Ann Ig 2022 Jan-Feb; 34(1): 84-96 doi: 10.7416/ai.2021.2472

Diagnostic and therapeutic pathway for pain in a Continuing Care setting: a survey at an Italian Continuing Care Service

A. Piroli[1], C. Leuter[2], L. Fusco[3], D. Biccirè[1], A. Paladini[1], R. Testa[4], F. Marinangeli[1]

Key words: Pain management, Law no. 38/2010, General Medicine, Continuing Care, Health Care, Pain in Italy
Parole chiave: Gestione del dolore, Legge n. 38/2010, Medicina generale, Continuità assistenziale, Assistenza sanitaria, Dolore in Italia

Abstract

Background. *Law no. 38 of 15 March 2010 ensures and governs the access to the palliative care and pain management network for patients who require it. The professional roles involved in the project have been identified by the law, with the specific experience and expertise in the field of palliative care and pain management, by allocating a meaningful role to general practitioners (GPs). For this reason, an important direct training plan has been drawn up that GPs can count on for dedicated refresher courses to increase and deepen their knowledge in this specific clinical field. If the role of the GPs in the pain management and palliative care network was well-defined by the law, we cannot say the same for the Continuing Care Physician (CCP), a role that only partially overlaps that of the GP.*
The study observed the response of a Continuing Care Service (CCS) to the demand for services from patients with pain-related problems. The role of the CCP is, therefore, outlined in the pain therapy care network by observing the services provided to patients experiencing pain that is understood as being a non-deferrable problem.
Methods. *A survey was conducted at the CCSs site in Aquila, AS-01 Abruzzo. For this reason, the attending physician records the data of patients who consult the CCSs for pain-related problems on an appropriate questionnaire. The survey period covered a total of 68 days (1 January - 8 March 2020).*
Results. One hundred sixty five sheets were completed; females were more represented than males (57.6% v 42.4%) and the 36-65 age group appears most greatly represented (47.9%). One of the most frequent reasons for consulting the service is "musculoskeletal pain" (58.2%), followed by abdominal pain (15.8%). In the majority of patients, pain lasted from days (53.9%), with an average of approximately 3 days (3.1± 2.9), or hours in 40% of cases, with an average of over 6 hours (6.54±3.1). 88.5% of patients defined the level of pain experienced as "severe" (NRS=7-10), and the intensity of the pain associated with its

---

[1] *Department of Life, Health and Environmental Sciences, University of L'Aquila, L'Aquila, Italy*
[2] *Departmental Faculty of Medicine and Surgery, Campus Bio-medico University, Rome, Italy*
[3] *General Medicine, Continuity of Care, ASL 1 Abruzzo, L'Aquila, Italy*
[4] *General Manager, ASL 1 Abruzzo, Italy*

Annali di Igiene : Medicina Preventiva e di Comunità (Ann Ig)
ISSN 1120-9135 https://www.annali-igiene.it

repetitiveness (80.3% vs 92.6%) as "severe", with a statistically significant difference in relation to non-repetitiveness cases (p=0.02). 66.1% of patients said that they had taken analgesics independently, with nonsteroidal anti-inflammatory drugs (NSAIDs) the most frequently taken (53.5%). Patients who turned to the CCS received a pharmacological prescription in almost all cases. NSAIDs, specifically, were the most prescribed medicines (64.8%), followed by muscle relaxants (29.7%). Tramadol was the most represented among opioids, which was prescribed in 7.9% of cases. Just 6.1% of patients were entered into the regional pain management network.

Conclusions. *The results of the survey show that a large number of patients turn to the CCS to resolve painful symptoms of various natures. The study offers some food for thought concerning the role of CCPs and the importance of providing for their inclusion in the pain therapy clinical and training pathways provided for by Law 38/2010. This would ensure its more effective implementation and, therefore, better care for patients experiencing painful pathologies.*

Introduction

Pain represents a significant clinical, social, and economic problem in communities throughout the world (1, 2).

It frequently depicts the distinctive characteristics of many pathologies, helps in diagnoses and, in some cases, can represent an important prognostic index for the severity of the basic pathology (3). The importance of this symptom is demonstrated by the enormous interest manifested in recent years by the medical and scientific community in the study of pathophysiological mechanisms, in improving diagnostic processes and pain therapy options, taking its various forms and manifestations into consideration (4).

Also, in recent years, there has been a genuine cultural and scientific reform which has seen pain turned from a symptom, often to be endured, into an authentic nosological entity to be correctly diagnosed and treated, with important physical, psychological, social and, last but not least, economic repercussions (5).

Although extensively investigated, even today it is difficult to describe the extent of the problem exactly, expressed in all of its manifestations, oncological and non-oncological in origin, classified by origin, intensity and duration. Epidemiological studies have demonstrated that half of the population, in recent months, have experienced an episode of pain lasting at least one day (6, 7). The widest survey conducted in Europe on chronic pain showed, in 2006, somewhat alarming data with regard to its effect on the surveyed population, showing that pain of a moderate-severe intensity was observed in 19% of European adults, and Italy in particular was at the third place, with a prevalence of 26% (8-10). Just a few years later, pain was declared a global priority in public health (11, 12).

In this global scientific landscape, the need was born to define diagnostic-therapeutic pathways in Italy that are capable of effectively tackling the problem of pain, by creating therapeutic networks that are uniformly distributed across the country and integrated with hospitals. The need to make use of committed professionals not only in the patient care process, but also in activities of scientific and clinical refreshers, is at the base of this project.

With Law 38 of March 15 2010, concerning the provisions for guaranteeing access to palliative care and pain management, access to palliative care and pain management are protected and guaranteed in Italy for the first time (13). Among the most relevant and innovative aspects of the law are the promotion and the integration of national networks for palliative care and pain management, as well as the training of medical and healthcare staff in the specific sector of pain therapy.

Although the accent in this legislative context has been particularly placed on monitoring pain, the provision of palliative care in the advanced and terminal phases of serious chronic or oncological conditions, the importance of providing care in all, even the initial, phases of the disease, by directing patients towards dedicated care pathways earlier is reiterated. In Law 38/2010, the professional roles involved in the project have been identified, with specific skills and experience in the field of palliative care and pain management, with particular reference to the specialist MDs (anaesthetists and resuscitators, geriatricians, neurologists, oncologists, radiologists, paediatricians) and to General Practitioners (GPs). Indeed, the latter coordinate the basic interventions in domestic care and are an integral part of the specialist teams, ensuring uninterrupted continuing care.

Given the regional structure of the care system defined by legislators, the GPs' role is of primary importance, since they handle the majority of patients who need analgesic care, instead diverting only the most delicate and serious cases to specialized centres (HUBs) (14).

Since the approval of Law 38/2010, much has been done on the GPs' training plan, who can count on dedicated refresher courses on palliative care and pain management promoted by the various scientific societies.

But if the role of the GPs in the pain management and palliative care network was well-defined by the law, we cannot say the same for the Continuing Care Physician (CCP), a role that only partially overlaps that of the GP.

CCPs operate in the regional network by responding to the demand for non-deferrable care services: that is to say those health problems which cannot wait for the outpatients' clinic of their GP or free-choice paediatrician (PLS) to open.

The CCPs can be a valuable asset in developing and strengthening the network of services at a regional level. For example, they can first of all intercept a condition in its initial stage, resolve problems linked to acute painful conditions, or tackle therapeutic adjustments in patients affected by chronic pain, caused by cancer or otherwise. In any case, they can provide patients with useful information, eventually directing them to national networks for palliative care and pain management, becoming for all effects an integral part of the multidisciplinary team involved in the treatment of patients who are experiencing pain. Hence, the need for specific training for CCPs in the field of pain therapy.

This study intends to carry out a survey on patients who have turned to CCPs for non-deferrable pain-related problems. The site for the survey is Aquila, the capital city of a Region which, when previously examined in 2017, showed a context in which Law 38/2010 struggled to be applied (15). Moreover, these regional data were placed in a national context in which the project took off, not without some difficulties: two full years from the issuing of the regulatory act, clinical practice regarding pain management was still inadequate, and the absence of systematic pain evaluation and of a proper diagnostic-therapeutic approach represented the main critical issues (16). This study was expected to provide interesting information concerning an important link in the pain management care network, scarcely, if at all, looked into until now. Recognising any critical issues will enable a better investigation of the problem in order to define a specific training plan for the healthcare staff involved, thereby encouraging Law no. 38/2010 to be implemented more effectively (15).

Materials and Methods

The prospective observational epidemiological study lasted a total of 68 days (1 January - 8 March 2020). The data relating to patients who consulted the CCP in relation to issues with pain management during this period was recorded using a simple survey tool: a questionnaire completed by the attending CCP at the L'Aquila site, Local Health Unit 01 (ASL-01), Abruzzo, Italy.

The data were collected according to the type of contact between the MD and the patient: telephone, home visit, or outpatient consultation. Written consent to participate in the study was obtained from outpatients and in-home patients. The CCP reported the data anonymously, for reasons of patient protection, the information on the sheet is appropriately arranged, not numbered or identifiable in any other way, with no codes, dates, serial numbers, or patient initials provided. In this way, the acquired data cannot be attributed to a specific patient. This method of data collection, also provided solely for telephone contact, does not allow the acquisition of the patient's informed consent in writing. However, they were all informed by the CCP in relation to the possibility that any data collected could be used, in strict confidentiality and in compliance with the codes of ethical conduct, exclusively for scientific studies, which also anticipates the publication of the results. The recording of the data did not change the collection of the medical history or the care/therapeutic process for patients in any way. In fact, the CCP limited himself to reporting the information useful to this survey on the appropriate sheet at the end of the patient contact/consultation, only when the latter had expressed a positive consent.

Questionnaire

The questionnaire was developed by the members of the research group (CCPs and the Pain Therapy Service Doctors). Before the data was collected, the comprehensibility of the questions was assessed through a pre-test phase conducted by the CCP on a small group of patients with pain-related pathologies. The questionnaire has been structured into five areas:

1. Information concerning the shift and type of doctor/patient contact
2. The patient's characteristics: age, sex, comorbidities, and current treatments
3. Characteristics of the pain: duration, location, intensity (Numeric Rating Scale - NRS: 0=no pain, 10=maximum pain imaginable), type, description, quality, treatment with any medication prior to the consultation.
4. Pharmacological or behavioural therapy practiced and/or advised by the CCP.
5. Whether the patient was entered into the regional pain management treatment and palliative care network, or any information concerning them if the patient was not aware of the services.

Statistical Analysis

The characteristics of the sample observed through the sections of the questionnaire have been analysed using descriptive statistics. Based on the responses to the questionnaire, patients were stratified into groups based on the intensity of the pain (Moderate/Severe) and whether they had taken any medication to manage the pain (Yes/No). The categorical variables have been expressed with frequencies and percentages and the χ^2 or del χ^2 test for the trend for ordinal variables have been used in order to analyze the differences between the groups.

The continuous variables have been expressed with mean values and the related standard deviations. The differences between the groups have been analysed using the Wilcoxon-Mann-Whitney test for the distribution of the non-normal data (Shapiro-Wilk test).

The statistical tests were two-tailed and p-values <0.05 were considered statistically significant.

Univariate logistic regression analysis was carried out to identify factors that predispose self-medication (dependant variable) and an assessment of severe pain (dependant variable). The association analysis was expressed in terms of the odds ratio (OR) and of the confidence interval (95% CI).

The data have been codified on the spreadsheet and the statistical analysis made using the software SPSS version 19 (IBM Corp., Armonk, NY, USA).

Results

User characteristics

One humndred sixty five sheets have been completed in relation to the attendees of the CCSs in the period 1 January - 8 March 2020.

Demand for the service occurred more frequently during the night shift and by telephone consultation.

Table 1 shows the composition of the patient samples according to their demographic and clinical characteristics, including the reason for requesting the service. Females were more greatly represented (57.6%) compared to males (42.4%), particularly those in the 36-65 age group (47.9%). Among the most frequent reasons for resorting to the service is "musculoskeletal pain" (58.2%), followed by abdominal pain (15.8%). A little over half of patients were affected by comorbidity (46.1%), multiple (two conditions 17.1%, more than two conditions 27.6%) for 44.7%. The predominant comorbidity is arterial hypertension, followed by dysthyroidism and by diabetes mellitus.

Table 1 - Distribution of the patients according to demographic and clinical characteristics. Reason for requesting service

Total N=165	no.	%
Gender		
Males	70	42.4
Females	95	57.6
Age (years)		
<35	50	30.3
35-65	79	47.9
>65	36	21.8
$\bar{X}$± SD	47.7±19.5	
Reason		
Musculoskeletal pain	96	58.2
Headache/Migraine	8	4.8
Abdominal pain	26	15.8
Post-Traumatic Pain	6	3.6
Cancer Pain	2	1.2
Odontalgia	14	8.5
Other	13	7.9
Comorbidity		
Yes	76	46.1
No	89	53.9
One comorbidity	42	55.3
Two comorbidities	13	17.1
> Two comorbidities	21	27.6

Pain characteristics

The patients who consulted the CCSs reported their pain symptoms according to the characteristics shown in Table 2.

In the majority of patients, the pain lasted for days (53.9%), with an average of approximately 3 days (3.1± 2.9), and hours for 40%, with an average of over 6 hours (6.54±3.1) Lower percentages (11 patients, equivalent to 6.1%) were represented by those who indicated a pain lasting for a longer period. To the question concerning the repetition of the pain, 57% of users responded that it was not the first time that they had felt pain in that area.

The pain was defined "localised" by 86.7% of patients, and as "nociceptive somatic" with a higher frequency (63%). Based on the scale of intensity on the survey form, 88.5% of patients defined the level of pain they felt as "severe" in intensity (NRS=7-10).

The association analysis between the patient characteristics and the intensity of the pain (dependant variable) is shown in

Table 2 - Nature of the pain in patients who have consulted the continuing care service

Total N=165	no.	(%)
Duration pain		
Hours	66	40.0
$\bar{X}$± SD	6.54 ± 3.1	
Days	89	53.9
$\bar{X}$± SD	3.1 ±2.9	
Weeks (1-3)*	5	3.1
Months(1-2)*	2	1.2
Years (2-10)*	3	1.8
First time		
Yes 71 43.0		
No 94 57.0		
Self- medication		
Yes	109	66.1
No	56	33.9
Pain characteristics		
Localised	143	86.7
Radiating neurological	21	12.7
Missing data	1	0.6
Pain definition		
Nociceptive somatic	104	63.0
Nociceptive visceral	23	13.9
Neuropathic	15	9.1
Mixed syndrome	13	7.9
Break-Trough	10	61
Pain intensity		
Moderate	19	11.5
Severe	146	88.5

*range

Table 3, according to the classifications observed, "moderate" (NRS=4-6) and "severe" (NRS=7-10). No statistically significant differences were observed based on the variables in the table, except in those relating to the repetitiveness/non-repetitiveness of the pain indicated in the area shown by the patient (p=0.02). The assessment of "severe" intensity of the pain is associated to its repetitiveness (80.3% vs 92.6%), a characteristic that can be attributed to a chronic condition. The confirmation of this trend is provided by the regression analysis that indicates this characteristic as predisposing the highest level of pain intensity (O.R 3.34 95% CI 1.20 - 9.37 p = 0.02).

Self-medication

The study considered also the self-medication adopted to counteract the pain. Two thirds, 66.1% (Table 2) stated that they had taken medication independently. Figure 1 shows the medications taken distributed according to pharmacological category: NSAIDs (non-steroidal anti-inflammatory drugs) (53.5%), followed by Paracetamol (20.5%) were the drugs most frequently taken independently by patients.

Table 4 outlines the statistically significant differences according to certain patient characteristics in self-medication (dependent

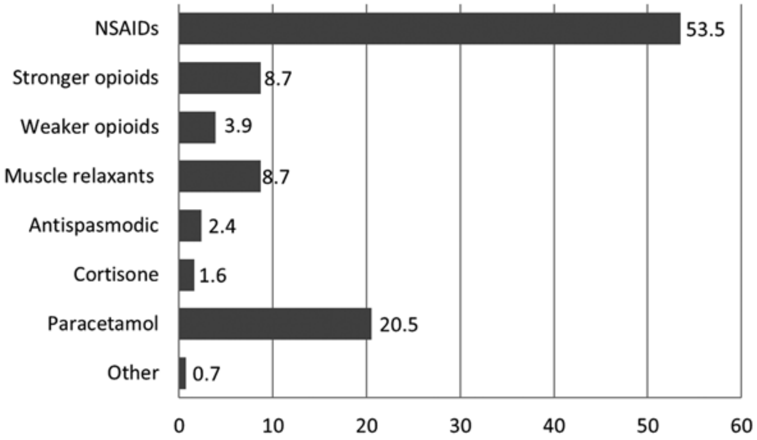

Figure 1- Type of self-medication consumed (%)

Table 3 - Patients characteristics, localisation, and duration of the pain according to intensity moderate/severe.

	Pain intensity				Univariate logistic regression		
	Total N =165	moderate n =19	severe n=146	p- value	Or	95% C I	p- value
Gender				0.66*			
Male	70	9(12.9)	61(87.1)		1		
Female	95	10(10.5)	85(89.5)		0.81	0.31-2.10	0.66
Age (years)				0.61*			
<35[a]	50	4(8.0)	46(92.0)		1		
35-65	79	10(12.7)	69(87.3)		0.60	0.18-2.03	0.41
>65	36	5(13.9)	31(86.1)				
Age $\bar{X}$ ± *sd*	47.7±19.5	51.3±19.5	47.3±19.5	0.40**			
Comorbidity				0.30*			
None [a]	89	12(13.5)	77(86.5)		1		
One	42	3(7.1)	39(92.9)		3.04	0.65-14.3	0.16
>One	34	5(14.7)	29(85.3)		0.90	0.29-2.80	0.86
Self-medication				0.17*			
Yes	109	10(9.2)	99(90.8)		1		
No	56	9(16.1)	47(83.9)		1.94	0.74-5.09	0.18
Duration pain				0.26*			
Hours[a]	66	10(15.2)	56(84.8)		1		
Days	89	7(7.9)	82(92.1)		2.10	0.76-5.86	0.15
Over	10	2(18.2)	9(81.8)		0.73	0.13-3.94	0.71
First time				0.02*			
Yes[a]	71	14(19.7)	57(80.3)		1		
No	94	7(7.4)	87(92.6)		3.34	1.20-9.37	0.02

[a] Reference category
*χ^2 test or χ^2 for trend
**Wilcoxon–Mann–Whitney test.

variable). Specifically in the 36-65 age group, 74.7% took medications, while 25.3% did not (p=0.03). This age group is confirmed as that most predisposed to self-medication (O.R 2.72 95% CI 1.28-5.77 p=0.01).

Associations with other potentially predisposing variables to self-medication were analysed in addition to demographic characteristics.

Statistically significant differences between the absence and presence of co-morbidity were observed (p=0.02) and the repetitiveness/non-repetitiveness of the pain in the area indicated by the patient (p=0.02). The presence of additional conditions (O.R 3.17 95% CI 1.19-8.43 p=0.02) and recurring pain (O.R 2.16 95% CI 1.2-4.17 p=0.02) were factors which significantly predisposed patients to take medication independently.

Services provided to patients

Patients who consulted the CCS received a pharmacological prescription in almost all cases (two users were sent to the Emergency Department) (Figure 2). NSAIDs, specifically, were the most prescribed medicines (64.8%), followed by muscle relaxants (29.7%). Other types of drugs were prescribed less frequently. With the exception, among the weaker opioids, for Tramadol, which was prescribed

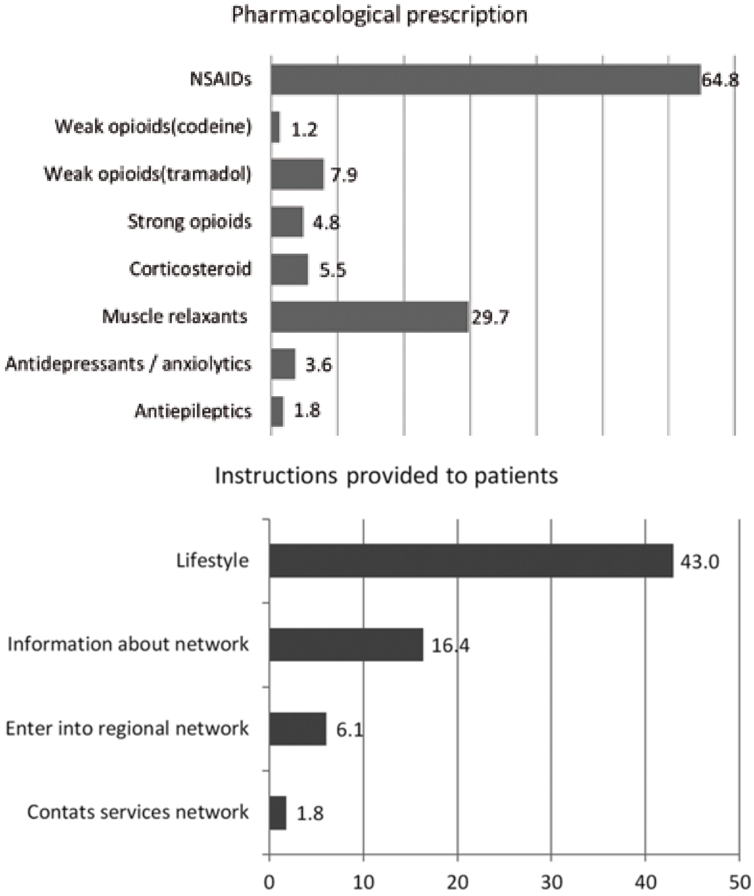

Figure 2- Services provided to patients (%)

to 7.9% of patients, making it the most frequently prescribed opioid, also in comparison to stronger opioids.

In addition to pharmacological prescriptions, other instructions provided to service users were observed. These were predominantly advices relating to lifestyle (43%).

Considering the objective of the study and, therefore, pain as a reason for using the CCS, particular attention was focussed on the pathway of patients affected by pain, both acute and chronic, within the regional pain management network. Even though information concerning the organisation and the services provided was supplied (16.4%) and certain patients were entered into the regional network (6.1%), it was observed that just 1.8% of patients had previously contacted the pain management services network.

Discussion

To our knowledge, this study is the first one in Italy to investigate the use of the CCS by patients experiencing painful symptoms, describing the characteristics of the pain and the physician's response. The results presented are the preliminary information concerning the role played by the CCS in the pain therapy network.

Table 4- Demographic variables of the patients, nature of the pain according to the self-medication.

Self-medication					Univariate logistic regression		
	Total	yes	no	p-value	OR	95% C I	p- Value
	N = 165	n = 109	n = 56				
Gender				0.87*			
Male[a]	70	47(67.1)	23(32.9)		1		
Female	95	62(65.3)	33(34.7)		1.05	0.55 – 2.03	0.87
Age (years)				0.03*			
<35[a]	50	26(52.0)	24(48.0)		1		
35-65	79	59(74.7)	20(25.3)		2.72	1.28 – 5.77	0.01
>65	36	24(66.7)	12(33.3)		1.94	0.76 - 4.94	0.16
Age $\bar{X}\bar{X}$ *± sd*	47.7±19.5	50.2±18.6	42.9±20.5	0.02**	1.02	1.00 – 1.04	0.03
Comorbidity				0.02*			
None [a]	89	53(59.6)	36(40.4)		1		
One	42	28(33.3)	14(66.7)		1.35	0.63 – 2.93	0.43
>One	34	28(82.4)	6(17.6)		3.17	1.19 – 8.43	0.02
Pain intensity				0.17*			
Moderate [a]	19	10(52.6)	9(47.4)		1		
Severe	146	99(67.8)	47(32.2)		1.94	0.74 – 5.09	0.18
Duration pain				0.20*			
Hours [a]	66	40(60.6)	26(39.4)		1		
Days	89	69(77.5)	31(34.8)		1.38	0.71 – 2.68	0.34
Over	10	1(10.0)	9(90.0)		6.00	0.72 – 50.2	0.09
First time				0.02*			
Yes [a]	71	40(56.3)	31(43.7)		1		
No	94	68(72.3)	26(27.7)		2.16	1.2 – 4.17	0.02

[a] *Reference category*

*χ^2 *test or* χ^2 *for trend*

**Wilcoxon–Mann–Whitney test.

Law 38/2010 defined the organisation of the pain management and palliative care path, and the Ministry of Health allocated funds to set up the project in each region of Italy (17). The organisational model is for integrated clinics, providing the concentration of more complex patients in a small number of centres for excellence (HUBs), which are prepared to provide highly complex diagnostic and therapeutic interventions, supported by a network of regional services (Spoke Centres) which operate on an outpatient basis.

In this context the role of the GP is by now well defined, and the application of the Law provides for the development of regional associations of GPs all Italy around and the implementation of a direct training programme for GPs in the field of pain management (15, 18, 19). This objective requires an articulated model based on the organisational structure of general medicine capable of providing the first diagnostic and therapeutic response to the needs of those in pain, and to direct, when necessary and according to shared criteria of appropriateness, the patient to the outpatient Spoke Centre for pain management, or the HUB/pain management hospital centre, ensuring continuity of management in the context of the pathways defined in the network (17).

Not included in this model is the role of the CCPs who, in any case, find themselves operating in the context of the regional network and who often have to meet the demand for non-deferrable medical services requiring an immediate solution to a variety of clinical problems which, very often, include pain. It is precisely this missing link that this study intended to investigate, focusing attention on the patients who consult the CCS for pain-related problems and the clinical response provided by the physician.

The survey has demonstrated a higher number of patients, 165 in 68 days of observation, who have consulted the CCP for pain-related problems, with a greater presence of females in comparison to men (57.6% vs 42.4%), confirming the data already present in literature which show a greater incidence of pain in females (8, 19). Additionally, in accordance with the other epidemiological surveys, musculoskeletal pain is the most frequently complained about, with 58.2% of patients who consulted the service for muscle, bone, or joint pain (19-21). Musculoskeletal pain is the cause of significant limitations to carry out daily activities, also leading to important repercussions on working life; these data assume particular importance in our survey, considering that 47.9% of patients who consulted the CCS for a pain-related problem belonged to the working age (36-65 years) (8, 20, 22). In the majority of patients, pain lasted for days (53.9%), or for hours (40%), whereas it had a longer duration in just 6.1% of cases. These data reflect the type of medical service ensured by the CCS, especially responsible for resolving recent onset and non-deferrable clinical problem. However, in more than half of the cases (57%), the patients reported that it was not the first time they had felt pain in that area, and that the repetitiveness of the painful symptoms appeared to be a risk factor for the increased intensity of the pain. The non-deferrable nature of the healthcare services provided is also evidenced by the intensity of the pain that caused the patient to request a medical consultation; in 88.5% of cases, in fact, the pain was reported as being severe in intensity (NRS≥7) and moderate in 11.5% (NRS=4-6). These data correspond to the physician's decision to prescribe pharmaceutical treatment in almost all of the patients surveyed. NSAIDs were the most commonly used analgesics, which were prescribed in 64.8% of cases, in spite of the higher intensity of the pain suggesting resorting to analgesic opioids in certain cases. This observation is also in line with the literature data, which show that NSAIDs are by far the most prescribed analgesics in the world (23). In this respect, it is necessary to consider that musculoskeletal pain, the principal cause of pain in our sample group, is often caused by inflammatory processes and NSAIDs are the cornerstone of musculoskeletal pain management (24). This may explain their widespread use in this survey, sometimes in association with muscle relaxant drugs, which were in second place in terms of the frequency of prescriptions (29.7%). On the other hand, the use of opioids in treating non-oncological pain was the subject of much discussion in recent years, and their use must be considered very cautiously, by adequately evaluating the risks and benefits for each patient (25). In this experience, just 7.9% of cases resorted to the use of weaker opioids, and an even lower percentage (4.8%) resorted to stronger alternatives. These data are also in line with what is described in the literature, which indicates a lower use of opioids in Europe in comparison to the USA, with Italian doctors at the last place when it comes to prescribing opioids (8, 26).

Another interesting piece of data is the high percentage of patients who declared that they have taken analgesic drugs independently (66.1%), especially NSAIDs and Paracetamol. The independent taking of analgesic drugs is significantly higher among patients in the 36-65 age group, among those affected by one or more comorbidities and those who report that they have already felt pain in the same area previously. This observation may presumably be linked to the previous experiences with pain, for which they had already requested to take analgesics, and caused patients to take the treatment again.

Among the patients surveyed, only a small portion (1.8%) had previously contacted the pain management service network, and just 6.1% had been directed to the region of the painful pathology that the patients have complained about which therefore may not require being sent to a pain treatment centre rather than given an immediate therapeutic solution. The data, however, could also indicate the limited awareness, by the general population, of the pain management services guaranteed by Law 38/2010, still implemented today in a partial and inconsistent manner, and the still inadequate recourse to centres specialising in curing painful pathologies (15, 27).

Strengths and limitations

The limitations of the study are attributable to the limited numerosity of samples and to the local context of the survey. The limited number of patients recruited for the survey contributed to the reduction of the duration of the anticipated three month survey period for the study protocol approved by the Ethics Committee. This reduction was determined by the COVID-19 emergency and the subsequent lockdown.

However, the study provided information concerning the role of the CCS which, although participating in regional network, has up to now received little attention in the organisation of its provision and the training of operators. The result represents a starting point for further detailed investigation aimed at a more effective response to the demand for assistance by patients with painful conditions.

Conclusions

The study, conducted with the primary aim of surveying the role played by the CCS and describing its activity in the context of the pain management care network, has shown a high number of patients consult the CCS to resolve painful symptoms of various types. Therefore, in spite of the frequent involvement of the CCPs in pain-related problems, their role in the context of Law 38/2010 is not yet defined and the training programmes provided to GPs have not been provided for those working in the CCS. Greater involvement of CCPs in clinical and training pathways for pain management is recommended to guarantee greater assistance to patients with painful pathologies and to encourage a more effective implementation of Law 38/2010, which offers increasingly wider margins for improvement.

Ethics Statement: Research ethics approval was obtained from the Hospital Ethics Committee (n. 672/31 dec. 2019).

Author contributions: All authors have significantly contributed to the work. Each has read the manuscript and approved the final version of the manuscript

Funding and Competing Interests: No funding was received.

No conflicts of interest exist.

Riassunto

Percorso diagnostico e terapeutico del dolore nella continuità assistenziale: indagine su un Servizio di Continuità Assistenziale in Italia

Premessa. La Legge n° 38 del 15 marzo 2010 garantisce e regolamenta, per i pazienti che ne hanno necessità, l'accesso alla rete delle cure palliative e della terapia del dolore. Nella legge sono individuate le figure professionali coinvolte nel progetto, con specifiche competenze ed esperienza nel campo delle cure palliative e della terapia del dolore, assegnando un ruolo rilevante ai medici di medicina generale. Per tale motivo è stato previsto un importante piano formativo diretto ai medici di medicina generale, che possono contare su percorsi di aggiornamento dedicati, al fine di accrescere e approfondire le

conoscenze in questo specifico ambito clinico.

Se il ruolo del medico di medicina generale nella rete della terapia del dolore e delle cure palliative è stato ben definito nella Legge, non si può dire altrettanto per il medico di Continuità Assistenziale, figura solo parzialmente sovrapposta a quella dei medici di medicina generale.

Lo studio ha la primaria finalità di indagare il ruolo rivestito dal Medico di Continuità Assistenziale nell'ambito della rete assistenziale della terapia del dolore, rilevando le caratteristiche dei pazienti che si rivolgono al servizio di Continuità Assistenziale per problematiche inerenti il dolore, in termini di problema non differibile, e le risposte mediche loro fornite.

Metodi. È stata condotta un'indagine conoscitiva presso il Servizio di Continuità Assistenziale, sede dell'Aquila, ASL-01 Abruzzo. A tale scopo il medico di turno registrava, su un questionario opportunamente predisposto, i dati dei pazienti che si rivolgevano al Servizio di Continuità Assistenziale per un problema di dolore. Il periodo di osservazione ha avuto una durata complessiva di 68 giorni (1 gennaio - 8 marzo 2020).

Risultati. Sono state compilate 165 schede; le donne risultano più rappresentate rispetto agli uomini (57,6% vs 42,4%) e la classe di età 36-65 appare quella maggiormente presente (47,9%). Tra le motivazioni più frequenti per il ricorso al Servizio c'è il "dolore di origine muscolo-scheletrica" (58,2%), seguito dal dolore addominale (15,8%).

Il dolore nella maggioranza dei pazienti durava da giorni (53,9%), con una media di circa 3 giorni (3,1± 2,9), e per il 40% da ore, con una media di oltre 6 ore (6,54±3,1). L'88,5% dei pazienti ha definito il livello di dolore provato come "severo" (NRS=7-10), e la valutazione di intensità "severa" del dolore appare associata alla sua ripetitività (80,3% vs 92,6%), con una differenza statisticamente significativa rispetto alla situazione di non ripetitività (p=0,02).

Il 66,1% dei pazienti ha dichiarato di avere assunto analgesici in maniera autonoma, e i Farmaci Antinfiammatori non Steroidei (FANS), sono risultati i farmaci più frequentemente assunti (53,5%).

I pazienti che si sono rivolti al Servizio di CA hanno ricevuto nella quasi totalità dei casi una prescrizione farmacologica. In particolare, i FANS sono stati i farmaci più prescritti (64,8%), seguiti dai Miorilassanti (29,7%). Tra i farmaci Oppioidi il più rappresentato è il Tramadolo, che è stato prescritto nel 7,9% dei casi. Solo il 6.1% dei pazienti è stato inserito nella rete territoriale della terapia del dolore.

Conclusioni. I risultati dell'indagine mostrano come un elevato numero di pazienti si rivolge al Servizio di CA per risolvere sintomatologie dolorose di varia natura. Lo studio offre alcuni spunti di riflessione sul ruolo dei medici di CA e sull'importanza di prevedere un loro inserimento nei percorsi clinici e formativi della terapia del dolore previsti dalla L. 38/2010. Ciò garantirebbe una sua più efficace attuazione e, quindi, una migliore assistenza ai pazienti con patologia algica).

References

1. Slomski A. Cultural Transformation Needed to Solve Public Health Problem of Chronic Pain. JAMA 2011; **306**(7): 692-3. doi:10.1001/jama.2011.1158.
2. Henschke N, Kamper SJ, Maher CG. The epidemiology and economic consequences of pain. Mayo Clin Proc 2015; **90**(1): 139-47. doi: 10.1016/j.mayocp.2014.09.010.
3. McBeth J, Jones K. Epidemiology of chronic musculoskeletal pain. Best Pract Res Clin Rheumatol 2007; **21**(3): 403-25. doi: 10.1016/j.berh.2007.03.003.
4. Mackey S. Future Directions for Pain Management: Lessons from the Institute of Medicine Pain Report and the National Pain Strategy. Hand Clin 2016; **32**(1): 91-8. doi: 10.1016/j.hcl.2015.08.012.
5. Leadley RM, Armstrong N, Lee YC, Allen A, Kleijnen J. Chronic Diseases in the European Union: The Prevalence and Health Cost Implications of Chronic Pain. J Pain Palliat Care Pharmacother 2012; **26**(4): 310-25. doi:10.3109/15360288.2012.736933.
6. Macfarlane GJ, Beasley M, Smith BH, Jones GT, Macfarlane TV. Can large surveys conducted on highly selected populations provide valid information on the epidemiology of common health conditions? an analysis of UK Biobank data on musculoskeletal pain. Br J Pain 2015; **9**(4): 203-12. doi: 10.1177/2049463715569806.
7. Macfarlane GJ. The epidemiology of chronic pain. Pain 2016; **157**(10): 2158-9. doi: 10.1097/j.pain.0000000000000676.
8. Breivik H, Collett B, Ventafridda V, Cohen R, Gallecher D. Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment. Eur J Pain 2006; **10**(4): 287-333. doi: 10.1016/j.ejpain.2005.06.009. Epub 2005 Aug 10.
9. Varrassi G, Raffaeli W, Marinangeli F, et al. Epidemiology and treatment of pain in Italy: Part I. Eur J Pain 2008; **2**(Suppl 1): 44-6. https://doi.org/10.1016/S1754-3207(08)70064-6.
10. Raffaeli W, Varrassi G, Righetti D, et al. Epidemiology and treatment of pain in Italy: Part II. Eur J Pain 2008; **2**(Suppl 1): 47-51. https://doi.

org/10.1016/S1754-3207(08)70065-8.

11. Goldberg DS, McGee SJ. Pain as a global public health priority. BMC Public Health 2011 Oct 6; **11**: 770. doi: 10.1186/1471-2458-11-770.
12. Blyth FM, Der Windt DA, Croft PR. Chronic Disabling Pain A Significant Public Health Problem. Am J Prev Med 2015; **49**(1): 98-101. doi: 10.1016/j.amepre.2015.01.008.
13. Italian Law. (2010). Legge n. 38 del 15 Marzo 2010. Disposizioni per garantire l'accesso alle cure palliative e alla terapia del dolore. Gazzetta Ufficiale della Repubblica Italiana [Official Gazette of Italian Republic] n. 65 del 19 Marzo 2010.
14. Ministero della Salute. Il dolore cronico in medicina generale. Ministero della Salute, ottobre 2013. Available on: http://www.salute.gov.it/imgs/C_17_pubblicazioni_2076_allegato.pdf [Last accessed: 2020, Dec 1].
15. Leuter C, Piroli A, Marinangeli F, Paladini A, Tudini M, Varrassi G. Care strategies and therapeutic pathways for chronic pain patients in Abruzzo Region, Italy. Ann Ig 2017; **29**(1): 63-72. doi: 10.7416/ai.2017.2133.
16. Fanelli G, Gensini G, Canonico PL, et al. Dolore in Italia. Analisi della situazione. Proposte operative. Recenti Prog Med 2012; **103**(4): 133-41. doi: 10.1701/1068.11703.
17. Ministero della Salute. La rete per la terapia del dolore. 28 giugno 2013. Available on: http://www.salute.gov.it/portale/temi/p2_6.jsp?lingua=italiano&id=3768&area=curePalliativeTerapiaDolore&menu=terapia [Last accessed: 2021, Feb 10].
18. Torrance N, Smith BH, Elliot AM, et al. Potential Pain Management Programmes in primary care. A UK-wide questionnaire and Delphi survey of experts. Fam Prac 2011; **28**(1): 41-8. doi: 10.1093/fampra/cmq081. Epub 2010 Oct 14.
19. Piccoliori G, Pecchioli S, Sessa E, Lora Aprile P, Cancian M, Pavone P. Italian Pain Research: una ricerca osservazionale in Medicina Generale sulla gestione del dolore moderato-severo acuto e cronico. Rivista della Società Italiana di Medicina Generale 2009; **3**: 7-14.
20. Health in the European Union. Eurobarometer Special Report 272, Sept 2007. Available on: https://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_272e_en.pdf [Last accessed: 2021, Feb 10].
21. Cimmino MA, Ferrone C, Cutolo M. Epidemiology of chronic musculoskeletal pain. Best Pract Res Clin Rheumatol 2011; **25**(2): 173-83. doi: 10.1016/j.berh.2010.01.012.
22. Perrot S, Cohen M, Barke A, Korwisi B, Rief W, Treede RD; The IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic secondary musculoskeletal pain. Pain 2019; **160**(1): 77-82. doi: 10.1097/j.pain.0000000000001389.
23. Roelofs PD, Deyo RA, Koes BW, Scholten RJ, van Tulder MW. Nonsteroidal anti-inflammatory drugs for low back pain: An updated Cochrane review. Spine 2008; **33**(16): 1766-74. doi: 10.1097/BRS.0b013e31817e69d3.
24. Haroutiunian S, Drennan DA, Lipman AG. Topical NSAID Therapy for Musculoskeletal Pain. Pain Med 2010; **11**(4): 535-49. doi: 10.1111/j.1526-4637.2010.00809.x. Epub 2010 Mar 4.
25. van den Driest JJ, Schiphof D, de Wilde M, Bindels PJE, van der Lei J, Bierma-Zeinstra SMA. Opioid prescriptions in patients with osteoarthritis: a population-based cohort study. Rheumatology 2020; **59**(9): 2462-70. doi: 10.1093/rheumatology/kez646.
26. Helmerhorst GT, Teunis T, Janssen SJ, Ring D. An epidemic of the use, misuse and overdose of opioids and deaths due to overdose, in the United States and Canada: is Europe next? Bone Joint J 2017; **99-B**(7): 856-64. doi: 10.1302/0301-620-X.99B7.BJJ-2016-1350.R1.
27. Ministero della Salute, Direzione Generale della Programmazione Sanitaria. Rapporto al Parlamento sullo stato di attuazione della Legge n. 38 del 15 marzo 2010 "Disposizioni per garantire l'accesso alle cure palliative e alla terapia del dolore". Anni 2015-2017. Pubblicato 31 gennaio 2019. Available on: http://www.salute.gov.it/imgs/C_17_pubblicazioni_2814_allegato.pdf [Last accessed: 2021, Feb 10].

Corresponding Author: Cinzia Leuter, Departmental Faculty of Medicine and Surgery Campus Bio-medico University, Rome, Italy
Via Alvaro del Portillo 21, 00128 Roma, Italy
e-mail: c.leuter@unicampus.it