

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER.

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BACKGROUND

In 2017, 70,237 drug overdose deaths occurred in the US 47,600 deaths related to opioids, according to the CDC; an age adjusted increase in 9.6% from 2016.¹ Additionally, the NIH acknowledges the misuse of and addiction to opioid is estimat to cost the US \$78.5 billion a year, which includes the costs of healthcare, lost productivity, addiction treatment and criminal justice involvement.² Ultimately, the data obtained by the US Department of Health and Human Services in recent years has to the opioid crisis, and in 2017, a declaration of a public healt emergency.³

In 2016, the CDC released the Guideline for Prescribing **Opioid for Chronic Pain as guidance for primary care clinicians** When assessing opioid-related harm, the guideline note: clinic should consider offering naloxone when factors that increase for opioid overdose, such as higher opioid doses in oral morpl milligram equivalents (>50 MME/day), or concurrent

benzodiazepine use are present.⁴ Additionally, the World Healt Organization released an Information Sheet in 2018 that notes factors for opioid overdose include higher opioid doses (> 100 MME/day) or concurrent benzodiazepine use. ⁵

OBJECTIVE

Due to high mortality rates associated with opioid overdoses in the US, this study seeks to determine the percent of patients at increased risk of opioid overdose in a community pharmacy.

STUDY DEFINITIONS

- Patients at increased risk of opioid overdose:
- **Prescribed an opioid of \geq 50 MME/day**
- OR taking benzodiazepines concurrently
- **Chronic therapy:**
- Patients with an opioid prescription for > 60 days

METHODS

Multi-center retrospective chart review:

- (Feb 2018-2019) Texas Tech University Health Sciences Center (TTUHSC) Pharmacy in Lubbock and Amarillo, Texas
- (Dec 2018- Feb 2019) United Supermarkets, LLC, in the Lubbock, Texas Region

Adult patients with an opioid prescription were identified. Once identified, opioid prescribed, amount of MME/day, presence of benzodiazepine, and if naloxone was dispensed, was collected and analyzed.

Statistical analysis includes Pearson Chi-square or Fisher exact test for nominal data. Continuous data was analyzed using Shapiro-Wilk for normality and Mann-Whitney U to determine difference. An alpha level of significance was defined as <0.05. Multiple logistic analysis was also performed on overdose risk.

Patients at Increased Risk of **Opioid Overdose in a Community Pharmacy**

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with	Table 1: Patient Demographics				Table 2: Primary Endpoint		
ted			TTUHSC & United Supermarkets (n = 792)			Total % at Risk: ٦ ≥ 50 MME/day	「otal % at Risk: ≥100 MME/day
	Male		337 (42.5%)		TTUHSC +	212/702 (26 7%)	67/702 (8 1%)
	Median age in years (IQR)		55.2 (9)		United Supermarket	S 212/192 (20.170)	077792 (0.470)
led h	Table 3: Secondary Endpoints				Table 4: Multiple Logistic Analysis		
		TTUHSC	United Supermarkets	P-value	Multiple Logistic Regression Factor	Odds Ratio (95% CI)	P-value
s. sians risk hine		(n = 188)	(n = 604)		Risk of overdose at ≥ 100 MME/day	Chronic Use (≥ 60 Day Supp 6.677 (3.801-11.73)	ly) <0.0001
	≥ 100 MME/day	9 (4.8%)	14 (2.3%)	0.0783		Pharmacy: United Supermark	ets 0.0546
	<u>></u> 50 MME/day	45 (23.9%)	120 (19.9%)	0.2303		0.5766 (0.3327 - 0.9993)	0.0340
	Opioid + Renzediazonine	15 (8.0%)	33 (5.5%)	0.2069		Overall Model	<0.0001
th risk	Dispensed Naloxone	0 (0.0%)	1 (0.2%)	0.7524	Risk of overdose at ≥ 50 MME/day	Chronic Use (≥ 60 Day Supp 4.333 (3.104 – 6.048)	ly) <0.0001

Percent of Patients at Risk of Opioid Overdose at >50 MME by Pharmacy



Percent of Patients at Risk of Opioid Overdose at >50 MME by Chronic Use

50.0% n = 260 40.0% p = <0.0001 46.5% 30.0% 20.0% n = 532 **16.7%** 10.0% 0.0% Yes No

RESULTS

Percent of Patients at Risk of Opioid Overdose at >100 MME by Pharmacy



Percent of Patients at Risk of Opioid **Overdose at >50 MME by Chronic Use**



- Overall, 212 of the 792 (26.7%) of patients prescribed opioids were found to be at an increased risk of overdose based on **> 50MME/day or concurrent benzodiazepine** Significantly more patients were at risk of overdose from opioids if 50 MME was used vs 100 MME
- Those on chronic opioids (≥ 60 day supply) were at
- significantly increased risk of overdose from opioids
- Only 1 patient received naloxone despite several patients being at risk of opioid overdose
- **Retrospective chart review**
- Limited data available from community pharmacy
- Systematically difficult to capture additional patient information
- Difficult to use screening tools such as the Risk Index for **Overdose or Serious Opioid-Induced Respiratory**
- Depression (RIOSORD) Risk of overdose changes depending on the MME used and guideline recommendations
- 1. Drug Overdose Deaths. Centers for Disease Control and Prevention. https://www.cdc.gov/drugoverdose/data/ statedeaths.html. Published December 19, 2018. Accessed January 11, 2019.
- 2. Understanding the Epidemic. Centers for Disease Control and Prevention. https://www.cdc.gov/drugoverdose/epidemic/ index.html. Published December 19, 2018. Accessed January 11, 2019.
- 3. National Institute on Drug Abuse. Opioid Overdose Crisis. National Institute On Drug Abuse . https://www.drugabuse.gov/ drugs-abuse/opioids/opioid-overdose-crisis#two. Published March 6, 2018. Accessed January 11, 2019.
- 4. Dowell D, Haegerich TM, Chou R. CDC Guideline for **Prescribing Opioids for Chronic Pain — United States, 2016.** MMWR Recomm Rep 2016;65(No. RR-1):1–49. DOI: http:// dx.doi.org/10.15585/mmwr.rr6501e1
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CONCLUSIONS

LIMITATIONS

SELECTED REFERENCES

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