

REAL WORLD DATA OF ACUTE PAIN PRESCRIPTION IN A HEALTH DISTRICT

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1. Objective

Published data about drug prescription patterns in acute pain treatment is scarce. In this study we pretend to analyse the acute pain treatment profiles in a health district for 2014-2019 using Real World Data (RWD)

2. Methods

A non-interventional, cross-sectional and population-based study using RWD for outpatients corresponding to the period 2014-2019, extracted from the information systems of the Clinico-Malvarrosa health district of Valencia (Spain) (N:320.000). Included ATC codes were M01A: anti-inflammatory and antirheumatic products, non-steroids, N02A: opioids and N02B: other analgesics and antipyretics.

Patients included are those with an ambulatory prescription for acute pain equal or less than 90 days. Measurements were the total number of Defined Daily Dose (DDD) and cost, ex-factory price, in euros.

3. Results

A total of 171.652 patients (approximately 54% of the population) received treatments for pain in 2019, with a total cost of 4.779.145 euros. 58% of the cost corresponds to the N02A group, followed by M01A (23%) and N02B (19%). (Figure 1)

Figure 1. Cost and DDD by ATC group in 2019

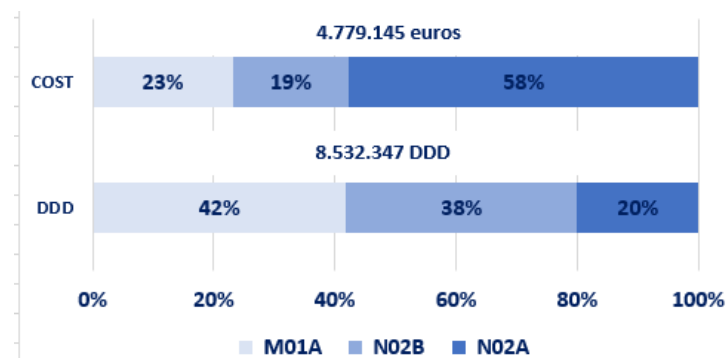
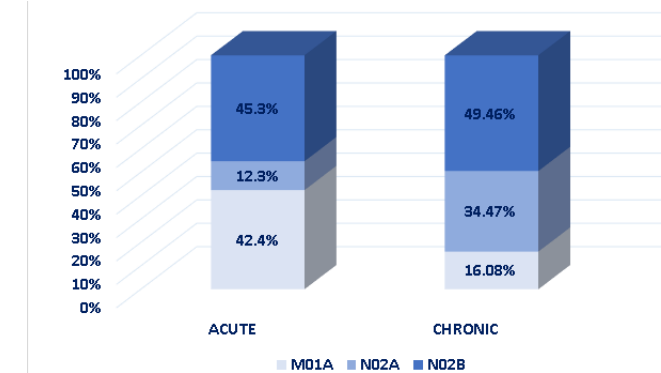
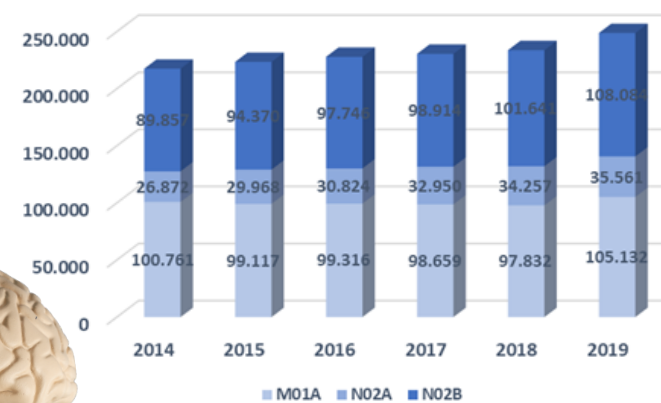


Figure 2. Pain trataments acute and chronic in 2019



In 2019, 90% of treatments were targeted for acute pain, the most commonly used drugs are N02B which account for 45.3% of treatments, followed by M01A with 42.4% and N02A with 12.3%.

Figure 3. Number of patients with acute treatment



Mild & severe acute pain

The most prescribed opioid (N02A) drug in 2019 is paracetamol+tramadol with 916,305 DDD and accounting for 53%. Fentanyl accounts for the largest cost (1,073,982 euros, 39%), followed by tapentadol (623,231 euros, 23%) and paracetamol+tramadol (581,533 euros, 21%). (Table 1)

The N02B group increases by 23%. The most prescribed analgesic and the antipyretic drug is paracetamol (2,671,954 DDD, 82%), with a total cost of 608,787 euros (66%). Metamizole is second (285,499 euros, 31%). (Table 1)

The M01A group decreased by 3%. The most prescribed anti-inflammatory drug is ibuprofen with 1,173,445 DDD (33%), although the main cost was dextketoprofen (223,781 euros, 20.2%), followed by ibuprofen (217,060 euros, 19.6%). (Table 1)

The mean daily dose per patient of treatment with Tramadol are: **171 mgr/day**.

4. Conclusions

Acute pain accounts for 90% of pain treatments.

The use of **opioids has increased** while the use of anti-inflammatory drugs has decreased in this periode. This evolution is in dissonance with the **multimodal approach to pain treatment** and the perceived rule of inflammation in pain stated in different guidelines.

The development of new and **safe multitarget drugs** or pharmacological approaches for pain treatment with anti-inflammatory activity is needed.

Figure 3 shows the evolution of acute treatments for each therapeutic group along the years of study. These data correspond to patients who have started some type of treatment every year. A patient may carry several concomitant treatments. In terms of evolution, the relative growth of opioids treatments in acute pain (N02A) stands out, (32% compared to 2014). In 2019 the estimated incidence of patients with acute pain was **53%**.

Table 1. DDDs, cost and patients of the most used drugs for acute pain in 2019

N02A_OPIOID ANALGESICS						
	DDD	%	COST	%	PATIENTS	%
PARACETAMOL + TRAMADOL	916.305	53,45%	581.533 €	21,08%	15.026	35,13%
FENTANYL	219.235	12,79%	1.073.982 €	38,92%	1.557	3,64%
TRAMADOL	143.660	8,38%	89.808 €	3,25%	2.347	5,49%
TAPENTADOL	112.671	6,57%	628.231 €	22,77%	2.465	5,76%
PARACETAMOL + CODEINE + ASCORBIC ACID	97.183	5,67%	75.217 €	2,73%	17.401	40,69%
DEXKETOPROFEN + TRAMADOL	86.000	5,02%	30.530 €	1,11%	1.426	3,33%
OTHERS	139.393	8,13%	280.029 €	10,15%	2.546	5,95%
N02B-OTHERS ANALGESICS AND ANTIPYRETICS						
	DDD	%	COST	%	PATIENTS	%
PARACETAMOL	2.671.954	82,31%	608.787 €	66,59%	87.162	74,80%
METAMIZOLE	537.017	16,54%	285.499 €	31,23%	27.351	23,47%
PARACETAMOL + CODEINE	26.065	0,80%	11.029 €	1,21%	1.457	1,25%
LYSINE CLONIXINATE	9.980	0,31%	7.187 €	0,79%	387	0,33%
PARACETAMOL + CODEINE + CAFFEINE	627	0,02%	782 €	0,09%	48	0,04%
ACETYLSALICYLIC ACID	537	0,02%	500 €	0,05%	84	0,07%
OTHERS	14	0,00%	462 €	0,05%	43	0,04%
M01A-NON-STEROIDAL ANTI-INFLAMMATORY AND ANTIRHEUMATIC DRUGS						
	DDD	%	COST	%	PATIENTS	%
IBUPROFEN	1.173.445	32,85%	217.060 €	19,63%	51.784	46,21%
NAPROXENE	620.856	17,38%	70.035 €	6,33%	10.277	9,17%
CHONDROITIN SULPHATE	406.770	11,39%	210.151 €	19,01%	3.276	2,92%
ETORICOXIB	393.442	11,02%	150.913 €	13,65%	6.334	5,65%
DEXKETOPROFEN	384.382	10,76%	223.781 €	20,24%	25.408	22,67%
CELECOXIB	194.340	5,44%	144.330 €	13,05%	3.137	2,80%
OTHERS	398.471	11,16%	89.300 €	8,08%	11.838	10,56%

