Potential occupational exposure to illegally made fentanyl and analogues among workers other than first responders

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Potential occupational exposure to opioids

Fentanyl is 50-100x more potent than morphine.
Potential occupational exposure to opioids

Illicit fentanyl is the main driver of recent increases in

Synthetic opioid overdose deaths
Potential occupational exposure to opioids

Various organizations have issued guidance for first responders.

https://www.cdc.gov/niosh/topics/fentanyl/risk.html
Potential occupational exposure to opioids

- Guidance for first responders
- 50-100x more potent
- Synthetic opioid overdose deaths
- What about other workers?

↑ Synthetic opioid overdose deaths
50-100x more potent
Relevant NIOSH Health Hazard Evaluations (HHEs)

- Medicolegal death investigators
- Aviation security screeners
What is a NIOSH Health Hazard Evaluation (HHE)?

- **Worksite investigation** in response to a request from employees, employers, or unions OR for technical assistance from government agencies (e.g., state and local health departments)

- Determine whether harmful exposures, processes, or conditions exist OR cause injuries or illnesses

- No cost to the employer or employees

- Involve employees at every step
Our approach to these HHEs

1. Gather information
2. Assess job tasks and work practices
3. Apply relevant NIOSH guidance for first responders
Medicolegal death investigator HHE

- Chief medical investigator submitted request regarding possible exposure to fentanyl and its analogues at death scenes

- <1% of caseload was related to fentanyl or analogues

- No employees have developed symptoms after exposure to death scenes with suspected opioids

Gather information

Assess job tasks and work practices

Apply relevant NIOSH guidance for first responders
Medicolegal death investigator HHE

- Death scene activities
  - Collect evidence on or in the body
  - Samples of drugs and paraphernalia are not routinely collected

- Unlikely to arrive at scene before law enforcement

- Nitrile glove use is required
Medicolegal death investigator HHE

- Unlikely to encounter fentanyl and its analogues
- Investigators have opportunity to perform a scene safety assessment
- Required personal protective equipment (PPE) is consistent with recommended protection against fentanyl

Gather information

Assess job tasks and work practices

Apply relevant NIOSH guidance for first responders
Medicolegal death investigator HHE

- Provide training for employees on
  - Prevention of exposure
  - Safe work practices
  - PPE
  - Decontamination

- Communicate with law enforcement officers before entering death scene

- For death scenes with visible fentanyl products
  - Minimize collection of suspected fentanyl
  - Use eye, respiratory, wrist/arm protection
Aviation security screener HHE

- Concerns
  - Processes
  - PPE requirements
  - Naloxone program

- Fentanyl has been discovered during screening activities

- No reports of screeners who have developed symptoms
Aviation security screener HHE

- Screen
  - Passengers
  - Luggage

- Might need to open containers with powders, collect a sample, and perform testing for explosives

- Stop if a powder is suspected to be an opioid and notify law enforcement

- Use nitrile gloves

Gather information

Assess job tasks and work practices

Apply relevant NIOSH guidance for first responders
Aviation security screener HHE

- Avoid tasks or operations that can potentially aerosolize a suspected opioid
- Respiratory protection program for fentanyl not recommended
- Naloxone program not recommended; can coordinate with airport emergency medical services

Gather information

Assess job tasks and work practices

Apply relevant NIOSH guidance for first responders
Summary

- Workers other than first responders have potential for unintentional, work-related exposure to opioids, but in these HHEs, the risk was low.

- We have applied the principles underlying the current NIOSH guidance for first responders, as relevant.

- We welcome opportunities to work with you on the topic of potential work-related exposures to opioids through the HHE program.
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- Douglas Wiegand
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1-800-CDC-INFO (232-4636)

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.
Extra slides
Exposure levels in the current NIOSH guidance for protecting first responders against fentanyl

- **Minimal**: Response to a situation where it is suspected that fentanyl may be present but no fentanyl products are visible

- **Moderate**: Response to a situation where small amounts of fentanyl products are visible

- **High**: Response to a situation where liquid fentanyl or large amounts of fentanyl products are visible
Exposure levels in the current NIOSH guidance for protecting first responders against fentanyl

- **Pre-Hospital Patient Care**: Emergency medical services (EMS) providers, including first responders, fire department and private companies who attend to individuals with suspected fentanyl overdose. Responders may encounter drugs or drug paraphernalia on or near the patient.

- **Law Enforcement**: Law enforcement officers who perform day-to-day law enforcement duties. Law enforcement officers may come into contact with fentanyl during the course of their daily activities such as traffic stops, apprehending and searching subjects, and responding to fentanyl overdose calls.

- **Investigation and Evidence Handling**: Law enforcement personnel who conduct investigations related to fentanyl. Activities may include executing search warrants and collecting, transporting, and storing evidence. Evidence collection activities in the field have the potential to aerosolize powders. Also, law enforcement personnel who handle evidence in the chain of custody have the potential to come into contact with fentanyl unless controls are in place to prevent exposures.

- **Special Operations and Decontamination**: Workers who conduct special operations where exposure to large amounts of fentanyl are expected. Examples include hazardous material incident response teams responding to a release or spill, and law enforcement officers executing search warrants on opioid processing or distribution sites, or participating in other tactical operations. These activities may aerosolize powders.
Current NIOSH PPE recommendations for protecting first responders against fentanyl

<table>
<thead>
<tr>
<th>Personal Protective Equipment</th>
<th>Pre-Hospital Patient Care</th>
<th>Law Enforcement Routine Duties</th>
<th>Investigations and Evidence Collection</th>
<th>Special Operations and Decontamination</th>
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<tbody>
<tr>
<td></td>
<td>Exposure Level</td>
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<tr>
<td></td>
<td>Minimal</td>
<td>Moderate</td>
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<tr>
<td><strong>Respiratory Protection</strong></td>
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<tr>
<td>Disposable N100, R100, or P100 FFR</td>
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<tr>
<td>Elastomeric APR³</td>
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<tr>
<td>PAPR²</td>
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<tr>
<td>SCBA⁴</td>
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<td><strong>Face and Eye Protection</strong></td>
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<tr>
<td>Safety goggles/glasses²</td>
<td>✓</td>
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<td><strong>Hand Protection</strong></td>
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<tr>
<td>Nitrile gloves₅</td>
<td>✓</td>
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<tr>
<td>Nitrile gloves, double or use of thicker gloves</td>
<td>●</td>
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<td><strong>Dermal Protection</strong></td>
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<tr>
<td>Wrist/arm protection⁷</td>
<td>✓</td>
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<td>Particulate hazards protective ensemble (i.e., NFPA 1999 Single or Multi-Use or NFPA 1994 Class 4 Ensemble)</td>
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<td>Chemical hazards protective ensemble (i.e., NFPA 1994 Class 3 Ensemble or Higher)</td>
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Current NIOSH PPE recommendations for protecting first responders against fentanyl

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