

# Overdose Deaths in Manitoba

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# Disclosures

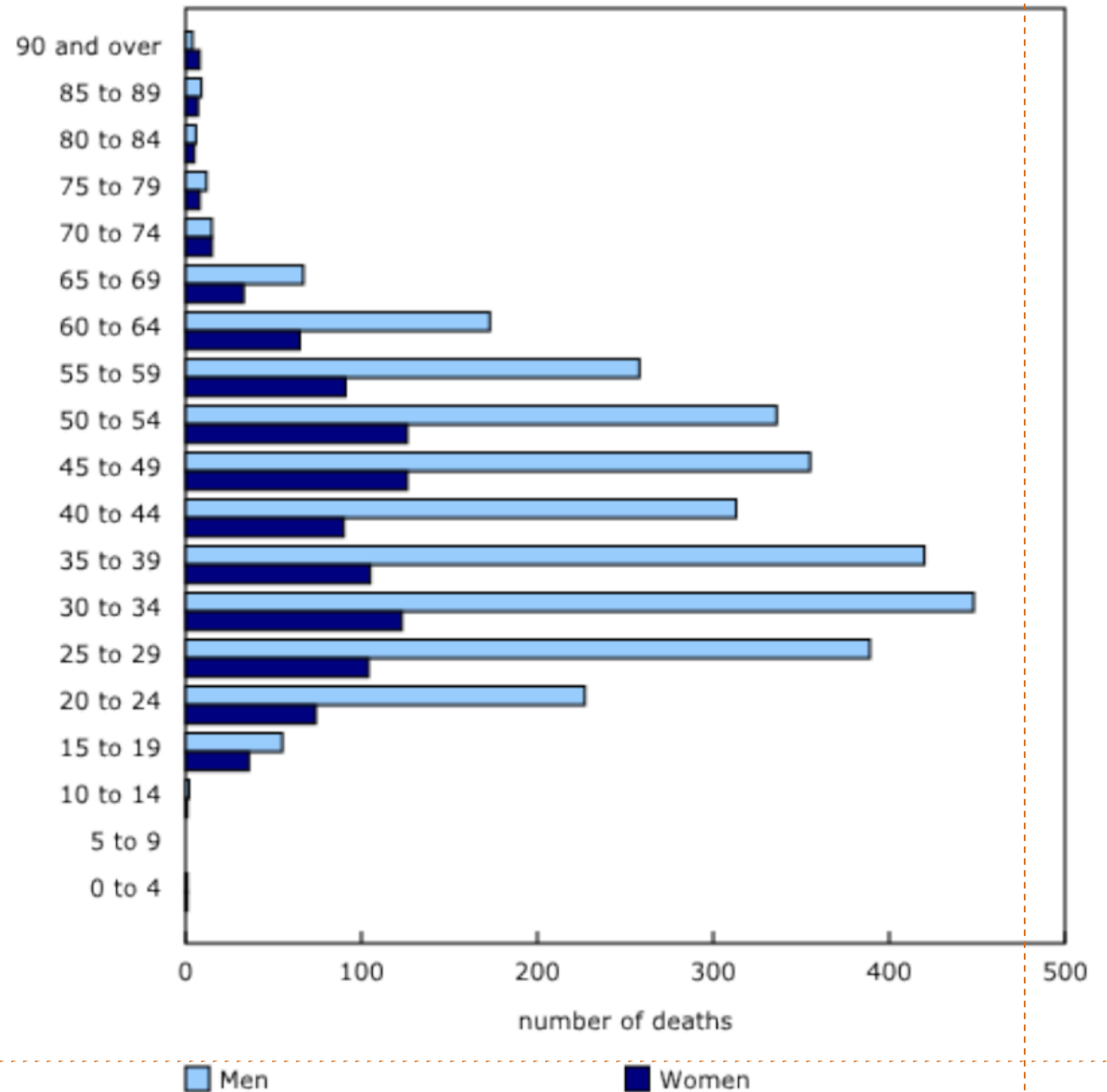
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  - ♦ Grants/Research Support:
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      - ♦ Young Investigator Award
  - ♦ Speakers Bureau/Honoraria: Nil
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  - ♦ Other: Nil

# Objectives

- ♦ To understand the demographic profiles of people dying by overdose in Manitoba
- ♦ To learn of the substances involved in overdoses, both pharmaceutical and other
- ♦ To explore options for means restriction in the prevention of overdose deaths

# Drug Overdose Deaths in Canada

- ♦ Men considerably outnumber women
- ♦ Peak ages 25-55



**Source(s):** Canadian Vital Statistics: Death Database

# Suicide in Canada: Key Statistics

## DEATHS AND HOSPITALIZATIONS

approx. **11** PEOPLE die by suicide EACH DAY



approx. **4,000** DEATHS BY SUICIDE PER YEAR

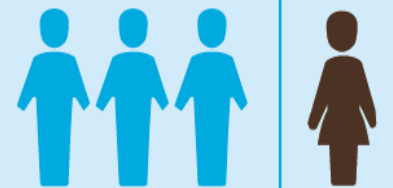


Suicide is the **SECOND** leading cause of death among youth and young adults (15–34 years)

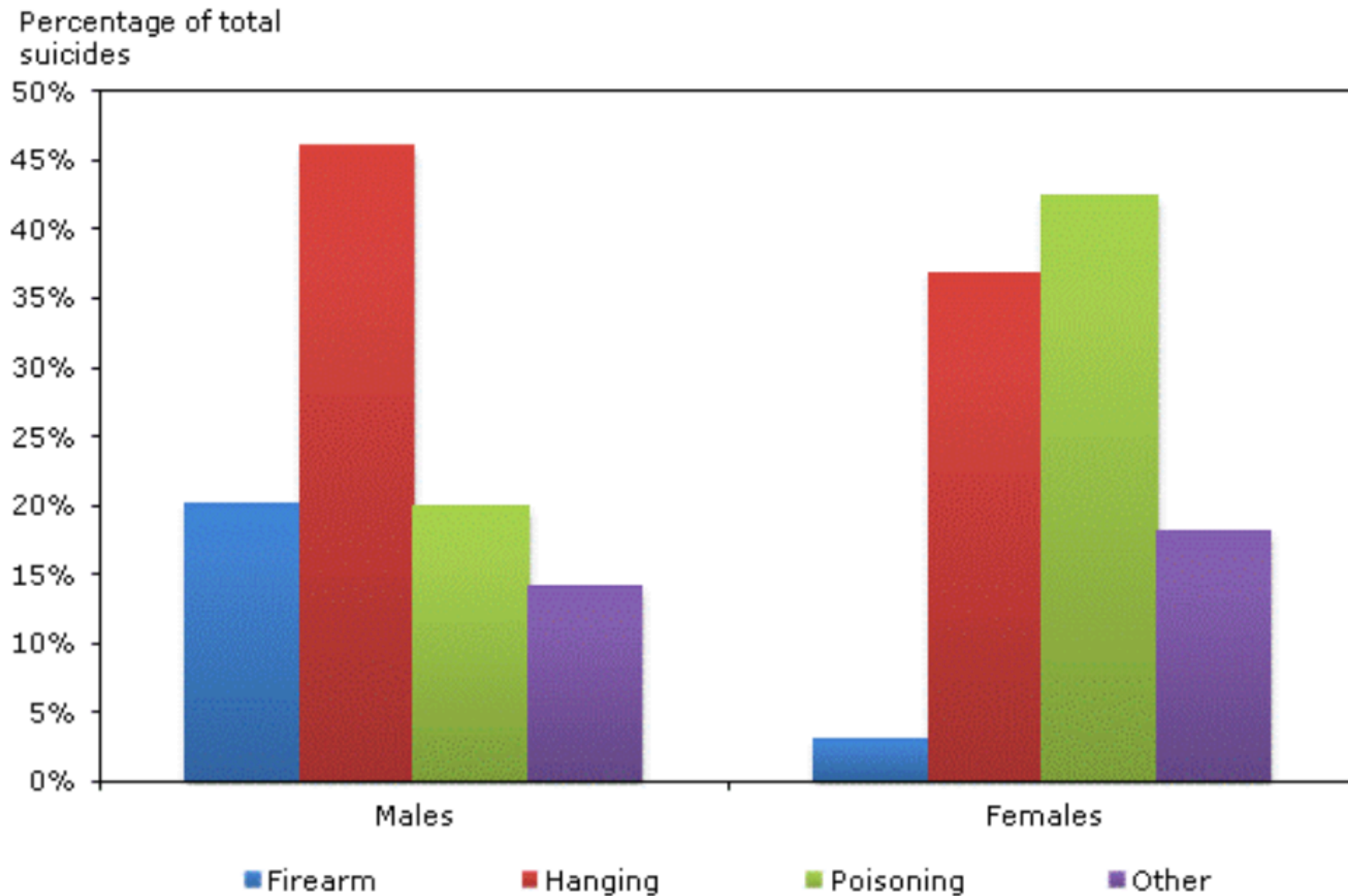


Suicide rates are approx.

**3X** higher among men compared to women



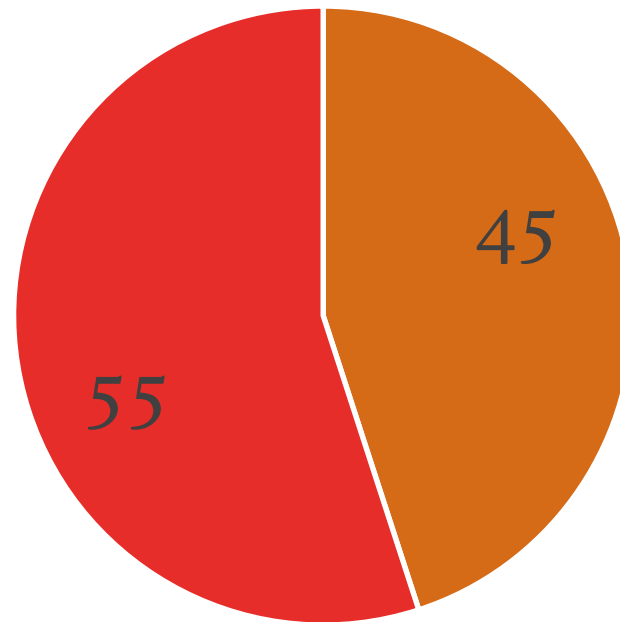
# Method of Suicide in Canada, by Sex 2000-2009



# CME Chart Review

- ♦ All deaths by overdose in Manitoba 2007-2017
- ♦ 1607 cases
- ♦ CME charts reviewed using a data extraction tool

# Overdose Deaths by Sex Manitoba 2007-2017

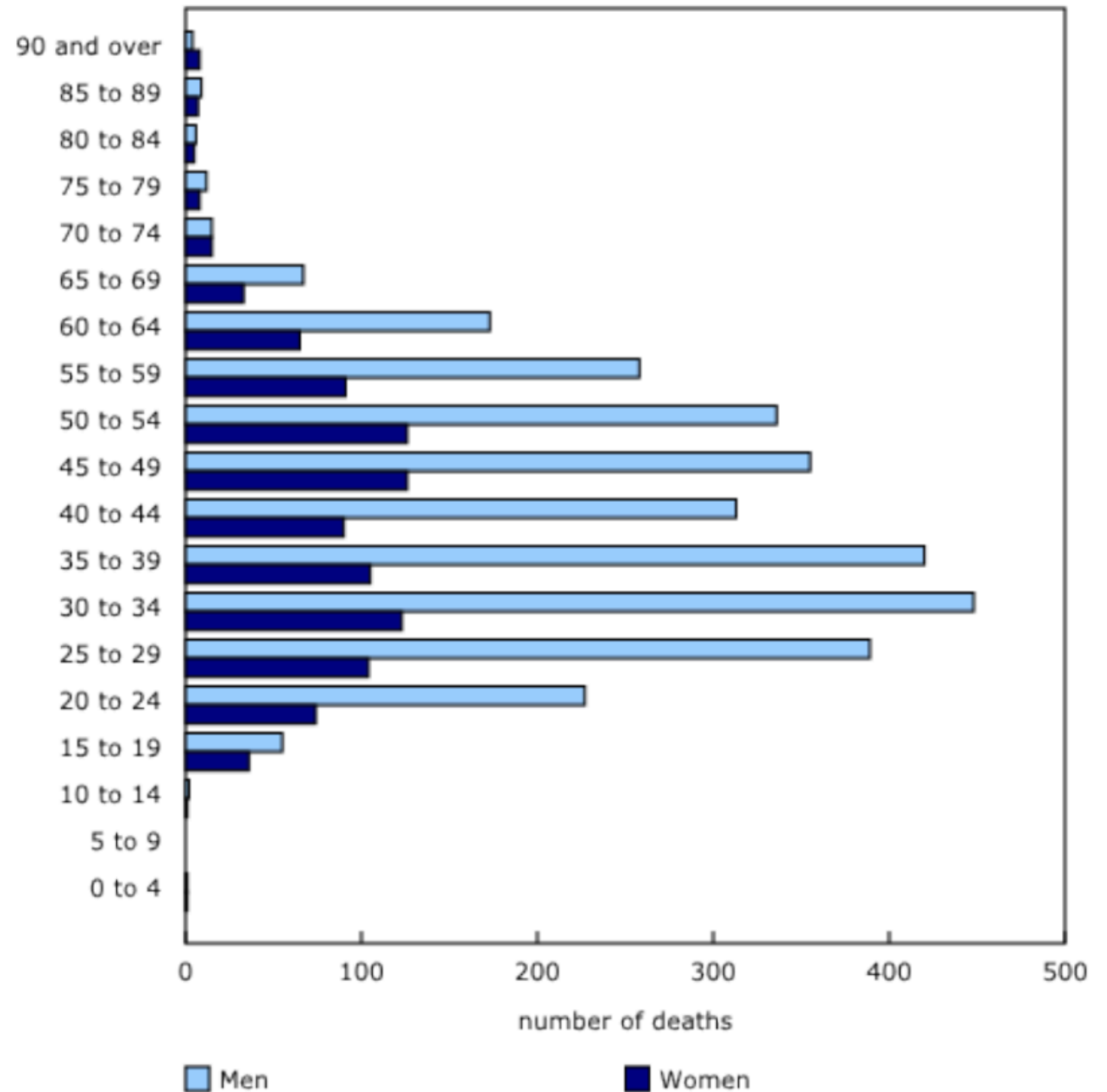


■ Female ■ Male



# Drug Overdose Deaths in Canada

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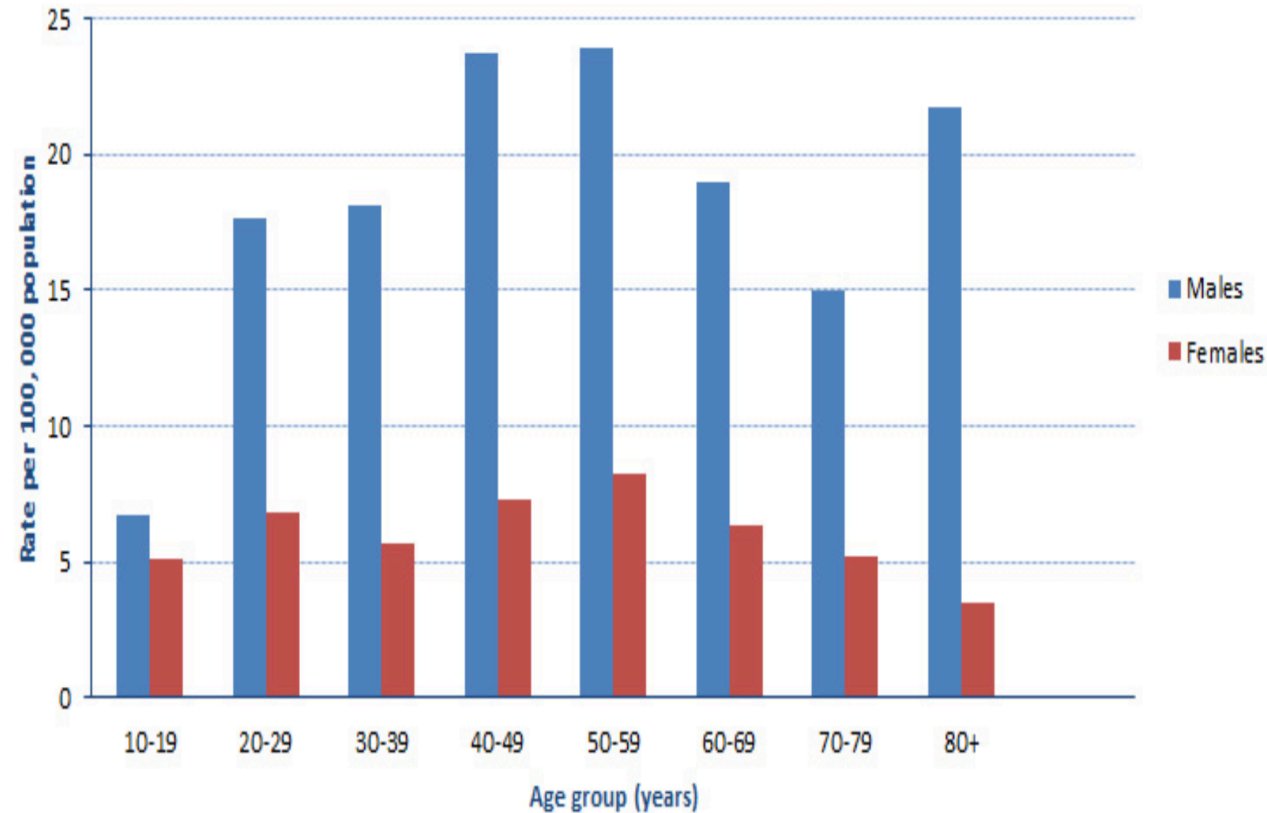
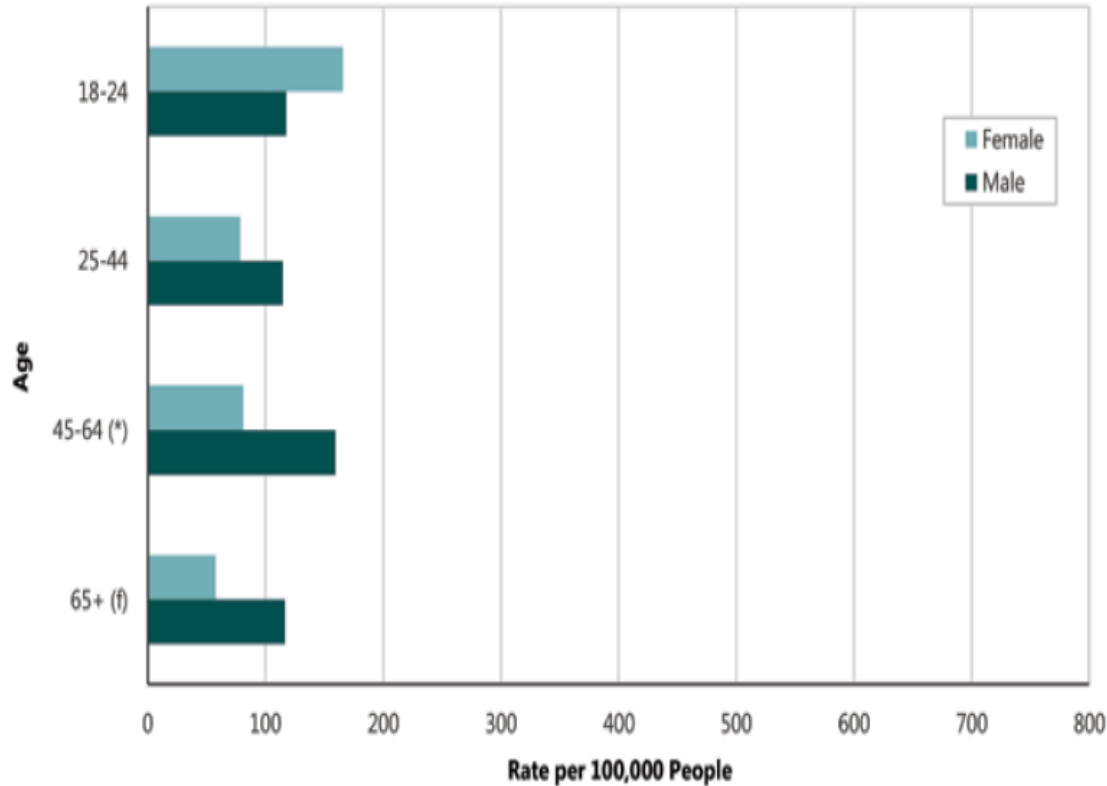


**Source(s):**Canadian Vital Statistics: Death Database

# Suicide by Sex, Manitoba vs Canada

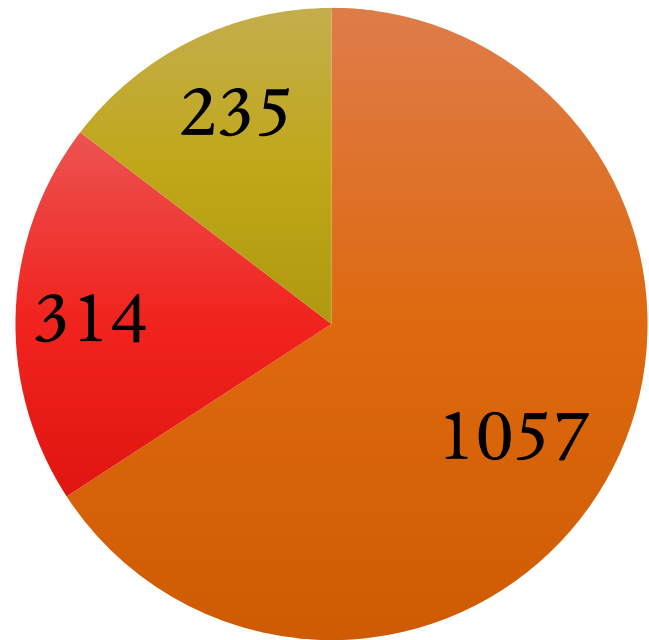
Figure 2.44: Suicide Rates among Adults by Age and Sex, 2010/11-2014/15

Adjusted†; per 100,000 adults aged 18+ who died by suicide in five-year time period



# Cause of Death

Total Death n=1607



■ Accidental

■ Suicide

■ Undetermined

# Are most overdoses actually suicides?

A study in the UK examined coroner verdicts with a blinded research team

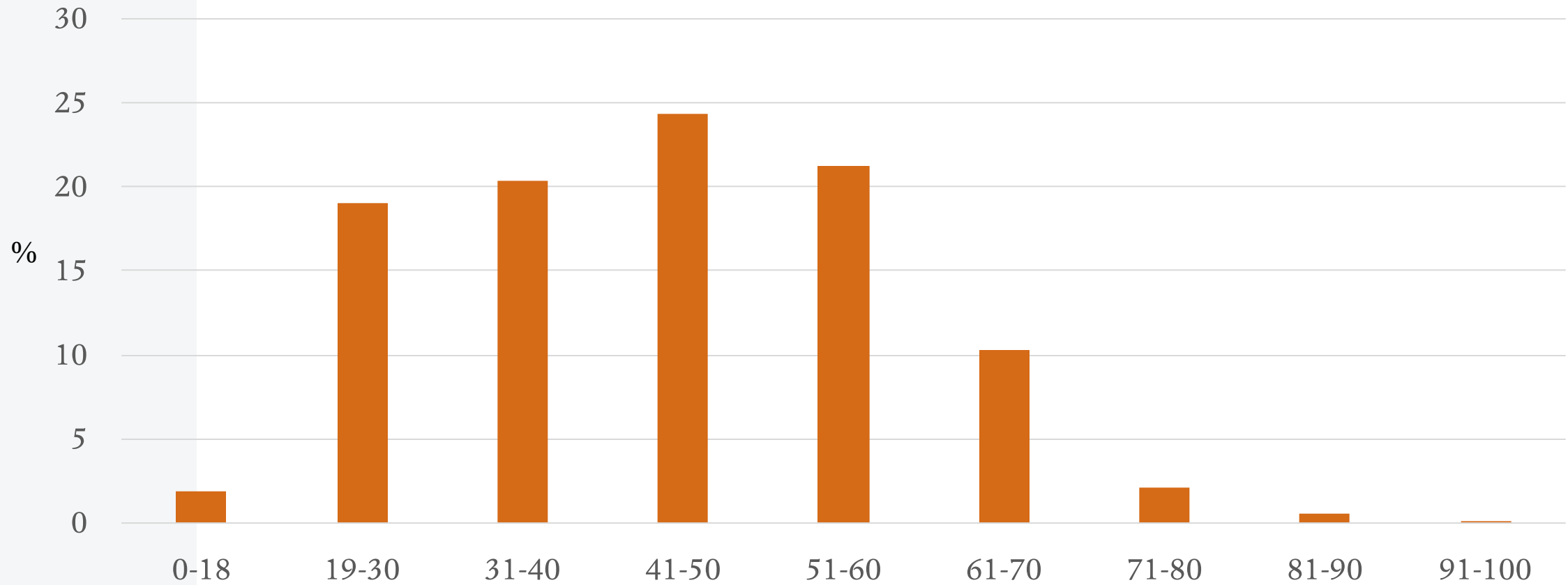
- 50% of accidental deaths were recoded as suicides

Table 2.1: Suicide Rates among Adults in Manitoba based on different Suicide Definitions, 2010/11-2014/15  
Per 100,000 people

	Count	Crude Rate
<b>Main Definition: Self-inflicted injury or poisoning, poisoning of undetermined intent, or accidental poisoning</b>	872	88.19
<b>Definition 2: Self-inflicted injury or poisoning, or poisoning of undetermined intent</b>	708	71.61
<b>Definition 3: Self-inflicted injury or poisoning</b>	665	67.26

Gunnell D, Bennewith O, Simkin S, Cooper J, Klineberg E, Rodway C, Sutton L, Steeg S, Wells C, Hawton K, et al. Time trends in coroners' use of different verdicts for possible suicides and their impact on officially reported incidence of suicide in England: 1990–2005. *Psychol Med.* 2012;2013(43):1415-1422.

# Age of decedents



# Relationship status

33% in a relationship

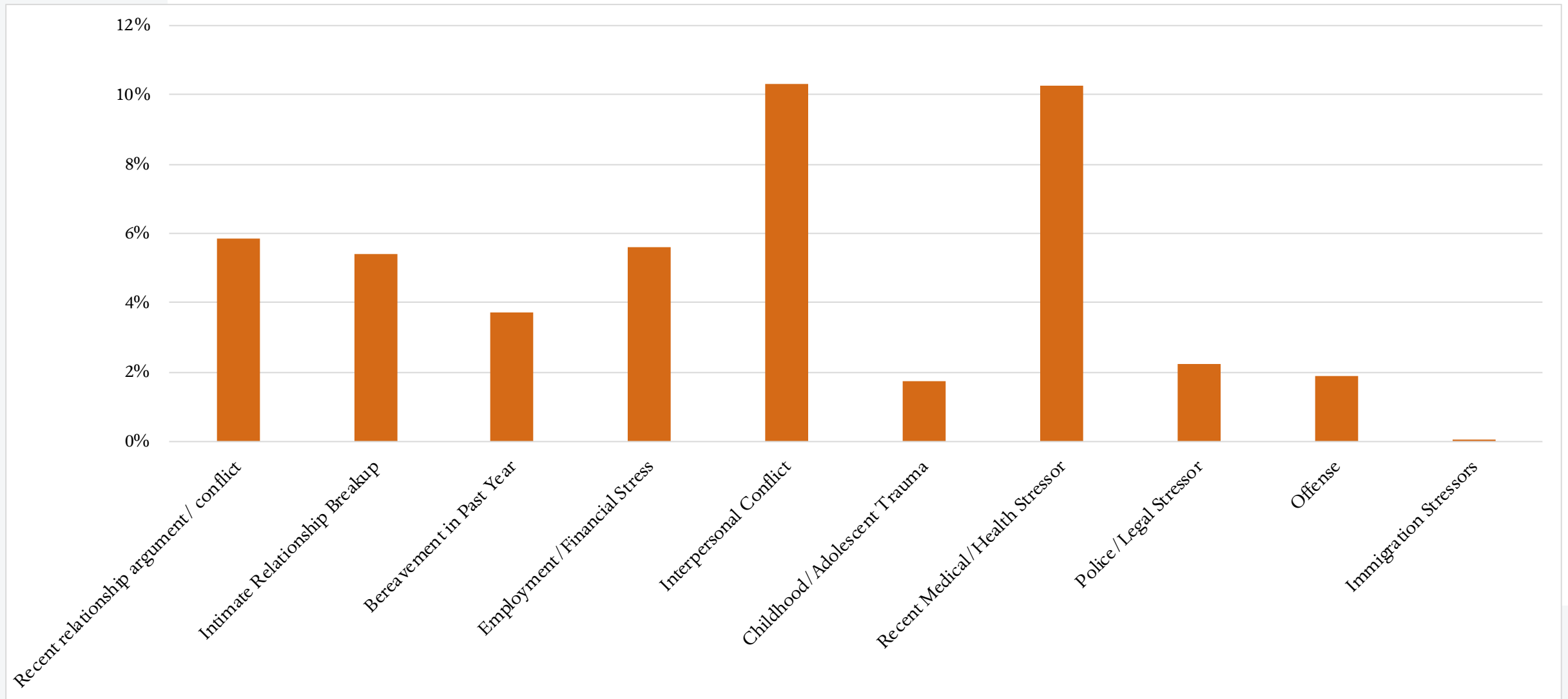
- Married 22%

34% Single

- Divorced/separated 10%
- Widowed 3%
- Single 21%

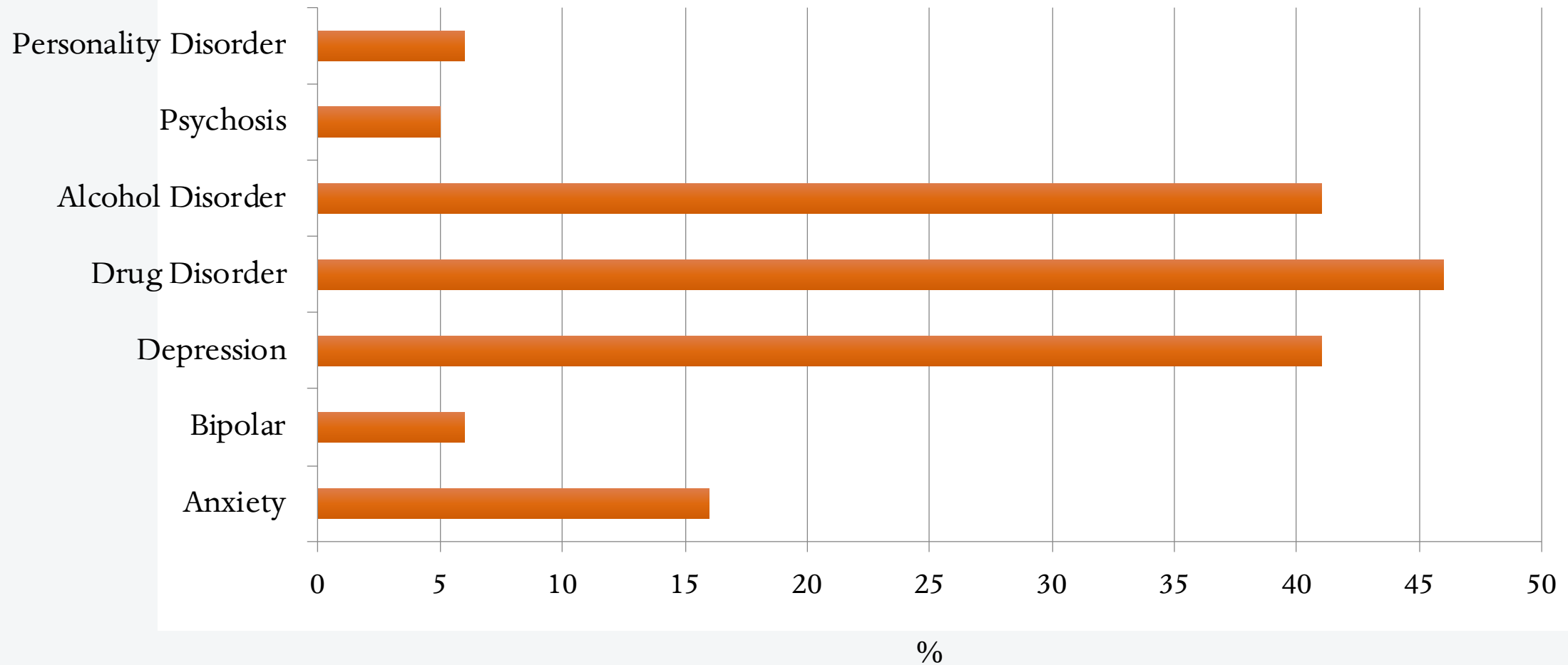
33% Unknown

# Stressors Prior to Overdose



# Correlates of Overdose Deaths

## Mental Disorders

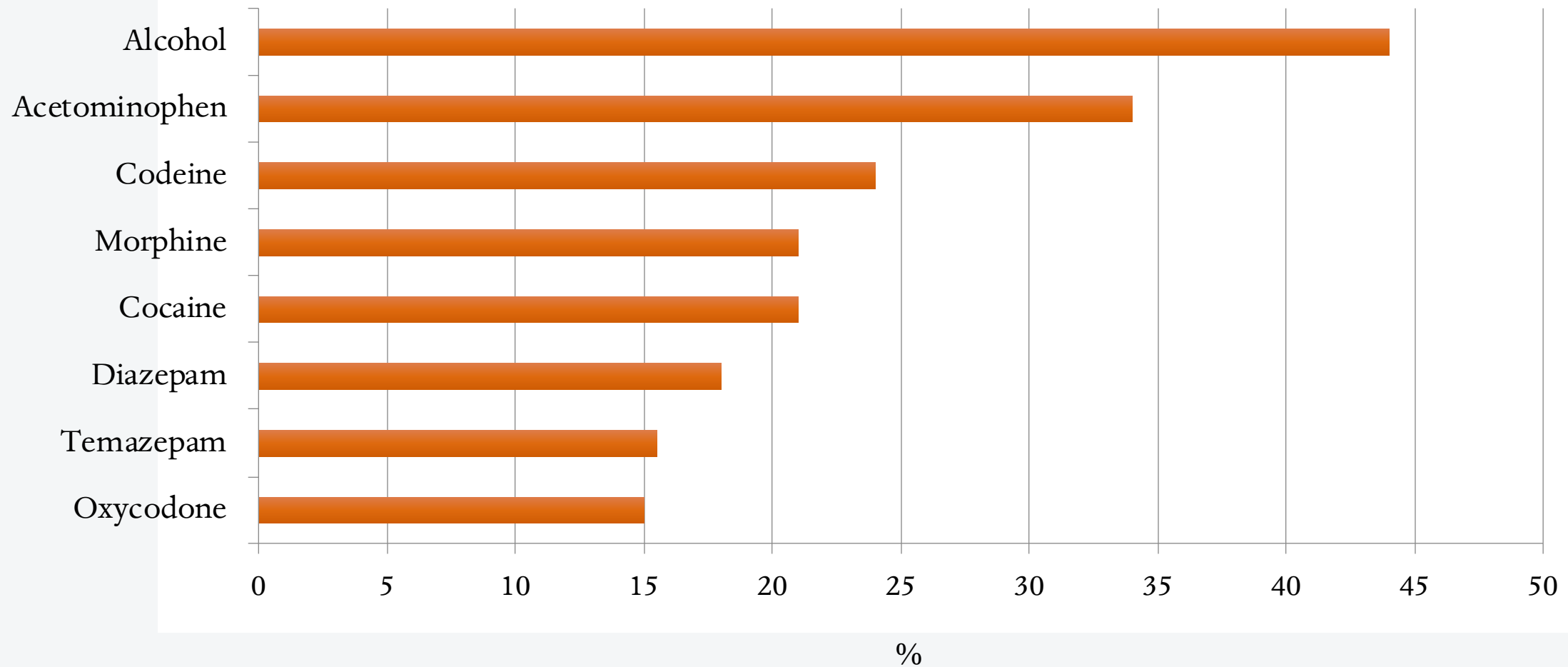




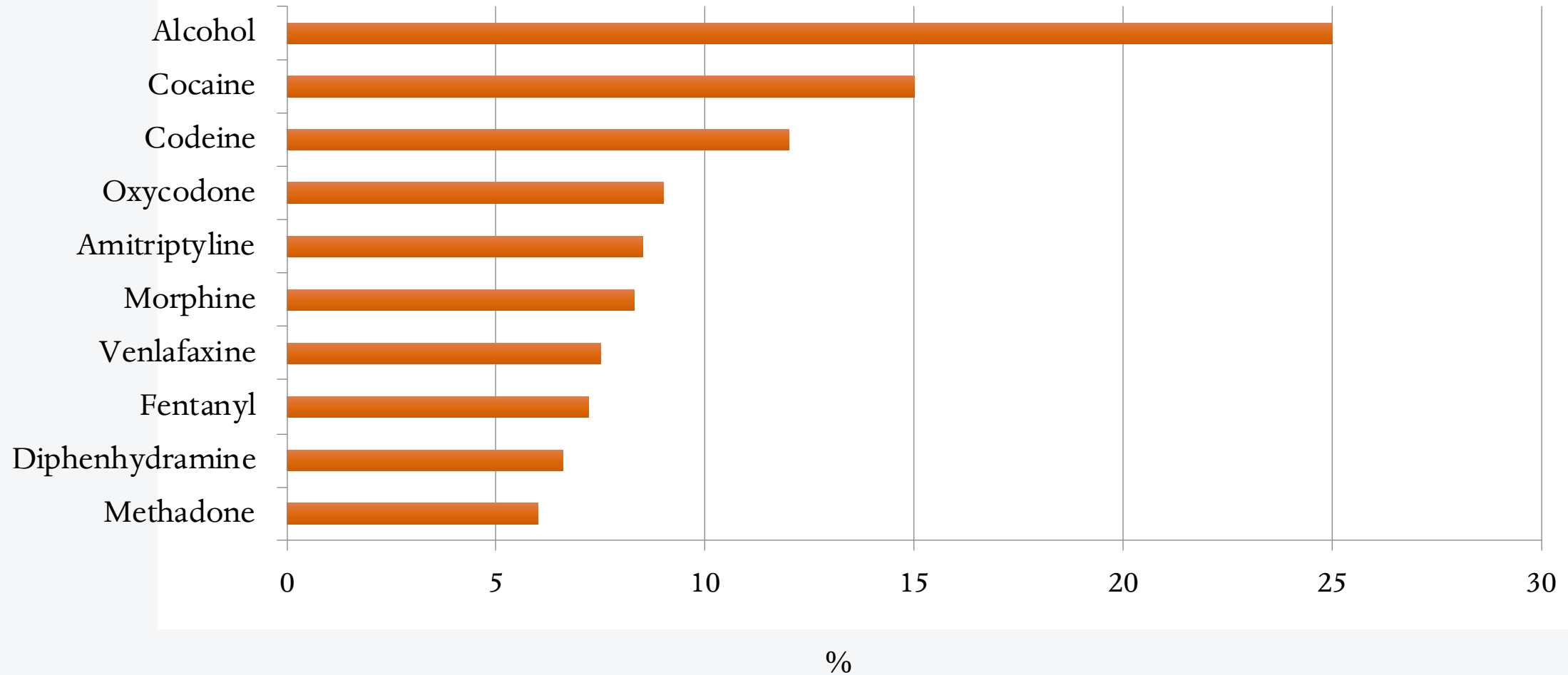
# Polysubstance Use

- ♦ Single substance ingestions 46%
- ♦ Mixed overdoses 54%

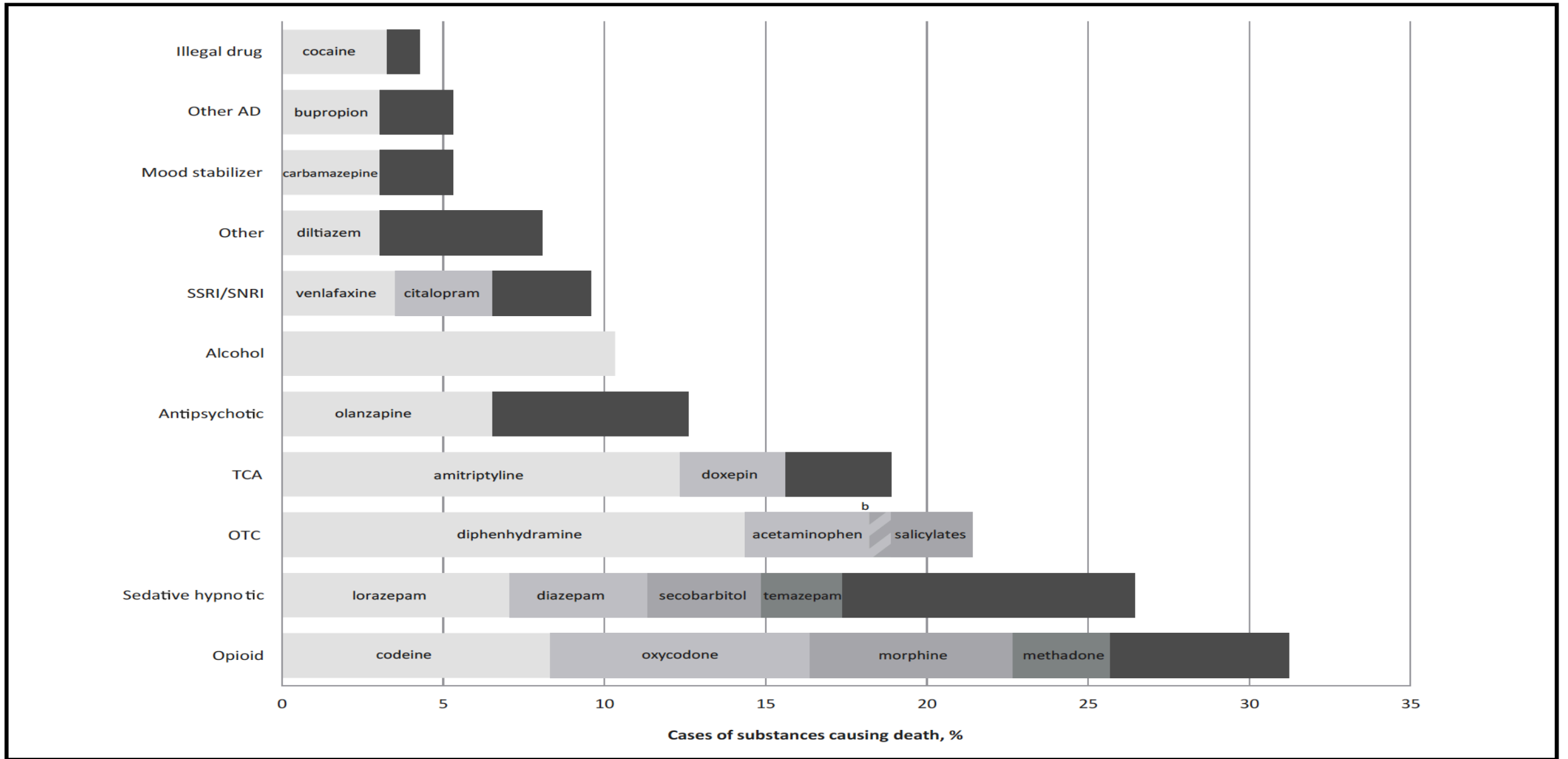
# Top Substances Present on Toxicology



# Most Common Substances Deemed Lethal

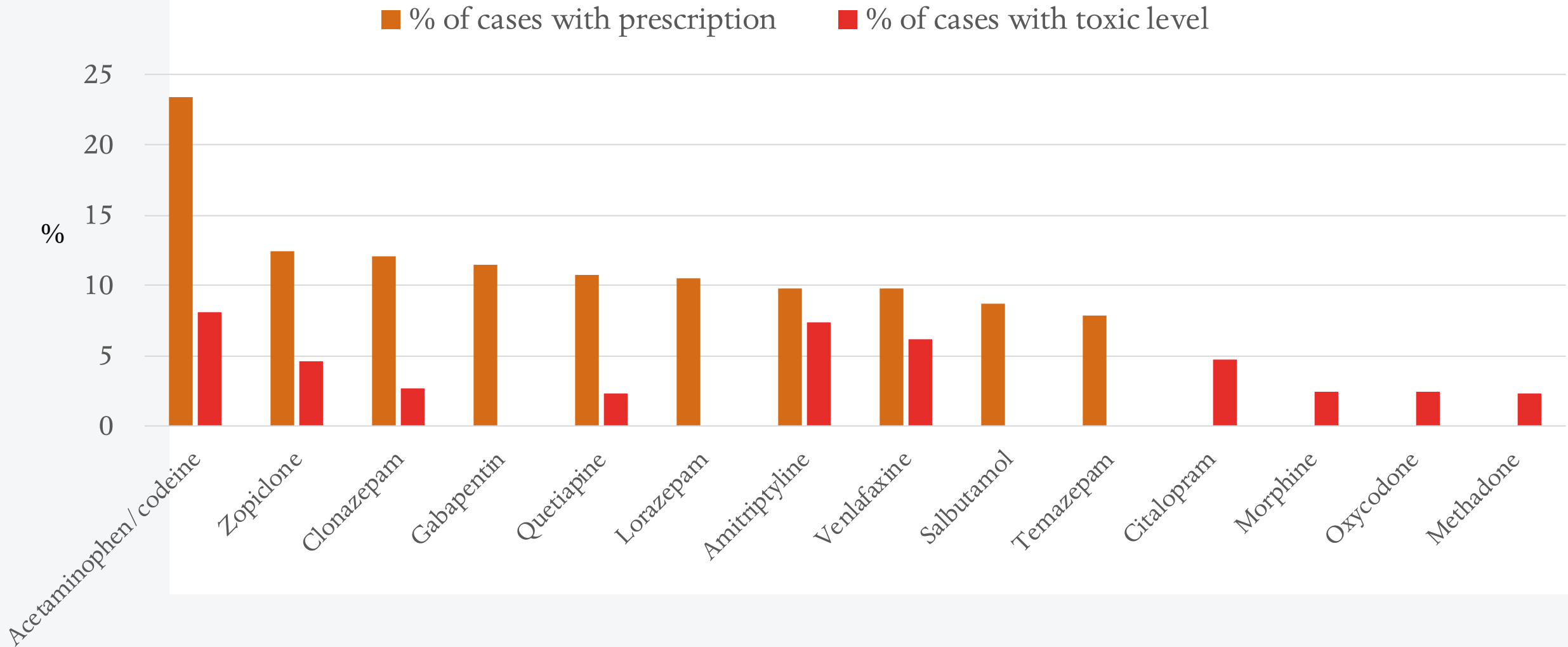


**Figure 2 Substances causing death in suicides by overdose in Toronto from 1998 to 2007 by percentage of all overdose suicides<sup>a</sup>**

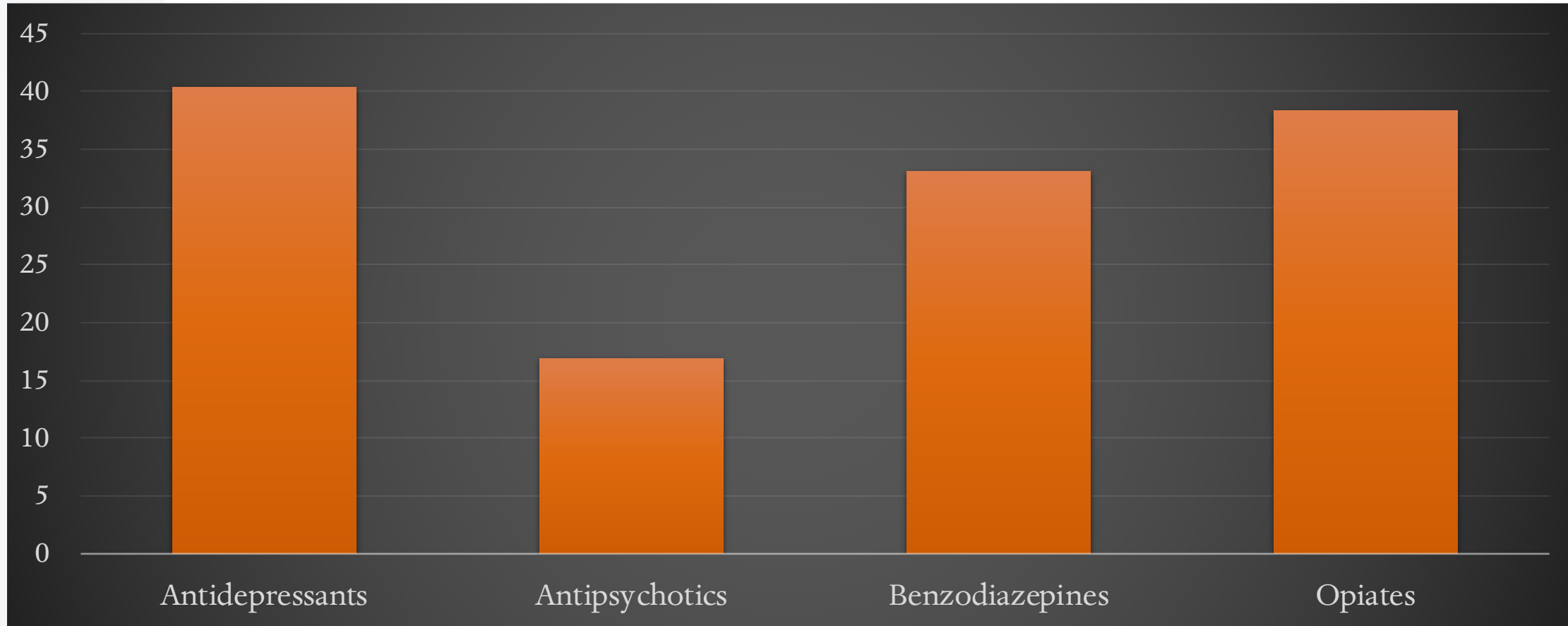


**Mark Sinyor, MD, MSc<sup>1</sup>; Andrew Howlett, MD<sup>1</sup>; Amy H Cheung, MD, MSc, FRCPC<sup>2</sup>; Ayal Schaffer, MD, FRCPC<sup>3</sup>**

# Prescribed Medications among ODs



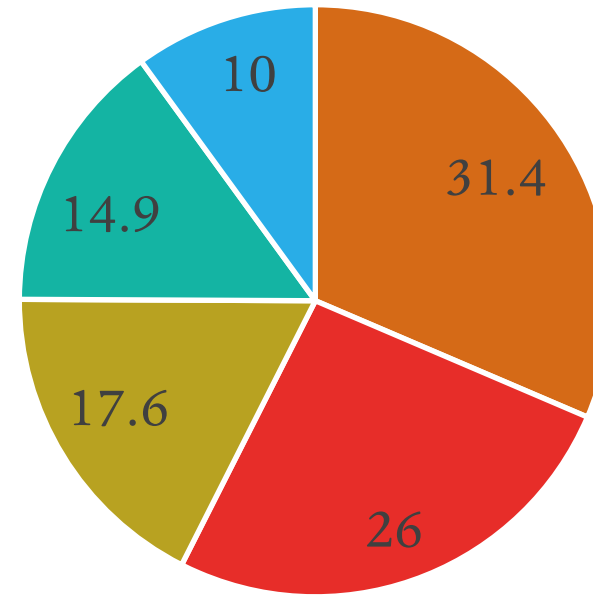
# Common medication classes dispensed to decedents



# Early refills

- ◆ Refills more than 10 days early
  - ◆ 19%
- ◆ More than 50 days early
  - ◆ 5%

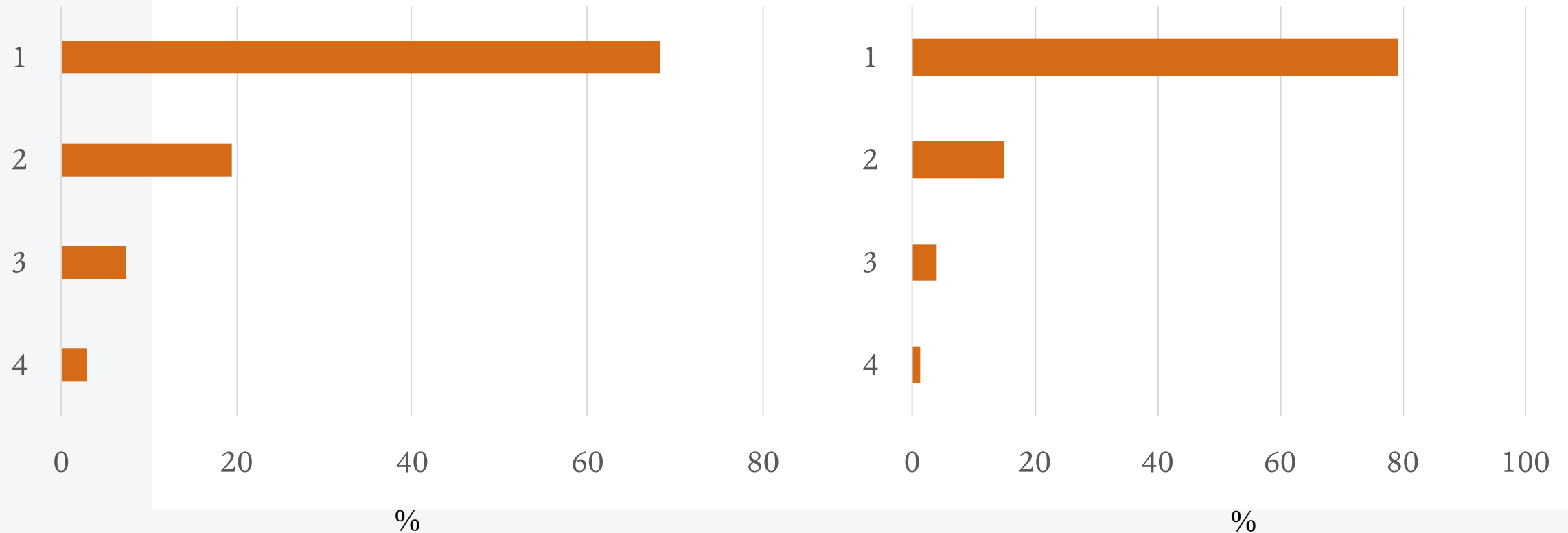
Among Early Refillers



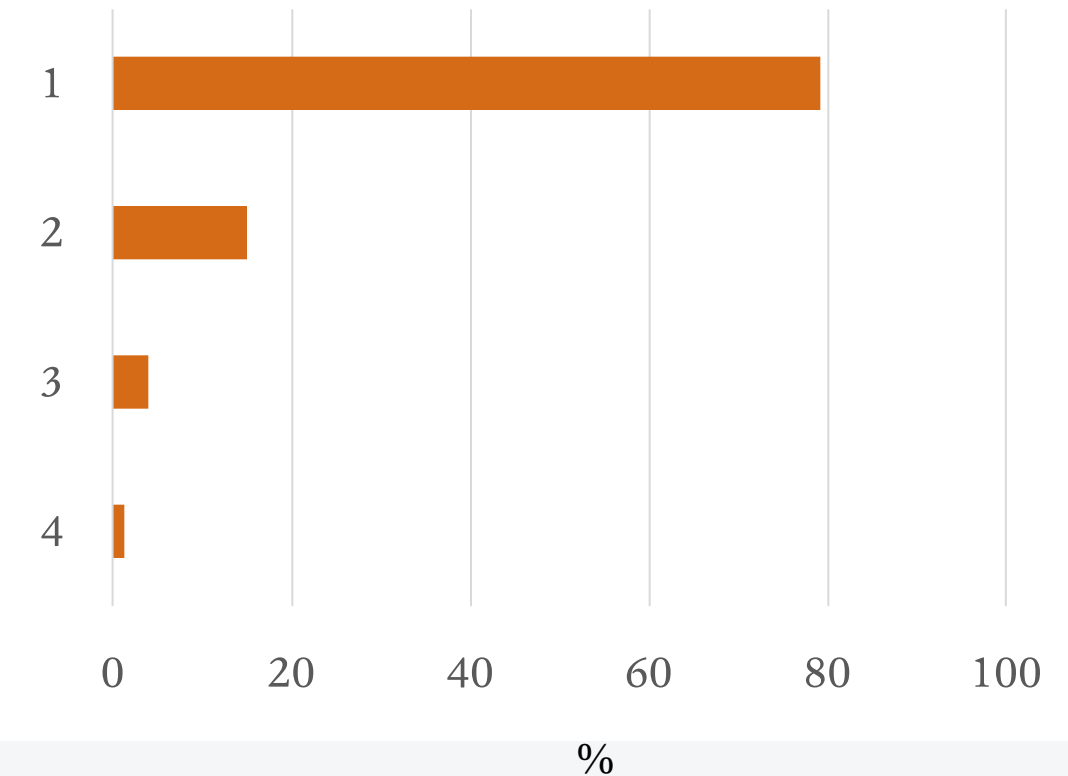
■ 10-20 days ■ 20-30 days ■ 30-50 days  
■ 50-75 days ■ 75-100 days

# Multiple Prescribers and Pharmacies

## Number of Prescribers



## Number of Pharmacies





# Summary



# Profile of Overdose Decedents

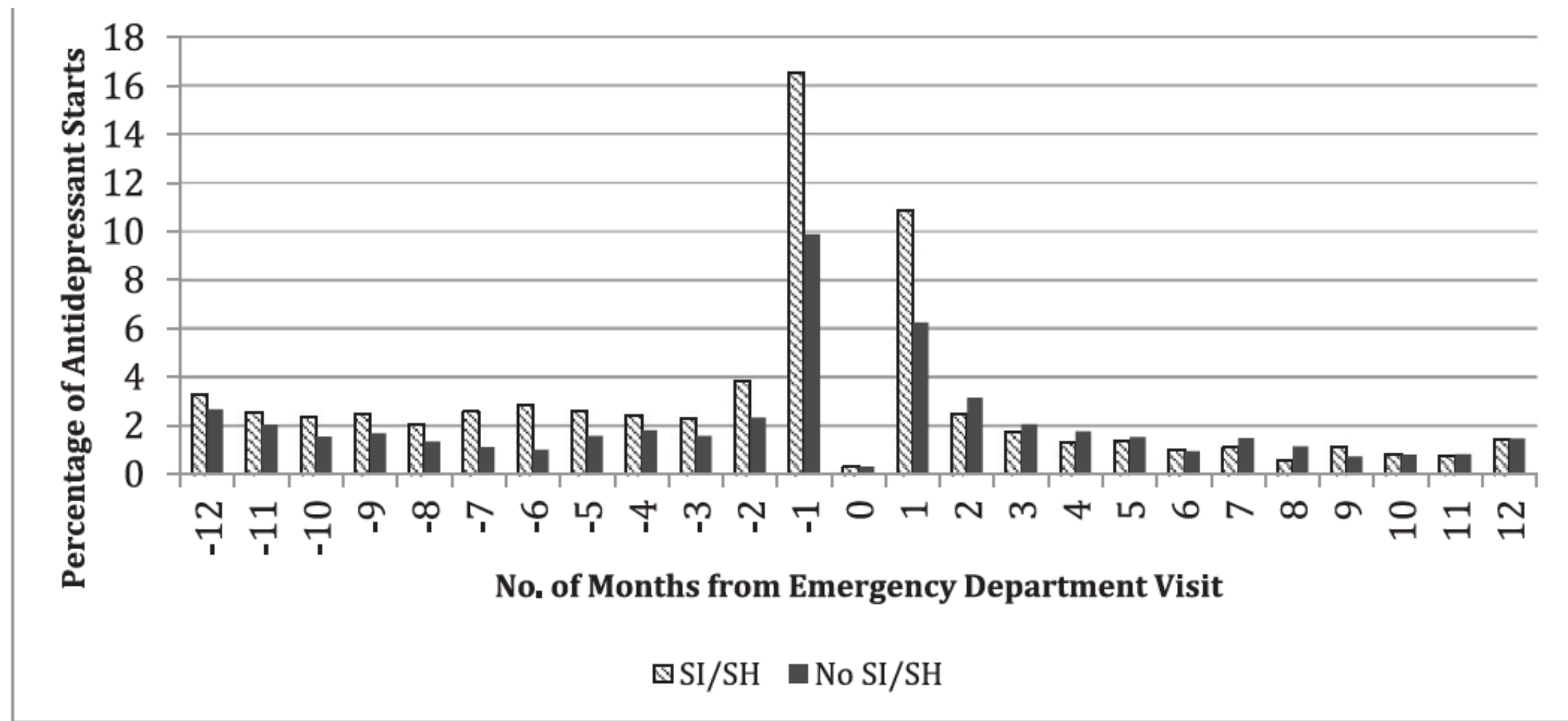
- ♦ Ages 20-60
- ♦ Significant psychiatric comorbidity
- ♦ Alcohol and illicit drugs are major contributors

# Prescription Medication Correlates

- ♦ Combinations of Antidepressants, Opiates, Benzodiazepines
- ♦ 1 / 5 of cases sought early refills
- ♦ Venlafaxine and amitriptyline

# Psychotropic medication use before and after suicidal presentations to the emergency department: A longitudinal analysis

Cara Katz<sup>a,\*</sup>, Jason R. Randall<sup>b</sup>, Christine Leong<sup>d</sup>, Jitender Sareen<sup>a,c,e</sup>, James M. Bolton<sup>a,c,e,f</sup>



**Fig. 1.** Percentage of new antidepressant prescriptions dispensed pre- and post-emergency department visit.



Thank you