals and their carers (e.g. problems with fatigue, altered body image, work, impact on family relationships and sexual issues).
- Recognise the psychological effects of trauma (e.g. post-traumatic stress disorder).

- Assess the likelihood of occupational exposure as a cause of musculoskeletal disease (e.g. repetitive strain injury) and advise regarding the likely prognosis in relation to the occupation.

Contextual aspects

- Describe the potential effect on the health of patients where services are deficient and have frequent long waiting times (e.g. imaging services, physiotherapy and allied professions, hospital-based services including consultant opinion and interventions).
- Recognise how geographical distance influences the treatment of trauma in a primary care setting.
- Describe the systems of care for rheumatological conditions, including the roles of primary and secondary care, shared-care arrangements, multidisciplinary teams and patient involvement.

Attitudinal aspects

- Demonstrate empathy and compassion towards patients with incurable, disabling or painful musculoskeletal conditions.
- Provide adequate information for informed consent before any procedure is undertaken.
- Recognise the emotional impact that dealing with trauma and disability can have on the GP.

Scientific aspects

- Describe the key national guidelines that influence healthcare provision for musculoskeletal problems (e.g. the NICE guidelines, RCGP low back pain guidelines, SIGN guidelines, etc.).

Psychomotor skills

- Demonstrate complete examination of the following areas:
 - ◆ the neck and back
 - ◆ the shoulder, elbow, wrist and hand
 - ◆ the hip, knee and ankle.
- Demonstrate competence in suturing techniques and applying simple dressings.

Further Reading

Examples of relevant texts and resources

HAKIM A AND CLUNIE G. *Oxford Handbook of Rheumatology* Oxford: Oxford University Press, 2002

JONES R, BRITTEN N, CULPEPPER L, *et al.* (eds). *Oxford Textbook of Primary Medical Care* Oxford: Oxford University Press, 2004

ROYAL COLLEGE OF GENERAL PRACTITIONERS. *Clinical Guidelines for the Management of Acute Low Back Pain* London: RCGP, 2001

ROYAL COLLEGE OF RADIOLOGISTS. *Making the Best Use of a Department of Clinical Radiology. Guidelines for doctors (5th edn)* London: RCR, 2004

SNAITH M. *ABC of Rheumatology (3rd edn)* London: BMJ Books, 2004

WARRELL D, COX TM, FIRTH JD, BENZ EJ (eds). *Oxford Textbook of Medicine (4th edn)* Oxford: Oxford University Press, 2004

WHYTE G, HARRIES M, KING J. *ABC of Sports and Exercise Medicine (3rd edn)* London: BMJ Books, 2005

Web resources

Arthritis Care

Arthritis Care is the largest UK-wide voluntary organisation working with and for all people with arthritis. It aims to ‘promote independence and empower people with arthritis to live positive lives as well as raise awareness of the condition’. Its website provides information for patients and health professionals.

www.arthritiscare.org.uk

Arthritis Research Campaign

This is a useful source of information for health professionals and for patients.

www.arc.org.uk

Bandolier evidence base on arthritis, bones and joints

www.jr2.ox.ac.uk/bandolier/booth/booths/bones.html

Clinical Evidence

Clinical Evidence is a website owned by BMJ Publishing Group Limited. Clinical Evidence summarises the current state of knowledge and uncertainty about the prevention and treatment of clinical conditions, based on thorough searches and appraisal of the literature. It is neither a textbook of medicine nor a set of guidelines. It describes the best available evidence from systematic reviews, randomised controlled trials and observational studies where appropriate, and if there is no good evidence it says so.

www.clinicalevidence.com/ceweb/conditions/msd/msd.jsp

Department of Health – Musculoskeletal Services Framework

www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4138413&chk=HWmMzS

MOVE: making osteoarthritis matter

This site provides accessible and comprehensive information on osteoarthritis for patients, the primary care team and secondary care. It includes exercise regimes for patients.

www.move.uk.net

National Institute for Health and Clinical Excellence (NICE)

A useful source of information:

- Referral guidelines for OA hip/knee
- Guideline CG4: Head injury: triage, assessment, investigation and early management of head injury in infants, children and adults
- Guideline CG21: the assessment and prevention of falls in older people
- Technology Appraisal 2 – hip disease – replacement prostheses
- Technology Appraisal 16 – knee joints (defective – autologous cartilage transplantation)
- Technology Appraisal 27 – osteoarthritis and rheumatoid arthritis – COX II inhibitors
- Technology Appraisal 35 – arthritis (juvenile idiopathic) – etanercept
- Technology Appraisal 36 – rheumatoid arthritis – etanercept and infliximab
- Technology Appraisal 44 – hip disease – metal on metal hip resurfacing
- Technology Appraisal 72 – rheumatoid arthritis – anakinra
- Guidelines in development: osteoarthritis and osteoporosis.

www.nice.org.uk/

National Osteoporosis Society

This is a useful source of information for health professionals and for patients.

www.nos.org.uk

Primary Care Rheumatology Society

The Primary Care Rheumatology Society (PCR) was set up in 1986 by a group of GPs with a special interest in rheumatology. PCR's aims are to improve education in rheumatology in general practice, to set up relevant research topics, to increase communication between hospital rheumatologists and other relevant health professionals, with the ultimate aim of improving care for patients with rheumatic disease.

PCR has close links with the British Society for Rheumatology, the ARC Epidemiology Unit at the University of Manchester, the Rheumatology Department at Bristol Royal Infirmary, and is grateful for the help and support of consultants in the many rheumatology units throughout the country. PCR has a steadily growing membership and has become an important source of advice, education, ideas and initiatives in rheumatology in general practice. PCR is now looking forward to a new method of educating GPs. The development of the Diploma in Primary Care Rheumatology, jointly with the University of Bath, was a major step towards this goal. It allows GPs to enrol at any time and to learn at their own pace to suit practice and personal circumstances. The Diploma is a unique course in musculoskeletal medicine. It is written by GPs for GPs and thus accurately reflects the diagnosis and management of the kind of problems that appear in our surgeries daily, amounting for some of us to a hefty 25% of our general practice workload.

www.pcrsociety.org.uk/

PRODIGY guidance

PRODIGY is a source of clinical knowledge, based on the best available evidence, about the common conditions and symptoms managed in primary care. The team at the Sowerby Centre for Health Informatics at Newcastle has developed, and keeps up to date, around 170 guidance topics for both acute and chronic illnesses, including most of the conditions that can be managed by extended formulary nurse prescribers. The

guidance is structured to support both decision-making in the consultation and learning outside of the consultation – so that knowledge can be accessed in an appropriate format where and when it is needed. The information includes:

- Musculoskeletal disorders

www.prodigy.nhs.uk/ClinicalGuidance/ReleasedGuidance/GuidanceList.asp?specialityGuidanceList=13

- Lower back pain

www.prodigy.nhs.uk/guidance.asp?gt=back%20pain%20-%20lower

- Ankylosing spondylitis

www.prodigy.nhs.uk/guidance.asp?gt=Ankylosing%20spondylitis.

Scottish Intercollegiate Guidelines Network

The Scottish Intercollegiate Guidelines Network (SIGN) was established in 1993 by the medical Royal Colleges to develop evidence-based national guidelines for NHS Scotland. In 2005, SIGN became part of NHS Quality Improvement Scotland. It has a number of useful guidelines relating to musculoskeletal problems including:

- 31: Report on a recommended referral document
- 48: Management of early rheumatoid arthritis
- 56: Prevention and management of hip fractures in older people
- 71: Management of osteoporosis.

www.sign.ac.uk/

Promoting Learning about Musculoskeletal Problems

Work-based learning – in primary care

Most musculoskeletal disorders are primarily managed in primary care. It is imperative that specialty registrars (GP) have a large primary care input into their education and it is the role of course organisers and programme directors to facilitate this.

As the numbers of medical students increase, more and more student teaching is taking place in primary care and GPs should be confident in their musculoskeletal skills and knowledge to allow them to do this. GPs' input into the teaching of allied health professionals is also valuable and vice versa.

Work-based learning – in secondary care

Secondary care educators (e.g. rheumatologists, orthopaedic surgeons) can complement the training from general practice with specific focus on referrals/changes in practice/innovations and new treatments.

Non-work-based learning

- ARC educational research fellowships.
- ARC primary care research fellowships.
- British Institute of Musculoskeletal Medicine – www.bimm.org.uk.
- Modular course in musculoskeletal medicine.
- Injection therapies.
- MSc – Manchester/London.

RCGP Learning Unit – *Professional Development Series – Update in Rheumatology for General Practitioners*

The RCGP, in partnership with the University of Bath School for Health, has developed a series of courses called the *Professional Development Series* that are user friendly and relevant to everyday practice. Primarily developed for GPs and using a GP's perspective, multiprofessional teams have also found the materials to be a useful resource. While they are an excellent choice for established GPs' PDPs (professional development portfolios), specialty registrars will also find them very useful because all relevant learning goals are covered.

These distance education courses are specifically relevant to primary care. They feature an interactive CD-ROM showing videos of real doctor–patient consultations, information text, resource material and links to professional websites. The courses stimulate knowledge through interactive questions and answers. They also challenge the GP's thinking around more complex issues and provide the opportunity for independent peer review with optional tutor-marked assignments and clinical audits. Each course is accompanied by a paperback reference book (also on the CD). The courses are arranged into small packages of information, allowing you to cover a clinical condition quickly when time allows.

Additionally, there are optional one-day clinical skills meetings that are an invaluable opportunity to meet peers and tackle real cases and problems, and engage in debate with key professionals in the area. The clinical meetings are organised through the RCGP's Courses and Conferences Department.

The *Update in Rheumatology* is a flexible, case-based short course for GPs. The course consists of videos of real patient consultations on CD, a textbook on rheumatological conditions seen in general practice and one-day clinical meetings. It aims to update GPs in diagnosis, investigation and management, including referral to secondary care, of common and 'red flag' rheumatological conditions. The course is evidence-based and encourages audit of aspects of the care of patients with a rheumatological disorder in order to evaluate the user's own practice in specific rheumatological areas.

The course is divided into 10 topic areas:

- Shoulder pain
- Aches and pains
- Osteoporosis
- Osteoarthritis
- Low back pain
- Polymyalgia rheumatica
- Rheumatoid arthritis
- Scleroderma
- Gout
- Systemic lupus erythematosus.

Full details are available via the web link: www.rcgplearning.org.

Learning with other healthcare professionals

Expert allied health professionals are another important resource for GP learning. Musculoskeletal disorders are an area where teamwork is essential for the optimal management of conditions. This may involve members from orthodox medicine, e.g. nurses, physiotherapists, social workers, occupation therapists, podiatry/chiroprody and the secondary care team, but may also include complementary and alternative medicine practitioners, e.g. chiropractors, osteopaths, herbalists. Learning about musculoskeletal conditions should reflect this.

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