Questionnaire

Neuropathic Pain Management in France: A Comparison of French Recommendations Using Case-Vignette Surveys

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Background: Despite the availability of clinical practice guidelines, suboptimal adherence among general practitioners (GPs) in pain management remains a concern. The French Pain Society issued revised guidelines for pain management in 2020.

Objectives: This study aimed to evaluate the current adherence of French doctors to the updated guidelines for pain management.

Study Design: A non-interventional, cross-sectional study.

Setting: A panel of doctors from France, participated in an online questionnaire.

Methods: Two selected vignettes describing patients with chronic neuropathic pain (central and peripheral) were completed. The ability to correctly prescribe appropriate first- and second-line treatments according to the 2020 French Pain Society guidelines was assessed.

Results: A total of 191 physicians were recruited from a database of 3,380, representing a response rate of 5.7%. Of the participants, 182 (95.3%) completed the survey correctly and were included in the final analysis. Among those participants, 64% were general practitioners (GPs). Adherence to the guidelines for the management of l ocalized peripheral neuropathic pain was reported by 15.38% of participants, while 21% reported adherence for central neuropathic pain. A significant disparity was observed in the prescription of medications, with pregabalin being prescribed by 32.9% of participants and gabapentin by 22.5% for localized neuropathic pain. For central neuropathic pain, pregabalin use was reported by 30.7% of respondents and gabapentin by 26.3%. Following the failure of a second-line therapy, 66% of participants considered reorientation to be a viable treatment option for localized peripheral neuropathic pain, compared to 45% for central neuropathic pain.

Limitations: The number of participants is one of the main limitations in this study.

Conclusions: Despite the participants' low adherence to guidelines, substantial variation in medication use, and limited support for reorientation after failed treatment, this study offers insight into management practices for neuropathic pain among French GPs in Burgundy.

Key words: Chronic pain, diagnosis, therapy, decision making, France, general practitioners, statistics & numerical data, guideline adherence, neuralgia, pain management

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The complexity of pain pathways, as we understand them, is a testament to the genetic origin of pain during human evolution (1). An inability to feel pain is deleterious, leading to shorter survival (2). Pain can thus be seen as the emotional, cognitive, and behavioral integration of nociception.

The treatment of pain is as complex as the elements that compose it. The challenges faced during pain management put health professionals under large amounts of pressure, especially since treatment is only partly effective. There are therefore psychological repercussions for doctors, who describe feelings of helplessness and guilt (3). A French law enacted on March 4, 2002, stipulates that "everyone has the right to receive care to alleviate their pain. This pain must be prevented, assessed, taken into account, and treated in all circumstances." Numerous national plans have been implemented over the past decade, intensifying the pressure on health care professionals (4,5). Emergency services and general practitioners bear the brunt of this responsibility, with pain management accounting for 43% of consultations (6).

However, as highlighted by the French Society for the Study and Treatment of Pain (SFETD), the training provided on pain and its management remains inadequate (7). In some cases, neuropathic pain emerges. The International Association for the Study of Pain (IASP) defines this term as pain caused by a lesion or disease of the somatosensory nervous system. Neuropathic pain affects an estimated 6.9% to 10% of the global population (8).

With these developments in mind, the pain management guidelines were revised in 2020 to incorporate the latest French recommendations (9). A significant change has been the recent classification of pregabalin as a restricted substance in France, resulting in its use as a second-line treatment. We evaluate here the management of neuropathic pain in accordance with these guidelines.

The multifaceted nature of neuropathic pain, characterized by a diverse range of treatments, variable pain presentations, and challenges in accessing certain medications, has resulted in inconsistencies in pain management practices among health care providers. We were therefore inspired to conduct a descriptive study to assess the management of neuropathic pain among physicians. Our findings were subsequently compared against the 2020 recommendations issued by the SFETD. This observational study explores the prescribing practices of physicians in the Burgundy region, their approaches to therapeutic escalation, and the criteria prompting referrals to specialists.

Methods

Selection of Participants

The study focused on doctors in the Burgundy region, and our goal was to define the terms of prescription for doctors seeing patients for neuropathic pain consultations.

We included only medical doctors (with or without doctoral theses) as participants, and they had to meet the following criteria: currently practicing, in loco tenens, working alone (self-employed, in clinics, or as assistant doctors), working in Burgundy, and able to respond to an online questionnaire. To this end, we sent a questionnaire by e-mail using Google Form, using the departmental medical council and the regional union of health professionals (URPS). Answers were received anonymously, directly by the Google Docs software in the form of spreadsheets. We collected the following data: gender, age, specialty, place and mode of practice, presence of pain management training, type of therapy prescribed, and whether the patient was referred. Incomplete questionnaires were excluded, as were nonprescribing doctors.

Construction of the Clinical Case

A multidisciplinary panel of pain experts from the University Hospital of Dijon developed the clinical cases. Each case was designed to be realistic and concrete, representing 2 types of neuropathic pain: localized peripheral neuropathic pain and central neuropathic pain. These 2 types of pain covered the entire set of recommendations published by the French SFETD in 2020. The clinical case clearly stated the identification of neuropathic pain, so the participating doctors knew the type of pathology they were confronting. Screening tools, such as the Douleur Neuropathique en 4 Questions (DN4), which is used in France to detect neuropathic pain (10), were employed. Based on these conditions, we developed 2 case-vignettes with each scenario (Appendix S1). Given the significant overlap between peripheral and central neuropathic pain, as well as the lack of definitive guidelines for differentiating between the 2 types in clinical practice, our study focused on localized peripheral neuropathic pain and central neuropathic pain to provide a more focused analysis.

To illustrate the management of localized peripheral neuropathic pain, we used the example of a

42-year-old patient with a postoperative lesion of the external saphenous nerve after a phlebotomy. In this clinical case, the pain was rated between 2 and 8 on the Numeric Rating Scale (NRS) with symptoms described as burning, electric shocks, itching, tingling, and numbness. Clinical examination revealed a circular allodynic area in the outer lower third of the left leg, with adjacent areas of hypoesthesia. The patient's score on the DN4 questionnaire was positive.

As for the management of central neuropathic pain, we used the example of a 38-year-old patient who had had multiple sclerosis since 2008. The patient's symptoms affected the axial, posterior, and anterior surfaces of the upper limbs. This pain was described as tingling and burning and was rated between 3 and 9 on the NRS. The patient's score on the DN4 questionnaire was also positive.

We selected the most discriminative symptoms and clinical examination findings, although none of them were specific.

Construction of the Questionnaire

The questionnaire, which employed a combination of closed-ended and open-ended questions, was structured into 2 primary sections: treatment selection and specialist referral. It offered tailored options based on the progression of the clinical case. Multiple-choice questions were organized under 2 treatment lines, with the respondent informed of these options up front, allowing for prioritized answers (Appendix S2). The corresponding items aligned with the neuropathic pain management guidelines established by the SFETD. To guide each respondent's choice more precisely, the treatments were initially proposed by drug class, utilizing various International Nonproprietary Names (INNs). The number of questions and items remained consistent across all cases.

Procedure

Prior to engaging with the case vignette, participants were prompted to provide the following demographic information: gender, age, professional specialty, practice routine (location and modality), history of pain management training, and whether they practiced in a rural or an urban setting. Upon validation of these responses, participants were granted access to the first clinical case.

Statistical Analysis

Data collection was conducted directly through the Google Forms platform and subsequently transferred to Microsoft Excel software for organization. To minimize the collection of incomplete or unusable responses, questionnaire items were intentionally designed to mandate answers. Data collection took place from June 1 to August 1, 2022. Responses received beyond this time frame were excluded from the analysis. Data analysis was performed using XLSTAT statistical software, an add-on to Microsoft Excel. For descriptive statistics, the frequencies of qualitative variables were reported. Due to the small sample sizes, Fischer's exact test was employed to compare qualitative variables. Chi-squared tests of association were utilized to assess order differences for categorical variables. A 95% confidence interval with a level of α significance set at 5% was employed.

We aimed to evaluate compliance with SFETD guidelines. Thus, for each question on the case-vignette questionnaire, we analyzed the frequency of correct responses and responses that had one incorrect selection. Additionally, we categorized responses that included a third-line therapy, such as strong opioids, or had at least 3 incorrect selections.

Results

Out of 3,380 doctors contacted, 191 responded to the questionnaire. However, 9 responses were excluded due to uninterpretable results, representing approximately 5% of the total responses. This decision left 182 questionnaires for analysis, yielding a response rate of 5%. In total, 364 case vignettes were evaluated.

Characteristics of the Participants

The demographic characteristics of the participants who completed the questionnaire for both clinical cases are summarized in Table 1. Many of the respondents were between 30 and 40 years old (34.6%), were general practitioners (64.1%), and had no training in pain management (84.6%). This sample was considered representative of the general population in terms of nationwide distribution and mean age, as assessed using the French Atlas of Medical Demography (11).

Evaluating the Therapeutic Strategy

Global Results

Adherence to SFETD recommendations for localized peripheral neuropathic pain was satisfactory, with 15.38% of participants following the guidelines. However, 17% prescribed third-line medications or commit-

Table 1. *Population characteristics*.

Characteristic	n = 182
	Percentage
Women	50.0
Age, y	
30-39	34.6
40-49	11.5
50-60	14.3
Less than 30	23.6
Above 60	15.9
Consultants	
Pain specialist	1.1
Anesthesiologist resuscitator	3.3
Cardiologist	1.7
Surgeon	7.2
Dermatologist	1.1
Endocrinologist	0.6
Gastroenterologist	2.2
Geriatrician	2.2
Gynecologist	1.1
Occupational physician	0.6
General practitioner	64.1
Vascular doctor	1.1
Internal medicine	1.1
Physical rehabilitation doctor	2.2
Nephrologist	0.6
Neurologist	3.9
Oncologist	1.1
Otolaryngologist	0.6
Pneumologist	0.6
Psychiatrist	3.9
Place of Practice	
Rural	17.0
Semi-rural	34.6
Urban	48.4
Type of Practice	
Working in group	23.1
Alone	13.7
Junior doctor	3.3
Intern	13.7
Multidisciplinary care home	16.5
Non-prescribing doctor	0.5
Hospital doctor	25.3
Locum tenens physician	3.8
Traineeship	
Inter-university diploma	9.9
Seminar	4.4
Hypnotherapy	1.1
None	84.6

ted more than 3 errors. For central neuropathic pain, adherence was lower, with only 21.4% of prescriptions compliant. Additionally, 41.7% of participants made one to 2 errors, and 36.8% prescribed third-line medications or committed more than 3 errors. A significant disparity in drug prescription was observed with pregabalin used in 32.9% of cases and gabapentin in 22.5% within a context of localized neuropathic pain; pregabalin and gabapentin were prescribed, respectively, in 30.7% and 26.3% of cases of central neuropathic pain. Data on prescription drugs are available in Table 2. Table 3 shows the number of medications prescribed at the same time for each scenario.

Localized Neuropathic Pain

The most common medications prescribed for localized neuropathic pain include anticonvulsants (54.4%) and weak opioid analgesics (35.2%) as first-line treatments. Anticonvulsants (50.5%) and antidepressants (34.1%) are also frequently used as second-line treatments.

Central Neuropathic Pain

For central neuropathic pain, anticonvulsants (56.6%) and antidepressants (32.4%) were the most commonly prescribed first-line treatments. However, in the second-line setting, there was a shift in medication usage, with a decrease in anticonvulsant prescriptions (43.4%) and an increase in antidepressant prescriptions (56.6%).

Referral to a Specialist

Localized Neuropathic Pain

Among the participants, 120 doctors (66%) considered reorientation to be a viable option following the failure of a second-line therapy. Of these, 35 doctors (19%) believed that reorientation was necessary as soon as the first-line therapy proved ineffective. Conversely, 26 doctors (14%) were not inclined to redirect the patient even after the second-line therapy failed. For the doctors who opted for reorientation,

Table 2. *Data on prescription drugs.*

	Localized Neuropathic Pain		Central Neuropathic Pain	
	First-Line Treatment	Second-Line Treatment	First-Line Treatment	Second-Line Treatment
Antidepressants	30 (16.5)	62 (34.1)	59 (32.4)	79 (43.4)
Tricyclic antidepressant	24 (70.6)	29 (38.7)	28 (38.9)	30 (32.3)
Duloxetine	7 (20.6)	32 (42.7)	34 (47.2)	43 (46.2)
Venlafaxine	3 (8.8)	14 (18.7)	10 (13.9)	19 (20.4)
Antiepileptics	99 (54.4)	92 (50.5)	103 (56.6)	67 (36.8)
Gabapentine	41 (40.6)	52 (43.3)	48 (46.2)	36 (38.7)
Pregabaline	60 (59.4)	68 (56.7)	56 (53.8)	57 (61.3)
Hypnosis	1 (0.5)	0 (0)	0 (0)	0 (0)
Physiotherapy	1 (0.5)	0 (0)	0 (0)	0 (0)
TENS	15 (8.2)	47 (25.8)	21 (11.5)	35 (19.2)
Weak Opioids	64 (35.2)	28 (15.5)	42 (23.1)	21 (11.5)
Acetaminophen/Codeine	23 (34.3)	15 (26.8)	20 (35.1)	17 (32.7)
Acetaminophen/Tramadol	32 (47.8)	25 (44.6)	24 (42.1)	20 (38.5)
Acetaminophen/ Opium	0 (0)	2 (3.6)	0 (0)	0 (0)
Tramadol	12 (17.9)	11 (19.6)	9 (15.8)	14 (26.9)
Codeine	0 (0)	0 (0)	3 (5.3)	1 (1.9)
Strong Opioids	1 (0.5)	13 (7.1)	7 (3.8)	25 (13.7)
Morphine	1 (33.3)	7 (43.8)	3 (33.3)	11 (42.3)
Oxycodone	2 (66.7)	8 (50.0)	4 (44.4)	13 (50.0)
Fentanyl	0 (0)	1 (6.2)	2 (22.2)	2 (7.7)
Psychotherapy	14 (7.7)	23 (12.6)	34 (18.7)	40 (22.0)
Topical Treatment	40 (22.0)	29 (15.9)	6 (3.3)	11 (6.0)
Lidocaïne	37 (84.1)	24 (54.5)	9 (90.0)	18 (66.7)
Capsaïcine	6 (13.6)	20 (45.5)	1 (10.0)	9 (33.3)
Cannabinoid	0 (0)	5 (2.7)	5 (2.7)	17 (9.3)

referral to a specialized pain center was the preferred approach, chosen by 82% of participants (127 doctors). The remaining 18% of participants (29 doctors) sought alternative routes: 12% (19 doctors) referred to a neurologist, 4 doctors referred to the patient's referring surgeon, and 2 doctors referred the patient to a rheumatologist.

Central Neuropathic Pain

Among the participants, 82 doctors (45.1%) considered reorientation to be a viable option after the failure of a second-line therapy. Of these, 68 doctors (37.4%) believed that reorientation was necessary when the first-line therapy proved ineffective. Conversely, 14 doctors (7.7%) were not inclined to redirect the patient even after the second-line therapy failed. For those who chose reorientation, a neurologist was the preferred referral, chosen by 55% of participants

Table 3. *Number of medications prescribed simultaneously for each scenario.*

	Number of Treatments	Total
Localized Neuropathic Pain: First-Line - n (%)	Monotherapy	111 (61.7)
	Dual therapy	51 (28.3)
	Triple therapy or more	18 (10.0)
Localized Neuropathic Pain: Second-Line - n (%)	Monotherapy	95 (53.1)
	Dual therapy	51 (28.5)
	Triple therapy or more	33 (18.4)
Central Neuropathic Pain: First-Line - n (%)	Monotherapy	106 (59.9)
	Dual therapy	46 (26.0)
	Triple therapy or more	25 (14.1)
Central Neuropathic Pain: Second-Line - n (%)	Monotherapy	92 (54.4)
	Dual therapy	40 (23.7)
	Triple therapy or more	37 (21.9)

(84 doctors). The remaining 45% of participants (66 doctors) sought alternative routes: 42% (65 doctors) referred their patients to a specialized pain center, one doctor referred the patient to a physical rehabilitation doctor, and one other doctor referred the patient to a rheumatologist.

Discussion

Limitations

This study has several limitations that should be considered. Firstly, the study relied on a regional medical association to facilitate the recruitment of participants. However, difficulties in reaching all physicians within the region, as well as potential resistance or limited engagement from the medical association itself, may have limited the overall response rate.

Secondly, the challenges in participant recruitment resulted in a smaller sample size than initially anticipated. While the data collected from the participants provide valuable insights, the reduced sample size may limit the generalizability of the findings to a broader population of physicians. Although we do not have specific data on why GPs were more likely to participate than other types of physicians, the questionnaire's relevance to primary care practice or the ease of participation for GPs might have contributed to this distribution.

Finally, to address these limitations, future studies could consider expanding the recruitment strategy beyond a single region. A national or international approach, potentially utilizing multiple medical associations and other professional networks, could increase the diversity of participants and enhance the generalizability of the findings.

Therapeutic Management

Nearly 60% of our respondents were under the age of 40, suggesting a greater likelihood of familiarity with digital technologies and access to online resources. This figure aligns with a 2019 French study (12) that found that younger practitioners were more likely to seek reliable information online. The substantial number of GPs among our respondents reflects their active involvement in managing neuropathic pain, a condition that poses challenges, according to a 2016 study (13). Our findings can then help illuminate the needs and expectations surrounding pain management.

Regarding training in pain care, a significant proportion of physicians indicated that they had no training in this field of medicine. France has introduced a mandatory module on pain management for medical students; however, it does not appear that a change has occurred in the perception of training in this area. Indeed, these results are in agreement with a 2011 study carried out in the medical school at the University of Nancy (France) (13).

A notable variation in the prescribed treatments was observed, with monotherapy being the preferred approach. The introduction of INNs into the questionnaire led to significant changes in treatment choices. This finding suggests that some practitioners may have been influenced by the brand name of the medication rather than its generic name (INN). Interestingly, these disparities were less pronounced among physicians with specialized training in pain management. The observed treatment patterns suggest that prescription practices and an incomplete understanding of the pharmacodynamics of these drugs might be contributing factors. A dedicated study is warranted to evaluate practitioners' knowledge of the biochemical effects of medications in these indications. For localized neuropathic pain, the interviewed physicians predominantly prescribed antiepileptics and weak opioids as first-line treatments. Most physicians continued with antiepileptics as second-line therapy. Antidepressants were prescribed by 34% of the study participants, and 25% requested the use of transcutaneous electrical nerve stimulation (TENS).

Our results deviate from the 2020 SFETD recommendations in several aspects. Topical treatments, recommended as first-line therapy, were prescribed by only 16% of our participants. Similarly, TENS, another recommended first-line treatment, was used by only 7% of doctors in the first line and 25% in the second line. The limited prescription of lidocaine patches, approved only for postherpetic neuropathic pain, may be due to its off-label use as suggested by the SFETD. The overrepresentation of GPs in our sample may also contribute to this discrepancy, since GPs are less likely to prescribe topical treatments as first-line therapy than are specialists. Additionally, capsaicin's hospital-exclusive availability and the requirement for specialist consultation before the use of the substance may further explain its underutilization.

French regulations (14) restrict the prescription of TENS to physicians specializing in physical medicine and rehabilitation, orthopedic surgery, gynecology, psychiatry, rheumatology, neurosurgery, or neurology. This limitation likely explains the low utilization

of TENS in our study, since the sample population consisted primarily of GPs who were not authorized to prescribe those devices. Notably, hospital physicians also refrained from prescribing TENS. Furthermore, our findings indicate a positive association between training in pain management and the prescription of antidepressants for localized neuropathic pain.

In the treatment of central neuropathic pain, antiepileptics were the first-line choice for 56% of patients in this study, while antidepressants were used as first-line therapy in 32% of cases. For second-line treatment, antidepressants were chosen by 43% of respondents, and 36% opted for antiepileptics. These findings align with the recommendations of the SFETD. However, the choice of specific molecules diverges from the SFETD's guidelines. While the SFETD favors gabapentin, pregabalin was the most frequently prescribed drug in our study. This result was previously described in a 2014 French study evaluating the 2010 SFETD recommendations (15).

No differences were found associated with the varying amounts of pain training among respondents or between GPs and other specialties.

The study also assessed the prescription patterns of antidepressants for neuropathic pain. Duloxetine emerged as the preferred choice, aligning with the SFETD's recommendation to prioritize duloxetine over venlafaxine due to the stronger supporting evidence for the former in the literature. Notably, venlafaxine, duloxetine, and tricyclic antidepressants are all considered first-line treatments for central or peripheral neuropathic pain. Additionally, these medications can be utilized as second-line therapies for localized neuropathic pain. No significant disparities were observed in antidepressant prescription practices among physicians with pain training or between GPs and other specialties.

The present study highlights the sparing use of strong opioids for neuropathic pain management. For localized neuropathic pain, strong opioids were prescribed as a second-line treatment for only 13% of patients. Similarly, for central neuropathic pain, strong opioids were prescribed as a first-line treatment in only 4% of cases and as a second-line treatment in 13%. These findings align with the SFETD's recommendations for opioid use in neuropathic pain management. Notably, a document from the French Health Authority (HAS) (16) emphasizes the importance of exploring other therapies before prescribing oxycodone. In a finding consistent with this guidance, oxycodone was the most frequently prescribed strong opioid in our study.

Weak opioids were a common choice among participating physicians, particularly for localized neuropathic pain. In most cases, the chosen medication was a combination of acetaminophen and tramadol. Tramadol alone was rarely prescribed. These observations align partly with the SFETD's recommendations, which indeed consider tramadol a second-line treatment for central neuropathic pain. However, the 2020 SFETD guidelines do not specifically address the use of an acetaminophen-tramadol combination.

Conclusions

Our study highlights significant deficiencies in current neuropathic pain management practices in France. Despite the availability of evidence supporting combination therapies, monotherapy remains the predominant approach. While the treatment of central neuropathic pain appears more aligned with current guidelines, the overuse of pregabalin is concerning due to its higher risk of adverse effects.

To improve pain management, several major strategies are necessary. First, medical training must be enhanced to address the pervasive nature of pain across all specialties. Second, the accessibility of pain centers should be expanded to meet the increasing demand for specialized pain care, while simultaneously addressing staffing shortages and long wait times. Third, improved coordination between primary care physicians and pain centers is essential to ensure seamless patient care. Finally, innovative approaches, such as the new classification system for analgesic molecules, hold promise for more effective pain management, since these approaches may facilitate the development of combination therapies targeting multiple receptors.

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Appendix S1. *Pain in Diabetic Patients*.

Case n°1 Vignette describing a case of painful localized neuropathy
You receive a 40-year-old woman in consultation, with no significant medical history.
This patient underwent varicose vein surgery on her left leg in 2021.
Since the surgery, the patient has been experiencing pain described as burning, electric shocks, itching, and tingling, suggesting a lesion of the external saphenous nerve. The DN4 score was positive.
You therefore diagnose peripheral neuropathic pain localized to the lower half of the left leg.
Several appointments are scheduled with this patient to adapt the treatment to be implemented.
Case n°2 Vignette describing a case of painful central neuropathy
You receive a 32-year-old woman in consultation.
This patient is being followed for multiple sclerosis, which was diagnosed 3 years ago.
She is consulting for burning pain during relapses. Outside of relapses, the painful sensations can persist, with feelings of tightness or constriction, especially in the legs. The DN4 questionnaire is positive.
You therefore diagnose central neuropathic pain.
Several appointments are scheduled with this patient to adapt the treatment to be implemented.

Appendix S2. *Case-Vignette Questionnaire*

THERAPEUTIC STRATEGY

First line strategy

- What treatment(s) do you initiate at this first consultation (first line of therapy)? ** Multiple answers possible.
  - a. Antidepressants
  - b. Anticonvulsants
  - c. Strong opioids (morphine, oxycodone...)
  - d. Weak opioids (tramadol, codeine...)
  - e. Topical treatments (patches)
  - f. Non-invasive peripheral nerve stimulation (TENS)
  - g. Psychotherapy
  - h. Cannabinoids
  - i. Other:

- Did you prescribe an antidepressant? If so, which one? One possible answer.
  - a. Duloxetine 60-120 mg/day
  - b. Venlafaxine 150-225 mg/day
  - c. Tricyclic antidepressants 10-150 mg/day
  - d. I did not prescribe an antidepressant

- Did you prescribe an anticonvulsant? If so, which one? One possible answer.
  - a. Gabapentin 1200-3600 mg/day
  - b. Pregabalin 150-600 mg/day
  - c. I did not prescribe an anticonvulsant
  - d. Other:

- Did you prescribe a strong opioid (morphine, oxycodone)? If so, which one? One possible answer.
  - a. Morphine
  - b. Oxycodone
  - c. Fentanyl
  - d. I did not prescribe a strong opioid
  - e. Other:

- Did you prescribe a weak opioid? If so, which one? One possible answer.
  a. Paracetamol/Tramadol
  b. Tramadol
  c. Codeine
  d. Paracetamol/Codeine
  e. I did not prescribe a weak opioid
  f. Other:

- Did you prescribe a topical treatment? If so, which one? One possible answer.
  a. Lidocaine patch (1-3 patches, 12 hours/day)
  b. Capsaicin patches 8% (1-4 patches/3 months)
  c. I did not prescribe a topical treatment
  d. Other:

THERAPEUTIC STRATEGY

Second line strategy

You see this patient again a month later. She tells you that the solutions put in place have not relieved her pain. **

**What treatment(s) do you initiate as a second line of therapy? ** Multiple answers possible.
  a. Antidepressants
  b. Anticonvulsants
  c. Strong opioids (morphine, oxycodone)
  d. Weak opioids (tramadol)
  e. Topical treatments (patches)
  f. Cannabinoids
  g. Non-invasive peripheral nerve stimulation (TENS)
  h. Psychotherapy
  i. Other:

- Did you prescribe an antidepressant? If so, which one? One possible answer.
  e. Duloxetine 60-120 mg/day
  f. Venlafaxine 150-225 mg/day
  g. Tricyclic antidepressants 10-150 mg/day
  h. I did not prescribe an antidepressant

- Did you prescribe an anticonvulsant? If so, which one? One possible answer.
  e. Gabapentin 1200-3600 mg/day
  f. Pregabalin 150-600 mg/day
  g. I did not prescribe an anticonvulsant
  h. Other:

- Did you prescribe a strong opioid (morphine, oxycodone)? If so, which one? One possible answer.
  f. Morphine
  g. Oxycodone
  h. Fentanyl
  i. I did not prescribe a strong opioid
  j. Other:

Appendix S2 cont. *Case-Vignette Questionnaire*

- Did you prescribe a weak opioid? If so, which one? One possible answer.
  - g. Paracetamol/Tramadol
  - h. Tramadol
  - i. Codeine
  - j. Paracetamol/Codeine
  - k. I did not prescribe a weak opioid
  - l. Other:

- Did you prescribe a topical treatment? If so, which one? One possible answer.
  - e. Lidocaine patch (1-3 patches, 12 hours/day)
  - f. Capsaicin patches 8% (1-4 patches/3 months)
  - g. I did not prescribe a topical treatment
  - h. Other: