A Three-Year Analysis and Comparison of Opioid Prescribing Practices by Emergency Care Providers for Chronic Pain

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Background

Chronic pain is a common reason for emergency department (ED) visits. Emergency medicine providers commonly prescribe opioids; however, rates of opioid misuse have been high in the last several years. Previous studies have not described the variability in prescribing habits of emergency medicine providers.

Objective

To describe opioid prescribing practices of providers when treating patients with chronic pain in the ED.

Methods

This retrospective study evaluated opioid prescriptions from the ED of two military facilities between June 2009 and June 2012. The outpatient record database was queried to obtain a list of opioid medications prescribed. For this study the focus was on ED visits associated with chronic pain ICD-9 codes. The number of pills prescribed, type of medication, medication refill status, provider type, military status and gender were also collected.

Statistical Analysis: The proportions were compared with chi-square or Fisher's exact tests where appropriate. Wilcoxon test was used for non-parametric continuous variables. Data were reported as mean±SD (median [IQR]). A $p<0.05$ was considered significant.

Results

Over a 3-year period, 28,247 opioid prescriptions were written by ED providers.

Chronic pain was linked to 1,328 patient visits. From those visits, a total of 449 prescriptions for an opioid pain medication were dispensed.

ED providers were 79% Physician, 19% Physician Assistant (PA), 2% unknown, 19% Female, 81% Male, 69% Active Duty and 31% Civilian.

Non-opioids were more likely to be prescribed by a Physician than a PA (77% vs 45%, p<.0001).

Of the short-acting opioids, tramadol (16% vs 7%, p=.0081) and codeine (5.5% vs 0.5%, p=.0048) are more likely to be prescribed by PAs than Physicians.

PAs prescribed a larger number of opioid pills per prescription when compared to physicians (31±29 vs 20±12, p<.0001).

Table 1. All opioid prescriptions over a three-year period

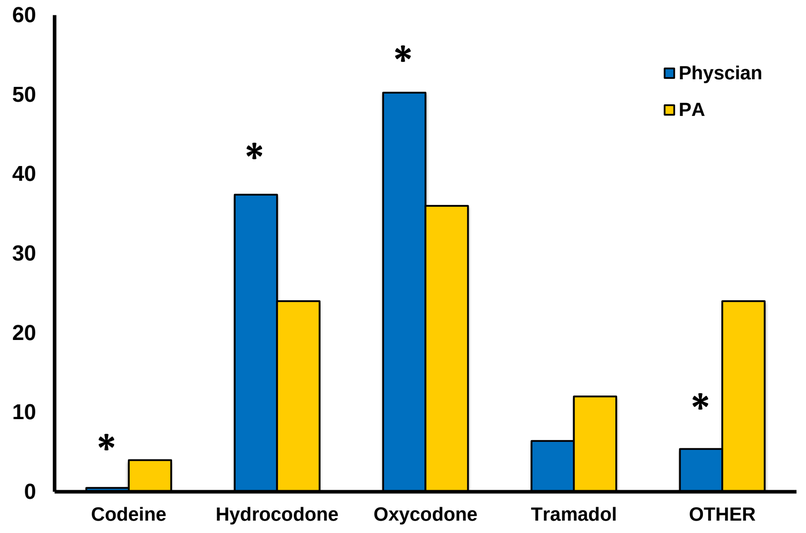
	Number of prescriptions (n)	Number of Pills (mean±SD; median[IQR])	Average Total ME Dose* median[IQR]
Study Year 1	7719	25±25; 20[15-24]	148±184; 150[75-150]
Study Year 2	8457	23±19; 20[15-20]	146±187; 150[75-150]
Study Year 3	12071	24±24; 20[15-20]	153±270; 150[75-150]

*ME; morphine equivalent

Table 2: Opioid prescriptions for patients with only chronic pain

	Number of prescriptions (n)	Number of pills per prescription median[IQR])	Average Opioid Dose in mg median[IQR])
Hydrocodone-acetaminophen	133	20[15-30]	5[5-5]
Codeine/Codeine-acetaminophen	11	20[10-20]	30[30-30]
Oxycodone/Oxycodone-acetaminophen	189	20[15-30]	5[5-5]
Tramadol	42	30[20-50]	50[50-50]
OTHER	68	20[8-37.5]	10[10-30]

Figure 2: Percentage of opioids prescribed by clinical provider.



There was a difference in prescribing practices between Physicians and PAs (p< 0.0001)

* Indicates a statistical difference between PA and Physician (p≤ 0.01)

Limitations

Retrospective study
Sample size
Military facility

Conclusions

Physicians were more likely to prescribe a non-opioid pain medication for a patient with chronic pain compared to PAs. PAs prescribed more opioid pills per prescription. When prescribing short-acting opioids, PAs are more likely to prescribe tramadol and codeine/codeine-acetaminophen than physicians.

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