

# The IASP classification of chronic pain for ICD-11: applicability in primary care

Blair H. Smith<sup>a</sup>, Egil A. Fors<sup>b</sup>, Beatrice Korwisi<sup>c</sup>, Antonia Barke<sup>c</sup>, Paul Cameron<sup>a</sup>, Lesley Colvin<sup>a</sup>, Cara Richardson<sup>a</sup>, Winfried Rief<sup>c</sup>, Rolf-Detlef Treede<sup>d,\*</sup>, The IASP Taskforce for the Classification of Chronic Pain

## Abstract

The *International Classification of Diseases, 11th Revision (ICD-11)*, proposes, for the first time, a coding system for chronic pain. This system contains 1 code for “chronic primary pain,” where chronic pain is the disease, and 6 codes for chronic secondary pain syndromes, where pain developed in the context of another disease. This provides the opportunity for routine, standardised coding of chronic pain throughout all health care systems. In primary care, this will confer many important, novel advantages over current or absent coding systems. Chronic pain will be recognized as a centrally important condition in primary care. The capacity to measure incidence, prevalence, and impact will help in identification of human, financial, and educational needs required to address chronic pain in primary care. Finally, opportunities to match evidence-based treatment pathways to distinct chronic pain subtypes will be enhanced.

**Keywords:** Primary care, Chronic pain, ICD-11, ICPC, General practice, Family doctor, General practitioner

## 1. Introduction

For the first time, the *International Classification of Diseases, 11th Revision (ICD-11)*, contains a coding system for chronic pain. Recognizing chronic pain in a systematic classification represents an opportunity to improve pain coding and treatment throughout all health care systems and treatment tiers. Because the large majority of patients with chronic pain are managed in primary care, adopting the main structure of the new classification may have substantial benefits. In this article, we will provide a brief introduction to primary care and its goals. The treatment of people with chronic pain will emerge as an important task of primary care. Currently, this central task is impeded by the way chronic pain is classified and coded. We explain the main aspects of the new classification of chronic pain for ICD-11 and argue that adopting it in the context of primary care may help overcome many of the challenges.

Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.

B.H. Smith, E.A. Fors, B. Korwisi, and A. Barke contributed equally to the manuscript; R.-D. Treede and W. Rief also contributed equally.

<sup>a</sup> Division of Population Health and Genomics, School of Medicine, University of Dundee, Dundee, Scotland, <sup>b</sup> General Practice Research Unit, Department of Public Health and Nursing, Faculty of Medicine and Health Sciences, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, <sup>c</sup> Division of Clinical Psychology and Psychotherapy, Department of Psychology, Philipps-University Marburg, Marburg, Germany, <sup>d</sup> Department of Neurophysiology, CBTM, Medical Faculty Mannheim of Heidelberg University, Mannheim, Germany

\*Corresponding author. Address: Department of Neurophysiology, Centre for Biomedicine and Medical Technology Mannheim, Medical Faculty Mannheim, Heidelberg University, Ludolf-Krehl-Str. 13-17, 68167 Mannheim, Germany. Tel.: +49 (0)621 383 71 400; Fax: +49-(0)621 383 71 401. E-mail address: Rolf-Detlef.Treede@medma.uni-heidelberg.de (R.-D. Treede).

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal's Web site ([www.painjournalonline.com](http://www.painjournalonline.com)).

PAIN 160 (2019) 83–87

© 2018 International Association for the Study of Pain

<http://dx.doi.org/10.1097/j.pain.0000000000001360>

### 1.1. Definition and goals of primary care

The World Health Organization (WHO) defines primary care as “first-contact, accessible, continued, comprehensive, and co-ordinated care.”<sup>40</sup> It is generally characterised by numerous, brief appointments between patients and multidisciplinary health care professionals led by general practitioners (GPs) or equivalent generalists. In 1978, in the Declaration of Alma-Ata, the International Conference on Primary Health Care enshrined the rights of every human to primary care and called on all governments and nongovernmental agencies to deliver this.<sup>38</sup> The ultimate goal of primary health care is better health for all, and the WHO has identified 5 key elements to achieving that goal<sup>40</sup>: (1) reducing exclusion and social disparities in health (universal coverage reforms); (2) organizing health services around people’s needs and expectations (service delivery reforms); (3) integrating health into all sectors (public policy reforms); (4) pursuing collaborative models of policy dialogue (leadership reforms); and (5) increasing stakeholder participation

### 1.2. Chronic pain and its management in primary care

Chronic pain affects between one-fifth and one-half of the general population<sup>5,9</sup> and is the leading cause of disability worldwide.<sup>24</sup> Primary care is often the first point of contact for a person with chronic pain. Patients with chronic pain are 1.5 times more likely to visit their primary care physician than those without chronic pain,<sup>1</sup> and 22% to 50% of GP consultations are related to pain.<sup>12,18,31</sup> A Swedish study showed that, of those presenting to primary care with pain, the pain was chronic in 37%, chronic and intermittent in 11% (predominantly migraine), and intermediate, with a duration of 1 to 3 months, in 13%.<sup>14</sup> A 1-day cross-sectional study from primary care in Paris observed that, of all patients seen, 43% presented with pain.<sup>31</sup> In 20% of those with pain, it was chronic (for musculoskeletal pain, this figure was higher with 50%). The great majority of chronic pain is managed in community or primary care settings, with

approximately 0.3% to 2% of those with chronic pain referred to specialist pain clinics,<sup>5,31</sup> whereas 7% to 35% are referred to other secondary care specialists, eg, an orthopaedic surgeon or a rheumatologist, and 26% to a physiotherapist.<sup>14,31</sup> De facto, chronic pain recognition and treatment is of central importance in primary care. However, the lack of a unified coding system means that chronic pain cannot be coded as the problem of interest. Thus, for the individual patient, it may go unrecognized as a clinical entity requiring a unified approach to management,<sup>17</sup> and for planning and resource allocation, it is considered only as a disparate group of less prevalent conditions. In addition, many people who consult with common diseases may also suffer from chronic pain, which cannot be coded separately and therefore may remain statistically invisible as a condition that requires treatment, management, and resources. Until now, we have lacked a standardised means of recording patient-centred pain parameters, such as pain intensity, pain-related interference, and pain-related distress. For the individual patient, this hinders continuous monitoring of central parameters of chronic pain; on the level of the health care system, it impedes pain-related audits and quality control.

It is clear that addressing chronic pain in primary care is consistent with WHO priorities. Chronic pain affects all ages and sociodemographic groups but is more common in older and more deprived populations,<sup>5</sup> and successful management will therefore target these populations in particular. It is multidimensional in its impact,<sup>5</sup> and its management therefore needs to be multidisciplinary and patient-centred.<sup>7</sup> To achieve this successfully requires imaginative collaboration between health care, social, and policy sectors, crucially also including service users (people with chronic pain) and an agreed approach to training and resource allocation.<sup>24</sup> A unified use of nonstigmatizing diagnostic terms to describe chronic pain conditions offers the basis to improve communication about clinically relevant conditions between primary care physicians, specialists, and patients and shape appropriate treatment pathways.

## 2. Coding chronic pain in ICD-11

In *ICD-11*, chronic pain is defined as pain that recurs or persists longer than 3 months.<sup>33</sup> It is coded by 7 main (“parent”) codes for chronic pain diagnoses, including 1 code for “chronic primary pain,” where chronic pain is the disease, and 6 codes for chronic secondary pain syndromes, where pain developed in the context of another disease (**Table 1**). These codes are available in the June 18, 2018, version of *ICD-11* that is intended for implementation by member states.<sup>37</sup>

“Chronic primary pain” is “...chronic pain in one or more anatomical regions, which is characterized by significant emotional distress ... or functional disability .... The diagnosis is appropriate independently of identified biological or psychological contributors unless another diagnosis would better account for the presenting symptoms.”<sup>21,37</sup> This is roughly equivalent to what may previously have been called chronic idiopathic pain. The 6 categories for chronic secondary pain are (1) chronic cancer-related pain, ie, all chronic pain that arises in the context of cancer or its treatment, (2) chronic postsurgical or post-traumatic pain, ie, all chronic pain from surgery or accidental trauma, (3) chronic neuropathic pain, (4) chronic secondary headache or orofacial pain, (5) chronic secondary visceral pain, ie, chronic pain arising from causes such as persistent visceral inflammation or vascular or mechanic causes, and (6) chronic secondary musculoskeletal pain, ie, rheumatoid arthritis etc.

The WHO automatically includes additional codes: one for “other specified chronic pain,” which should only be used when

**Table 1**

### Possible correspondences between ICD-11 and ICPC-2 codes.

ICD-11	ICPC (examples of ICPC-2 codes related to ICD-11 codes)
Chronic primary pain	A01 pain general/multiple sites L01-L20, L83, L84 various musculoskeletal pain complaints according to site D01, D02, D04, D06, X01, Y01 various visceral pain complaints according to site N01, N02, N89, N90, N95 various pain complaints in the head/orofacial region
Chronic cancer-related pain	No similar code
Chronic postsurgical or posttraumatic pain	A82 secondary effect of trauma
Chronic neuropathic pain	L86 back syndrome with radiating pain N92 trigeminal neuralgia
Chronic secondary headache or orofacial pain	N01, N02 pain in head/face
Chronic secondary visceral pain	D01, D02, D04, D06, D84, K01, R01, X01, Y01 various visceral pain complaints according to site
Chronic secondary musculoskeletal pain	L01-L20 various musculoskeletal pain complaints according to site L83, L85, L87 L88 rheumatoid arthritis L89-L91 osteoarthritis

Because ICPC often does not provide etiological information and no time span, no direct equivalence can be established. These are examples for possible correspondences. ICPC-2 codes do not distinguish primary from secondary pain syndromes.

ICPC, International Classification of Primary Care.

a new set of diseases is recognized to cause chronic pain that is not covered by any of the 6 chronic secondary pain parent categories; the other for “chronic pain, unspecified,” which may be useful in primary care when chronic pain is recognized to merit medical attention, but it remains unclear whether it is primary (as a disease) or secondary (as a symptom).

## 3. Application to primary care

The numerous, brief consultations that characterize primary care require that *ICD-11* coding must be straightforward to apply. It is therefore likely that these 7 “parent” codes will be those most useful in this setting, although each also includes 4 or 5 subcodes (“child codes”) should more detail be available and appropriate. However, for primary care to fulfill its central role, a specific biological diagnosis may often be unnecessary.

### 3.1. Gaps in current classification approaches

None of the major international diagnostic coding systems (*International Classification of Diseases [ICD-10]*; *Current Procedural Terminology*; *Diagnostic and Statistical Manual of Mental Disorders*) includes specific codes for chronic pain. This means that chronic painful conditions, if coded at all, are coded inconsistently and without mutual exclusivity. This coding requires creativity on behalf of the coder and might use ill-defined symptom-based codes (eg, “chronic intractable pain”—R52.1, or “persistent somatoform pain disorder”—F45.4 in *ICD-10*), diagnostic labels that are difficult to pin down (eg, “dorsalgia”—M54, “sciatica”—M54.3, and “lumbago”—M54.5 in *ICD-10*), or treatment-based codes (eg, “opioids and related analgesics”—Y54.0 in *ICD-10*).

In addition to the uncertainties about the classification of chronic pain in the current *ICD-10* system, the global diversity of coding systems in primary care is challenging. The International Classification of Primary Care (ICPC)<sup>36</sup> is the most widely used international classification in primary care.<sup>3</sup> It is developed and formally recognized by the World Organization of Family Doctors' (WONCA) International Classification Committee (WICC) and linked to the *International Classification of Diseases (ICD)*. The most recent version (ICPC-2) was published in 2005, and ICPC-3 is now in development. ICPC-2 has been carefully mapped to *ICD-10*, so that conversion systems can be used,<sup>36</sup> and a similar process is currently underway between *ICD-11* and ICPC-3 (K van Boyen, personal communication). Extensive use and testing of ICPC has confirmed that it and *ICD* are complementary rather than in competition, although not wholly compatible.<sup>35</sup> The ICPC philosophy is to encode a diagnosis as a "manifestation," rather than an "aetiology," as in the *ICD* system. However, it would be challenging, for clinical practice and research, to keep both approaches, because this would produce 2 identical "clinical labels" expressing the same concept but with different codes. This is an important issue. World Health Organization plans a "primary care linearization" of *ICD-11*, which is expected to further facilitate the applicability of *ICD-11* in primary care.<sup>41</sup>

A survey including responses from 109 of the 193 countries found that ICPC was used in primary care in only 27 countries worldwide (24%) and as a mandatory standard in only 6 (6%), ie, Norway, Finland, Denmark, Bulgaria, Portugal, and the Netherlands. Nineteen countries (17%) used the *ICD-10* (eg, Poland, Iceland, and Slovakia among others), 3 (3%) used other classifications (eg, the Read Code in United Kingdom), and 2 (2%) used no classifications, ie, Austria and Pakistan. Sweden uses a short version of *ICD*.<sup>3</sup>

Disadvantages of such a haphazard approach in primary care are numerous:

- (1) Poor understanding of the local, national, and global burden of chronic pain in primary care. For example, the Global Burden of Diseases Study 2013 undertook detailed study of the incidence and prevalence of many conditions but could only examine subheadings of chronic pain, such as back pain and headache.<sup>13</sup>
- (2) A consequent inability to acknowledge the resources and education required to address chronic pain, particularly in comparison with better defined long-term illnesses, such as diabetes and hypertension.<sup>24</sup>
- (3) Being unable to quantify and map chronic pain at regional or patient level, it is impossible to evaluate any service improvement efforts. With the previous 2 points, this makes it very difficult to make the service improvement case to health service providers and policy makers.

### 3.2. Establishing a unified classificatory language

The introduction of a primary health care linearization of *ICD-11 (ICD-11-PHC)* will simplify the application of *ICD-11* in primary care.<sup>41</sup> Such a linearization is defined as a subset of diagnostic entities from the *ICD-11* foundation that are mutually exclusive and jointly exhaustive. The foundation is the complete *ICD-11* universe, where every disorder, disease, and other diagnostic entity are listed. Different linearizations provide different selections from this foundation at different levels of granularity. In this context, the primary health care linearization will show a lesser level of detail, (ie, fewer subcategories) than a linearization with intended use in tertiary care, and it will contain only those entities relevant for primary health care.<sup>41</sup> This will make the coding

process straightforward and time-efficient, with GPs selecting from a list of 7 well-defined chronic pain codes.

Introducing the new *ICD-11* coding and/or mapping this to other coding systems for chronic pain routinely in primary care would confer several key advantages over current practice (Box 1). Evaluation of these potential effects will be an important activity after the introduction and linearization of the *ICD-11* coding in primary care.

### 3.3. Further benefits

#### 3.3.1. Chronic primary pain

The option to code a diagnosis of "chronic primary pain" may confer several advantages to patients and professionals. These potentially include the following:

- (1) minimising unnecessary diagnostic procedures and treatments (saving resources and avoiding iatrogenic problems);
- (2) shifting focus early in the patient journey from finding a cause to managing the impact of chronic pain, including multimodal treatments;
- (3) avoiding unhelpful labels such as "psychosomatic" or "functional" illnesses;
- (4) greater potential for a patient-centred approach, with shared decision-making in achieving a mutually acceptable management plan.

#### 3.3.2. Red flags

The remaining 6 chronic secondary pain syndrome codes will allow for early flagging of patients at risk of complex chronic pain (after cancer treatment, surgery, or trauma) and may help to predefine possible referral to the appropriate specialists. Initial coding of "chronic primary pain" may progress to a chronic secondary pain code when further information becomes available from assessment (Table 1). Pilot field testing in Norway suggested that primary care physicians can distinguish between chronic primary and secondary pain syndromes with reasonable accuracy. With a moderate amount of training and practice, this accuracy can likely be further improved.

#### 3.3.3. Additional assessment and coding options

For additional assessment needs with regard to chronic pain, the *ICD-11* also provides so-called "extension codes" endorsed by the WHO that allow for coding of pain severity, its temporal course, and psychosocial aspects.<sup>32</sup> The severity of chronic pain is determined by pain intensity, pain-related distress, and interference of the pain with daily activities and participation. At each assessment, the patient should rate (separately) the average intensity, the distress, and the interference in the previous week on a numerical rating scale ranging from 0 "no pain/distress/interference" to 10 "worst pain/

#### Box 1. Benefits of applying ICD-11 chronic pain coding in primary care practice.

- Chronic pain recognized as a centrally important condition in primary care.
- Capacity to measure incidence, prevalence, and impact—locally, nationally, and internationally.
- Identification of human, financial, and educational needs required to address chronic pain in primary care.
- Enhanced opportunities to match evidence-based treatment pathways to distinct chronic pain subtypes.
- Greatly improved potential for audit and evaluation, leading to efficient service improvement.
- For research, the ability to use primary care registers as sampling frames for intervention studies and pragmatic trials that reflect real-world chronic pain.<sup>25</sup>

distress/interference imaginable.” These ratings can be translated into extension codes to be used with the underlying pain code. This will provide a rapid method of recording the most important pain parameters as rated by the patients and will improve the standardization of pain assessment in primary care.

### 3.3.4. Treatment pathways

The large Pain in Europe study found that only 40% of community-based people with chronic pain considered themselves to be adequately managed.<sup>5</sup>

In the United States, Fink-Miller et al.<sup>10</sup> investigated the differences between patients with chronic pain treated in primary care and those treated in tertiary care and found that the groups were similar across a range of indices. Those presenting at primary care reported greater average pain severity; however, those in tertiary care displayed greater pain-related catastrophizing. On average, the tertiary care group was 6 years older than the primary care group, and this greater age may lead to different perceptions about their condition and life in general. However, contrasting findings have also been identified, ie, that patients with pain problems at the primary care level seem to be older than pain patients attending a specialist pain clinic.<sup>8</sup> According to Fink-Miller et al.,<sup>10</sup> both groups were similar with regard to measures of psychological distress and the use of opioid medications. However, Hasselstrom et al.<sup>14</sup> found that only 2% of patients presenting with pain in primary care were defined as neuropathic in contrast to 40% in a specialist pain clinic. In reality, again without a standard coding system that is feasible to apply in the primary care setting, our understanding of the true picture is obscured.

A coding system that categorises chronic pain into diagnoses with distinct management pathways (eg, neuropathic pain<sup>28</sup> or chronic widespread pain<sup>16</sup>) is likely to lead to better differentiated and targeted management approaches. It is a strength of the new classification that it allows for such categorization. Especially useful is its biopsychosocial framework that recognizes the benefits of early multimodal treatment for chronic pain. Important goals for the treatment of chronic pain include the improvement and maintenance of functioning, the improvement of quality of life, and the reduction of pain-related distress. It has been widely recognized that these goals are best achieved by an integrated treatment approach that includes timely contact with physiotherapists, rehabilitative measures, and appropriate psychological and behavioural interventions in addition to targeted pharmacological interventions.<sup>2,4,11,26,29</sup>

### 3.3.5. Terminological continuity across the health care service tiers

A standardised coding system used throughout primary, secondary, and tertiary services will highlight anomalies in the recognition of different pain diagnoses. We also need to recognize and quantify the resources required—educational, personnel, and financial—to address this major primary health care issue. This requires an adequate coding system for chronic pain, and the new *ICD-11* coding can provide this,<sup>32,33</sup> if adopted or adapted in primary care.

### 3.3.6. Educational aspects

Clinicians, including (but not limited to) those working in primary care, may lack sufficient teaching and training in relation to the treatment and management of chronic pain.<sup>19,20,23</sup> This lack of sufficient teaching and training can result in poor treatment choices,<sup>27</sup> which in turn leads to inadequate outcomes for patients with chronic pain. This deficiency may stem from inadequate undergraduate training. A survey of pain curricula in 242 medical schools across Europe between 2012 and 2013

revealed a median of only 12 hours’ teaching on pain (range 4–56 hours; interquartile range 12 hours).<sup>6</sup> In the above study in Paris, 43% of the GPs believed they were not sufficiently trained in pain and only 6% used pain assessment scales.<sup>31</sup> In a US survey, 54% of participating primary care physicians indicated that their chronic pain training during residency was insufficient.<sup>34</sup> Even those with sufficient education may struggle to put their knowledge into practice, for a variety of reasons such as lack of validated outcome measures, short consultation times, and concerns over the adverse effects of pharmacological treatments.<sup>30</sup> Increased recognition of chronic pain as a central primary care problem, for example, through a standardised coding system, is likely to lead to the identification and uptake of associated education needs, including at undergraduate level.<sup>15</sup>

### 3.3.7. Electronic patient documentation

Electronic records can allow clinicians to input and observe systematically patient-level data on pain, emotional functioning, and physical functioning (see also the International Classification of Functioning [ICF] that is cross-referenced from *ICD-11*<sup>22,39</sup>), which can then be used to monitor the effectiveness of treatments and allow for auditing of services,<sup>30</sup> as well as facilitating epidemiological research and needs assessments. An internationally agreed and validated coding system that lends itself to electronic implementation will aid in the recognition of chronic pain in primary care, providing measures of prevalence, which can guide treatment provision and reimbursement, service improvement, and comparisons across time and regions.

## 4. Conclusions

The coding system for chronic pain proposed in *ICD-11* is therefore novel, comprehensive yet practical and flexible, and feasible to apply in primary care. It is to be welcomed for its numerous potential benefits in managing chronic pain, in primary care and beyond, and in improving our understanding of chronic pain and its management. It is intended to be compatible with the other coding systems in primary care, described above. Further work will now be needed to determine how this will apply in practice—including whether *ICD-11* and ICPC can be used interchangeably, whether one might be adopted as a subset of the other, or even whether ICPC should be replaced. Meanwhile, the “chronic primary pain” code will be particularly advantageous in primary care, and its inclusion along with the 6 chronic secondary pain syndrome codes into the primary care linearization will allow for compatibility with ICPC and other clinical coding systems, and improve the lives of patients and professionals in this complex clinical field.

### Conflict of interest statement

A. Barke reports personal fees from IASP, during the conduct of the study. L. Colvin reports: Editor, British Journal of Anaesthesia. W. Rief reports grants from IASP, during the conduct of the study; personal fees from Heel, personal fees from Berlin Chemie, outside the submitted work. R.-D. Treede reports grants from Boehringer Ingelheim, Astellas, AbbVie, and Bayer, personal fees from Astellas, Grünenthal, Bauerfeind, Hydra, and Bayer, and grants from EU, DFG, and BMBF, outside the submitted work. The remaining authors have no conflicts of interest to declare.

### Acknowledgements

The authors gratefully acknowledge the financial support by the International Association for the Study of Pain and the excellent

discussions with Dr Robert Jakob of WHO. Members of the Taskforce: Rolf-Detlef Treede (Chair), Winfried Rief (Co-chair), Antonia Barke, Qasim Aziz, Michael I. Bennett, Rafael Benoliel, Milton Cohen, Stefan Evers, Nanna B. Finnerup, Michael First, Maria Adele Giamberardino, Stein Kaasa, Beatrice Korwisi, Eva Kosek, Patricia Lavand'homme, Michael Nicholas, Serge Perrot, Joachim Scholz, Stephan Schug, Blair H. Smith, Peter Svensson, Johannes Vlaeyen, Shuu-Jiun Wang.

## Appendix A. Supplemental digital content

Supplemental digital content associated with this article can be found online at <http://links.lww.com/PAIN/A658>. SDC includes a complete reference list of the diagnoses entered into the foundation with the foundation IDs as well as the extension codes (specifier). Since the complete list is contained, the material is identical for all papers of the series.

### Article history:

Received 7 June 2018

Received in revised form 16 July 2018

Accepted 26 July 2018

### References

- Andersson HI, Ejlertsson G, Leden I, Schersten B. Impact of chronic pain on health care seeking, self care, and medication. Results from a population-based Swedish study. *J Epidemiol Community Health* 1999;53:503–9.
- Arnold B, Brinkschmidt T, Casser HR, Diezemann A, Gralow I, Irnich D, Kaiser U, Klasen B, Klimczyk K, Lutz J, Nagel B, Pflingsten M, Sabatowski R, Schesser R, Schiltenswolf M, Seeger D, Söllner W. Multimodale Schmerztherapie für die Behandlung chronischer Schmerzsyndrome. Ein Konsensuspapier der Ad-hoc-Kommission Multimodale interdisziplinäre Schmerztherapie der Deutschen Schmerzgesellschaft zu den Behandlungsinhalten [Multimodal pain therapy for treatment of chronic pain syndrome. Consensus paper of the ad hoc commission on multimodal interdisciplinary pain management of the German Pain Society on treatment contents] [in German]. *Schmerz* 2014;28:459–72.
- Basílio N, Ramos C, Figueira S, Pinto D. Worldwide usage of International Classification of Primary Care. *Rev Bras Med Fam Comunidade* 2016;11:1–9.
- Block F, Gabriel J. Multimodale Schmerztherapie in der Neurologie [Multimodal pain therapy in neurology] [in German]. *Akt Neurol* 2010;37:501–4.
- Breivik H, Collett B, Ventafridda V, Cohen R, Gallacher D. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. *Eur J Pain* 2006;10:287–333.
- Briggs EV, Battelli D, Gordon D, Kopf A, Ribeiro S, Puig MM, Kress HG. Current pain education within undergraduate medical studies across Europe: Advancing the Provision of Pain Education and Learning (APPEAL) study. *BMJ Open* 2015;5:e006984.
- Carter JJ, Watson AC, Sminkey PV. Pain management: screening and assessment of pain as part of a comprehensive case management process. *Prof Case Manag* 2014;19:126–34.
- Ektor-Andersen J, Manzon L, Sjolund B. Chronic pain and the sociodemographic environment: results from the pain clinic at Malmö General Hospital in Sweden. *Clin J Pain* 1993;9:183–8.
- Fayaz A, Croft P, Langford RM, Donaldson LJ, Jones GT. Prevalence of chronic pain in the UK: a systematic review and meta-analysis of population studies. *BMJ Open* 2016;6:e010364.
- Fink-Miller EL, Long DM, Gross RT. Comparing chronic pain treatment seekers in primary care versus tertiary care settings. *J Am Board Fam Pract* 2014;27:594–601.
- Flor H, Fydrich T, Turk DC. Efficacy of multidisciplinary pain treatment centers: a meta-analytic review. *PAIN* 1992;49:221–30.
- Friessem CH, Willweber-Strumpf A, Zenz MW. Chronic pain in primary care. German figures from 1991 and 2006. *BMC Public Health* 2009;9:299.
- Global Burden of Disease Study 2013. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2015;386:743–800.
- Hasselstrom J, Liu-Palmgren J, Rasjo-Wraak G. Prevalence of pain in general practice. *Eur J Pain* 2002;6:375–85.
- Kopf A, Dusch M, Alt-Epping B, Petzke F, Treede RD. Das Querschnittsfach "Schmerzmedizin": Chance für die Allgemeine Schmerzmedizin [Pain medicine as a cross-sectional subject in German medical schools. An opportunity for general pain management] [in German]. *Schmerz* 2014;28:405–13.
- Lee J, Ellis B, Price C, Baranowski AP. Chronic widespread pain, including fibromyalgia: a pathway for care developed by the British Pain Society. *Br J Anaesth* 2014;112:16–24.
- Mansfield KE, Sim J, Croft P, Jordan KP. Identifying patients with chronic widespread pain in primary care. *PAIN* 2017;158:110–19.
- Mäntyselkä PT, Turunen JH, Ahonen RS, Kumpusalo EA. Chronic pain and poor self-rated health. *JAMA* 2003;290:2435–42.
- McCarberg BH. Pain management in primary care: strategies to mitigate opioid misuse, abuse, and diversion. *Postgrad Med* 2011;123:119–30.
- Mezei L, Murinson BB. Pain education in North American medical schools. *J Pain* 2011;12:1199–208.
- Nicholas M, Vlaeyen JWS, Rief W, Barke A, Aziz Q, Benoliel R, Cohen M, Evers S, Giamberardino MA, Goebel A, Korwisi B, Perrot S, Svensson P, Wang SJ, Treede RD; The IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic primary pain. *PAIN* 2019;160:28–37.
- Nugraha B, Gutenbrunner C, Barke A, Karst M, Schiller J, Schäfer P, Falke S, Korwisi B, Rief W, Treede RD; The IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: functioning properties of chronic pain. *PAIN* 2019;160:88–94.
- O'Rourke JE, Chen I, Genao I, Panda M, Cykert S. Physicians' comfort in caring for patients with chronic nonmalignant pain. *Am J Med Sci* 2007;333:93–100.
- Rice ASC, Smith BH, Blyth FM. Pain and the global burden of disease. *PAIN* 2016;157:791–6.
- Rowbotham MC, Gilron I, Glazer C, Rice AS, Smith BH, Stewart WF, Wasan AD. Can pragmatic trials help us better understand chronic pain and improve treatment? *PAIN* 2013;154:643–6.
- Scascighini L, Toma V, Dober-Spielmann S, Sprott H. Multidisciplinary treatment for chronic pain: a systematic review of interventions and outcomes. *Rheumatology* 2008;47:670–8.
- Schneiderhan J, Clauw D, Schwenk TL. Primary care of patients with chronic pain. *JAMA* 2017;317:2367–8.
- Smith BH, Lee J, Price C, Baranowski AP. Neuropathic pain: a pathway for care developed by the British Pain Society. *Br J Anaesth* 2013;111:73–9.
- Spina A, Mortini P, Alemanno F, Houdayer E, Iannaccone S. Trigeminal neuralgia: toward a multimodal approach. *World Neurosurg* 2017;103:220–30.
- Stanos S, Brodsky M, Argoff C, Clauw DJ, D'Arcy Y, Donevan S, Gebke KB, Jensen MP, Lewis Clark E, McCarberg BH, Park PW, Turk DC, Watt S. Rethinking chronic pain in a primary care setting. *Postgrad Med* 2016;128:502–15.
- Tajfel P, Gerche S, Huas D. La douleur en médecine générale [in French]. *Douleur et Analgésie* 2002;15:71–9.
- Treede RD, Rief W, Barke A, Aziz Q, Bennett MI, Benoliel R, Cohen M, Evers S, Finnerup NB, First MB, Giamberardino MA, Kaasa S, Korwisi B, Kosek E, Lavand'homme P, Nicholas M, Perrot S, Scholz J, Schug S, Smith BH, Svensson P, Vlaeyen JWS, Wang SJ. Chronic pain as a symptom and a disease: the IASP classification of chronic pain for the international classification of diseases ICD-11. *PAIN* 2019;160:19–27.
- Treede RD, Rief W, Barke A, Aziz Q, Bennett MI, Benoliel R, Cohen M, Evers S, Finnerup NB, First MB, Giamberardino MA, Kaasa S, Kosek E, Lavand'homme P, Nicholas M, Perrot S, Scholz J, Schug S, Smith BH, Svensson P, Vlaeyen JW, Wang SJ. A classification of chronic pain for ICD-11. *PAIN* 2015;156:1003–7.
- Upshur CC, Luckmann RS, Savageau JA. Primary care provider concerns about management of chronic pain in community clinic populations. *J Gen Intern Med* 2006;21:652–5.
- Verbeke M, Schrans D, Deroose S, De Maeseneer J. The international classification of primary care (ICPC-2): an essential tool in the EPR of the GP. *Stud Health Technol Inform* 2006;124:809–14.
- WONCA International Classification Committee. International classification of primary care ICPC-2-R, revised second edition (chapter 11). Oxford: Oxford University Press, 2005.
- World Health Organization. ICD-11 for mortality and morbidity statistics (ICD-11 MMS). Available at: <https://icd.who.int/browse11/l-m/en> Accessed August 20, 2018.
- World Health Organization. Declaration of Alma Ata: report of the international conference on primary health care—Alma Ata, USSR. *WHO Chron* 1978;32:428–30.
- World Health Organization. International classification of functioning, disability and health: ICF. Geneva: World Health Organization, 2001.
- World Health Organization. Primary health care. Available at: [http://www.who.int/topics/primary\\_health\\_care/en](http://www.who.int/topics/primary_health_care/en). Accessed May 8, 2018.
- World Health Organization. ICD-11 (Mortality and Morbidity Statistics) – Beta Draft, 2018. Available at: <https://icd.who.int/dev11/l-m/e>. Accessed May 8, 2018.