



ALBANY COLLEGE OF PHARMACY AND HEALTH SCIENCES

Analysis of Variable Morphine Milligram Equivalent (MME) Threshold Trends by State

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BACKGROUND

- On average, 115 Americans die every day from an opioid overdose.¹
- In 2016, 40% of all overdose deaths in the US involved prescription opioids, and the majority involved illegitimate sources and misuse.^{2,3}
- The 2016 CDC guidelines, intended for primary care, recommend 90 MME maximum before referral to a pain specialist.⁴
- Nevertheless, states historically and currently have implemented their own MME thresholds through legislation and insurance mandates.

Purpose

This study aims to unmask:

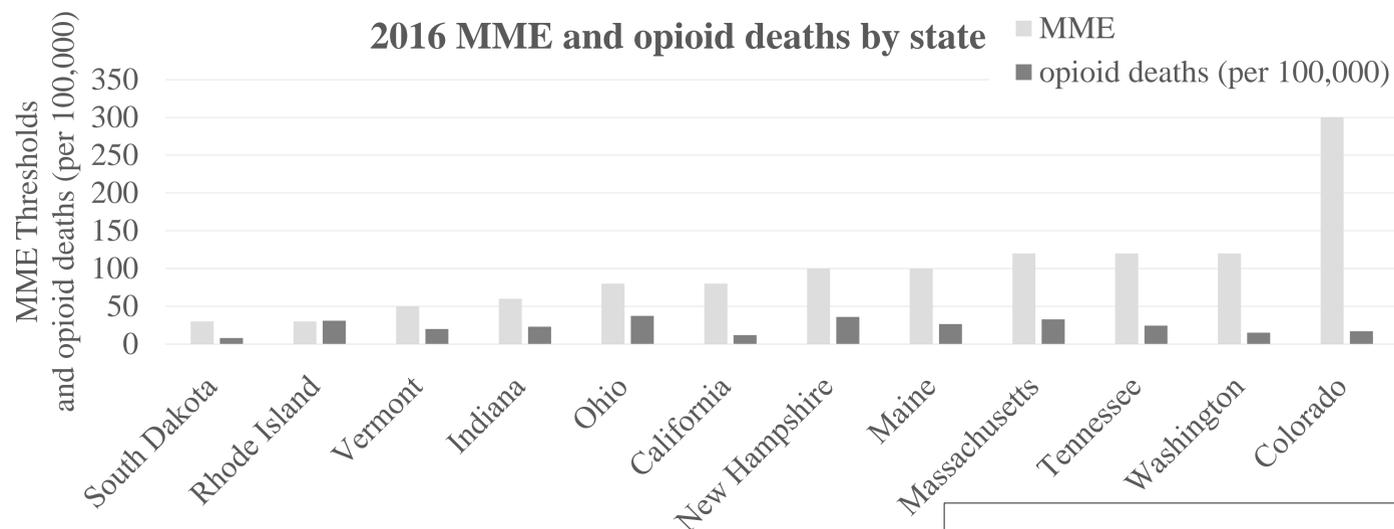
- The disparities of MME across states
- MME thresholds are arbitrary with no supporting data
- MME's impact on overdose deaths

METHODS

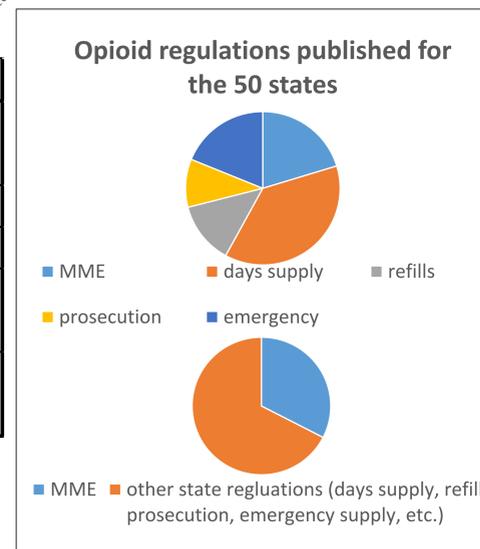
- Data on opioid deaths and MME threshold, between 2016 to 2018 were collected for all 50 states
- Data was obtained using state and federal websites (CDC, states' pharmacy and licensing boards, and states' department of health websites)
- Trends on opioid regulations and the potential effect on illicit drug use were evaluated for states where data were available
- Additionally, the number of published MME thresholds for all 50 states were analyzed in relation to the other published opioid regulations (days' supply, refills, and immunity to prosecution for possession of a controlled substance during the overdose incident)

RESULTS

- CDC published opioid deaths data were available for all states in 2016, only 22 states in 2017, and none for 2018
- After analyzing more than 90 federal and state-specific websites, only 12 states had published MME thresholds in 2016, 7 states in 2017, and 2 states in 2018
- Most states, however, have opioid regulations based on the total days' supply and refills for a prescription



2016 MME and Opioid Deaths Data		
	States with MME cutoffs ≤ 90 MME	States with MME cutoffs ≥ 91 MME
Number of States	6	6
MME range	30-80	100-300
Range of opioid deaths per 100,000 persons	8-37.3	15.1-32.7
Average opioid deaths per 100,000 persons	21.9	25.3



CONCLUSIONS

- MME thresholds are variable among states, and not readily available.
- Based on 2016 data, higher MME ratios were not directly associated with higher opioid-related deaths, especially considering 2016 morbidity could have preceded implementation of new MME thresholds.
- It is unclear whether higher MME thresholds are attributable to deaths or whether they were implemented subsequent to published morbidity.
- Future directions include:
 - Analyzing MME and opioid deaths for multiple years
 - Comparing data pre- and post- the 2016 CDC guidelines
 - Analyzing whether there is a relationship between opioid deaths trends and opioid regulations (including MME thresholds)

REFERENCES

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DISCLOSURES

Dr. Fudin discloses the following industry relationships: Astra Zeneca (speakers bureau, advisory board); Clarity (consultant); DepoMed (advisory board, speakers bureau); Endo (speakers bureau, consultant); Kaleo (speakers bureau, advisory board); Kashiv Pharm (advisory board); KemPharm (consultant); Millennium Health, LLC (speaker); Pernix Therapeutics (speaker); Remitigate, LLC (owner); and Scilex Pharmaceuticals (consultant). Dr. Cleary discloses the following industry relationships: Kaleo (consultant); Remitigate (consultant). Malak Gawdat, Mariam Gawdat, and Dr. Jeffrey Bettinger have nothing to disclose.