

# **Substance use related fatalities in the Oil and Gas Extraction (OGE) industry**

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**NORA OGE Sector Council Spring Health and Safety Summit 2023:  
Psychosocial Stressors in the Oilfield**

**April 12, 2023**

# Why look at substance use in OGE?

- OGE workers face several risk factors for workplace substance use:
  - insecure employment
  - long work hours
  - fatigue
  - physically demanding working conditions and environments
- High rates of heavy alcohol use in OGE<sup>1</sup>
- Workplace overdose fatality rates are highest among workers in the mining, quarrying, and OGE sector and extraction occupations<sup>2,3</sup>
- One study of New Mexico oil and gas worker fatalities reported that of the identified cases with toxicology results, 18% detected alcohol and 19% were positive for illicit drugs<sup>4</sup>
- Limited information exists to examine substance use among OGE workers



# Fatalities in Oil and Gas Extraction (FOG) Database

# The Fatalities in Oil and Gas Extraction (FOG) database

A database specific to the oil and gas extraction industry.



<https://www.cdc.gov/niosh/topics/fog/default.html>

# FOG Database

NIOSH database that collects [detailed information](#) about oil and gas worker fatalities in the U.S.

## Includes

Fatal events to U.S. oil and gas extraction workers:

- Onshore
- Offshore
- **All NAICS (O&G related)**
- Motor vehicle incidents
- **Non-traditional commuting**
- Cardiac events

## Excludes

Midstream and downstream

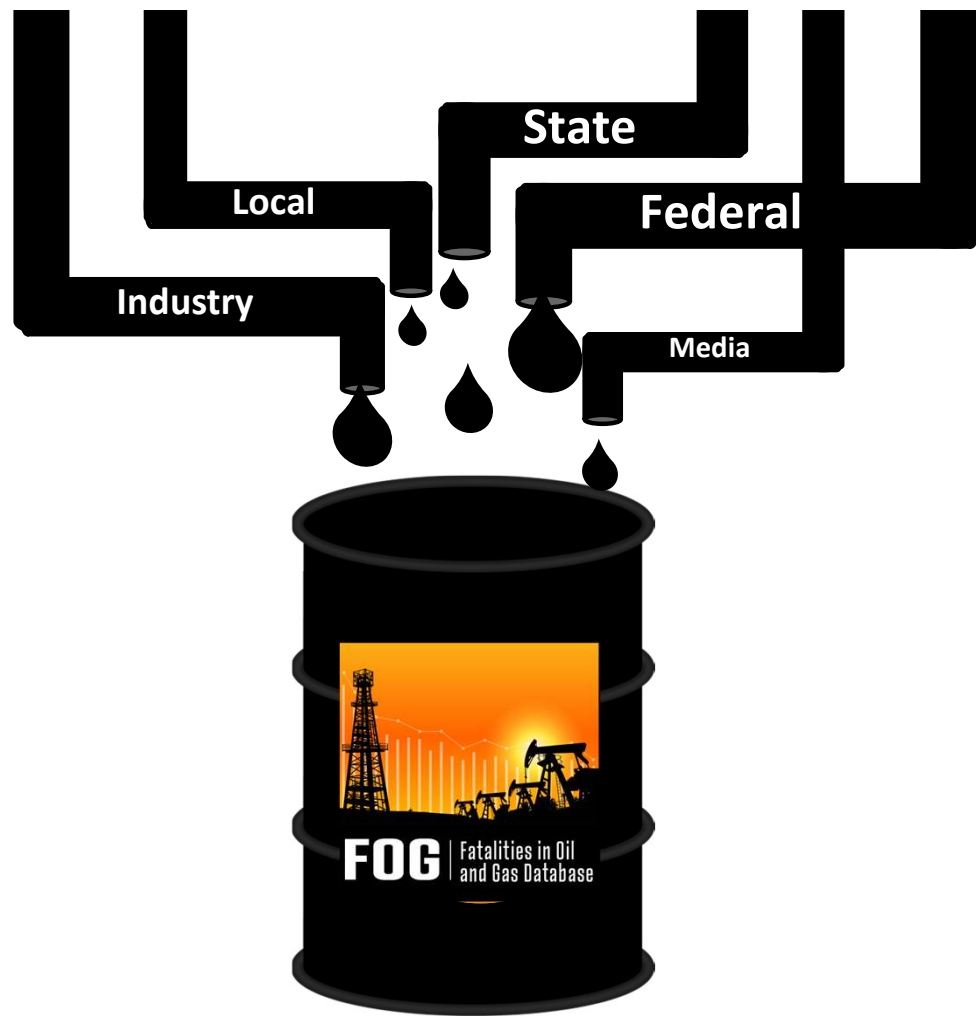
## Data Sources

OSHA case files, media, crash reports, autopsy reports, industry partners, state health departments

## Limitations

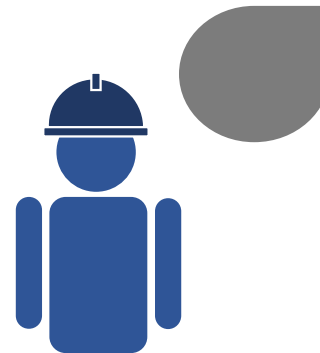
Roadway motor vehicle fatalities, chronic illness





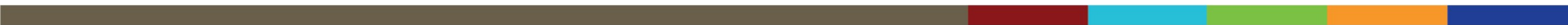
## Incident Variables

- ✓ Phase of Operation
- ✓ Industry activities
- ✓ Contributing factors  
(i.e. weather, equipment, etc.)



## Worker Variables

- ✓ Industry-specific occupations
- ✓ Years in Oilfield
- ✓ Cause of fatality



# **Methods for identifying substance use fatalities through FOG**

# NIOSH WSD Medical Rotation Program



SCHOOL OF MEDICINE



University of Colorado **Anschutz Medical Campus**

**School of Medicine**



# Methods



# Epidemiological Case Definition

## Role of substance use in OGE worker's death

### Cause of Death

Determined by the death investigator to be:

- Overdose
- Acute drug toxicity
- Acute alcohol toxicity

### Contributing Factor

Substance use noted as a contributing factor based on positive toxicology findings in:

- Death investigation file
- OSHA case file
- Crash report

### Suspected Contributing Factor

Substance use identified through:

- Positive toxicology at time of death
- Potential contributing factor listed in the crash report



# FOG case review results

# Substance Use in FOG Results, 2014-2019<sup>5</sup>

- 26 fatalities involving substance use
  - 7 (27%) cause of death
  - 7 (27%) contributing factor
  - 12 (46%) suspected contributing factor
- All male workers
- Median age 31.5 (range 19-53)



# Substance use related fatalities by company type



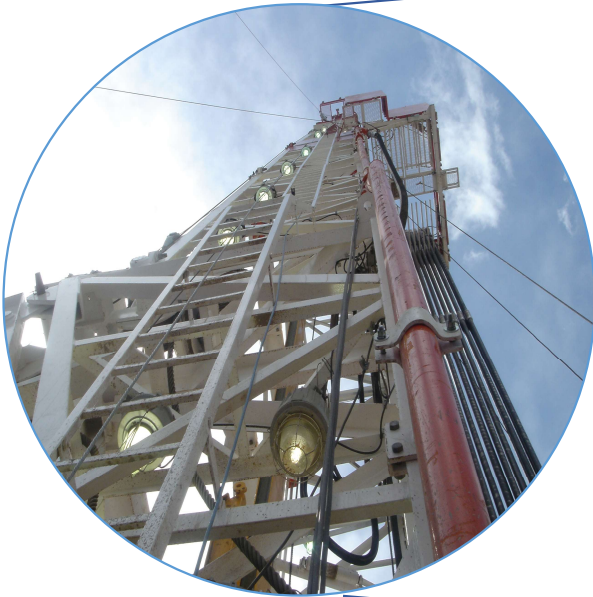
Operators

0



Drilling

5



**Oil & Gas Extraction  
Industry**

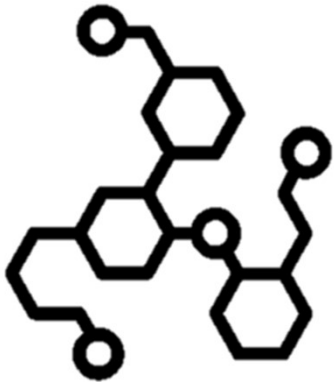


Well  
Servicing

16

Other or unknown = 5; n=26

## Substances Identified



**Stimulants**

**n=17**



**Alcohol**

**n=6**



**Cannabis**

**n=4**



**Opioids**

**n=3**

**Polysubstance use n=9**



# Substance Use: Case Example

- **Case Description:**

- Worker operating a power washer to clean threads on pipe
- Stumbled while walking on boards
- Stated that he felt hot so his colleagues took him to cooling trailer and provided fluids
- Went into truck and turned on air conditioner
- Coworkers checked on him and found him asleep and snoring
- Found him dead on their last check up

- **Risk Factors:**

- First day on the job
- 98°F outside
- Inadequate heat stress training
- Cocaine and methamphetamine intoxication can mimic heat stress related illness



# Considerations for Prevention



# Considerations for Prevention

## **Training:**

- Basic first aid in response to substance use incidents
- Naloxone program
- Recognizing and responding to heat stress
- CPR and/or AED (if available)

## **Drug and Alcohol Testing**

- IPIECA: Oil and gas contractor drug and alcohol testing guidelines
- Drug testing should only be used to promote workplace safety and health and is not to be used by an employer to penalize a worker for reporting a workplace related injury

## **Medical Screen**

- To ensure that the worker can perform their job safely and provide a reasonable accommodation, if necessary

## **Workplace Supported Recovery (WSR) Programs**

- Decrease the risk for substance use and its progression to a substance use disorder
- Substance use disorders are covered by the Americans with Disabilities Act (ADA)
- Lowers barriers to seeking care, receiving care, and maintaining recovery without the penalty of losing their employment




# Acknowledgements

**Manuscript co-authors:** Kait Wingate, Richard Pompei, Bradley King, Ken Scott, Kyla Hagan-Haynes, L. Casey Chosewood

**Manuscript reviewers and contributors:** Kelsey Smithart, Sophia Chiu, Christa Hale, Ryan Hill

Ramirez-Cardenas A, Wingate KC, Pompei R, King B, Scott KA, Hagan-Haynes K, Chosewood LC. Fatalities involving substance use among U.S. oil and gas extraction workers identified through an industry specific surveillance system (2014-2019). J Occup Environ Med. 2023 Mar 30. doi: 10.1097/JOM.0000000000002856. Epub ahead of print. PMID: 36998177.



# Thank you!

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



<https://wwwn.cdc.gov/NIOSH-WHC/source/fog>



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