Secular Trends in Opioid Prescribing at Emergency Department Discharge in a Large Adult Cohort

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Intorduction

Emergency departments (EDs) are a major source of opioid prescriptions for acute pain and play a critical role in shaping community opioid exposure. Although Israel has not experienced an opioid crisis comparable to North America, ED opioid prescribing has steadily increased.

Aim

Evalute temporal trends in opioid prescribing, high-dose exposure, and associated patient characteristics in a large tertiary ED

Methods

Study design: Retrospective EHR-based cohort (2017–2024). Population: 39,534 adult ED discharges with opioid prescriptions. Variables: Demographics, clinical characteristics, MME, prescription duration. High-dose definition: >100 mg MME Analysis: Multivariable regression for temporal trends

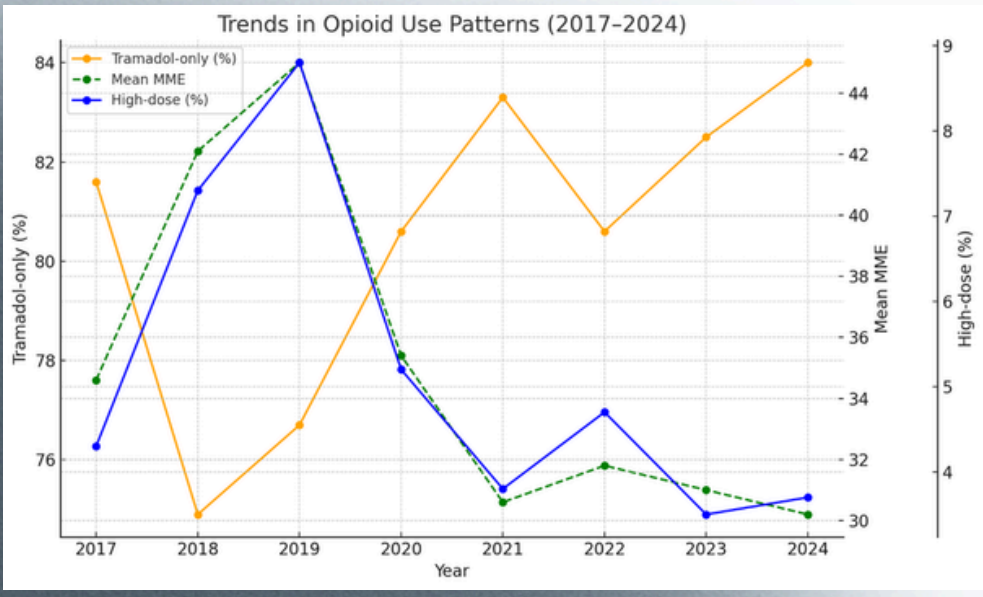
Results

Opioid prescribing increased from 3.2% of ED visits in 2017 to 4–5% thereafter. Tramadol represented 80.9% of prescriptions. High-dose prescribing peaked in 2019 (8.8%) and declined to 3.7% in 2024. Male sex and increasing age were independently associated with high-dose prescribing, whereas prior opioid exposure was not. High-dose prescribing was mainly associated with musculoskeletal and trauma-related diagnoses, especially back pain, fractures, and limb trauma

Table 1 – Cohort, compering Low and High MME

Variable	Low MME (N=37474)	High MME (N=2060)	Total (N=39,534)	p-value	Effect Size^
Age (mean ± SD)	48.4 ± 19.0	47.4 ± 17.8	48.35 ± 18.97	0.091	d = 0.009
Male sex	19,727 (52.6%)	2,015 (97.8%)	21,742	<0.001	**V= 0.202**
Non-Opioid-naive	3,487 (9.3%)	217 (10.5%)	3,704	0.310	V = 0.010
Pain/palliative clinic visit	5,235 (14.0%)	372 (18.1%)	5,607	<0.001	V = 0.026
Tramadol-only	31,476 (84.0%)	342 (16.6%)	31,818	<0.001	**V = 0.378**
Duration of prescription(s) (days, mean ±SD)	7.4±3.7	8.7±3.2	7.4±3.7	<0.001	d= 0.36

^Effect sizes are reported as Cohen's d for continuous variables and Cramér's V for categorical variables. High MME is defined as a daily dose greater than 100 mg oral MME



Conclusions

ED opioid prescribing in Israel showed declining high-dose exposure and shorter prescription durations. Further work is needed to determine whether this reflects improved stewardship or potential undertreatment of pain, emphasizing the role of ED-led opioid stewardship.