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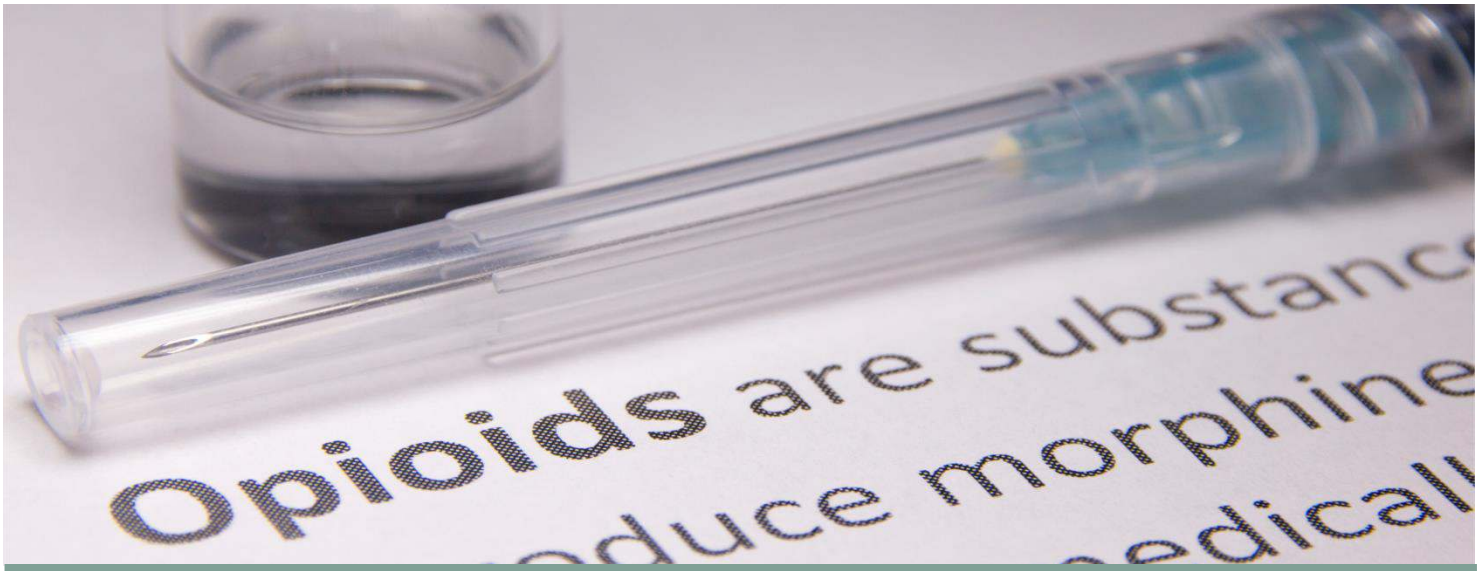

FENTANYL AND CARFENTANIL EXPOSURE IN LIBRARY SERVICES

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This fast fact has been developed to protect Library workers from accidental exposure to hazardous drugs such as Fentanyl and Carfentanil and to support the Canadian Action Plan for better informing Canadians about the risk of opioids.

WHAT ARE FENTANYL AND CARFENTANIL?

Fentanyl is a strong synthetic opioid drug administered to patients to prevent pain following surgery, for the management of chronic pain, and to produce sedation during medical procedures. Although similar in effect to morphine and heroin, Fentanyl is 50 to 100 times more potent[1]. Carfentanil is an analog of Fentanyl, however, it is 100 times more powerful than Fentanyl and 10,000 times more powerful than morphine. As it is the most potent commercially used opioid, it is inappropriate for use in humans and is intended to be used as a tranquilizer for large animals[2]. Both Fentanyl and Carfentanil are currently listed in Schedule I of the Federal Controlled Drugs and Substances Act (1996).

Recently, illicit Fentanyl and Carfentanil have been emerging as recreational drugs.

WHAT DOES STREET FENTANYL LOOK LIKE?

Street Fentanyl can come in many forms including powder form similar to heroin, powder form mixed into other drugs such as cocaine, transdermal Fentanyl patches, or (green) tablets resembling fake oxycodone pills[3].

HOW CAN LIBRARY WORKERS BE EXPOSED TO FENTANYL OR CARFENTANIL

Front-line Library workers may become accidentally exposed to Fentanyl when assisting an individual who has used or overdosed on the drug or its analogs, or when found in the workplace. Examples of high risk tasks include removing the clothing, searching, reviving, and administering antidotes to an individual who has used the drug or has the drug in their possession.

WHAT ARE THE ROUTES OF EXPOSURE TO FENTANYL AND CARFENTANIL?

Fentanyl and its analogs can enter the body by inhalation, ingestion, injection and absorption. Skin contact is thought to be a potential exposure route, but is not likely to lead to overdose unless there is prolonged exposure to large volumes of highly concentrated fentanyl in powder form.[1] Brief skin contact with Fentanyl or its analogs is not expected to lead to toxic effects if any visible contamination is immediately removed.[1] It is not yet known whether Fentanyl can be absorbed through the eyes

WHAT ARE THE SIGNS OF FENTANYL OR CARFENTANIL OVERDOSE

The signs of a Fentanyl overdose are not distinct from overdoses of other opioids. The signs may include:[3, 4, 5]

- Trouble walking or talking
- Severe sleepiness, gurgling or snoring sounds
- Slow, shallow breathing
- Bluish lips and nails
- Person is unresponsive
- Cold and clammy skin
- Tiny 'pinpoint' pupils
- Slow heart rate
- Seizures

Not responding to noise or knuckles being rubbed hard on their breastbone (sternal rub)

WHAT ARE THE HEALTH EFFECTS OF EXPOSURE TO FENTANYL OR CARFENTANIL?

Health effects of Fentanyl and its analogs include rapid depression of the central nervous system, delayed or reduced respiratory function, respiratory arrest, tightening of chest muscles, and rise in blood pressure within the brain, and muscle spasms.[1] Even exposure to small quantities of Fentanyl may be fatal as it acts as an incapacitating agent that impairs a person's ability to function.

WHAT CAN BE DONE TO CONTROL EXPOSURE TO FENTANYL AND CARFENTANIL?

ELIMINATING WIDESPREAD PRESCRIPTIONS

The best way to prevent exposure to opioids such as Fentanyl is by eliminating the widespread prescription of Fentanyl and its analogs. Reducing the number of overdoses can be achieved through decreasing easy access to unnecessary opioids. These are initiatives being taken by Health Canada as a part of their Action on Opioid Misuse.

SITUATIONAL RISK ASSESSMENTS

Because occupational exposure limits have not yet been developed for exposure to Fentanyl and its analogs, a situational risk assessment should be done to assess the risk of Fentanyl exposure to Library workers. This risk assessment evaluates:

1. **The quantity and form** of the opioid
2. **The type of packaging** (street level Fentanyl is often cut, whereas Fentanyl for transportation is often uncut)
3. **The potential for exposure** (chance of accidental inhalation or contact with bare skin).

Based on the predicted risks, the following precautions or actions can be taken: :[6]

It should be noted on the chart to the right that exposure to Library workers is typically expected to be in the minimum to moderate range if there is exposure to Fentanyl or its analogs.

Risk Level	Example Situations	Precaution/Action
Minimal	It is suspected that fentanyl may be present but no fentanyl products are visible	▪ Follow organization's standard operating procedures ▪ Continuously conduct situation risk assessments to determine further precautions and actions to take
	Small amounts of drugs in pill form are present on an overdosed patient	▪ Prevent skin and eye contact by donning proper PPE (see requirements below) ▪ Do not handle pills – advise security and law enforcement ▪ If you must handle the pills, always wear double nitrile gloves
Moderate	Minimal quantities of white powder drug is present on an overdosed patient	▪ If you encounter any powder – assume it is fentanyl or carfentanil ▪ If it is contained in an open baggy, do not attempt to seal the baggy by releasing the air in it as it will become airborne ▪ Donn proper PPE immediately (see requirements below) ▪ Where there is any signs of powdered carfentanil, exit the site immediately ▪ Advise security and law enforcement to attend the scene to assess the situation
High	Large quantities of white powder present in the environment	▪ Health and community care workers should not encounter these situations unless entering a private dwelling where drugs are being sold or produced. If this level of contamination were present, immediately exit the site and advise security and law enforcement.

ESTABLISHING ORGANIZATIONAL PROCEDURES FOR ILLICIT DRUG OVERDOSE

Employers have an obligation to take every precaution reasonable in the circumstances for the protection of a worker. This would include developing clear guidelines on how to handle situations when workers may encounter illicit drugs while assisting individuals who may have overdosed or encountering discarded drugs or needles. Employers covered by the Occupational Health and Safety Act must ensure that guidelines and training are developed in consultation with the JHSC.

In an overdose emergency, the most significant decision is after Emergency Services has been contacted, what takes place? The organization needs to determine whether they assist further. Many organizations provide auxiliary assistance such as First Aid, CPR, Defibrillators, and Epi-Pens. The provision of an antidote such as Naloxone is similar in nature but requires the additional precaution of being knowledgeable about personal safety, having and knowing how to use the antidote and protective equipment, and having the training to provide assistance with Naloxone. It is important that the organization views this as a voluntary part of the job and those providing assistance to overdosed individuals are fully covered for compensable injuries or illnesses, physical or mental and that there be no reprisals against a Library worker trying to assist an overdosed individual.

USING ANTIDOTES SUCH AS NALOXONE:

Naloxone is a safe and effective antidote to overdoses of Fentanyl and other opioids. It is an essential tool in preventing fatal opioid overdoses. Naloxone is available as a nasal-spray or in a prefilled syringe. The nasal-spray is the form used in many libraries. Due to its high potency, multiple doses of Naloxone may be needed to treat a Fentanyl overdose.[1] Naloxone only temporarily blocks the effects of respiratory depression caused by opioids (for 30-90 minutes) so medical attention is still required following its administration. Library workers should also be advised that they may encounter violence and/or aggression from individuals experiencing withdrawal symptoms following the intake of Naloxone. Employers must ensure workers are protected from workplace violence.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment should be worn by Library workers who may encounter Fentanyl or Carfentanil. Although Library workers are at a low risk for exposure, in situations where there is a risk of exposure to Fentanyl and its analogs, the precautionary principle should be applied. This principle is an approach to eliminating hazards before they cause harm. It is recommended that Library workers, through consultation with their employers, their union, and their JHSC, conduct situational risk assessments (see above) to establish PPE requirements for their workers. As a minimum, fit-tested N95 respirators should be worn for respiratory protection as well as disposable (double) nitrile gloves. The US Centers for Disease Control (CDC)[7] and FentanylSafety.com[9] can be used as references for examples of additional PPE currently being recommended for law enforcement and emergency medical service (EMS) workers. Guidelines set out by the local Health Department respecting PPE should be followed

EDUCATION AND TRAINING

All workers who may be exposed to Fentanyl and other opioids should receive awareness training. Any worker that might provide assistance to an individual that is overdosing must have comprehensive training to protect themselves. This training would include First Aid and CPR, Recognizing Drug Overdose, Assessing Situation, Naloxone Training, Respirator Fit Testing, Donning and Doffing Techniques, and Safe Handling Techniques.

WHERE CAN I FIND MORE INFORMATION

1. Health Canada's Action on Opioid Misuse: http://healthycanadians.gc.ca/healthy-living-vie-saine/substance-abuse-toxicomanie/misuse-plan-abus-index-eng.php
2. Get Naloxone Kits for Free: https://www.ontario.ca/page/get-naloxone-kits-free
3. BCCDC Decision Support Tool Administration of Naloxone: www.bccdc.ca/resource-gallery/Documents/.../Epid/.../NaloxoneDSTUseforRN.pdf
4. Canadian Centre on Substance Abuse Drug Alerts and Bulletins: http://www.ccsa.ca/eng/collaboration/ccendu/ccendu-drug-alerts-and-bulletins/pages/default.aspx
5. Safety Data Sheets (example): http://www.restek.com/documentation/msds/34082_useng.pdf)
6. Fentanyl Safety for First Responders: https://www.Fentanylsafety.com/
7. National Institute for Occupational Safety and Health (NIOSH). Fentanyl: Preventing Occupational Exposure to Emergency Responders: https://www.cdc.gov/niosh/topics/Fentanyl/risk.html
8. Public Health with the City of Toronto – Toronto Overdose Action Plan – Awareness Video. https://www.youtube.com/watch?v=Ya3PtHUtzIc

Disclaimer:

Please note that all information provided is general in nature and may not be appropriate for particular situations or circumstances and is not a substitute for professional advice. In every case, specific and qualified advice should be sought before applying this information. Under no circumstances shall the Public Services Health and Safety Association be responsible for any damage or other losses resulting from reliance upon the information given to you, and all such liabilities are specifically disclaimed to the full extent permitted by law.

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[1] National Institute for Occupational Safety and Health (NIOSH). (2016). Fentanyl: Preventing Occupational Exposure to Emergency Responders. Retrieved from https://www.cdc.gov/niosh/topics/fentanyl/default.html

[2] National Institute for Health (NIH). (n.d.) Carfentanil. Retrieved from https://pubchem.ncbi.nlm.nih.gov/compound/carfentanil#section=Top

[3] Government of Saskatchewan (2016). Fentanyl: Advisory for Saskatchewan Health Care Providers. Retrieved from https://www.saskatchewan.ca/~/media/files/health/health%20and%20healthy%20livin

[4] RCMP. (2017). What is fentanyl? Retrieved from http://www.rcmp-grc.gc.ca/en/what-is-fentanyl

[5] Government of Ontario. (2017). Get naloxone kits for free. Retrieved from https://www.ontario.ca/page/get-naloxone-kits-free

[6] Alberta Health Services. (2017). Emergency medical services Opioid Misuse-Interim Guidance for First Responders. Retrieved from https://www.fentanylsafety.com/wp-content/uploads/OPIOID-MISUSE-INTERIM-GUIDANCE_2.pdf

[7] British Columbia Ministry of Health. (2017). Guidance statement regarding Personal Protective Equipment for Emergency Medical Services and Health Care Workers dealing with overdose victims.

[8] US Centres for Disease Control https://www.cdc.gov/

[9] Fentanyl Safety. Job-Specific Fentanyl Safety for First Responders - Paramedics. Retrieved from https://www.fentanylsafety.com/job-specific/