

Opioid-Related Overdose Deaths (OROD) by Industry and Occupation of Deceased Worker in Montana, 2015-2024

ANDREW MATHEISON

MONTANA OCCUPATIONAL HEALTH AND SAFETY
SURVEILLANCE (MOHSS) PROGRAM

MONTANA DEPARTMENT OF LABOR & INDUSTRY



Montana Department of
LABOR & INDUSTRY

Background on OROD Research

Previous research identified industries and occupations with elevated rates of OROD:

- Construction
- Agriculture, Forestry, Hunting, and Fishing
- Transportation and Warehousing
- Accommodation and Food Services
- Healthcare Support

Methods

Data collected from MT-DPHHS Vital Statistics

- Montana citizens over 16
- ICD-10 code indicating suspected overdose from opioids
- Filtered to Montana citizens aged 18-64 examined
- Analysis only included individuals with industry and occupation data available

Data ingested into NIOCCS

- Results reviewed to ensure coding accuracy

Results examined by industry and occupation

- Rates calculated using employment counts from QCEW (BLS)
- Statistical significance calculated using Chi-squared testing



Results

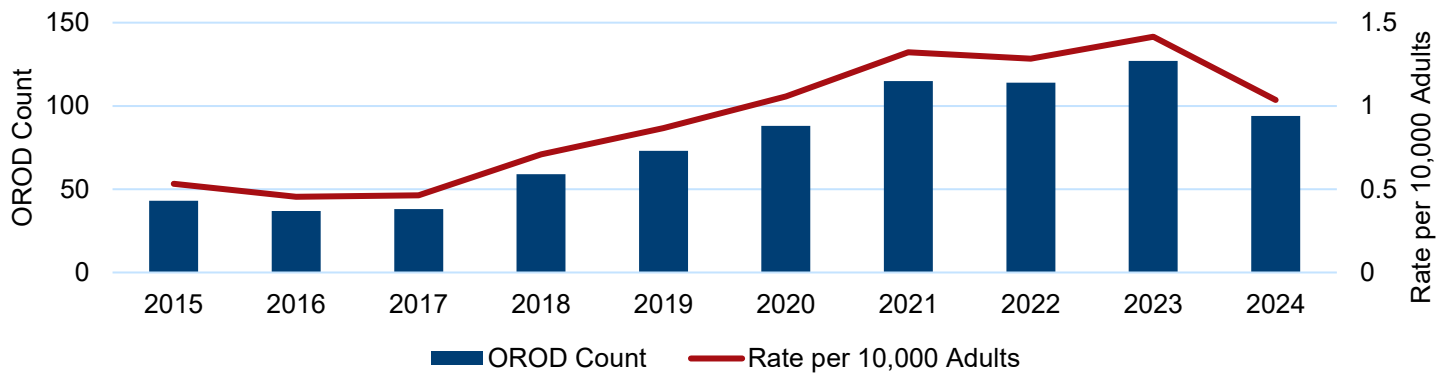
OROD counts and rates increased between 2015 and 2024

- Attributed to prevalence of fentanyl
- Rates dropped sharply in 2024

Demographic analysis

- Most groups fluctuated according to the general rate trend
- OROD rates highest among Black and Native populations (volatile)
- Higher for men (~3:2)
- Highest in ages 25-34 and 35-44

Figure 1: Montana Opioid Deaths by Year



Results

Red bar indicates OROD rate significantly higher than state average rate of OROD

Many industries / occupations with elevated OROD rates were identified in past research from other states

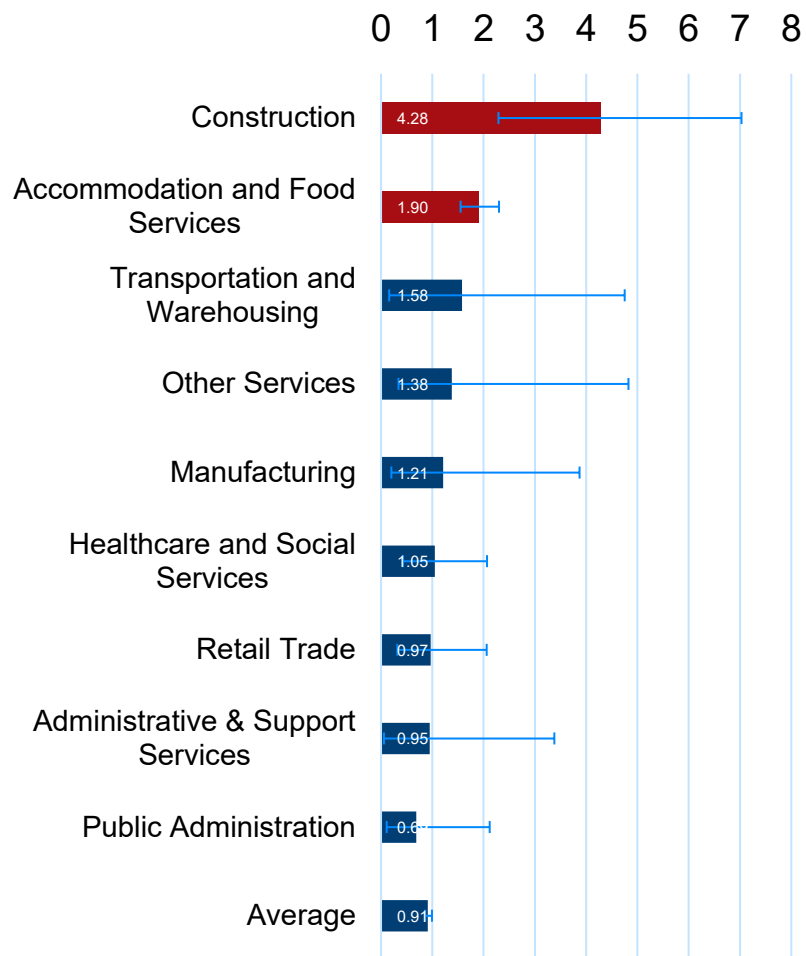
Sub-industries / occupations of note:

- Automotive Maintenance
- Landscaping

Excluded industries / occupations:

- Agriculture
- Mining

Figure 2: OROD Rate Per 10,000 FTE, Select Industries



Results

Red bar indicates OROD rate significantly higher than state average rate of OROD

Many industries / occupations with elevated OROD rates were identified in past research from other states

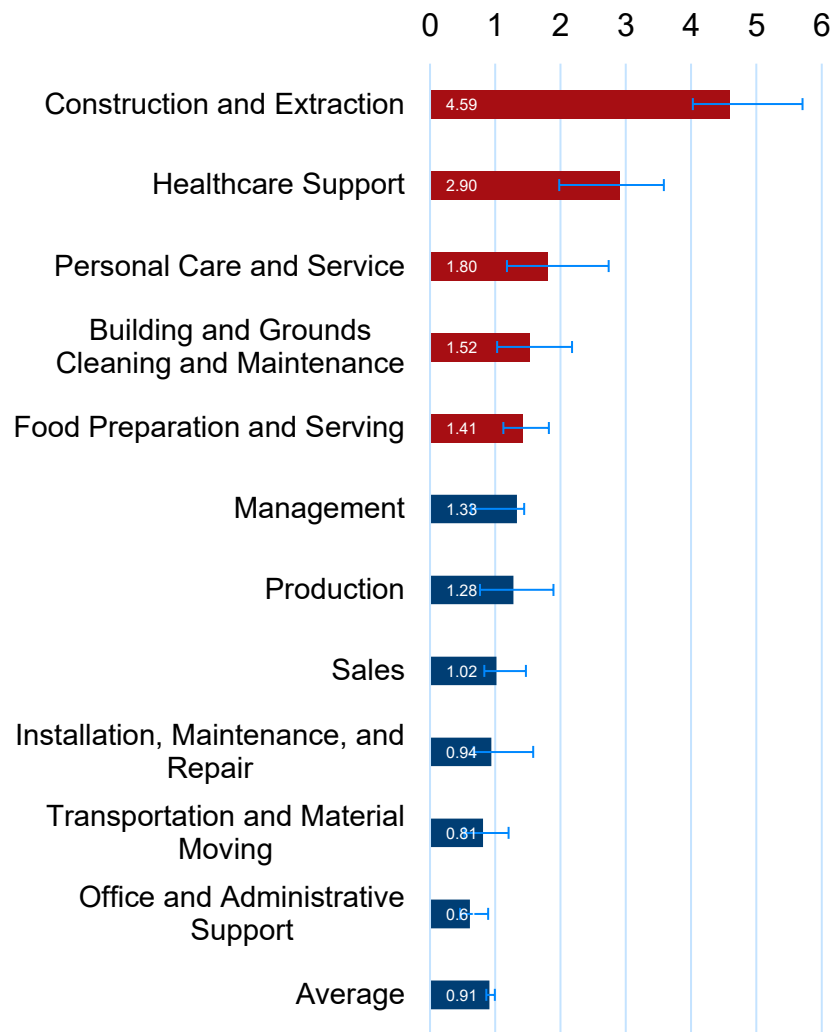
Sub-industries / occupations of note:

- Automotive Maintenance
- Landscaping

Excluded industries / occupations:

- Agriculture
- Mining

Figure 3: OROD Rate Per 10,000 FTE, Select Occupations



Discussion & Next Steps

Common work elements in affected industries / occupations:

- Heavy lifting
- Powered and unpowered hand tools
- Potential physical and mental health comorbidities (observed in BRFSS)

Substantial limitations

- No causation established
- Missing data / coding errors
- Low counts, high volatility

Next Steps

- Will publish findings to MOHSS webpage (<https://erd.dli.mt.gov/mohss>)
- Will work with Montana DPHHS to provide guidance for employers in affected workplaces

References

[California Overdose Surveillance Dashboard](#)

[Frey et. Al, Opioid-Related Overdose Deaths in Maryland \(2018\) by Industry and Occupation](#)

[Hawkins et. Al, Opioid Related Overdose Deaths by Industry and Occupation – Massachusetts, 2011-2015](#)

[Montana Injury and Overdose Indicators Data Dashboard](#)

[Overdose Prevention – U.S. Department of Health and Human Services](#)

