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Assessing Opioid Prescription Patterns in Pain Management Providers Using 2022 Medicare Part D Opioid Prescribing Data

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Introduction

Chronic pain affects 24% of the population of the United States¹. Although current pain management practices utilize nonpharmacologic approaches to treating pain, the use of opioids has persisted alongside these interventions due to efficacy and low cost. Multiple states have adopted the use of prescription monitoring programs and guidelines with the increased awareness of the opioid epidemic, but there are still differences in legislation regarding opioid prescribing practices². The authors sought to understand the evolving role of pain management providers in the opioid epidemic by investigating recent opioid prescription patterns.

Materials and Methods

This cross-sectional study utilized the Centers for Medicare and Medicaid Services (CMS) public datasets, “Medicare Part D Prescribers - by Provider” and “Medicare Part D Prescribers - by Provider and Drug” for 2022. Data were filtered to include only MD, DO, MBBS, or MBBSCH physicians in “interventional pain management,” “pain management,” and “pain medicine,” excluding CRNAs, NPs, and PAs. Mann-Whitney and Kruskal-Wallis tests compared outcomes such as total opioid claims (including refills), prescriber rates, days of prescription per claim, and claims per beneficiary across different regions, RUCA codes, and genders ($\alpha = 0.05$). Analysis was restricted to prescribers with more than 10 total claims, as CMS data does not report entries with fewer than 11 opioid claims. IRB was not required per institutional policy as this study uses publicly available data.

Results/Case Report

In 2022, pain physicians wrote 4,746,372 short-term opioid prescriptions totaling \$316,052,876 and 778,219 long-term opioid prescriptions totaling \$185,520,013 for Medicare Part D beneficiaries. Among 3,900 pain physicians, 5.15% prescribed no opioids, 17.69% prescribed 11-100, 26.59% prescribed 101-500, 16.56% prescribed 501-1000, 29.28% prescribed 1000-5000, and 4.72% prescribed over 5000 opioids. Men had significantly higher total opioid claims and prescriber rates compared to women ($p < 0.001$), though there were no differences in claims per beneficiary or days per claim. The South showed significantly higher total claims, prescriber rates, claims per beneficiary, and days per claim ($p < 0.001$). The top states with the highest proportion of physicians prescribing over 1000 opioids were Alabama (70.21%), Kentucky (67.14%), Louisiana (62.35%), Georgia ($n = 91$), and Arkansas (59.46%), all states located in the South. No significant differences were found between metropolitan, micropolitan, and rural areas. The South also had higher total claims, days per claim, and claims per beneficiary for morphine, hydrocodone-acetaminophen, oxycodone-acetaminophen, oxycodone, hydromorphone, and tramadol ($p < 0.001$).

Discussion

Overall, male pain management physicians prescribe more opioids than females, and the South has disparately higher opioid prescribing practices than other regions of the USA. The observed trends may be attributed to varying emphasis on alternative pain management methods or socioeconomic factors influencing pain management therapies. Further studies are needed to identify factors driving opioid prescription patterns and understand why the South leads in opioid prescriptions in the USA. Such insights can help reduce the role of pain management physicians in the opioid epidemic and inform public health policies to lower opioid-related mortality and morbidity.

References

- 1) U.S. Department of Health and Human Services (2019, May). Pain Management Best Practices Inter-Agency Task Force Report: Updates, Gaps, Inconsistencies, and Recommendations. Retrieved from U. S. Department of Health and Human Services website: <https://www.hhs.gov/ash/advisory-committees/pain/reports/index.html>
- 2) Guy GP Jr, Zhang K, Bohm MK, Losby J, Lewis B, Young R, Murphy LB, Dowell D. Vital Signs: Changes in Opioid Prescribing in the United States, 2006-2015. MMWR Morb Mortal Wkly Rep. 2017 Jul 7;66(26):697-704. doi: 10.15585/mmwr.mm6626a4. PMID: 28683056; PMCID: PMC5726238.

Disclosures

No

Tables / Images

		N	Median Total Opioid Claims	Median Prescriber Rate	Median Days per Claim	Median Claims per Beneficiary
Gender	Male	3332	562.5*	49.28*	26.93	4.38
	Female	568	306.5	42.03	26.85	4.19
Region	Northeast	38	26.89	38.33	25.57	3.77
	South	1750	977*	54.41*	27.69*	5.02*
	Midwest	728	296	45.21	26.14	3.73
	West	763	348	44.44	26.43	3.69
RUCA	Metropolitan	3553	503	48.32	26.89	4.36
	Micropolitan	194	558	48.49	27.41	4.26
	Rural/Smalltown	38	587	46.82	26.89	4.11

*Indicates $p < 0.001$

Opioid	Median Total Claims (Q1-Q3)	Median Days per Claim (Q1-Q3)	Median Claims per Beneficiary (Q1-Q3)
Morphine	28 (17-53)	28.39 (26.57-29.50)	4.23 (2.91-6.4)
Hydrocodone-Acetaminophen	176 (57-576)	27.45 (24.95-28.81)	3.89 (2.40-5.91)
Oxycodone-Acetaminophen	118 (38-344)	27.86 (25.70-29.01)	4.21 (2.55-6.45)
Oxycodone	87 (32-225)	27.98 (26.09-29.09)	4.50 (2.71-7.14)
Oxymorphone	14 (12-21)	28.65 (27.34-30.00)	2.80 (2.40-4.20)
Hydromorphone	35 (19-76)	27.31 (24.69-28.80)	4.20 (2.80-6.28)
Tramadol	61 (26-143)	26.5 (23.50-28.44)	3.20 (2.37-4.47)