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

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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\(^1\)

- Workplace overdose fatality rates are highest among workers in the mining, quarrying, and OGE sector and extraction occupations\(^2,3\)

- 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\(^4\)

- 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.

<table>
<thead>
<tr>
<th>Includes</th>
<th>Fatal events to U.S. oil and gas extraction workers:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Onshore</td>
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<tr>
<td></td>
<td>• Offshore</td>
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<tr>
<td></td>
<td>• <strong>All NAICS (O&amp;G related)</strong></td>
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<tr>
<td></td>
<td>• Motor vehicle incidents</td>
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<td></td>
<td>• <strong>Non-traditional commuting</strong></td>
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<td></td>
<td>• Cardiac events</td>
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<thead>
<tr>
<th>Excludes</th>
<th>Midstream and downstream</th>
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<tr>
<th>Data Sources</th>
<th>OSHA case files, media, crash reports, autopsy reports, industry partners, state health departments</th>
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<tr>
<th>Limitations</th>
<th>Roadway motor vehicle fatalities, chronic illness</th>
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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
Methods

Screen FOG

Review Potential Cases

Results
Epidemiological Case Definition

**Role of substance use in OGE worker’s death**

<table>
<thead>
<tr>
<th><strong>Cause of Death</strong></th>
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<tr>
<td><strong>Determined by the death investigator to be:</strong></td>
<td></td>
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<tr>
<td>• Overdose</td>
<td></td>
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<tr>
<td>• Acute drug toxicity</td>
<td></td>
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<tr>
<td>• Acute alcohol toxicity</td>
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<table>
<thead>
<tr>
<th><strong>Contributing Factor</strong></th>
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<tbody>
<tr>
<td><strong>Substance use noted as a contributing factor based on positive toxicology findings in:</strong></td>
<td></td>
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<tr>
<td>• Death investigation file</td>
<td></td>
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<tr>
<td>• OSHA case file</td>
<td></td>
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<tr>
<td>• Crash report</td>
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<thead>
<tr>
<th><strong>Suspected Contributing Factor</strong></th>
<th></th>
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<tbody>
<tr>
<td><strong>Substance use identified through:</strong></td>
<td></td>
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<tr>
<td>• Positive toxicology at time of death</td>
<td></td>
</tr>
<tr>
<td>• Potential contributing factor listed in the crash report</td>
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</tbody>
</table>
FOG case review results
Substance Use in FOG Results, 2014-2019

• 26 fatalities involving substance use
  o 7 (27%) cause of death
  o 7 (27%) contributing factor
  o 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
- Well Servicing: 16
- Other or unknown: 5

Total: 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

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Thank you!

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


