TEXAS
Health and Human Services

Texas Department of State Health Services

Association between patients prescribed opioids and patients prescribed multiple substances and long-term opioid use within 2022 calendar year

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Background & Overview

Background

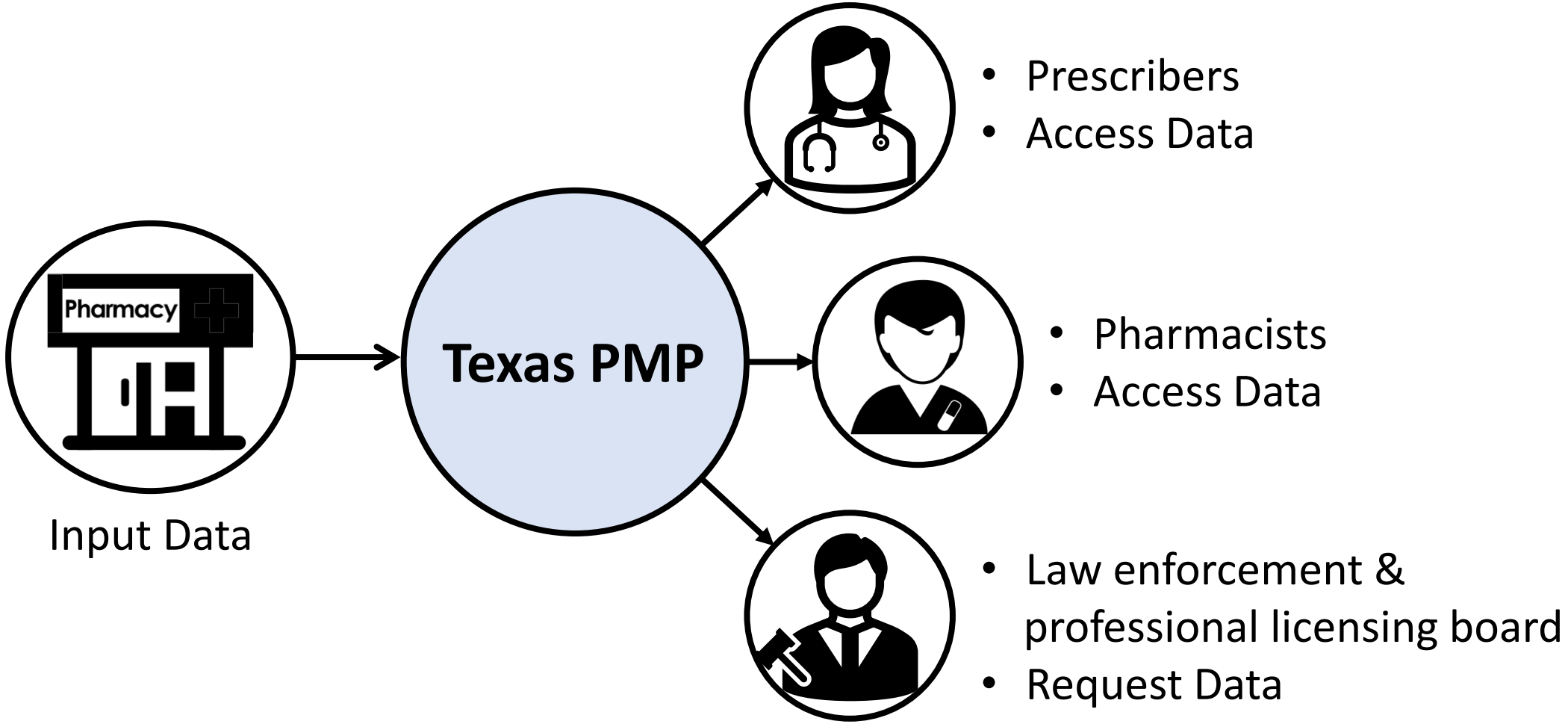
- **Opioid prescribing trends**
  - Shift toward shorter durations, but limited recent data on prescribing patterns
- **Long-term opioid use risks**
  - Higher doses → Increased risk
  - Co-prescription (benzodiazepines, stimulants) role in long-term use unclear
- **Demographic differences**
  - Variations in prescribing patterns & long-term use by location, age, and sex

Young JC, Dasgupta N, Chidgey BA, Jonsson Funk M. Postsurgical Opioid Prescriptions and Risk of Long-term Use: An Observational Cohort Study Across the United States. *Ann Surg*. 2021;273(4):743-750. doi:10.1097/SLA.0000000000003549

Objective

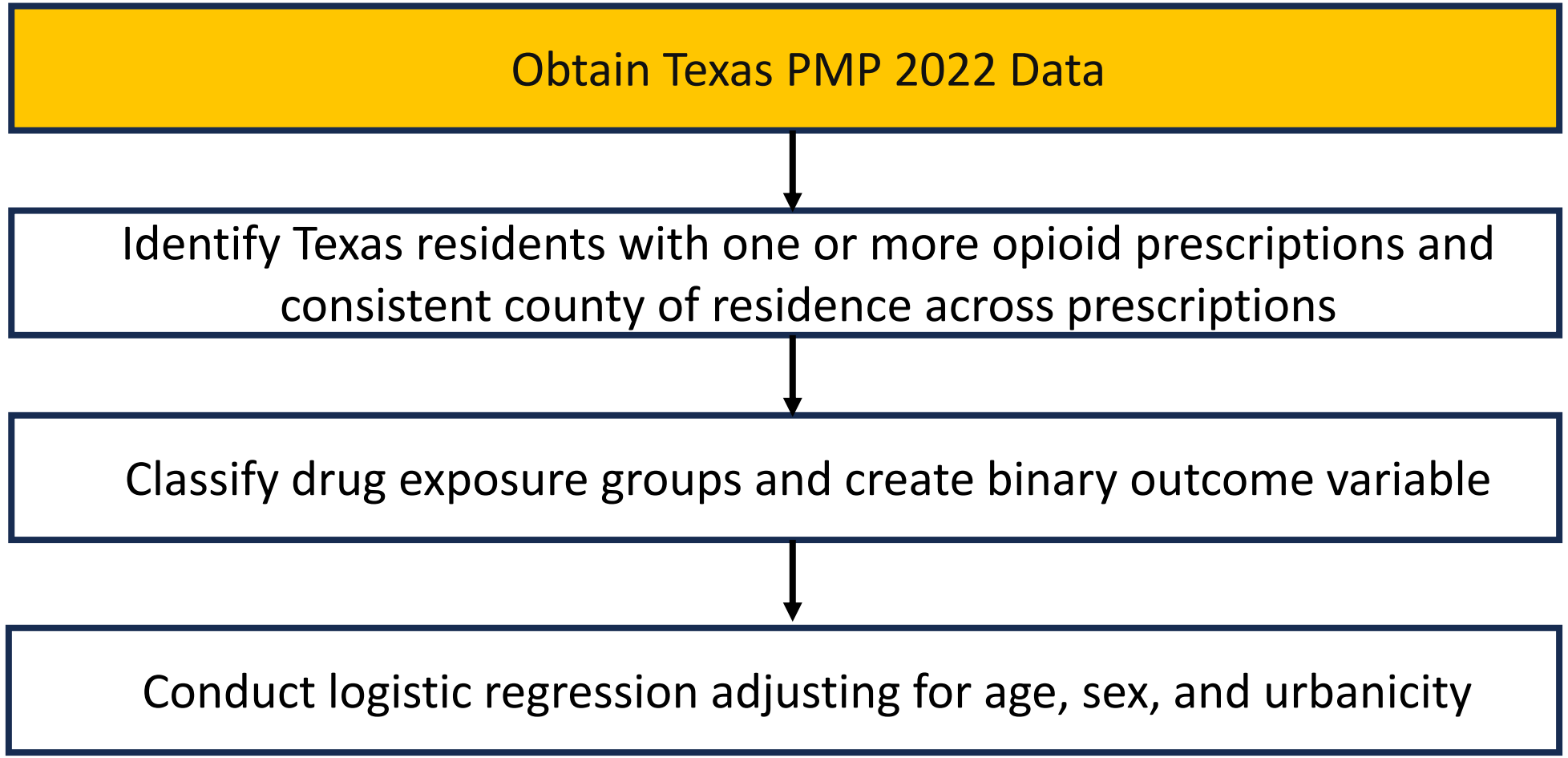
This study aims to evaluate the association between co-prescription of controlled substances, benzodiazepines and stimulants, and long-term opioid use among Texas patients using the 2022 Texas Prescription Monitoring Program (PMP) data.

Data Source Overview



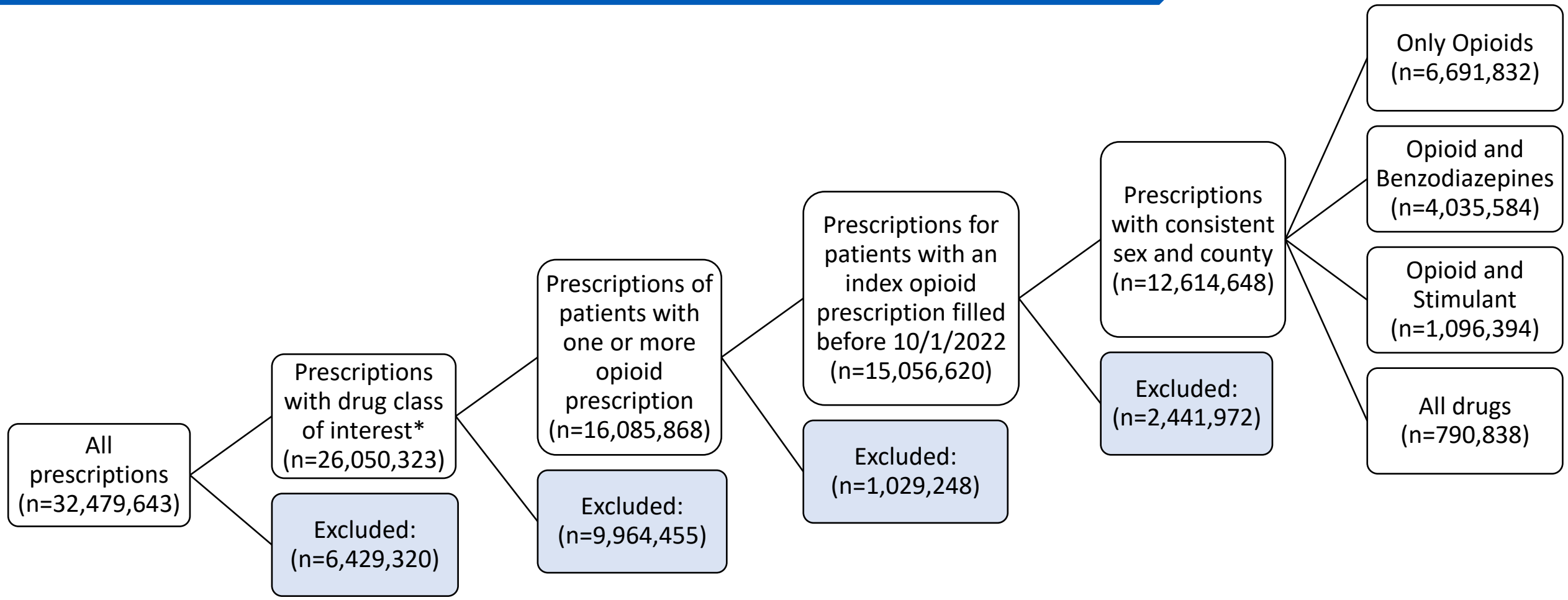
Texas State Board of Pharmacy. (2024). *Texas prescription monitoring program (PMP)*. www.pharmacy.texas.gov. https://www.pharmacy.texas.gov/PMP/

Study Overview



Texas State Board of Pharmacy. (2024). *Texas prescription monitoring program (PMP)*. www.pharmacy.texas.gov. https://www.pharmacy.texas.gov/PMP/

Study Population



*Includes opioid, benzodiazepine, and stimulant. Excludes methadone, buprenorphine, and naloxone as they are primarily used for opioid use disorder treatment or overdose reversal.

Texas State Board of Pharmacy. (2024). *Texas prescription monitoring program (PMP)*. www.pharmacy.texas.gov. https://www.pharmacy.texas.gov/PMP/

Methodology

Methods: Variables

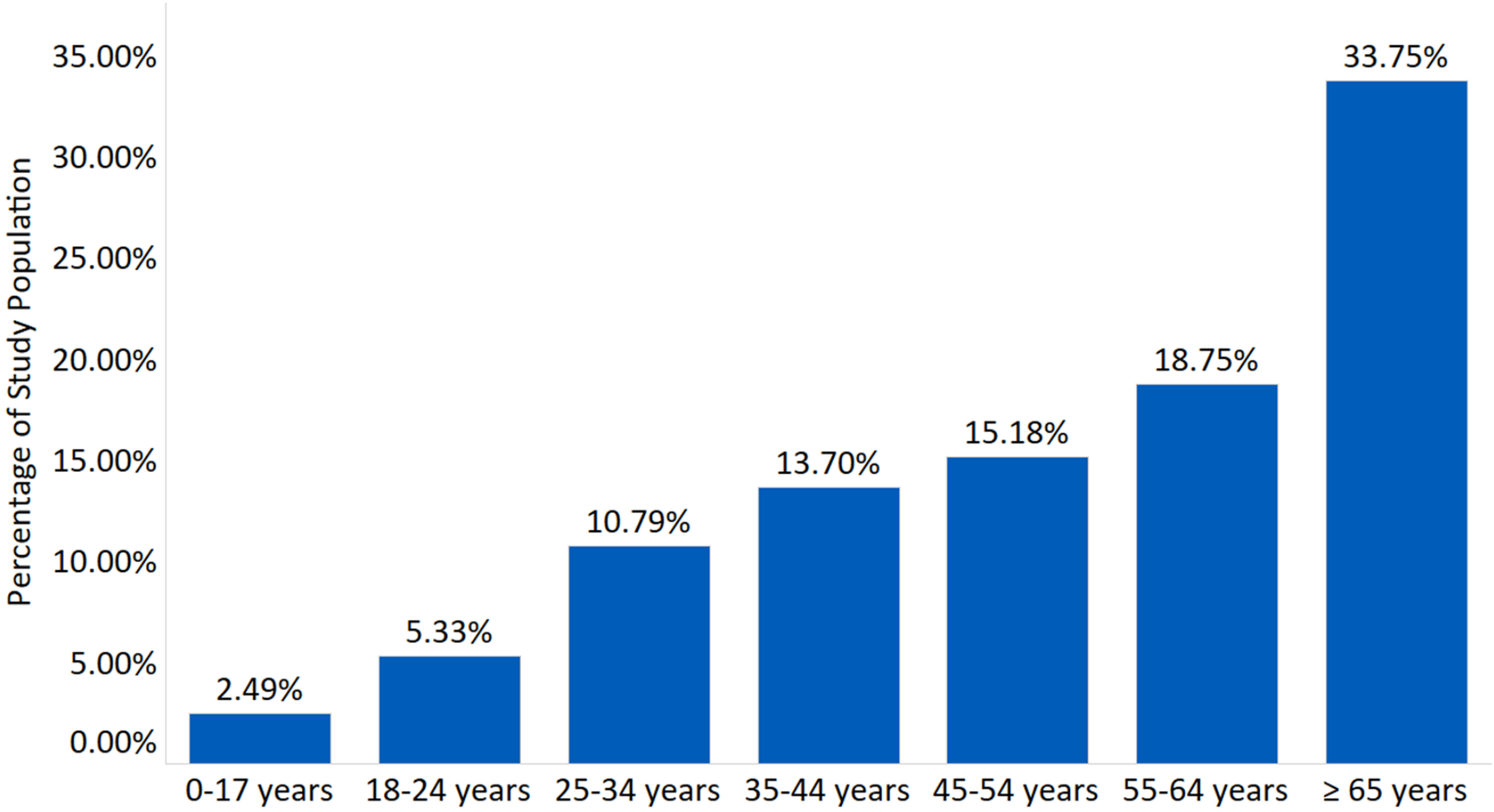
Exposure Variables: Prescription Drug Group (Mutually Exclusive)	**Covariates**	**Outcome Variable:** Long Opioid Use

• Only opioid
• Opioid and stimulant
• Opioid and benzodiazepine
• Opioid, stimulant, and benzodiazepine
	• Patient age group
	• Patient sex
	• Patient residence county urbanicity††
		• Defined as:
		  • Opioid use for 90 days or more with
		  • 3 or more opioid prescriptions

††Ingram D, Franco S, National Center for Health Statistics. 2013 NCHS Urban–Rural Classification Scheme for Counties. National Center for Health Statistics; 2014. https://www.cdc.gov/nchs/data/series/sr_02/sr02_166.pdf.

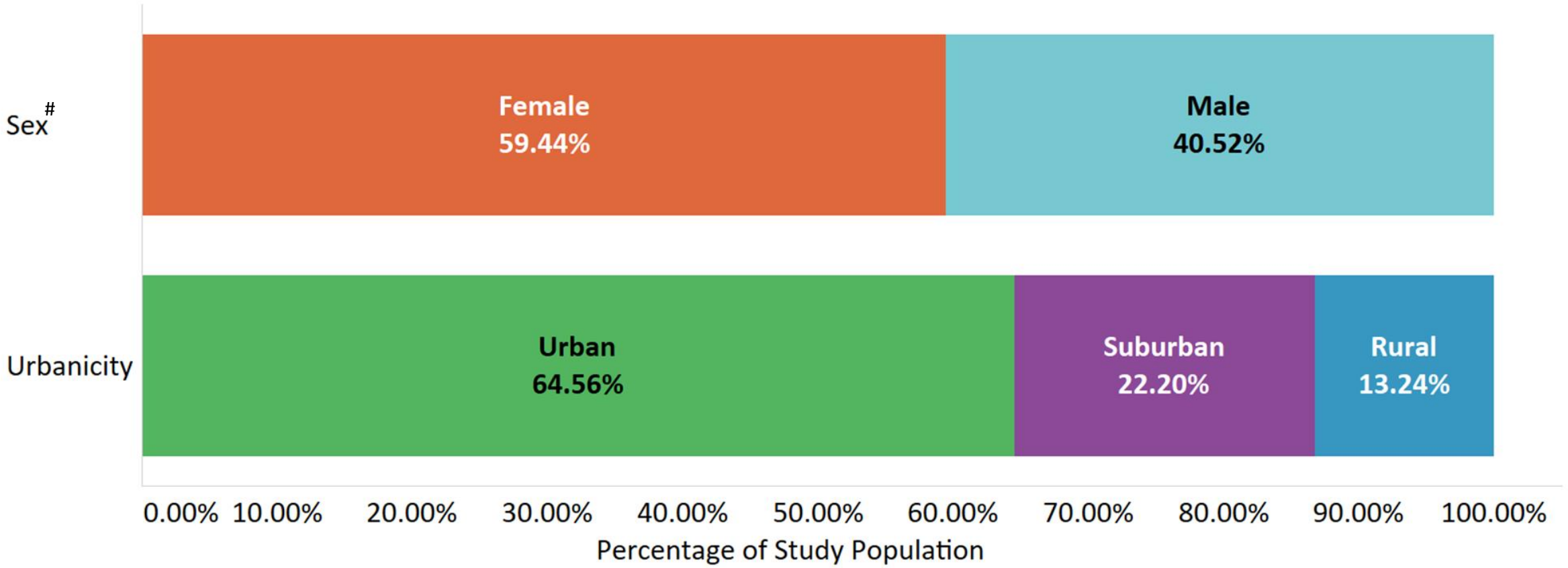
Results

Percentage of Texas PMP Patients by Age Group[¶] , 2022



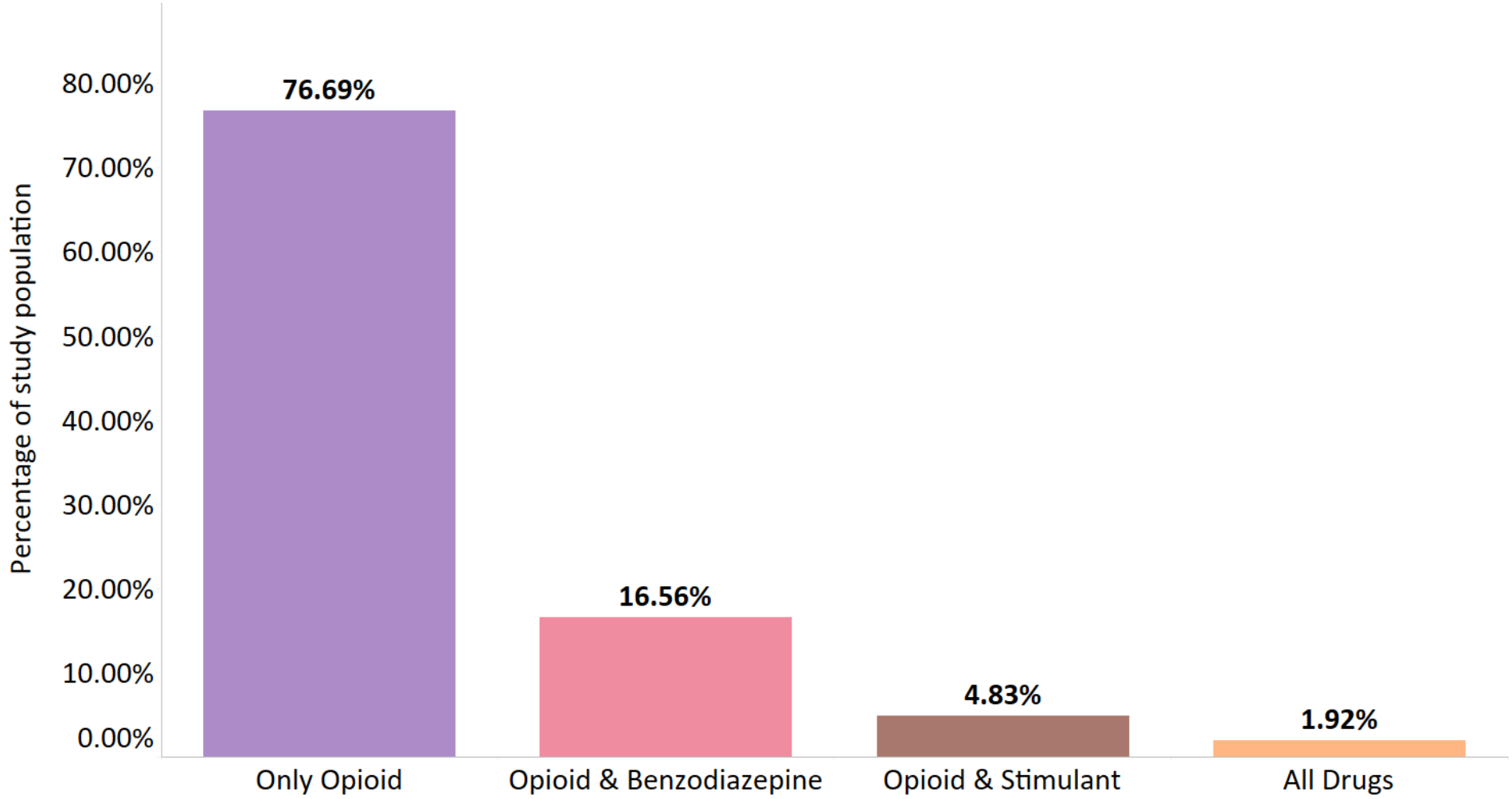
[¶]Percentages do not total 100 due to rounding

Percentage of Texas PMP Patients by Sex & Urbanicity, 2022

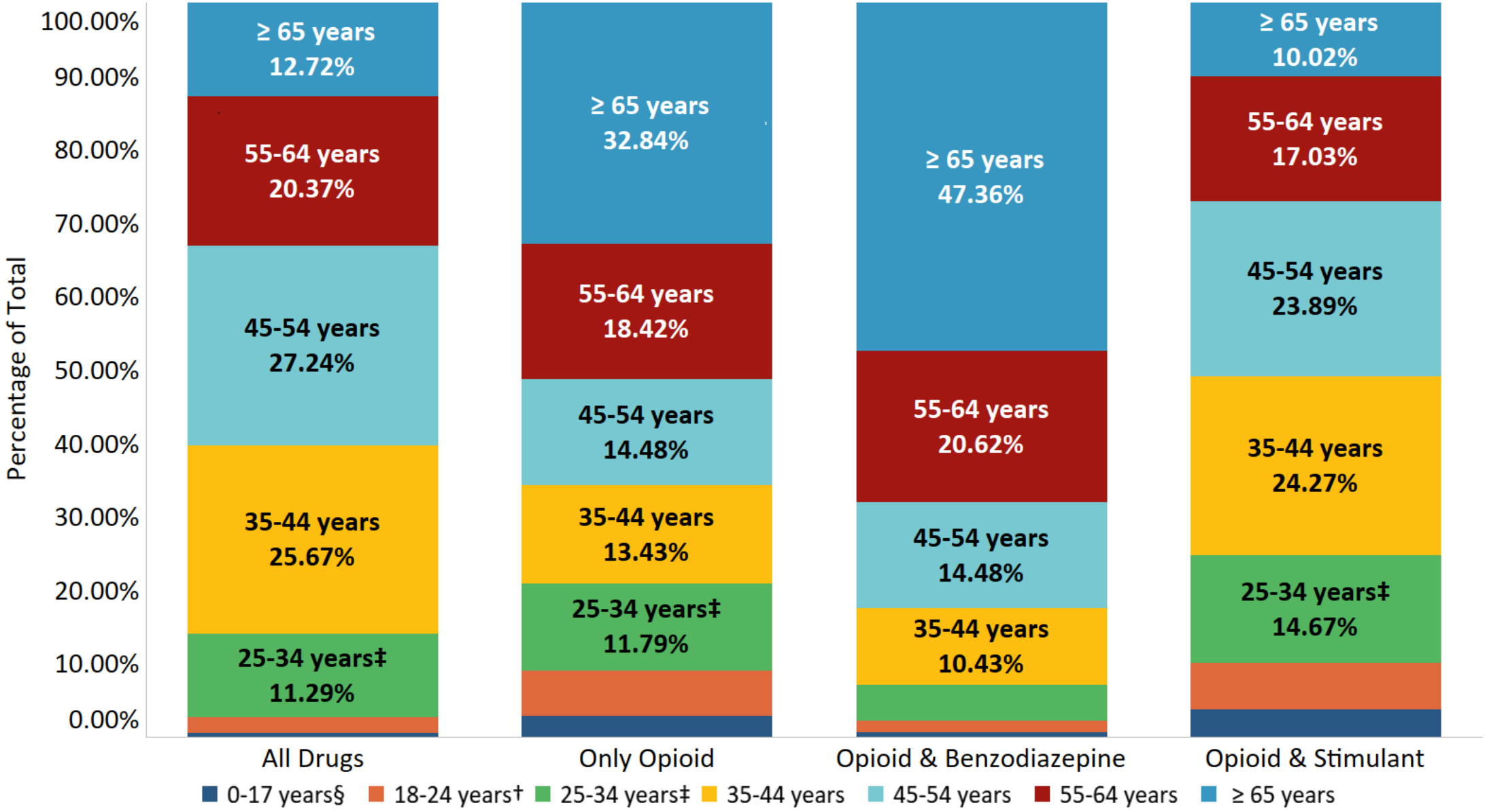


#Percentage of patients with Unknown Sex: 0.04%

Percentage of Texas PMP Patients by Prescription Drug Class, 2022



Percentage of Texas PMP Patients by Age Group and Drug Type, 2022



§Percent of 0–17 years patients: All drugs – 0.56%, Only Opioids – 2.86%, Opioid & Benzodiazepine – 0.65%, Opioid & Stimulant – 3.78%. †Percent of 18–24 years patients: All drugs – 2.16%, Only opioid – 6.18%, Opioid & Benzodiazepine – 1.49%, Opioid & Stimulant – 6.34%. ‡Percent of 25-34 years patients: Opioid & Benzodiazepine – 4.97% .

Adjusted Odds Ratio of Long-Term Opioid Use by Drug Class, Texas PMP, 2022

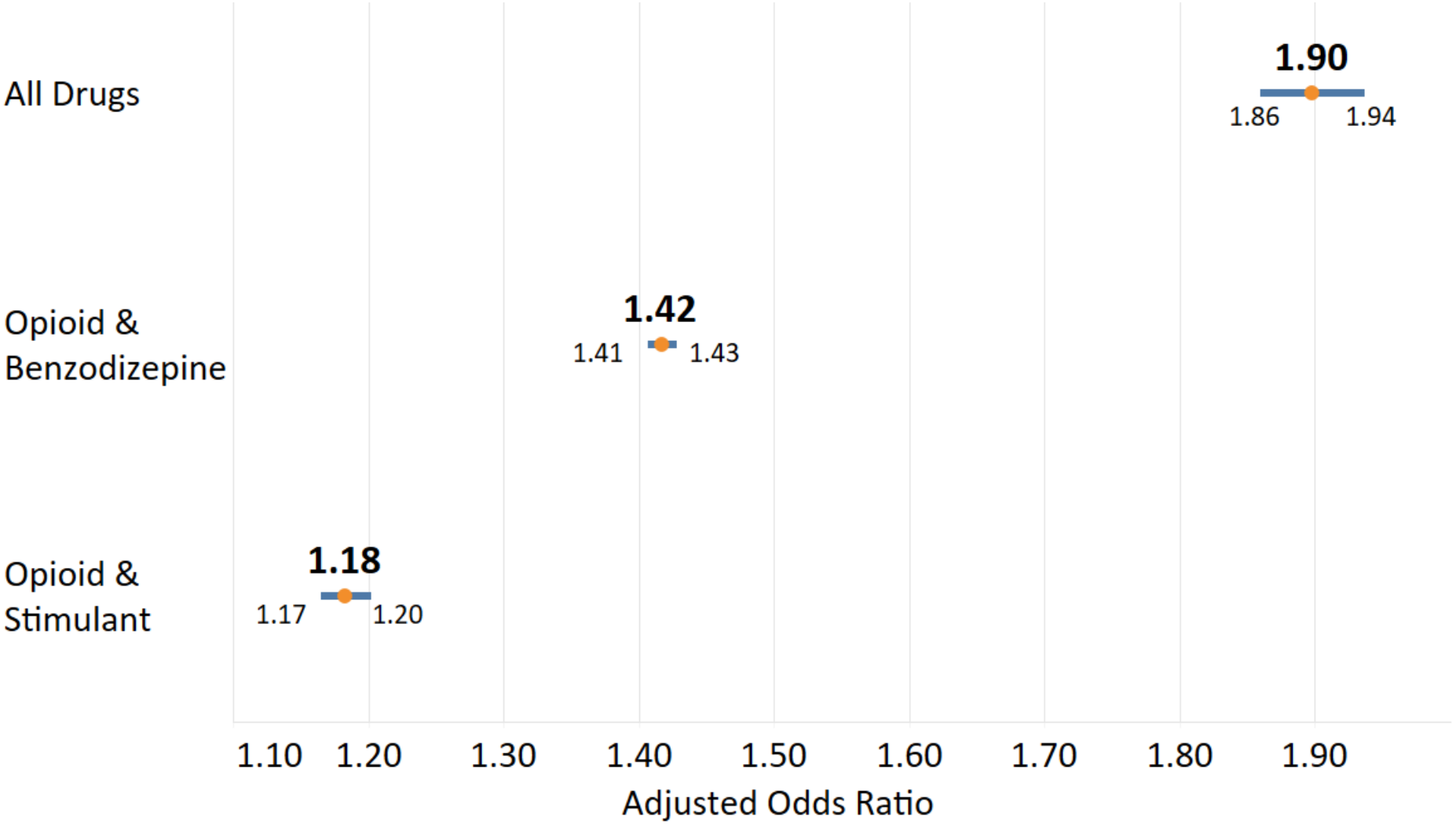


Table 1. Adjusted Odds Ratio of Long-Term Opioid Use by Demographics, Texas PMP, 2022

Variable	Results	
	AOR**	95% CI††
Age Group		
0-17 years	**3.01**	(2.79, 3.27)
18-24 years	Ref.	Ref.
25-34 years	**4.84**	(4.54, 5.16)
35-44 years	**15.00**	(14.07, 15.92)
45-54 years	**27.50**	(25.90, 29.38)
55-64 years	**42.90**	(40.37, 45.62)
65 years and older	**48.80**	(45.91, 51.87)
Sex		
Female	Ref.	Ref.
Male	**0.98**	(0.97, 0.98)
Unknown	**5.02**	(4.29, 5.86)
Urbanicity		
Urban	Ref.	Ref.
Rural	**1.21**	(1.20, 1.22)
Suburban	**0.93**	(0.92, 0.94)

**AOR: Adjusted Odds Ratio. ††CI: Confidence Interval.

Conclusion

Conclusion

- Significant associations observed between co-prescription of controlled substances (opioid with benzodiazepine and/or stimulant) and long-term opioid use.
- Findings support targeted interventions for high-risk groups, including older adults, rural residents, and those prescribed multiple controlled substances.
- Further research needed to examine clinical and behavioral profiles of individuals receiving co-prescriptions.

Limitations

- The Texas PMP data does not include information on race and ethnicity, limiting the ability to analyze differences in opioid prescribing and long-term use across different racial and ethnic groups.
- The study focused only on opioids, stimulants, and benzodiazepines, excluding other schedule II–V controlled substances.
- Lack of a consistent unique patient identifier across years limited the ability to link prescriptions longitudinally, restricting multi-year trend analyses at the patient level.

Thank you!

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