



A holistic approach to chronic pain management that involves all stakeholders: change is needed

Hans-Georg Kress, Dominic Aldington, Eli Alon, Stefano Coaccioli, Beverly Collett, Flaminia Coluzzi, Frank Huygen, Wolfgang Jaksch, Eija Kalso, Magdalena Kocot-Kępska, Ana Cristina Mangas, Cesar Margarit Ferri, Philippe Mavrocordatos, Bart Morlion, Gerhard Müller-Schwefe, Andrew Nicolaou, Concepción Pérez Hernández & Patrick Sichère

To cite this article: Hans-Georg Kress, Dominic Aldington, Eli Alon, Stefano Coaccioli, Beverly Collett, Flaminia Coluzzi, Frank Huygen, Wolfgang Jaksch, Eija Kalso, Magdalena Kocot-Kępska, Ana Cristina Mangas, Cesar Margarit Ferri, Philippe Mavrocordatos, Bart Morlion, Gerhard Müller-Schwefe, Andrew Nicolaou, Concepción Pérez Hernández & Patrick Sichère (2015) A holistic approach to chronic pain management that involves all stakeholders: change is needed, Current Medical Research and Opinion, 31:9, 1743-1754, DOI: [10.1185/03007995.2015.1072088](https://doi.org/10.1185/03007995.2015.1072088)

To link to this article: <https://doi.org/10.1185/03007995.2015.1072088>



Accepted author version posted online: 14 Jul 2015.
Published online: 20 Aug 2015.



Submit your article to this journal [↗](#)



Article views: 9512



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 34 View citing articles [↗](#)

Commentary

A holistic approach to chronic pain management that involves all stakeholders: change is needed

Hans-Georg Kress

Department of Special Anaesthesia and Pain Therapy,
Medizinische Universität/AKH Wien, Vienna, Austria

Dominic Aldington

Hampshire Hospitals NHS Trust, Winchester, Hants,
UK

Eli Alon

Universitätsspital Zurich, Zurich, Switzerland

Stefano Coaccioli

Santa Maria General Hospital, Terni, Italy

Beverly Collett

University Hospitals of Leicester NHS Trust, Leicester,
UK

Flaminia Coluzzi

Department of Medical and Surgical Sciences and
Biotechnologies, Sapienza University of Rome, Italy

Frank Huygen

University Hospital, Rotterdam, The Netherlands

Wolfgang Jaksch

Wilhelminenspital der Stadt Wien, Austria

Eija Kalso

Pain Clinic, Department of Anaesthesiology, Intensive
Care and Pain Medicine, University of Helsinki, and
Helsinki University Hospital, Finland

Magdalena Kocot-Kępska

Department of Pain Research and Treatment,
Collegium Medicum Jagiellonian University, Kraków,
Poland

Ana Cristina Mangas

UNIDOR, Centro Hospitalar de Leiria, Leiria, Portugal

Cesar Margarit Ferri

Hospital General Universitario de Alicante, Spain

Philippe Mavrocordatos

Clinique Cecil, Lausanne, Switzerland

Bart Morlion

University Hospitals Leuven, Belgium

Gerhard Müller-Schwefe

Schmerz- und Palliativzentrum, Göttingen, Germany

Abstract

Chronic pain affects a large proportion of the population, imposing significant individual distress and a considerable burden on society, yet treatment is not always instituted and/or adequate. Comprehensive multidisciplinary management based on the biopsychosocial model of pain has been shown to be clinically effective and cost-efficient, but is not widely available. A literature review of stakeholder groups revealed many reasons for this, including: i) many patients believe healthcare professionals lack relevant knowledge, and consultations are rushed, ii) general practitioners consider that pain management has a low priority and is under-resourced, iii) pain specialists cite non-adherence to evidence-based treatment, sub-optimal prescribing, and chronic pain not being regarded as a disease in its own right, iv) nurses', pharmacists' and physiotherapists' skills are not fully utilized, and v) psychological therapy is employed infrequently and often too late.

Many of the issues relating to physicians could be addressed by improving medical training, both at undergraduate and postgraduate levels – for example, by making pain medicine a compulsory core subject of the undergraduate medical curriculum. This would improve physician/patient communication, increase the use of standardized pain assessment tools, and allow more patients to participate in treatment decisions. Patient care would also benefit from improved training for other multidisciplinary team members; for example, nurses could provide counseling and follow-up support, psychologists offer coping skills training, and physiotherapists have a greater role in rehabilitation. Equally important measures include the widespread adoption of a patient-centered approach, chronic pain being recognized as a disease in its own right, and the development of universal guidelines for managing chronic non-cancer pain.

Perhaps the greatest barrier to improvement is lack of political will at both national and international level. Some powerful initiatives and collaborations are currently lobbying policy-making bodies to raise standards and reduce unnecessary pain – it is vital they continue.

Why change is necessary

Chronic pain may be defined as continuous, long-term pain lasting more than 12 weeks or after the time that healing would have been expected¹. It affects a large proportion of the general population – approximately one in five adults, which is equivalent to 96 million people in Europe^{2,3}. Its impact on individual patients and wider society is considerable: sleep, work and relationships are compromised, depression and anxiety are common, and some patients express the wish to die^{3,4}. The lifetime prevalence of suicide attempts ranges from 5% to 14% in people with chronic pain, and the risk of death by suicide is at least double that in control populations⁵. Despite the significant individual distress caused, however, there is evidence to suggest that the prevalence and societal burden of chronic pain are under-estimated, and that treatment is not always instituted and/or adequate^{6–8}. This is exemplified by findings that the average

Andrew Nicolaou

St. Georges Hospital, London, UK

Concepción Pérez Hernández

Hospital Universitario de la Princesa, Madrid, Spain

Patrick Sichère

Hôpitaux de Saint-Denis, Paris, France

Address for correspondence:

Professor Hans-Georg Kress, Department of Special Anaesthesia and Pain Therapy, Medical University/ AKH Vienna, Waehringer Guertel 18-20, 1090 Vienna, Austria. Tel: +43 1 4040041440; Fax: +43 1 4040064220; anaesthesie-schmerz@meduniwien.ac.at

Keywords:

Biopsychosocial model – Chronic pain – Improved training – Multidisciplinary management – Patient-centered approach – Political will – Standardized pain assessment tools

Accepted: 24 June 2015; published online: 18 August 2015
Citation: Curr Med Res Opin 2015; 31:1743–1754

patient in Europe with chronic pain has experienced the condition for 7 years⁹ and around one-fifth (21%) for 20 years or more². The shortfall in care has a particular impact on the elderly population because the prevalence of chronic pain increases with advancing years; 68% of women and 38% of men aged 70 have experienced pain lasting ≥ 6 months¹⁰. The rapid increase in the elderly demographic – the European Commission predicts that almost 25% of the European Union (EU) population will be >65 years of age by 2035¹¹ – seems likely to exacerbate the problem of unmet need.

Consensus point

Evidence suggests that the prevalence and societal burden of chronic pain are under-estimated, and that treatment is not always instituted and/or adequate.

Furthermore, the cost to society of sub-optimal pain management is not only measured in terms of individual suffering; there is a financial price to pay. A recent report published under the aegis of the European Federation of IASP Chapters (EFIC) estimated that the overall financial burden in Europe (i.e. both direct and indirect costs) could be as much as €300 billion per year, mostly in the form of lost productivity, social security and welfare payments¹². This equates to around 1.5%–3.0% of gross domestic product^{13,14} and greatly exceeds the direct cost of pain management, so that improvements in the clinical management of pain could bring significant economic and societal rewards¹².

When appropriately applied, the comprehensive multidisciplinary management of chronic pain, utilizing a range of strategies and specialist treatments, has repeatedly been shown to be a clinically effective and cost-efficient alternative to single-discipline treatment or usual care^{15–18}. The benefits consistently reported by patients extend not only to pain relief^{19,20}, but also to improvements in physical functioning, quality of life, emotional distress, behavioral outcomes and self-esteem^{21–24}. Although the biopsychosocial model of pain, and the contributions to the patient's condition made by physical dysfunction, beliefs and coping strategies, distress, illness and social interactions are now widely accepted²⁵, the corresponding introduction of multidisciplinary teams employing specialist treatments tailored to individual patient needs has not always followed, even in the most advanced countries.

The international Change Pain Advisory Board, comprising pain specialists from Europe and the USA, aims to increase the awareness and knowledge of chronic pain, identify best practice in pain management and provide guidance on the treatment of patients with pain. Regular meetings are held to discuss specific topics and try to achieve consensus on ways of achieving these objectives. On the 29th and 30th November 2013, the Board met to discuss possible reasons for the apparent under-diagnosis and sub-optimal management of chronic, non-cancer pain. To aid their discussion, Board members had the results of a survey of various stakeholder groups in the treatment of chronic pain (including patients, nurses, physicians, psychologists, physiotherapists, pharmacists and funders of healthcare) which asked about any shortcomings in pain management from their individual perspectives, and how these may be addressed. A range of measures and solutions was then assessed, all based upon the patient-focused, holistic and multidisciplinary approach mentioned above.

Rationale

In order to discover the views of the various stakeholder groups on how the management of chronic non-cancer pain could be improved, and how the best practice could be extended more widely, a literature review was commissioned. This involved searching PubMed, pain society websites and Thomson Research using Boolean operators and a variety of relevant search terms, as well as industry-sponsored reports, patient advocacy information, patient interviews and surveys. The documents accessed covered the years from 2004 to 2013 and focused mostly – but not exclusively – on five major European countries: France, Germany, Italy, Spain and the United Kingdom. Copies of the review report were circulated to Advisory Board members before the meeting. (The list of more than 90 references upon which the report was based is available online as supplemental information.)

Discussion of issues identified by stakeholders

The various stakeholder groups involved in the treatment of chronic pain are known, but the interdependencies between them are unclear. By identifying issues important to each of the different groups, it was hoped to clarify the relationships between them and move towards a more collaborative, holistic approach to managing patients with chronic pain.

Patients

Patients with chronic pain visit a healthcare professional three times as frequently as the general adult population – 12 times in 6 months on average²⁶. Most have their initial consultation with a general practitioner, but only one in five come away from this consultation feeling hopeful about their chronic pain³. In Europe, only 2% of patients with chronic pain report being managed by a pain specialist², even though 68% of respondents to one survey were still in pain for >12 hours a day despite treatment³, and 95% of patients in another survey supported by EFIC and the World Institute of Pain remained in moderate or severe pain 1 year after starting treatment²⁷.

Many patients feel that healthcare professionals lack relevant knowledge about chronic pain, suspecting that they do not receive adequate training in this field, and some patients are skeptical about their doctor's ability to treat it effectively. There is a widely held belief among the patient population that their chronic pain is unavoidable and unmanageable. Recurring themes are that patients are

Table 1. Use of pain assessment tools by primary care physicians²⁸.

Country	Number	Percentage of PCPs using tools	Percentage of PCPs using tools, but not recording in notes
Belgium	102	42	23
Denmark	101	36	19
France	100	60	15
Germany	100	59	12
Ireland	101	37	8
Italy	100	39	28
The Netherlands	100	42	10
Norway	100	63	5
Poland	100	65	22
Portugal	100	48	38
Spain	101	52	11
Sweden	100	56	16
UK	104	26	22
Total	1309	48	17

PCP = primary care physician.

Johnson M, Collett B, Castro-Lopez JM.²⁸

not given enough time to discuss their symptoms, doctors are more concerned with treating underlying conditions than controlling patients' pain, and that physicians are dismissive, appearing to consider patients' pain to be 'all in the mind'.

Thus there is a strong need for doctors to communicate the biopsychosocial nature of chronic pain and the importance of its psychological component, as well as evidence that treating the underlying condition generally has a beneficial effect on pain relief. This problem of poor physician/patient communication compromises the likelihood of developing a common understanding of the patient's condition and realistic expectations of treatment. Effective communication is especially important with respect to the severity of pain, yet a survey of over 1000 primary care professionals across 13 European countries found that only 48% used pain assessment tools, primarily visual analogue scales and numerical rating scales²⁸. Even when these tools are used, the results are often not documented in the patients' records²⁸ (Table 1). Also, greater involvement of patients' families and carers is needed, together with the provision of support programs.

There is a strong feeling among patients that they should be regarded as credible by healthcare professionals and managed according to their individual needs. Further frustrations are caused by delays in diagnosis and referral, and many patients say they would appreciate more information and advice, both for themselves and for family members. In particular, there is a lack of advice on coping strategies.

Consensus point

Many patients believe their chronic pain cannot be managed, and the lack of information and advice provided by physicians means this misconception may go unchallenged, particularly as there is a lack of defined patient pathways and transferral algorithms.

Consensus point

Outside pain medicine, chronic pain has a low priority within healthcare systems, partly because it does not have a code in the World Health Organization (WHO) International Classification of Diseases, and also because the mechanisms underlying the transition from acute to chronic pain are still poorly understood.

Physicians

In most European countries, pain medicine does not exist as a specialty or at least a sub-specialty, so the qualifications and definition of a pain specialist remain arbitrary and obscure. The continuing lack of generally accepted curricula for education in pain medicine means that this situation must be accepted. Nevertheless, there are physicians who specialize in pain medicine, and their dissatisfaction with the management of chronic non-cancer pain in Europe is well established^{2,28,29}. Many primary care professionals believe that pain management is inadequate largely because it has a low priority within healthcare systems²⁸, with too few resources being directed towards chronic pain prevention and providing adequate treatment that follows defined patient pathways based on best practice models. Also, early diagnosis and intervention is crucial, but non-specialists' lack of training means that acute pain is often not optimally treated and progresses to chronic pain which, in turn, is also inadequately diagnosed and managed³⁰. Pain specialists attribute ineffective care mainly to non-adherence to evidence-based treatment, sub-optimal prescribing and a lack of effective treatments for difficult and mixed pain conditions. Although many patients with chronic pain are treated in general practice – and this will continue – the situation is exacerbated by a widespread shortage of pain specialists in most countries (e.g. one for every 32,000 people with pain in the UK³¹) and psychologists, as well as the lack of evidence-based practical guidelines for managing different types of chronic non-cancer pain. Furthermore, chronic pain continues to be generally regarded as a symptom, rather than as a disease in its own right (as stated in EFIC's 2001 Declaration on Pain³²). As it does not currently have a World Health Organization (WHO) International Classification of Diseases (ICD-10) code, it is not officially documented, does not appear in health statistics, or in reports for insurance company decision-makers, health authorities and political bodies. Furthermore, these conditions are not adequately remunerated in public healthcare systems. This creates a vicious circle, because treatment that is not remunerative is less likely to be carried out or fostered by institutional and private service providers.

Medications with a better balance between efficacy and side effects are required, which would allow patients to enjoy a better quality of life³³. In particular, many drugs currently prescribed for treating neuropathic pain are not licensed for this indication³⁴ although they are recommended by expert guidelines, which could be problematic. Many clinicians in Europe do not fully appreciate the complexity and care required in prescribing strong opioids to treat chronic non-cancer pain, with the consequent risk of inappropriate over- or under-prescription²⁸. This differs from the current situation in the USA, where – mainly because of a liberal prescribing policy – the diversion and misuse of prescription opioids has become a matter of public debate and political concern.

Nurses

Nurses often have the closest contact with patients, yet they feel that this frontline role is not always recognized and that they could contribute more to chronic pain management by providing support for patients and clinicians, who could then focus on more complex cases. For example, improving their knowledge of pain therapy would enable them to give more comprehensive advice on the importance of adequate medication, and encourage treatment adherence. In many countries, healthcare professionals – including pain physicians, psychologists and physiotherapists – have endorsed such a change and regard nurses as having a significant role in pain management programs (PMPs)³⁵. Currently, nurses are often the first healthcare professionals to learn of inpatients' pain problems, but have limited opportunities to act because of the legal and administrative restrictions on their profession in many European countries.

Pharmacists

Pharmacists can advise pain patients on a range of topics (including medication, potential drug interactions and side effects) and they are frequently consulted by patients about pain, yet pharmacists' skills are often not fully utilized³⁶. One particular responsibility is to provide advice and guidance on the use of over-the-counter (OTC) analgesic agents. Many of these are non-steroidal

anti-inflammatory drugs, which have a risk of severe side effects such as gastrointestinal bleeding, renal failure, strokes and myocardial infarction. Owing to their current incomplete understanding of chronic, non-cancer pain conditions and multimodal pain management concepts, additional education and training is required with regard to pain – especially in unprejudiced opioid use and patient self-management – in order to increase their professional ability and confidence.

Physiotherapists

Physiotherapists typically receive many more hours of pain-relevant training than medical students, yet few patients with chronic pain are referred for physiotherapy³⁷, and in Europe only around 20% have physiotherapy as part of their treatment¹². Also, patients want personalized care and to be involved in the evaluation of their treatment. In addition to their primary role of restoring physical functioning, physiotherapists are ideally placed to provide reassuring advice, explanation and education, as well as encouraging an early return to normal activity³⁸ and identifying psychosocial problems. Their input – in close collaboration with other health disciplines, occupational therapists and social workers – could play a major part in biopsychosocial rehabilitation. However, they require additional training in the multifaceted nature and multimodal management of chronic pain, especially with regard to appropriate medication use, pain mechanisms, and the importance of an early multidisciplinary approach³⁹. Self-management strategies, in particular, require a good working relationship between patient and physiotherapist, and can be highly effective⁴⁰. One barrier to greater involvement is availability: in some countries, most physiotherapists are in private practice and have limited opportunities to participate in multidisciplinary teams.

Psychologists

The multidimensional, biopsychosocial nature of chronic pain means that all relevant forms of intervention are required to prevent and treat it⁴¹. Integrating psychological therapy is recognized as being effective⁴², yet it may only be considered once pharmacological treatment has failed to provide adequate relief⁴¹ – too late for many patients – despite the fact that the biopsychosocial model of pain strongly implies that somatic and psychological therapies should be administered simultaneously. This may be partly because few clinical or health psychologists currently work in the primary care of pain patients³⁵, and also because physicians are not fully aware of the benefits of psychological therapy in managing chronic pain. Moreover, many patients may be unwilling to accept

that psychological care has a valuable role in the development of coping strategies, seeing it as a personal failure that implies their pain is ‘all in the mind’. Conversely, some psychologists may pay insufficient attention to the somatic element of therapy. An additional factor is that some guidelines have no recommendations on which psychological interventions should be considered for which specific problems, and some are not applicable to modern interventions employing a biopsychosocial approach. High quality evidence-based guidelines are needed⁴³ that offer a more holistic, biopsychosocial approach, and provide advice on the optimal format, content and duration of such treatment.

Consensus points

Psychological therapy is recognized as being an important component of pain management, yet is often considered only when pharmacological treatment has failed.

Physiotherapists and psychologists should be involved in decision-making for managing chronic pain, and their roles within multimodal pain management defined more clearly.

Payers

Purchasers of healthcare (e.g. health ministries, insurance companies, governmental bodies) provide the financial impetus for healthcare systems, and are faced with annual increases in the cost of medicines, devices such as pumps and stimulators, and non-pharmacological interventions, as well as inpatient and outpatient services. They focus very much on the cost of medicines and are apprehensive about the rise in total expenditure that would result from treating those patients with chronic pain who are currently under-diagnosed and under-treated. However, the indirect costs of the present situation to both themselves and society are not taken into account. Payers would prefer pharmaceutical companies to focus less on promoting their products to physicians, and more on clinical conditions and the organizations paying for treatment. The need for new analgesics is recognized, but these must demonstrate both superiority over current gold standards and acceptable cost–benefit profiles. A standardized diagnostic system and defined treatment pathways are required. These would enable clinicians to properly diagnose and manage pain, make appropriate and economical treatment decisions, and thereby simplify administration, reduce the cost of healthcare systems and improve standards in many countries⁴⁴.

Addressing the issues

Undergraduate and postgraduate education and training

Many of the issues relating to physicians – such as insufficient knowledge of pain medicine among non-pain specialists, which is a major barrier to optimal pain management⁴⁵ – can be tackled by improving medical training, both at undergraduate and postgraduate levels. For example, during undergraduate education in the UK the median time spent on pain management by a medical student is 13 hours, sometimes as little as 6 hours, and it is taught piecemeal rather than as a discrete subject⁴⁶. Pain medicine should be made a compulsory core subject of the medical curriculum in order to increase awareness and understanding of chronic pain, improve diagnostic and therapeutic skills, reduce the burden of suffering and improve patient care. EFIC has recently developed a Core Curriculum for Undergraduate Education in Pain Medicine and has called for a framework of training and certification standards in chronic pain to be established, incorporating: i) a core curriculum of basic and applied knowledge of pain; ii) a ‘toolkit’ of pain management resources; and iii) a recognized professional certificate or diploma in pain medicine⁴⁷. Widespread lack of awareness of the magnitude and impact of chronic pain among general practitioners and other non-pain specialists should also be countered, by encouraging them to participate in relevant Continuing Medical Education (CME). Examples include the biennial EFIC Pain in Europe Congresses, the international EFIC Pain Schools, the International Association for the Study of Pain (IASP) curricula on acute, chronic and cancer pain for physicians and other healthcare professionals, and the Pain Education Program which is part of the Change Pain initiative.

Patient care could also benefit from improved training for other members of the multidisciplinary team. For example, linking patient narratives with a better understanding of chronic pain could improve nursing practice⁴⁸. Nurses could also provide web-based counseling and follow-up self-management support for patients with chronic pain, using text-based communications and instant messaging. In a 4-week pilot study of such a system, patients reported it to be both motivating and supportive⁴⁹. Most pharmacists believe they would benefit from additional education and training, particularly in two specific areas: advising patients on self-medication for (mainly acute) pain, and the use of opioid analgesics for managing chronic pain (in accordance with physicians’ instructions) – consideration should be given to making appropriate pain management education in this area mandatory⁵⁰. Physiotherapists receive many more hours of pain-relevant training than medical students, and they could be more heavily involved in multidisciplinary pain

management, especially if given additional instruction on topics such as shared decision-making with patients⁵¹, interaction behavior modification therapy⁵², and the impact of their own beliefs and attitudes on patients⁵³. Cognitive behavioral therapy (CBT) has emerged as the non-pharmacological treatment of choice for chronic pain⁵⁴ and psychologists could benefit from broader education in specific CBT techniques – such as coping skills training – to help patients with self-management of their condition.

Consensus point

Additional standardized and structured education and training is required for all members of the multidisciplinary pain management team (i.e. physicians, nurses, physiotherapists, psychologists, pharmacists) at both undergraduate and postgraduate levels.

Diagnosis and treatment planning

Good physician/patient communication and the establishment of trust are essential for accurate assessment and diagnosis. In consultations, a patient-centered approach should be used that incorporates active listening, use of lay language and correcting patients’ misconceptions, in order to reduce non-adherence and improve prescription effectiveness⁵⁵. Evidence-based written information should be provided that is relevant, jargon-free and understandable, such as that available from EFIC as part of the European Year Against Pain (EYAP) awareness campaign. This type of authorized, expert-derived communication can help to provide reliable and sound guidance for pain patients, who otherwise may be confused – or even misled – by the explosion of unbalanced, biased and unsubstantiated details relating to chronic pain found on the Internet.

Patients should be offered the opportunity to participate in decisions about their treatment⁵⁵; this has been shown to be highly effective as they gain a sense of control over their lives^{40,56}. Those patients who are interested in finding out more about their condition can be told how to access self-help groups, professional articles and relevant authorized and trustworthy websites.

More extensive use of standardized pain assessment tools would give a greater insight into patients’ pain and can provide much valuable information during treatment. Physicians require pain tools that are quick and easy to use. The simplest are one-dimensional instruments such as visual analogue scales and numerical rating scales, which only measure the intensity of pain. More information can be obtained by using multidimensional instruments.

Examples include the Change Pain Scale, which records not only the current and target pain intensity but also the improvements required in six key parameters that affect quality of life⁵⁷, and the McGill Pain Questionnaire, which quantifies the patient's subjective pain experience from an intensity scale and three categories of word descriptors⁵⁸. The DN4 (Douleur Neuropathique 4) questionnaire can be useful for distinguishing neuropathic from nociceptive pain⁵⁹. In approximately 60% of patients with neuropathic pain, the pain is consistently localized to a circumscribed area⁶⁰ and a Localised Neuropathic Pain (LNP) Screening Tool has recently been developed by a panel of international experts for general practitioners. Four key questions about the patient's history, pain distribution and symptoms indicate a diagnosis of neuropathic pain/LNP. These instruments facilitate the setting of individual treatment targets and subsequently measuring progress towards them⁵⁷, but both patients and physicians feel that additional training on their use is required²⁸.

The roles of other members of the multidisciplinary team in the process of diagnosis and treatment planning could be extended. For example, nurses can play a useful role as the 'bridge' between the physician and patients (who are often more at ease with nurses than clinicians) by conveying important information about the treatment plan. Similarly, psychologists can provide valuable input about the patient's mental condition and help self-reporting in patients who lack verbal skills, and – along with physiotherapists – have an important role in rehabilitation. Community pharmacists could potentially reduce the use or over-use of inappropriate over-the-counter or prescription medicines.

Integrating a range of healthcare professionals into multidisciplinary pain management teams with effective channels of communication can lead to greater efficiency, enabling referral, diagnosis and intervention to be streamlined. This not only avoids the delays which cause frustration among patients, but helps to prevent deterioration in their condition. Evidence suggests that in people who wait 6 months for treatment, quality of life and psychological wellbeing decrease, and they experience depression⁶¹. To put this in perspective, chronic pain sufferers in Europe currently wait an average of 2.2 years between seeking help and receiving a diagnosis, and a further 1.9 years before it is adequately managed⁶¹. Thus there is considerable room for improvement.

Long-term management

Essentially, long-term management involves a switch from focusing on cure to focusing on care and rehabilitation. For many chronic pain patients, optimal management requires appropriate behavioral therapy, as well as input from a broad range of different healthcare professionals⁶².

The multidisciplinary team structure varies considerably, but might comprise pain specialists, specialist pain nurses, a primary care physician, clinical psychologist, physiotherapist, occupational therapist and sometimes a specialist pharmacist, with access to other specialists such as a neurosurgeon, psychiatrist, rheumatologist, orthopedist and neurologist⁴⁷. Team members should establish or follow existing clear management pathways for patients with chronic pain, and intervene early to prevent psychological co-morbidities and costly complications⁴⁷. However, in most countries pain medicine and pain specialists have not yet been defined or officially recognized within the corresponding healthcare systems.

Consensus point

Optimal management of chronic non-cancer pain requires the structured and recognized education of pain specialists, recognition of pain medicine, and a holistic multidisciplinary team approach with appropriate behavioral therapy.

The focus should shift to managing the patient's pain as well as treating the underlying condition. This approach offers the rapid initiation of evidence-based therapy according to individualized treatment plans, utilization of a wide array of pharmacological and non-pharmacological treatment options, and continuity of care delivered in a programmed and co-ordinated manner²⁴. Reductions in pain intensity have been demonstrated following multidisciplinary treatment for various chronic pain conditions, including low back pain^{19,63}, fibromyalgia⁶⁴ and temporomandibular disorders⁶⁵. Furthermore, pain relief is accompanied by improvements in physical functioning, quality of life, emotional stress and behavioral outcomes²⁴.

There are multiple guidelines for specific pain conditions, but no universal guidelines for the management of chronic non-cancer pain as there are for cancer pain. Some European countries, such as Germany, Ireland and France, have introduced national strategies and frameworks for managing chronic pain, but there remains a need for clear directives, incentives for implementation and a coordinated approach, to ensure engagement with these important initiatives⁴⁷. The SIAARTI recommendations in Italy cover the clinical assessment of patients with chronic non-cancer pain, as well as its pharmacological and non-pharmacological treatment⁶⁶. In the UK, the British Pain Society has developed a number of evidence- and expert consensus-based care pathways aimed at establishing best practice in the assessment and management of chronic pain, as well as underpinning quality standards⁶⁷.

Different pathways cover the initial assessment and early management of pain, low back and radicular pain, chronic widespread pain, neuropathic pain and chronic pelvic pain. These could serve as a template for other countries and organizations to devise their own pathways, with the aim of improving clinical outcomes and the patient experience⁶⁷.

Consensus point

Universal clinical guidelines and defined treatment pathways are required for the efficient management of chronic non-cancer pain.

With regard to medication, new effective treatments are required with better response rates, fewer side effects in long-term use, and improved tolerability in elderly patients. A low potential for drug/drug interactions is also important, as pain rarely manifests as a single symptom and co-morbidities must be treated simultaneously. However, it is important to note that many new therapies are simply reformulations of existing analgesics, and agents that utilize a completely new mechanism of action are required.

Pain management programs (PMPs) are a form of rehabilitative treatment based on CBT, in which the primary goal is not pain relief, but teaching patients how to manage their pain. Delivered by a multidisciplinary team in a group setting, PMPs incorporate education on pain physiology, pain psychology, healthy functioning and self-management, as well as ways of identifying and changing unhelpful beliefs, and relaxation⁶⁸. Members of the team might include a pain specialist, physiotherapist, psychologist, pharmacist, occupational therapist and nurse. A rehabilitation specialist may also be included, especially in cases of physical limitation or impairment. PMPs may be offered in primary or secondary care, and there is good evidence for their efficacy in improving pain experience, mood, coping, negative outlook on pain, and activity levels^{35,69,70}. Input from a physiotherapist and clinical or health psychologist has been identified as a key factor³⁵.

Interactive Behavioral Modification Therapy (IBMT), a physiotherapist-led group intervention also based on CBT principles, has been shown to reduce fear of movement and catastrophizing, and increase functional self-efficacy, leading to improvements in pain levels, disability and depression⁵². Erroneous beliefs about illness and rehabilitation can be corrected by physicians and psychologists, and even simple psychological principles and techniques can divert some patients from a course of increasing disability⁷¹. The most common form of

CBT used by psychologists is coping skills training, but some therapy programs address specific problems, such as sleep disturbances and fatigue, or addiction control. Building good coping skills enables patients to enjoy a better quality of life despite their pain, which often decreases because they become fitter, happier and more active.

Chronic disease management also requires effective communication with the patient's family and/or carers, who may require information on how best to support the patient in daily life. In Sweden, for example, programs have been designed exclusively for relatives and carers, and the community-based primary care system is supported by a flexible hospital system.

Developing political momentum is essential

The changes that are necessary in order to improve the management of chronic pain will not be implemented unless they have political backing. Today, chronic and recurrent non-cancer pain has a low priority within healthcare systems, largely because it is generally regarded as a symptom – not as a disease in its own right, as stated in EFIC's Declaration on Pain launched at the European Parliament in 2001³². As previously mentioned, one major reason for this low profile is the lack of a WHO ICD-10 code, the standard diagnostic tool for epidemiology, operational and strategic planning, resource utilization, performance management and reimbursement. Instead, pain is fragmented all over the coding system as a sub-specifier of other diagnoses. This is a major barrier to the recognition of chronic pain. From the political perspective, medical conditions without an ICD code do not exist and are not considered relevant; therefore they do not require political attention or action, appropriate treatment resources, or dedicated and standardized professional training, and they are not incorporated into most reimbursement systems. The ICD-10 is currently undergoing revision and the new Internet-based ICD-11 will incorporate a virtual chapter of all pain diagnostic codes, as a result of the involvement of the IASP and EFIC. This is considered a necessary precondition for evidence-based clinical management programs, integration of pain management into healthcare and compensation regulations, and stimulation of focused research. The WHO is closely collaborating with an IASP-funded international taskforce to develop this chapter, which is expected to include sections on oncological, post-surgical, musculo-skeletal, visceral and neuropathic pain conditions, plus a cross-reference to the existing headache chapter.

Consensus point

Chronic and recurrent non-cancer pain must be recognized in the new ICD-11 coding system. This is a prerequisite for increased public awareness, political support, and action at regional, national and European levels.

The 2002 European Charter of Patients' Rights⁷² aims to ensure high quality healthcare services and specifically includes the "right to avoid unnecessary suffering and pain". There are also national charters, such as the Charter of Rights for People Living with Chronic Pain in Ireland⁷³ and the Charter of Rights against Unnecessary Pain in Italy⁷⁴, which focus solely on preventing unnecessary pain. The 2010 introduction of Law 38 in Italy placed a legal obligation on healthcare professionals to provide access to pain therapy and palliative care, and to record "the characteristics of the monitored pain and its evolution during hospitalization, as well as the analgesic technique and drugs used, the relevant doses and the analgesic results achieved". A number of initiatives aim to ensure that these standards are established and upheld much more widely than at present, by petitioning and exerting pressure on national and international policy-making bodies.

The Societal Impact of Pain (SIP) initiative introduced by EFIC is an international multi-stakeholder collaboration aiming to: i) proclaim adequate pain management an ethical duty for all caregivers and health institutions, ii) make chronic pain management a priority with governments and health providers, iii) raise awareness of the human and economic cost of under-treated chronic pain, and iv) establish an EU platform for all stakeholders and member states, and use it to define high-quality management of chronic, non-cancer pain, develop quality indicators for pain management, and share best practice.

To date, one SIP focus group has drafted an initial set of evidence-based indicators of good quality pain management, comprising structural, process and outcome indicators, which will be further enhanced⁷⁵. A second focus group has developed a Proposal for Action⁷⁶, which outlines best practice for the reintegration of patients with chronic pain into the workforce, and calls upon European governments to embrace measures ranging from early intervention of stakeholders to patient education programs. SIP is also participating in the European Innovation Partnership on Active and Healthy Ageing, a collaboration of stakeholders facilitated by the European Commission, which tackles societal challenges through research and innovation. The ultimate objective is to increase the average healthy lifespan by 2 years by the year 2020. A working group on pain management and palliative care has been established, to identify ways of

making these services more integrated and more efficient – physicians are invited to submit examples of best practice to the working group for evaluation.

The Pain Patients Pathway Recommendation Project is a collaboration between patients (Pain Alliance Europe), citizens (Active Citizenship Network) and industry (Grünenthal GmbH), which aims to develop a strong advocacy group for pain patients and to encourage the active participation of citizens in relevant European and national policy-making⁷⁷. The project has surveyed ministries of health, citizens' organizations and health professionals in 20 European countries and found that patients' right to avoid unnecessary suffering and pain is not widely respected⁷⁷. Recommendations for improving the management of chronic non-cancer pain have been developed and published, which will be presented to European, national and local institutions. Among other things, they urge policy makers to incorporate pain education into basic training for medical students, to increase public awareness of chronic pain and make it a health priority, to support the creation of networks to share good pain therapy practice, and to stimulate relevant research.

The Painful Truth campaign was launched to build awareness of the issues facing people with chronic (non-cancer) pain, to improve the diagnosis of chronic pain, and to enhance access to innovative and cost-effective treatments³. A collaboration between Action on Pain (UK), the Spanish Association for Pain Patients (Sine Dolore) and the German Pain League (Deutsche Schmerzliga), and sponsored by Boston Scientific Ltd, it has published the results of a survey into the prevalence and impact of chronic pain in five European countries³. It was found that only around one-third (36%) of chronic pain sufferers were satisfied with their pharmacological treatment, and that two-thirds (68%) remained in pain for ≥ 12 hours a day despite treatment³. The organizations involved are calling for all European governments to develop national plans for chronic pain that include: i) the provision of comprehensive information about all treatment options, ii) tools to aid prompt diagnosis, and clear referral pathways, iii) evaluation of new technologies, iv) improved access to treatment, v) enhanced training for healthcare professionals, and vi) support for chronic pain organizations³.

A similar call to action has been made by OPENMinds (Opioids and Pain European Network of Minds), a group of leading European experts who specialize in pain management and research, in its White Paper of 2011⁷⁸. After providing plentiful evidence of the human and financial cost of chronic pain, it points out that most countries either have very inadequate policies regarding the management of pain or no policy at all. Also, widespread severe restrictions on the availability and accessibility of opioids and other essential medications constitute a barrier to

optimal pain management⁷⁸. Accordingly, it has called upon European governments to work towards implementing a number of strategies, including: i) making the prevention and management of chronic severe pain a health priority, ii) allocating adequate resources for the education and training of qualified personnel, iii) establishing interdisciplinary pain clinics and centers, iv) ensuring the availability and affordability of pain-modulating drugs and interventional equipment, and v) promoting and supporting research into many aspects of pain and its treatment⁷⁸.

Conclusions

A substantial body of evidence suggests that chronic pain appears to be under-diagnosed and under-treated, at considerable cost to the individuals involved and to society in general. The biopsychosocial model of pain implies that optimal management requires a multidisciplinary team approach with good lines of communication, as well as input from a range of properly educated, specialist health-care professionals. Stakeholders in the provision of pain management – from patients to payers, physicians to psychologists – have very different perspectives, and have identified numerous ways in which it could be improved. Foremost among these is additional education and training for physicians and other team members, but other important measures include chronic pain being recognized as a disease in its own right, the development of universal guidelines for managing chronic non-cancer pain, and the adoption of a patient-centered approach. Perhaps the greatest barrier to improvement is lack of political will at both national and European level, but powerful initiatives and collaborations play a vital role by lobbying national and international policy-making bodies to raise standards and reduce unnecessary pain.

Transparency

Declaration of funding

This article was based on a meeting held in Rome, Italy, 29–30 November 2013, supported by an unrestricted educational grant from Grünenthal GmbH, Aachen, Germany.

Declaration of financial/other relationships

H.-G.K. has disclosed that he is a consultant to and on the Speakers' Bureau of Grünenthal GmbH, Astellas, Teva, and Mundipharma, and is a consultant to Phillips. D.A. has disclosed that he is a consultant to and on the Speakers' Bureau of Grünenthal GmbH. B.C., F.C., F.H., E.A., A.N., C.M.F. and W.J. have disclosed that they are consultants to Grünenthal GmbH. E.K. has disclosed that she is a consultant to and on the Speakers' Bureau of Grünenthal GmbH and Orion Pharma and owns stock in Orion. S.C., M.K.-K., G.M.-S., A.C.M., P.M.

and C.P.H. have disclosed that they have no significant relationships with or financial interests in any commercial companies related to this study or article. B.M. has disclosed that he is a consultant to and on the Speakers' Bureau of Grünenthal GmbH and Mundipharma and is a consultant to J&J. P.S. has disclosed that he is a consultant to Grünenthal GmbH.

CMRO peer reviewers on this manuscript have no relevant financial or other relationships to disclose.

Acknowledgment

The authors thank Derrick Garwood Ltd, Cambridge, UK, for editorial support, which was sponsored by Grünenthal GmbH, Aachen, Germany.

References

1. The British Pain Society. Available at: http://www.britishpainsociety.org/media_faq.htm [Last accessed 18 June 2014]
2. Breivik H, Collett B, Ventfridda V, et al. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. *Eur J Pain* 2006;10:287-333
3. Boston Scientific. The Painful Truth Survey: state of pain management in Europe. 2013. Available at: http://www.bostonscientific.com/content/dam/painful-truth/en/documents/NM-114704-A_INTL_Painful_Truth_Survey_Report_Final_UK.pdf [Last accessed 9 June 2015]
4. O'Brien J. The impact of chronic pain - European patients' perspective over 12 months. *Scand J Pain* 2011;3:23-9
5. Tang NK, Crane C. Suicidality in chronic pain: a review of the prevalence, risk factors and psychological links. *Psychol Med* 2006;36:575-8
6. Yap E. Myofascial pain – an overview. *Ann Acad Med Singapore* 2007;36:43-8
7. McCarberg BH, Nicholson BD, Todd KH, et al. The impact of pain on quality of life and the unmet needs of pain management: results from pain sufferers and physicians participating in an Internet survey. *Am J Ther* 2008;15:312-20
8. Akashi M, Yano E, Aruga E. Under-diagnosis of pain by primary physicians and late referral to a palliative care team. *BMC Palliative Care* 2012;11:7
9. Fricker J. Pain in Europe. A 2003 Report. Research project by NFO Worldgroup. Funded by an educational grant from Mundipharma International Limited, Cambridge, England. October 2003. Available at: [https://www.pfizer.pt/Files/Billeder/Pfizer%20P%C3%BAblico/Not%C3%ADcias/\[La/Pain%20Proposal%20-%20European%20Consensus%20Report%20final.pdf](https://www.pfizer.pt/Files/Billeder/Pfizer%20P%C3%BAblico/Not%C3%ADcias/[La/Pain%20Proposal%20-%20European%20Consensus%20Report%20final.pdf) [Last accessed 20 July 2015]
10. Bergh I, Steen G, Waern M, et al. Pain and its relation to cognitive function and depressive symptoms: a Swedish population study of 70-year-old men and women. *J Pain Symp Manag* 2003;26:903-12
11. European Commission. Population projections 2008–2060. Available at: http://europa.eu/rapid/press-release_STAT-08-119_en.htm [Last accessed 9 June 2015]
12. A European Consensus Report. Pain proposal: improving the current and future management of chronic pain. 2010. Available at: http://www.efic.org/userfiles/file/pain_proposal.pdf [Last accessed 9 June 2015]
13. Mäntyselkä PT, Kumpusalo EA, Ahonen RS, Takala JK. Direct and indirect costs of managing patients with musculo-skeletal pain – challenge for health-care. *Eur J Pain* 2002;6:141-8
14. Phillips CJ. Economic burden of chronic pain. *Expert Rev Pharmacoecon Outcomes Res* 2006;6:591-601
15. Turk DC. Clinical effectiveness and cost-effectiveness of treatments for patients with chronic pain. *Clin J Pain* 2002;18:355-65
16. Scascighini L, Toma V, Dober-Spielmann S, Sprött H. Multidisciplinary treatment for chronic pain: a systematic review of interventions and outcomes. *Rheumatology* 2008;47:670-8
17. Cunningham JL, Rome JD, Kerkvliet JL, Townsend CO. Reduction in medication costs for patients with chronic nonmalignant pain completing a pain

- rehabilitation program: a prospective analysis of admission, discharge, and 6-month follow-up medication costs. *Pain Med* 2009;10:787-96
18. Dysvik E, Kvaløy JT, Stokkeland R, Natvig GK. The effectiveness of a multidisciplinary pain management programme managing chronic pain on pain perceptions, health-related quality of life and stages of change – a non-randomized controlled study. *Int J Nurs Stud* 2010;47:826-35
 19. Flor H, Fydrich T, Turk DC. Efficacy of multidisciplinary pain treatment centers: a meta-analytic review. *Pain* 1992;49:221-30
 20. Carbonell-Baeza A, Aparicio VA, Chillón P, et al. Effectiveness of multidisciplinary therapy on symptomatology and quality of life in women with fibromyalgia. *Clin Exp Rheumatol* 2011;29(6 Suppl 69):S97-103
 21. Jensen MP, Turner JA, Romano JM. Changes in beliefs, catastrophizing, and coping are associated with improvement in multidisciplinary pain treatment. *J Consult Clin Psychol* 2001;69:655-62
 22. Patrick LE, Altmaier EM, Found EM. Long-term outcomes in multidisciplinary treatment of chronic low back pain: results of a 13-year follow-up. *Spine* 2004;29:850-5
 23. Heiskanen T, Roine RP, Kalso E. Multidisciplinary pain treatment – which patients do benefit? *Scand J Pain* 2012;3:201-7
 24. Pergolizzi J, Ahlbeck K, Aldington D, et al. The development of chronic pain: physiological CHANGE necessitates a multidisciplinary approach to treatment. *Curr Med Res Opin* 2013;29:1127-35
 25. Gatchel RJ, Peng YB, Peters ML, et al. The biopsychosocial approach to chronic pain: scientific advances and future directions. *Psychol Bull* 2007;133:581-624
 26. Langley PC. The prevalence, correlates and treatment of pain in the European Union. *Curr Med Res Opin* 2011;27:463-80
 27. PainSTORY 2009. About the PainSTORY Survey. Available at: <http://www.painstory.org/uk/survey/here-are-the-results> [Last accessed 9 June 2015]
 28. Johnson M, Collett B, Castro-Lopes JM, on behalf of the OPENMinds Primary Care group. The challenges of pain management in primary care: a pan-European survey. *J Pain Res* 2013;6:393-401
 29. Reid KJ, Harker J, Bala MM, et al. Epidemiology of chronic non-cancer pain in Europe: narrative review of prevalence, pain treatments and pain impact. *Curr Med Res Opin* 2011;27:449-62
 30. Kehlet H, Jensen TS, Woolf CJ. Persistent postsurgical pain: risk factors and prevention. *Lancet* 2006;367:1618-25
 31. Annual Report of the Chief Medical Officer 2008. Available at: <https://workspace.imperial.ac.uk/ref/Public/UoA%2001%20-%20Clinical%20Medicine/CMO%20annual%20report.pdf> [Last accessed 9 June 2015]
 32. European Federation of IASP Chapters. Declaration on Pain: pain is a major health problem, a disease in its own right. 2001. Available at: <http://www.efic.org/index.asp?sub=724B97A2EjBu1C> [Last accessed 9 June 2015]
 33. Chancellor J, Martin M, Liedgens H, et al. Stated preferences of physicians and chronic pain sufferers in the use of classic strong opioids. *Value Health* 2012;15:106-17
 34. Nightingale S. The neuropathic pain market. *Nat Rev Drug Discov* 2012;11:101-2
 35. Torrance N, Smith BH, Elliott AM, et al. Potential pain management programmes in primary care. A UK-wide questionnaire and Delphi survey of experts. *Fam Pract* 2011;28:41-8
 36. Thomas M. Is pharmacist prescribing a painless alternative in chronic pain management? *Pharmacy Management* 2012;28:11-16
 37. Cottrell E, Roddy E, Foster NE. The attitudes, beliefs and behaviours of GPs regarding exercise for chronic knee pain: a systematic review. *BMC Family Practice* 2010;11:4
 38. Moffett J, McLean S. The role of physiotherapy in the management of non-specific back pain and neck pain. *Rheumatology* 2006;45:371-8
 39. Kress HG, Casale R. No (rehabilitation) gain without pain (management). *Am J Phys Med Rehabil* 2013;92:90-2
 40. Nolte E, McKee M. The European Observatory on Health Systems and Policies. Caring for people with chronic conditions: a health system perspective. Maidenhead, United Kingdom: Open University Press, 2008
 41. University College London School of Pharmacy. Relieving persistent pain, improving health outcomes. 2012. Available at: <http://www.ukcpa.net/wp-content/uploads/2010/11/Relieving-Persistent-Pain-Web-Edition-1-1-12.pdf> [Last accessed 9 June 2015]
 42. Chan HN, Fam J, Ng BY. Use of antidepressants in the treatment of chronic pain. *Ann Acad Med Singapore* 2009;38:974-9
 43. Reese C, Mittag O. Psychological interventions in the rehabilitation of patients with chronic low back pain: evidence and recommendations from systematic reviews and guidelines. *Int J Rehabil Res* 2013;36:6-12
 44. Reinventing biopharma: strategies for an evolving market place. The value challenge. Economist Intelligence Unit. 2013. Available at: <http://www.quintiles.com/library/white-papers/reinventing-biopharma-the-value-challenge.pdf?aid=5465&cid=5488> [Last accessed 9 June 2015]
 45. Kress HG. The importance of putting pain on the curricula in medical schools in Europe. *J Pain Palliat Care Pharmacother* 2013;27:182-4
 46. Survey of undergraduate pain curricula for healthcare professionals in the United Kingdom: a short report. The Pain Education Special Interest Group of the British Pain Society. London, UK: The British Pain Society, 2009. Available at: https://www.britishpainsociety.org/static/uploads/resources/files/members_sig_edu_short_report_survey.pdf [Last accessed 9 June 2015]
 47. Call for specialization and certification in pain medicine. European Federation of IASP Chapters. 2012. Available at: <http://www.efic.org/index.asp?sub=1602e13G5R0a22> [Last accessed 9 June 2015]
 48. Dysvik E, Sommereth R, Jacobsen FF. Living a meaningful life with chronic pain from a nursing perspective. Narrative approach to a case story. *Int J Nurs Pract* 2011;17:36-42
 49. Jelin E, Granum V, Eide H. Experiences of a web-based nursing intervention – interviews with women with chronic musculoskeletal pain. *Pain Manag Nurs* 2012;13:2-10
 50. Marlowe KF, Geiler R. Pharmacist's role in dispensing opioids for acute and chronic pain. *J Pharm Pract* 2012;25:497-502
 51. Parsons S, Harding G, Breen A, et al. Will shared decision making between patients with chronic musculoskeletal pain and physiotherapists, osteopaths and chiropractors improve patient care? *Fam Pract* 2012;29:203-12
 52. Woby SR, Roach NK, Urmston M, Watson PJ. Outcome following a physiotherapist-led intervention for chronic low back pain: the important role of cognitive processes. *Physiotherapy* 2008;94:115-24
 53. Nijs J, Roussel N, Paul van Wilgen C, et al. Thinking beyond muscles and joints: therapists' and patients' attitudes and beliefs regarding chronic musculoskeletal pain are key to applying effective treatment. *Man Ther* 2013;18:96-102
 54. Eccleston C. Psychology of chronic pain and evidence-based psychological interventions. In: Stannard CF, Kalso E, Ballantyne J (eds). Evidence-based chronic pain management. West Sussex, UK: John Wiley and Sons Ltd, 2010
 55. National Collaborating Centre for Primary Care. Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence. London, UK: Royal College of General Practitioners, 2009
 56. Pain Association Scotland. Chronic pain and the benefits of self-management. 2013. Available at: <http://www.rpharms.com/public-affairs-pdfs/83187-pas-gp-brochure-12pp-low.PDF> [Last accessed 9 June 2015]
 57. Müller-Schwefe G, Jaksch W, Morlion B, et al. Make a CHANGE: optimising communication and pain management decisions. *Curr Med Res Opin* 2011;27:481-8
 58. Melzack R. The McGill Pain Questionnaire: major properties and scoring methods. *Pain* 1975;1:277-99
 59. Bouhassira D, Attal N, Alchaar H, et al. Comparison of pain syndromes associated with nervous or somatic lesions and development of a new neuropathic pain diagnostic questionnaire (DN4). *Pain* 2005;114:29-36
 60. Mick G, Baron R, Finnerup NB, et al. What is localized neuropathic pain? A first proposal to characterize and define a widely used term. *Pain Manage* 2012;2:71-7
 61. InSites Consulting. Pain Proposal Patient Survey. August–September 2010 (Conducted in 2,019 people with chronic pain across 15 European countries.) Funded by Pfizer Ltd. Available at: <https://www.pfizer.pt/Files/Billelder/>

- Pfizer%20P%C3%BAblico/Not%C3%ADcias/Pain%20Proposal%20-%20European%20Consensus%20Report%20final.pdf [Last accessed 20 July 2015]
62. Giordano J, Schatman ME. A crisis in chronic pain care: an ethical analysis. Part three: toward an integrative, multi-disciplinary pain medicine built around the needs of the patient. *Pain Physician* 2008;11:775-84
 63. Guzman J, Esmail R, Karjalainen K, et al. Multidisciplinary bio-psycho-social rehabilitation for chronic low back pain. *Cochrane Database Syst Rev* 2002;1:CD000963
 64. Carbonell-Baeza A, Aparicio VA, Ortega FB, et al. Does a 3-month multidisciplinary intervention improve pain, body composition and physical fitness in women with fibromyalgia? *Br J Sports Med* 2010;45:1189-95
 65. Gardea MA, Gatchel RJ, Mishra KD. Long-term efficacy of biobehavioral treatment of temporomandibular disorders. *J Behav Med* 2001;24:341-59
 66. Ambrosio F, Finco G, Mattia C, et al. SIAARTI recommendations for chronic non-cancer pain. *Minerva Anestesiol* 2006;72:859-80
 67. The British Pain Society. Map of Medicine. Pain assessment and management pathways. 2013. Available at: <http://bps.mapofmedicine.com/evidence/bps/index.html> [Last accessed 9 June 2015]
 68. The British Pain Society. Recommended guidelines for Pain Management Programmes for adults: an evidence-based review prepared on behalf of the British Pain Society. November 2013. Available at: https://www.britishpainsociety.org/static/uploads/resources/files/pmp2013_main_FINAL_v6.pdf [Last accessed 9 June 2015]
 69. Koes BW, van Tulder MW, Thomas S. Diagnosis and treatment of low back pain. *BMJ* 2006;332:1430-4
 70. Hoffman BM, Papas RK, Chatkoff DK, Kerns RD. Meta-analysis of psychological interventions for chronic low back pain. *Health Psychol* 2007;26:1-9
 71. Eccleston C, Morley SJ, Williams AC. Psychological approaches to chronic pain management: evidence and challenges. *Br J Anaesth* 2013;111:59-63
 72. European Charter of Patients' Rights. 2002. Available at: <http://www.aemh.org/pdf/06-035EuropeanCharterofPatientsRights.pdf> [Last accessed 9 June 2015]
 73. Chronic Pain Ireland. Charter of Rights for People Living with Chronic Pain. 2009. Available at: http://www.sip-platform.eu/tl_files/redakteur-bereich/National%20Initiatives/Ireland/CPICharter%20of%20Rights2.pdf [Last accessed 9 June 2015]
 74. Cittadinanzattiva. Italy: Charter of Rights against unnecessary pain. 2005. Available at: <http://www.cittadinanzattiva.it/corporate/salute/5014-italy-charter-of-rights-against-unnecessary-pain.html> [Last accessed 9 June 2015]
 75. Societal Impact of Pain. Working Document: IP Recommendations on the European Implementation of Quality Indicators in Chronic Non-Malignant Pain Management. 2013. Available at: http://www.sip-platform.eu/tl_files/redakteur-bereich/Symposia/Focus Groups 2013/Focus Group 1/Working Document SIP 2013 Recommendations Quality Indicators_14.05._REVISED BY GROUP_low.pdf [Last accessed 9 June 2015]
 76. Societal Impact of Pain. SIP proposal for action: using European best practices for the reintegration of chronic pain patients into the workforce. 2013. Available at: http://www.sip-platform.eu/tl_files/redakteur-bereich/Symposia/Focus%20Groups%202013/Focus%20Group%202/Final_SIP%20Proposal%20for%20Action_15%2005%202013_signatures_low.pdf [Last accessed 9 June 2015]
 77. Pain Patient Pathway Recommendations. Civic Survey on the Respect of Unnecessary Pain Patients' Rights in Europe: Report on the Patients' Right to Avoid Unnecessary Suffering and Pain, 2nd Edn. 2013. Available at: <http://www.pae-eu.eu/wp-content/uploads/2013/12/PPPR-Questionnaires-Report.pdf> [Last accessed 9 June 2015]
 78. OPENMinds (Opioids and Pain European Network of Minds). Pain in Europe – a public health priority: a strategy to better diagnose and manage chronic pain and the responsible use of opioids. 2011. Available at: <http://www.paineurope.com/docs/default-source/default-document-library/pain-in-europe-white-paper.pdf> [Last accessed 9 June 2015]