

Family physicians' experience with chronic non-cancer pain in the Community of Madrid

Gema Izquierdo Enríquez*, María Fernández de Paul, Isabel Prieto Checa, María Victoria García Espinosa

Specialist in Family and Community Medicine. Villa de Vallecas Health Center. Madrid (Spain)

*Corresponding author.

Email address: gemaizquierdo88@gmail.com

Abstract: Aims: to explore the beliefs and management of patients with chronic non-cancer pain (CNCP) among primary care physicians in the public health system of the Community of Madrid. Methods: this was an observational, descriptive, cross-sectional study, performed by means of an anonymous 23-item questionnaire that was distributed electronically to 1148 professionals. Results: the response rate was 6.4%. Of respondents, 59.4% believe that paracetamol is of limited effectiveness; 27.3% think that topical NSAIDs are a first-line treatment for gonarthrosis and small joints; 62.8% consider opioids effective, and 50% consider them safe. However, 72.8% believe that an approach based on education and physical exercise is more effective than pharmacological treatment, providing advice on these approaches in 77.2% and 99.4% of cases, respectively. Conclusions: the results highlight the need for CNCP training focused on education and physical exercise, as well as recognition of the limited evidence for certain pharmacological treatments.

Key words: analgesics; chronic pain; education; exercise; opioid

1 Introduction

The International Association for the Study of Pain (IASP) defines pain as an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage [1]. In its chronic form, it lasts for more than 3 months and is often accompanied by significant functional and emotional impairment. The IASP recognizes that pain does not always imply tissue damage, as it is a subjective experience influenced by biopsychosocial factors [2].

The impact of chronic pain extends beyond the clinical realm and is a major public health problem. The Barometer of Chronic Pain in Spain (2022) [3] indicates that 28.6% of patients have required sick leave in the past year, 32% have left their jobs, and 17.3% have changed jobs.

According to the European Health Survey in Spain (2020) [4], 4 of the 10 most common conditions are related to primary chronic pain (low back pain, neck pain, migraine, or osteoarthritis). Their prevalence increases with age and is more common in women. Furthermore, pain is the second most common reason for seeking care in primary care, yet clinical management falls short of scientific evidence [5].

Various clinical practice guidelines (CPGs), such as those from the National Institute for Health and Care Excellence (NICE) [6], recommend a patient-centered approach that combines education and physical exercise for chronic non-cancer pain (CNCP), reserving pharmacological treatment as a second-line option, for short-term use, and at the lowest possible

dose. However, in Spain, the use of medications is high. The Ministry of Health's EDADES 2022 survey [7] shows an increase in opioid use, in many cases initiated for the management of acute pain.

Given the existing gap between scientific evidence and clinical practice, the main objective of this study is to explore the beliefs and practices regarding the management of CNCP among family and community medicine specialists who provide care at primary care health centers within the public health system of the Community of Madrid.

The secondary objectives are to describe perceptions of efficacy and reasons for prescribing by drug type, as well as the use of non-pharmacological treatment.

2 Materials and methods

2.1 Design

An observational, descriptive, and cross-sectional study was conducted.

2.2 Study period and setting

The study was conducted between February and April 2024 in the eastern and southeastern primary care districts of the public health system of the Community of Madrid. These districts comprise 38 and 39 health centers, respectively, and serve populations of 1,027,143 and 1,061,653 residents, respectively.

2.3 Study population

The study targeted family and community medicine physicians and family and community medicine residents who were actively working in health centers within these two healthcare districts. Those working in specific units (palliative care, hospital and out-of-hospital emergency departments) were excluded.

2.4 Sample size and selection

The sample size was not calculated, as the survey was sent to the 1,148 professionals working in those healthcare facilities during the study period.

2.5 Questionnaire

An anonymous, self-administered questionnaire was developed on the Google Forms platform following the request for informed consent. The questionnaire consisted of 23 items divided into two sections: a sociodemographic section comprising 6 questions and a section on the management of CNCP comprising 17 questions. Since no validated questionnaire was available, one was designed based on existing clinical guidelines and consensus documents [5,6] and asked about the different therapeutic options for CNCP, aiming to gather information on the use and beliefs regarding each one (Appendix 1).

After developing the questionnaire, a pilot test was conducted among several medical professionals to ensure its comprehensibility, duration, and ease of administration.

It was distributed electronically via the institutional email system, with two separate mailings sent two weeks apart.

2.6 Statistical analysis

Qualitative variables were described using absolute frequencies or percentages, and quantitative variables using measures of central tendency and dispersion. The Chi-square test was used to analyze the possible association of each therapeutic group with age groups (<35, 35–50, >50), years of work experience (<5, 5–15, and more than 15 years), the number of walk-in patients (<35, 35–45, >45), and the reason for the prescription, and odds ratios (OR) were calculated, along with their 95% confidence intervals (CI) and p-values.

Data were compiled in Microsoft Excel® and analyzed statistically using IBM SPSS Statistics 26®.

3 Results

A sample of 180 participants was obtained, of whom 4 were residents in Family and Community Medicine, and the

rest were family physicians; the response rate was 6.4%. Table 1 presents the characteristics of the sample.

Regarding treatment for CNCP, 59.4% considered that acetaminophen has little or very little effectiveness, although those over 50 years of age [OR 2.73; 95% CI (1.08–6.94); p 0.034] and professionals with more than those with 15 years of experience [OR 6.21; 95% CI (2.12 – 18.23); p 0.001] consider it most effective. 58.3% of prescribers establish a therapeutic agreement with the patient, explaining the risks and benefits, and 30% prescribe it because they feel the need to provide a pharmacological response to the patient.

Table 1. Sample characteristics

AGE	<35 years	15.60%
	35–50 years	25.60%
	>50 years	58.90%
GENDER	Female	75%
	Male	25%
WORK EXPERIENCE	Resident Physician	2.20%
	<5 years	8.30%
	5–15 years	16.70%
	>15 years	72.80%
EMPLOYMENT STATUS	Permanent	75%
	Other	25%
TIME IN CURRENT POSITION	<3 years	36.70%
	3–10 years	21.70%
	>10 years	41.70%
AVERAGE CONSULTATION DEMAND	<35 patients	20%
	35–45 patients	74%
	>45 patients	6%

With regard to NSAIDs, 27.3% believe that topical NSAIDs are a first-line treatment for knee osteoarthritis or osteoarthritis of small joints, while 50% believe they are not. 59.4% consider that their efficacy is not comparable to that of oral NSAIDs. 56.7% prescribe oral NSAIDs, with men doing so more frequently than women [OR 2.66; 95% CI (1.27–5.61); p = 0.010], mostly for short periods and at low doses (52.8%); 27.8% prescribe them on an as-needed basis, and 19.4% at high doses for short periods.

62.8% consider opioids to be effective for chronic non-oncological pain, and 50% perceive them as safe, with 61.6% of the sample estimating that they do not affect life expectancy.

Gabapentinoids were considered effective for chronic lumbosciatica by 45.6%.

Table 2 shows the reasons for prescribing the different drugs.

63.9% of professionals expressed satisfaction with the use of the World Health Organization (WHO) analgesic scale. 86.7% consider that an approach based on education and physical exercise is always, almost always, or frequently more effective than pharmacological treatment. 77.2% provide pain education, and 99.4% recommend staying active and doing physical exercise.

Table 2. Reasons for prescribing different medications

Reasons for Prescription	Paracetamol	Opioids	Gabapentinoids
Placebo effect	2.8% (5)	0	0
No available alternatives	0	36.1% (65)	29.4% (53)
Therapeutic agreement with patient	58.3% (105)	43.3% (78)	35.0% (63)
Need to provide pharmacological intervention	30.0% (54)	15.6% (28)	23.3% (42)
Patient pressure	1.7% (3)	2.2% (4)	3.3% (6)
Other reasons	7.2% (13)	2.8% (5)	8.9% (16)

Likewise, 59.4% stated that having centers offering supervised exercise would facilitate reduced pharmacological prescribing, followed by greater access to physical therapy (18.9%) and educational strategies (6.7%) or public health campaigns (6.7%).

4 Discussion

The results reflect how some of the professionals' beliefs align with the CPGs, while others diverge from them.

First, 59.4% believe that acetaminophen has limited efficacy in chronic musculoskeletal pain. This belief is supported by guidelines such as those from the American College of Rheumatology (2019) [8] or the Osteoarthritis Research Society International (OARSI) [9], which make a weak recommendation regarding the use of acetaminophen. However, given its safety profile, a 2019 BMJ Evidence-Based Medicine review [10] continues to consider it a first-line treatment.

Regarding topical NSAIDs, 27.3% of the sample would consider them first-line treatment for knee osteoarthritis and small joints, contrary to the recommendation of the American College of Rheumatology (2019) [8], which concludes that they are strongly recommended and that oral NSAIDs should be used in patients with osteoarthritis of the knee, hip, and/or hand, at the lowest possible doses and for the shortest possible duration.

Regarding opioids, 62.8% believe they are effective for CNCP and 50% consider them safe; there is a greater tendency for them to be prescribed by professionals with more work experience, contrary to guidelines such as those of the American College of Physicians from 2020 [11] or studies such as the one published in JAMA in 2023 [12], which found that opioids were no more effective than placebo in reducing low back or neck pain after 6 weeks of treatment. Similarly, the INFAC bulletin [13] concludes that opioids "have not demonstrated a favorable long-term benefit-risk profile in CNCP and their use should be exceptional."

As for gabapentinoids, the evidence is controversial. According to a review published in Tools for Practice by the College of Family Physicians of Alberta (Canada) [14], the benefits of these drugs for chronic pain have been overstated due to publication and reporting biases. There is no evidence from trials with pregabalin that it is superior to gabapentin [15]. Despite this, 45.6% of the sample considers them effective for chronic low back pain.

Management of CNCP based on education and physical exercise is considered more effective than pharmacological treatment by 72.8% of our sample, in line with guideline recommendations. However, according to the survey results, there is an unmet demand for a greater number of centers offering supervised exercise (58.8%) and a perception of logistical and structural barriers to its effective implementation.

It is well known that there is a significant gap between CPG recommendations and routine practice [16]. In a qualitative study conducted in Switzerland on the management of chronic non-cancer pain by primary care physicians, key factors were identified, such as the need for a biopsychosocial approach, caution in the use of opioids, and a preference for non-pharmacological management in these cases. Furthermore, the study highlights the complexity of chronic pain management and the need for education in this area [17]. Another study conducted with patients with low back pain also

highlights the importance of an approach focused not only on the physical aspect but also on the patient's social and personal context for better pain management [18]. Therefore, additional studies are needed in our setting to evaluate beliefs and clinical outcomes, as well as educational interventions to improve the management of chronic non-cancer pain.

4.1 Limitations

The main limitations of the study were the inability to verify compliance with the inclusion and exclusion criteria due to the online distribution of the questionnaire, and the low response rate obtained despite sending the questionnaire twice at separate intervals.

Considerations

The study was approved by the Central Primary Care Research Commission of Madrid (Code 20230040) and the Research Ethics Committee of the Hospital 12 de Octubre (CEIm No.: 24/056). The confidentiality of the participants was guaranteed, in accordance with Regulation (EU) 2016/679 and the Organic Law 3/2018 on the protection of personal data and the guarantee of digital rights.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- [1] Raja SN, Carr DB, Cohen M, Finnerup NB, Flor H, Gibson S, et al. The revised International Association for the Study of Pain definition of pain: concepts, challenges, and compromises. *Pain*. 2020 Sep;161(9):1976. doi:10.1097/j.pain.0000000000001939.
- [2] Nugraha B, Gutenbrunner C, Barke A, Karst M, Schiller J, Schäfer P; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: functioning properties of chronic pain. *Pain*. 2019 Ene;160(1):88. doi:10.1097/j.pain.0000000000001433.
- [3] Observatorio del Dolor de la Universidad de Cádiz. Barómetro del dolor crónico en España 2022. [Internet]. Fundación Grünenthal; 2023 [citado 10 mar 2025]. Disponible en: <https://www.fundaciongrunenthal.es/fundacion/pdfs/barometro-dolor-cronicoespana-2022-resumen-ejecutivo.pdf>.
- [4] Instituto Nacional de Estadística. Encuesta Europea de Salud en España (ESEE) 2020. [Internet]. Madrid: Ministerio de Sanidad, Gobierno de España; 2020 [citado 10 mar 10]. Disponible en: https://www.sanidad.gob.es/estadEstudios/estadisticas/EncuestaEuropea/EncuestaEuropea2020/ESEE2020_inf_evol_princip_result.pdf.
- [5] Sánchez Jiménez J, Tejedor Varillas A, Carrascal Garrido R. La atención al paciente con dolor crónico no oncológico en Atención Primaria. Documento de Consenso. [Internet]. 2016 [citado 10 mar 2025]. Disponible en: <https://www.semfyc.es/wp-content/uploads/2016/06/DOCUMENTO-CONSENSO-DOLOR-17-04-A.pdf>.
- [6] National Institute for Health and Care Excellence. Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain [Internet]. Guía NICE n.º 193. 2021 [citado 13 mar 2025]. Disponible en: <https://www.nice.org.uk/guidance/ng143>.
- [7] Ministerio de Sanidad, Gobierno de España. Encuesta sobre alcohol y otras drogas en España (EDADES) 2022 [Internet]. 2023 [citado 13 mar 2025]. Disponible en: https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/2022_Informe_EDADES.pdf.
- [8] Kolasinski SL, Neogi T, Hochberg MC, Oatis C, Guyatt G, Block J, et al. 2019 American College of Rheumatology/Arthritis Foundation guideline for the management of osteoarthritis of the hand, hip, and knee. *Arthritis Care Res (Hoboken)*. 2020 Feb;72(2):149-62. doi:10.1002/acr.24131.

- [9] Bannuru RR, Osani MC, Vaysbrot EE, Arden NK, Bennell K, Bierma-Zeinstra SMA, et al. OARSI guidelines for the non-surgical management of knee, hip, and polyarticular osteoarthritis. *Osteoarthritis Cartilage*. 2019 Nov;27(11):1578-89. doi:10.1016/j.joca. 2019.06.011.
- [10] Onakpoya IJ. Paracetamol as first line for treatment of knee and hip osteoarthritis. *BMJ Evid Based Med*. 2020 Feb;25(1):40. doi:10.1136/bmjebm-2019-111213.
- [11] Qaseem A, McLean RM, O'Gurek D, Batur P, Lin K, Kansagara DL, Clinical Guidelines Committee of the American College of Physicians, Commission on Health of the Public and Science of the American Academy of Family Physicians, Cooney TG, Forciea MA, Crandall CJ, Fitterman N, Hicks LA, Horwitch C, et al. Nonpharmacologic and pharmacologic management of acute pain from non-low back, musculoskeletal injuries in adults: a clinical guideline from the American College of Physicians and American Academy of Family Physicians. *Ann Intern Med*. 2020 Nov;173(9):739-48. doi:10.7326/M19-3602.
- [12] Harris E. Opioids no better than placebo at relieving back pain. *JAMA*. 2023 Ago 1;330(5):401. doi: 10.1001/jama.2023.12536.
- [13] Dolor crónico no-oncológico: ¿opioides? [Internet]. INFAC. 2022;30(1):1-10. Disponible en: https://www.euskadi.eus/contenidos/informacion/cevime_infac_2022/es_def/adjuntos/INFAC_Vol_30_1_OPIOIDES-CNCP.pdf.
- [14] Allan GM, Basset KL. Gabapentin & Chronic Pain: Missing Evidence and Real Effect? Tools for Practice. Alberta College of Family Physicians. [Internet]. 2010 [citado el 7 de enero de 2025]. Disponible en: <https://cfpclearn.ca/tfp25/>.
- [15] Roche Bueno JC. Eficacia de pregabalina, gabapentina y duloxetina en el dolor neuropático verificado por el análisis de la curva-p. *Rev Soc Esp Dolor*. 2020;27(1):16-23. doi:10.20986/resed.2020.3727/2019.
- [16] Buchbinder R, Underwood M, Hartvigsen J, Maher CG. The Lancet Series call to action to reduce low value care for low back pain: an update. *Pain*. 2020 Sep;161 Suppl 1(1):S57-S64. doi: 10.1097/j.pain.0000000000001869. PMID: 33090740; PMCID: PMC7434211.
- [17] Rufener L, Akre C, Rodondi P-Y, Dubois J. Management of chronic non-cancer pain by primary care physicians: A qualitative study. *PLoS One*. [Internet]. 2024;19(7):e0307701. doi: 10.1371/journal.pone.0307701.
- [18] Dalle G, Aloiso Alves C, Clerc P, Le Breton J. A narrative approach for the management of low back pain in general practice: An in-depth patient interviews study. *Eur J Gen Pract* [Internet]. 2025;31(1):2522183. doi: 10.1080/13814788.2025.2522183.

Appendix 1. Questionnaire

Management of Chronic Non-Cancer Pain in Primary Care

The following questionnaire has been developed to assess the management of chronic non-cancer pain (CNCP) by primary care medical staff in the Community of Madrid.

It consists of 23 items and should take no more than 5–10 minutes to complete.

Thank you very much for your cooperation.

I consent to participating in this research project and to the use of my data for this purpose.

1. Age

- Under 35
- Between 35 and 50 years old
- Over 50

2. Gender

- Female
- Male
- Other

3. Work experience

- Resident physician
- Less than 5 years
- Between 5 and 15 years
- More than 15 years

4. Employment status

- Permanent
- Other

5. Length of time at current health center

- Less than 3 years
- Between 3 and 10 years
- More than 10 years

6. Average daily patient volume

- Fewer than 35 patients per day
- Between 35 and 45 patients/day
- More than 45 patients/day

7. Do you think PARACETAMOL is effective in managing chronic musculoskeletal pain (e.g., low back pain or knee pain)?

- Not at all
- Very little
- A little
- Quite
- Very much

8. When you prescribe PARACETAMOL for the management of chronic musculoskeletal pain, why do you do so?

- I feel the need to provide a pharmacological response to the patient
- I feel pressure from the patient
- I am seeking the placebo effect of prescribing a drug
- I establish a therapeutic agreement with the patient and explain the risk-benefit balance
- Other

9. Do you believe that the use of topical nonsteroidal anti-inflammatory drugs (NSAIDs) is as effective as oral NSAIDs in managing pain associated with knee osteoarthritis?

- No
- Yes

10. Do you think topical NSAIDs are the first-line treatment for managing pain associated with knee osteoarthritis?

- I completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

11. Do you prescribe oral NSAIDs for the management of CNCP?

- Never
- Rarely
- Often
- Almost always
- Always

12. When you prescribe oral NSAIDs for CNCP, do you:

- For a short period and at a low dose
- For a short period and at a high dose
- I prescribe it on an as-needed basis for specific periods
- I prescribe it on a chronic basis

13. Do you believe that OPIOIDS are effective medications for the treatment of CNCP?

- None
- Very little
- A little
- Quite a bit
- A lot

14. Do you think OPIOIDS are safe drugs for the treatment of CNCP?

- Not at all
- Very little
- A little
- Quite a bit
- Very much

15. When you prescribe OPIOIDS on a long-term basis in the CNCP, why do you do so?

- I feel the need to provide a pharmacological response to moderate-to-severe pain

- I feel pressure from the patient
- I can't find any other alternatives for managing this situation
- I establish a therapeutic agreement with the patient and explain the risk-benefit balance
- Other

16. Do you think that OPIOIDS prescribed in the CNCP affect the patient's life expectancy?

- Not at all
- Very little
- A little
- Quite a bit
- A lot

17. Do you consider GABAPENTINOIDS to be effective in the management of chronic lumbosciatica?

- Not at all
- Very little
- A little
- Quite
- Very much

18. When you prescribe GABAPENTINOIDS for chronic non-cancer pain, you do so because:

- I feel the need to provide a pharmacological response to moderate-to-severe pain
- I feel pressure from the patient
- I can't find any other alternatives for managing this situation
- I establish a therapeutic agreement with the patient and explain the risk-benefit balance
- Other

19. Do you think that a management approach based on pain education and physical exercise is more effective than pharmacological treatment for CNCP?

- Never
- Rarely
- Often
- Almost always
- Always

20. Do you provide pain education to patients with chronic non-cancer pain?

- Never
- Rarely
- Often
- Almost always
- Always

21. Do you advise patients with CNCP to stay active and exercise?

- Never
- Rarely
- Often

- Almost always

- Always

22. What do you think would be most helpful in reducing the prescription of medications for chronic non-communicable diseases (CNCP)?

- More accessible physical therapy

- Targeted training

- Supportive gyms

- Centers with supervised and adapted exercise

- Public health campaigns

- Coordination with other specialists

- Other

23. Do you think following the World Health Organization (WHO) analgesic ladder—using analgesics, NSAIDs, weak opioids, strong opioids, and adjuvants—is appropriate for pain management?

- Strongly agree

- Agree

- Neither agree nor disagree

- Disagree

- Strongly disagree