

Combating Prescription Drug Abuse in Montgomery County, Texas: A Problem-Oriented Approach

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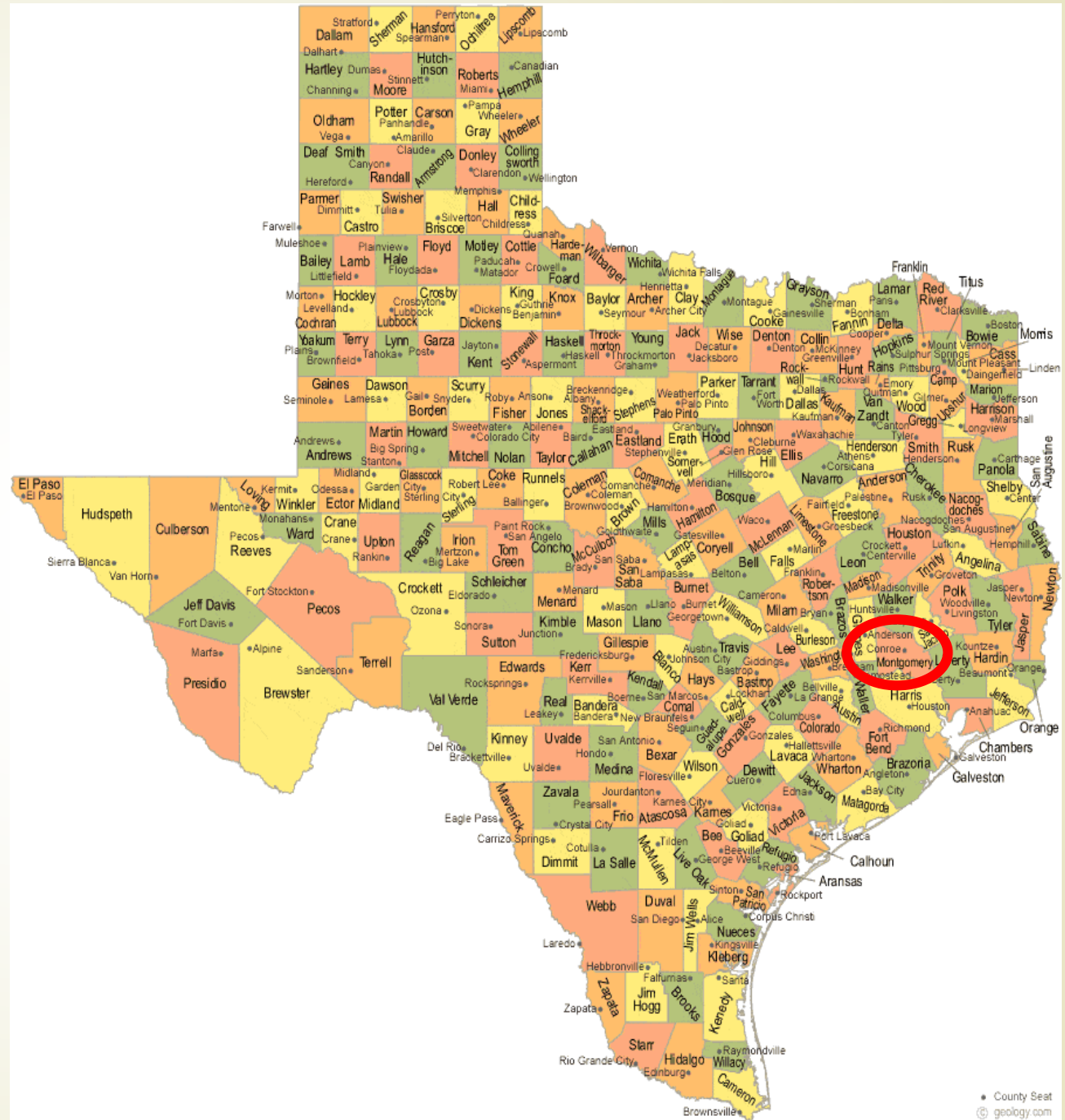
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Montgomery County

- **Size:** 1,077 square miles
- **Population:** 502,586
- an increase of 71% from 2000 Census
- 7th among the fastest growing counties in the U.S.
- **Racial composition:**
 - Whites: 86%
 - African Americans: 3.5%
 - Asians: 2.5%
 - Hispanic/Latino origin: 22.2%



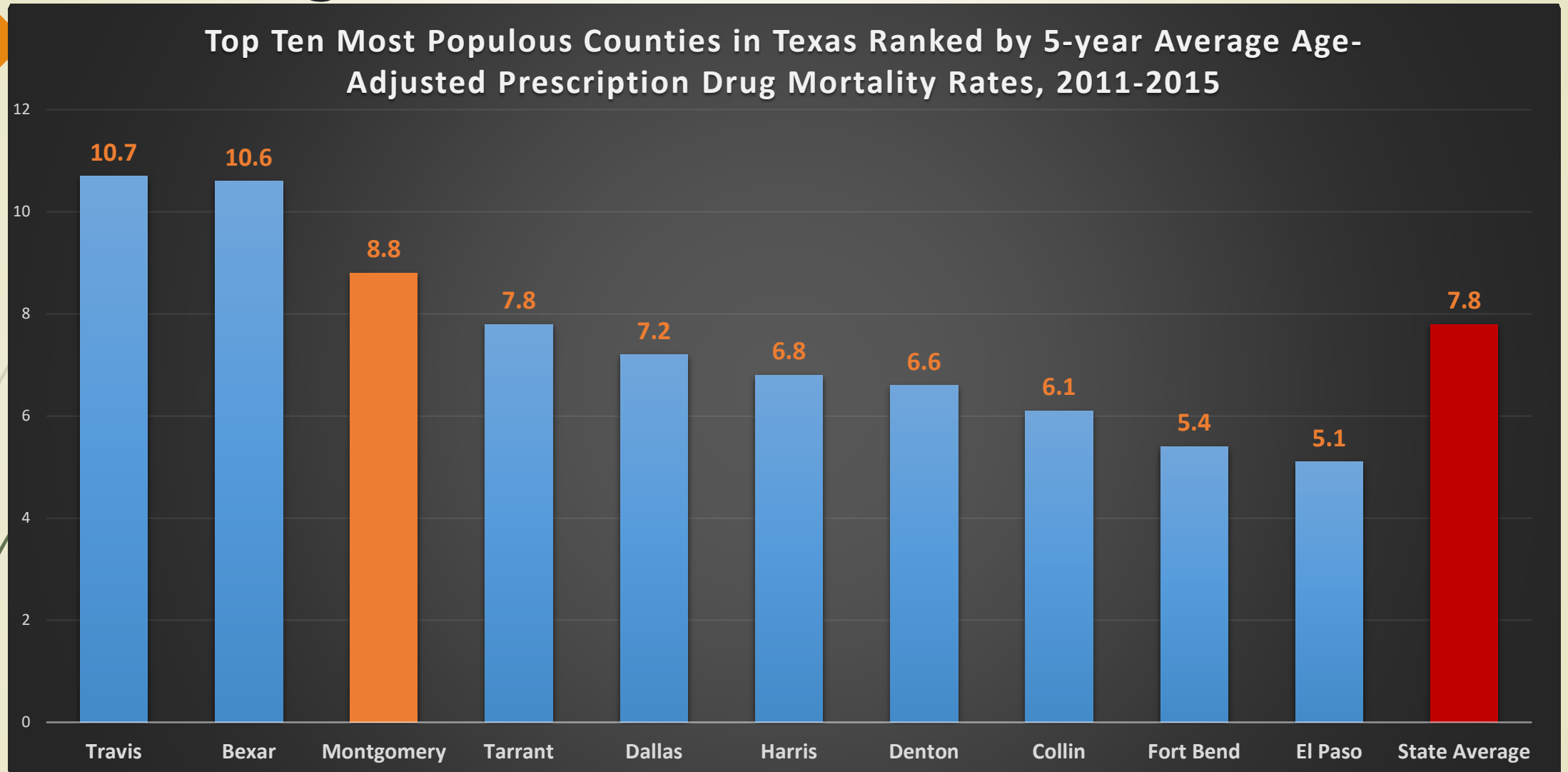


Scanning

Four things:

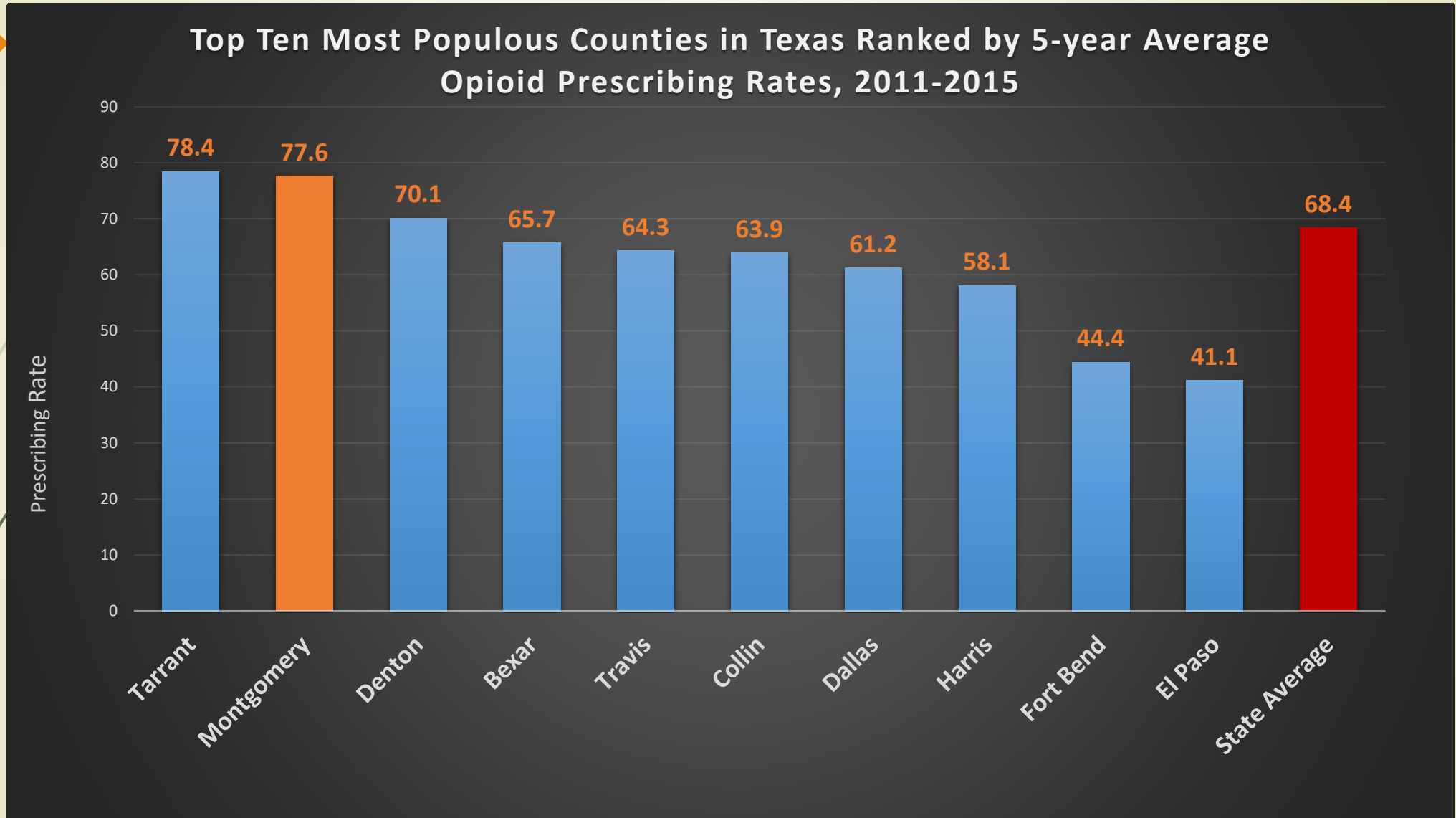
- ▶ Tragedy
- ▶ Drugged driving
- ▶ Anecdotal evidence
- ▶ CDC statistics

Scanning



Data were extracted from WONDER Online Database, Multiple Cause of Death, Centers for Disease Control & Prevention. The mortality rates are interpreted as the number of deaths per 100,000 population.


Scanning



Data were extracted from U.S. County Prescribing Rates, Centers for Disease Control & Prevention. The opioid prescription rates are interpreted as the number of opioid prescriptions per 100 persons.




Four Objectives

- Scope and impact of the problem
 - Identify drug of choice/trends
 - Make good use of Texas Prescription Monitoring Program data to identify doctor shoppers, problematic doctors and pharmacies
 - Formulate data-driven and evidence-based responses
- 



Four data sources

- Drug overdose death data, 2012-2016 by the Montgomery County Forensic Services Department
 - Overdose call data, March – June 2017 by the Montgomery County Hospital District
 - Drug arrest data, 2012-2016 by the Montgomery County DA's Office
 - Texas Prescription Monitoring Program (PMP), October 2015 – December 2016 by the Texas Department of Public Safety
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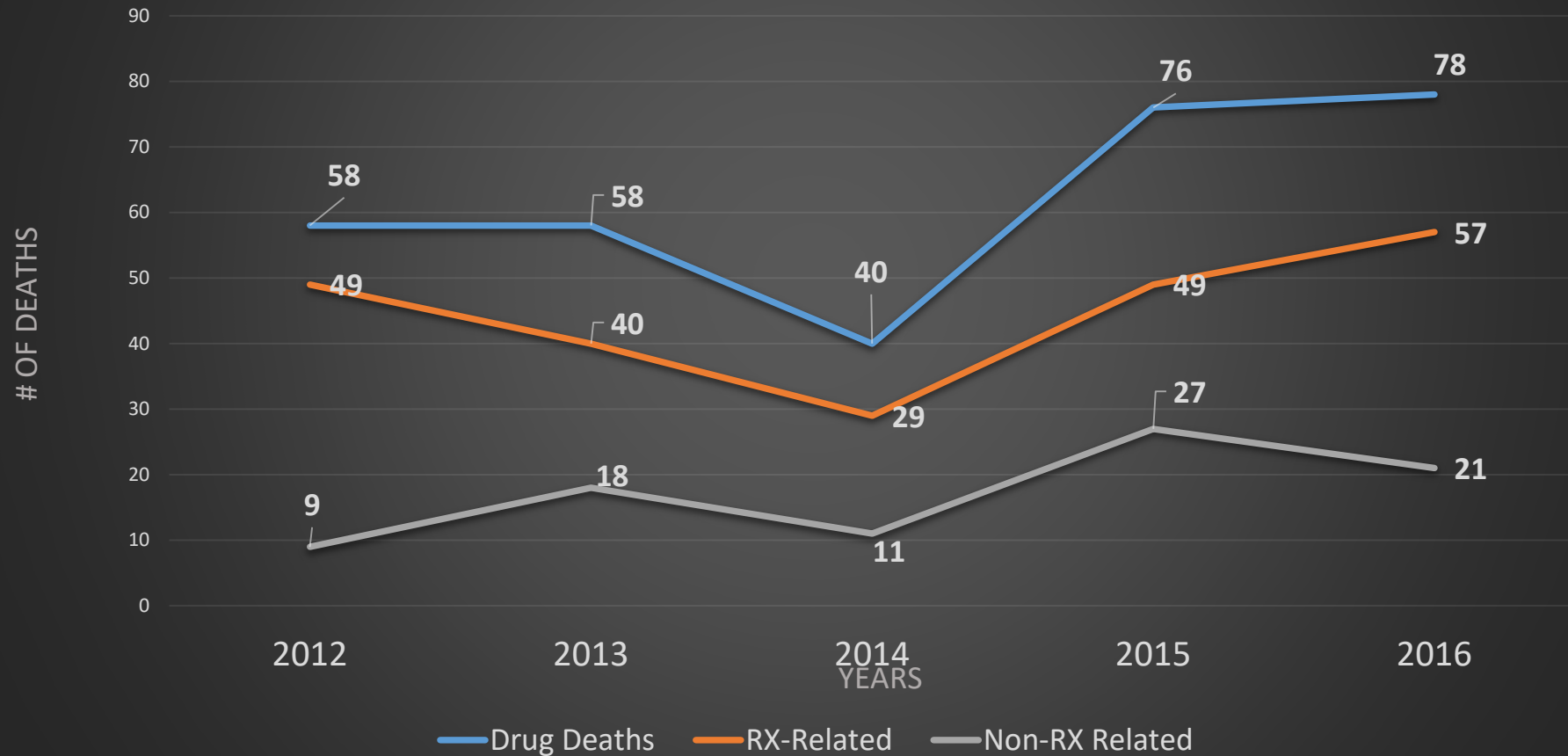


Analysis

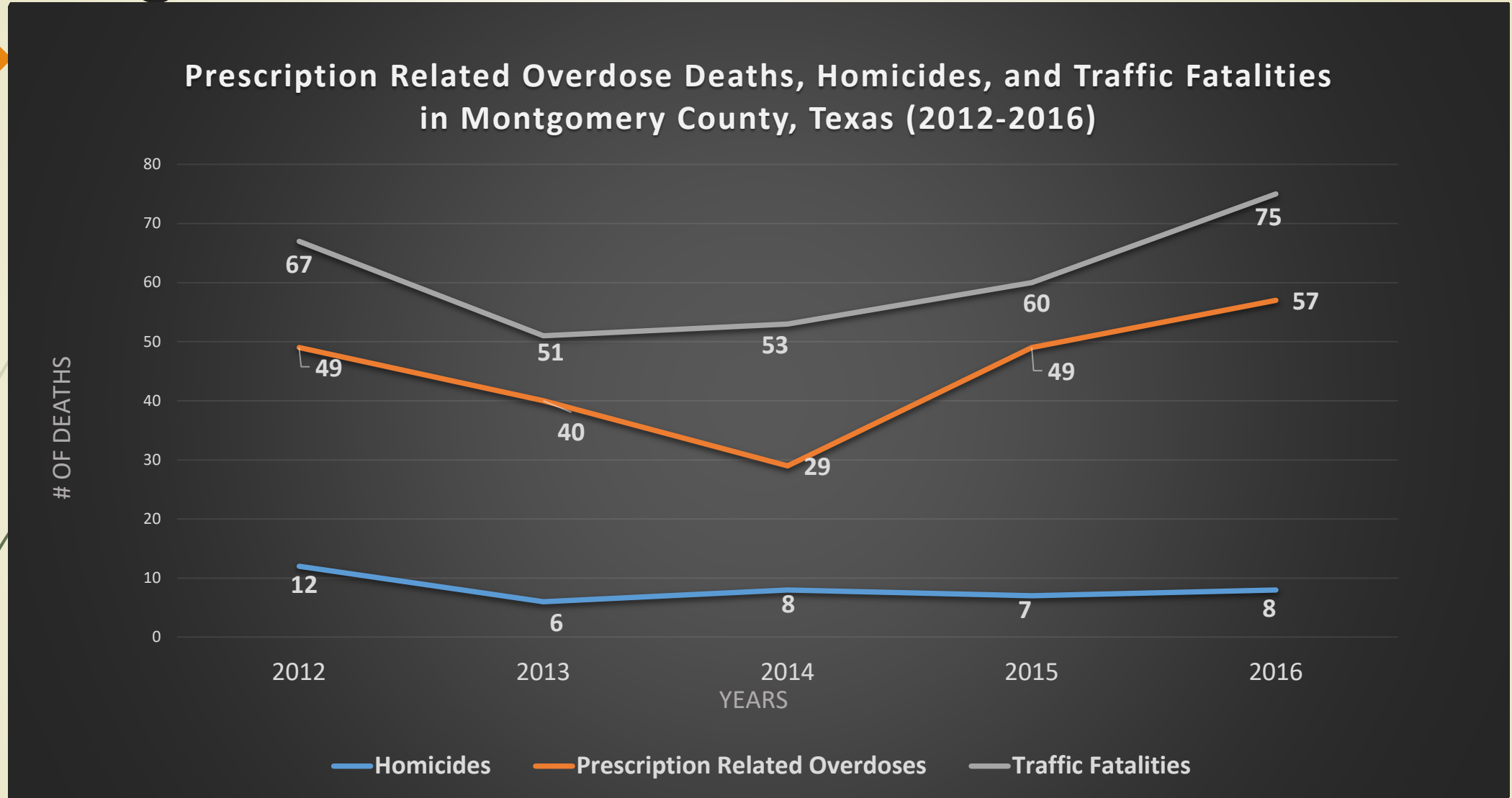
- **Drug overdose death data by Forensic Center**
 - Montgomery County does not have a Medical Examiner, but it does have a Forensic Center with paid pathologists that perform autopsies
 - The Center keeps statistics based on the results of the autopsies

Drug overdose death data, 2012-2016

Total Number of Drug Deaths, RX-Related Deaths, & Non-RX Related Deaths in Montgomery County, Texas (2012-2016)



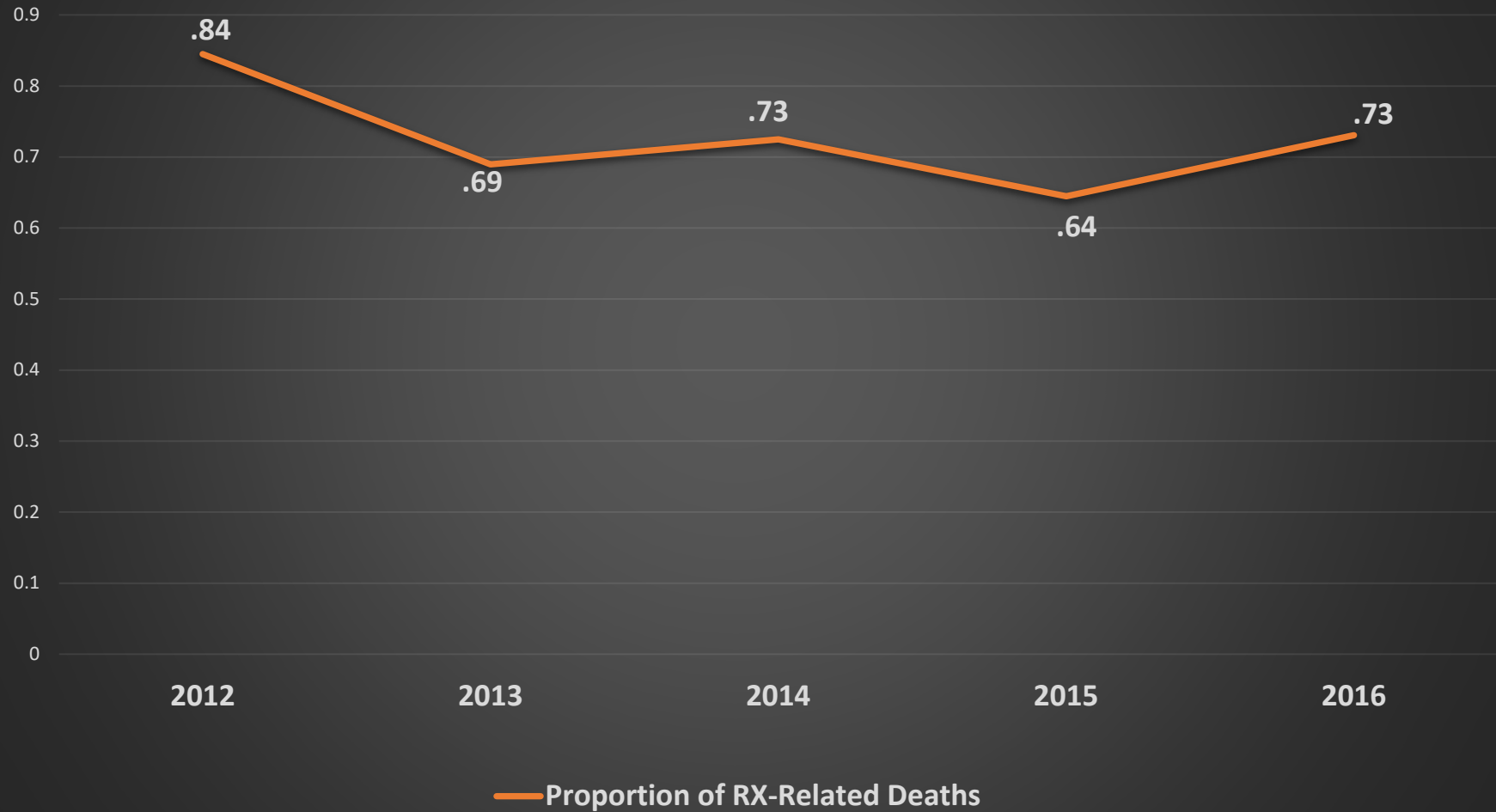
Drug overdose death data, 2012-2016



Traffic fatality data source: Texas Department of Transportation (Texas Motor Vehicle Crash Statistics). Homicide data source: Texas Department of Public Safety.

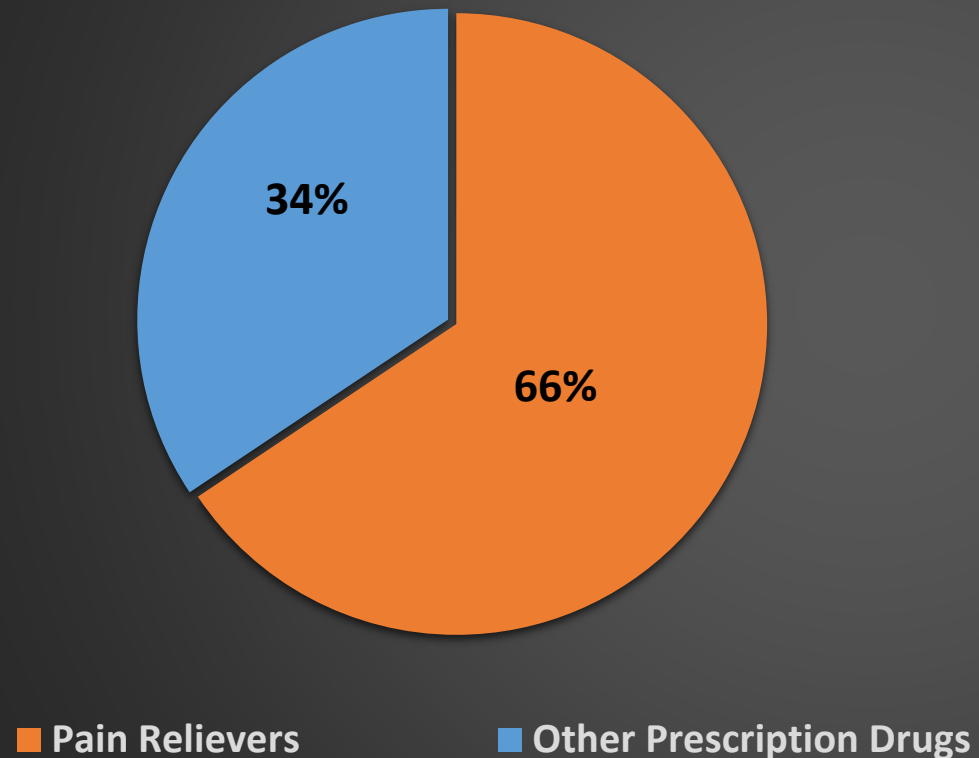
Drug overdose death data, 2012-2016

Proportion of RX-Related Deaths to All Overdose Deaths in Montgomery County, Texas (2012-2016)



Drug overdose death data, 2012-2016

Prescription Drug Overdose Deaths by Drug Types (2012-2016)



Pain Relievers:

- Hydrocodone
- Morphine
- Methadone
- Fentanyl
- Oxycodone
- Hydromorphone
- Tramadol

Other Prescription Drugs:

- Alprazolam
- Zolpidem
- Carisoprodol
- Amphetamine
- Diazepam
- Bupropion
-



Analysis

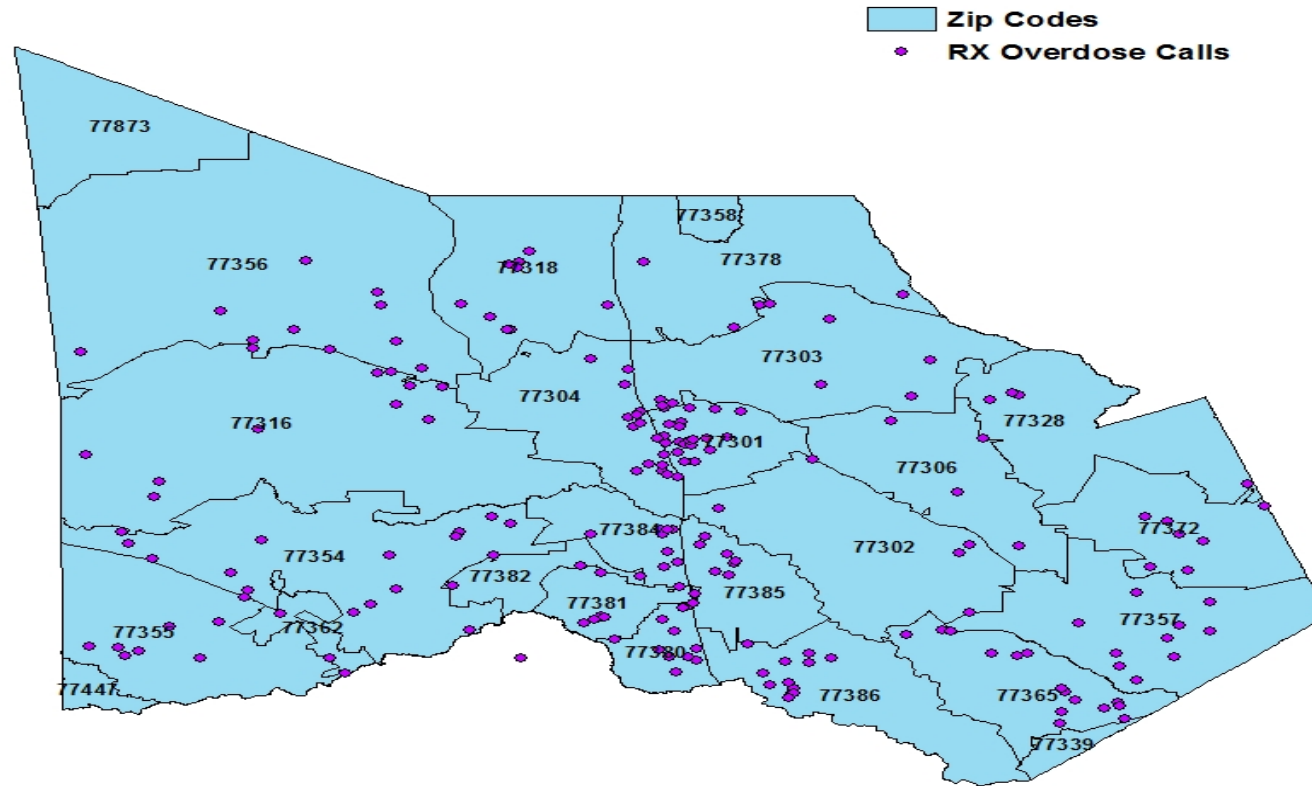
- ▶ Overdose call data by Hospital District
 - ▶ Overdose calls responded by the Emergency Medical Services
 - ▶ March-June, 2017
 - ▶ X & Y coordinates

Overdose call data, March-June 2017 (N=644)

Drug Types	Frequency	%
Prescription Drugs	217	33.7%
Alcohol	210	32.6%
Methamphetamine	52	8.1%
Marijuana	29	4.5%
Synthetic Drugs	28	4.3%
Heroin	15	2.3%
Cocaine	13	2.0%
Carfentanyl	2	0.3%
Unknown	78	12.1%

Overdose call data, March- June 2017

Figure 2.3 Geo-distribution of RX-related overdose calls in Montgomery County, Texas, 3/1/2017-6/30/2017

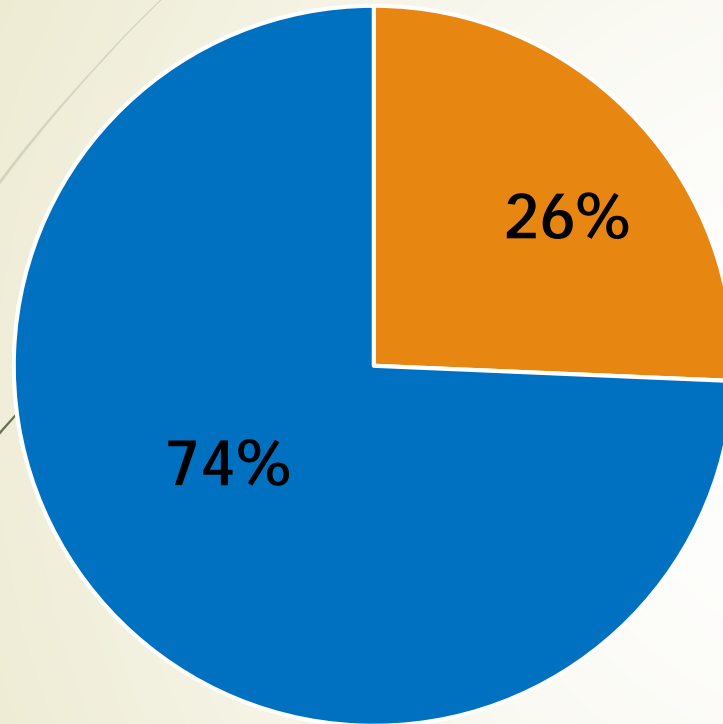




Analysis

- ▶ Drug arrest and prosecution data by DA's Office
 - ▶ Instanter arrests
 - ▶ Drug identified in charging instrument
 - ▶ Penalty groups v. Scheduled substances
 - ▶ Degrees of offense
 - ▶ Punishment

Drug Arrest data, 2012-2016 (N=8,452)



- RX-related arrests
- Non-RX related arrests

Types of Drugs	%
Meth	46.5%
Cocaine	14.7%
Prescription opioids	9.4%
Heroin	2.3%
Ecstasy	2.2%
Synthetic drugs	1.3%
THC	1.2%
Other prescription drugs	16.3%
Other illicit street drugs	1.4%
Undermined	4.6%

RX-related Drug Arrest data, 2012-2016

(N=2,170)

Types of RX drugs	%
Alprazolam	24.7
Hydrocodone	24.0
Carisoprodol	8.0
Amphetamine	7.7
Clonazepam	3.7
Oxycodone	3.0
Codeine	2.7
Morphine	2.4
Zolpidem	1.1
Others	22.7

Outcomes	%
Imprisonment	27.0
Fine only	7.2
Imprisonment & Fine	0.6
Dismissed	51.1
Deferred adjudication	11.1
Probation	1.6
Pending	1.4

RX-related Drug Arrest Data, 2012-2016: Cases dismissed (N=1,106)

Reasons for dismissals	%
Convicted in another case	61.6
Valid prescription	15.9
In the interest of justice	6.5
Cannot prove beyond a reasonable doubt	6.3
No bill by grand jury	1.8
Pre-trial diversion	1.5
Defendant deceased	0.7
Others	5.6

Texas Prescription Monitoring Program (PMP)

- ▶ Texas Prescription Monitoring Program Data by DPS
 - ▶ Collect and monitor prescription related data for controlled substances
 - ▶ Recently in the custody of the Texas State Board of Pharmacy
 - ▶ Department of Public Safety administrates data distribution for a law enforcement purpose
- ▶ Sample: a high-risk sample (≥ 2 prescribers) between 10/2015 and 12/2016

Texas Prescription Monitoring Program (PMP) Data

Controlled Substance Prescriptions (CSPs), 10/2015 - 12/2016 (N=51,074)

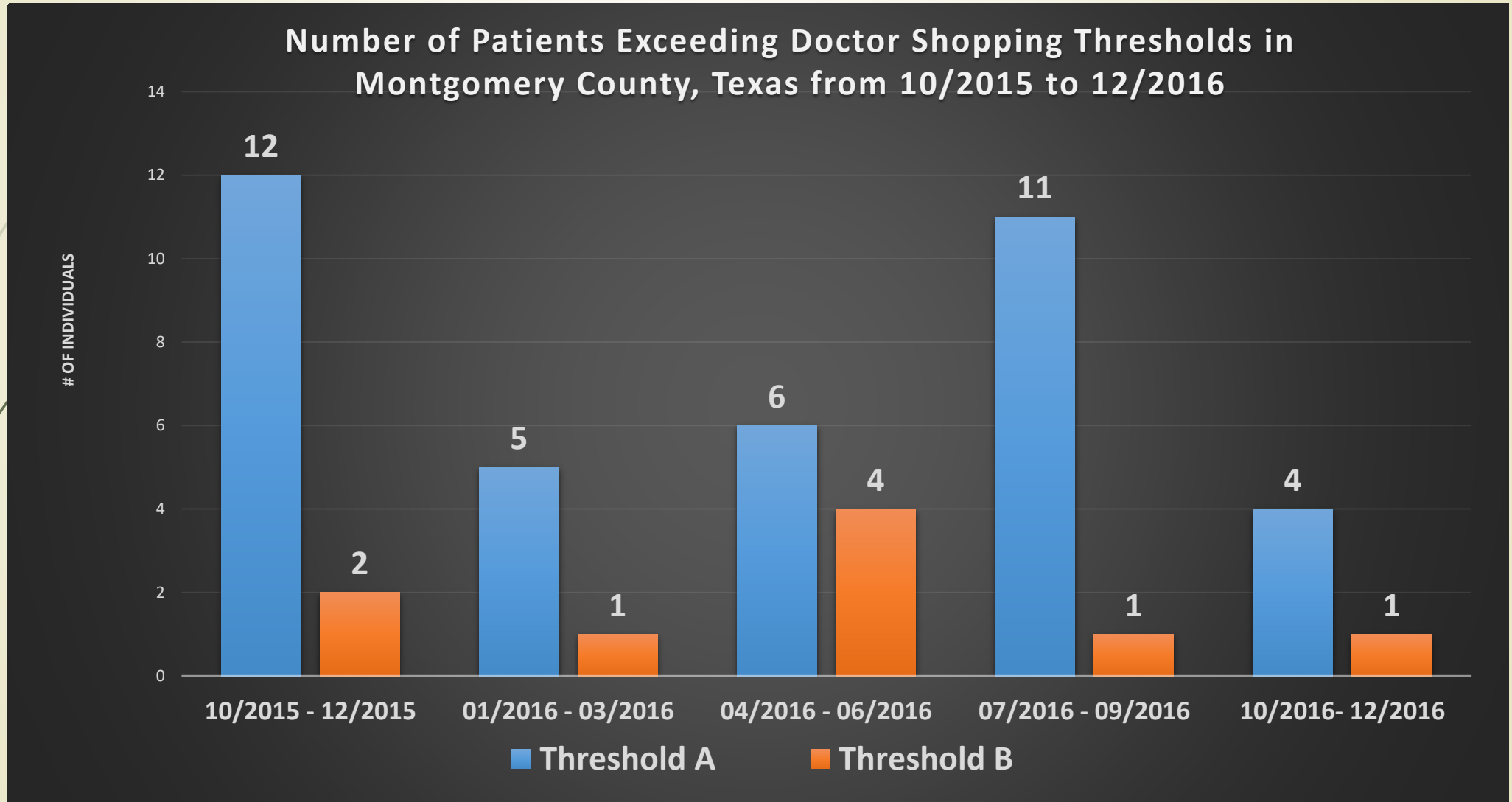
Variables	Groups	%
Age Distribution	18-34	7.9
	35-44	18.0
	45-64	56.6
	65-74	12.4
	≥75	5.1
Medication Class	Pain Relievers	46.3
	Tranquilizers	20.8
	Sedatives	19.3
	Stimulants	8.7
	Other Drugs	5.0
Drug Schedule	Schedule II	32.5
	Schedule III	16.9
	Schedule IV	46.3
	Schedule V	4.3

Texas Prescription Monitoring Program (PMP) Data

Top 10 Prescribed Drugs (N=51,074)

Prescription Drugs	%
Hydrocodone	14.5
Alprazolam	9.1
Zolpidem	9.0
Carisoprodol	5.7
Clonazepam	5.2
Codeine	5.0
Buprenorphine	5.0
Oxycodone	4.7
Diazepam	3.0
Fentanyl	2.1

Texas Prescription Monitoring Program (PMP) Data



Potential Responses

➤ Collaboration with Forensic Center

- Continue to receive data from the Forensic Center
- Sponsor medical pain management training for pathologists
- Establish an overdose fatality review process

➤ Development of Curriculum for Pain Management Doctors

- 3-day class for Pain Management Doctors: MD with specialty in Pain Management teaching it, along with a lawyer
- Specifically geared towards new doctors and medical students
- Not just about drugs
- Insurance billing/coding
- Scope of practice for different credentialed individuals



Potential Responses

More Drug Recognition Experts

- ▶ Not enough DREs in Montgomery County
- ▶ Can we subsidize this training for officers in law enforcement agencies across the County?
- ▶ The more we have, the more available they will be when someone is pulled over for possible "drugged driving"



Potential Responses

“Pre-Crime Unit”

- ▶ Develop statistical “super program” for analyzing data via multi-agency collaboration
 - ▶ Narcotics Units bust drug dealers using a lot of different techniques that are mostly different than busting doctor drug dealer of prescription drugs
 - ▶ But what do we have that helps?
 - ▶ Data, receipts, regulations

Potential Responses

"Pre-Crime Unit"

- ▶ Would it be possible to merge our data sets for actionable intelligence?
- ▶ Addresses: what addresses do we have?
 - ▶ Doctor shoppers' home addresses
 - ▶ Overdoes call addresses
 - ▶ Arrest addresses
 - ▶ Do these overlap & What does that tell us?

Potential Responses

Enhance analysis of the PMP data to identify and prevent “pill mill” doctors and doctor shoppers:

- ▶ Create quarterly dashboards for prescribers and identify the outliers who write disproportionate amount of prescriptions for one or more of major prescription opioids
- ▶ Conduct patient-level analysis and pair the PMP data with other surveillance analysis to identify doctor shopping and chronic users of opioid prescriptions