

Protecting the Law Enforcement Canine from the Opioid Epidemic

Introduction

The opioid epidemic has reached virtually every city, town and neighborhood in the United States. According to the CDC, approximately 33,000 people died from opioid overdose in 2015 alone and all studies suggest that the trend is getting worse, not better. As the front line of the war on drugs, law enforcement canines (OpK9s) are at increasing risk of exposure to these drugs and it our responsibility as members of the law enforcement community to ensure the safety of these critically important animals. Unfortunately, however, it is not just narcotic detection canines that are at risk; this crisis has evolved into a potential risk for all OpK9s. Following is a brief overview of the opioid crisis as well as some suggestions for canine handlers to help mitigate the risk of exposure for their partners.

Background

Opioids are a class of drugs that originally were derived from the opium poppy. This class of drug interacts with receptors on nerve cells within the brain to produce feelings of pleasure as well as relief of pain. As such, this class of drugs is highly addictive. This class of drug is often divided into licit (legal) and illicit (illegal) forms. Examples of licit opiates include: morphine, codeine, oxycodone (Percocet), oxycontin hydrocodone (Vicodin, lorcet), fentanyl (duragesic, sublimaze), and carfentanyl; an illicit example is heroin. Fentanyl is approximately 100x more potent than morphine and carfentanyl is approximately 10,000 more potent than morphine and 1000x more potent than fentanyl; meaning extremely small amounts of these incredibly potent drugs can be fatal to human or canine (pic 1?)

Prevention

As with all potential poisonings, preventing the exposure provides the best prognosis. In addition, all handlers should take a basic OpK9 First Aid class that discusses the various potential toxins that OpK9s can encounter and the appropriate therapies for them. Handlers must be aware that NO exposure to opioids can be considered safe and every handler should treat every potential exposure as if it may be fatal to their partner. While there is little scientific evidence regarding OpK9 exposure to opioids and/or their derivatives, an understanding of basic canine pharmacology and physiology

as well as the scientific and anecdotal information from human exposures can create a baseline regarding OpK9 treatment. Opioids can be absorbed through ingestion, inhalation, contact with mucous membranes or, in some cases absorbed through the skin. Because of this, it is also critical for handler to be aware that they, too, may risk dangerous exposure during their duties. As with most things, an awareness that this danger exists is the first and most important component of prevention. A thorough (yet safe) visual or hand search for easily contacted dangerous material should be performed (if possible) prior to any OpK9 deployment. Close supervision and early intervention and mitigation to prevent/reduce any potential exposure during searches or deployments is also necessary and remains the handler's best opportunity to keep their OpK9 safe. Additionally, simple considerations such as basic obedience including the ability to make an OpK9 release an object from their mouth or return to handler immediately regardless of circumstance can literally make the difference between life and death when dealing with opioid exposure.

Signs of exposure

Signs of opioid intoxication are similar to those seen in humans. These include: generalized depression, vomiting, unsteady or wobbly gait, and very constricted pupils. Decreased respirations (breathing), coma or seizures can be seen in critically affected OpK9s and may indicate a very poor prognosis unless treatment is initiated immediately. Exposure can happen incidentally, as is seen during active searches, or intentionally if the drugs are placed in a way as to optimize OpK9 contact. While both can be potentially life threatening, the potential *weaponization* of opioids makes it critical that ALL OpK9 handlers (NOT just narcotic detection canine handlers) are aware of and prepare to counteract potential exposures. For example, a bad actor may intentionally place opioids on the surface of a package or in the entryway of a room or building hoping that an explosive detection K9 would contact enough of the drug to make them ineffective in searching that area.

Treatment:

If the OpK9 is suspected of ingesting opioids but is not showing any negative effects, removal of the ingested toxin by inducing vomiting may be warranted. Hydrogen peroxide or apomorphine can be very effective at causing an animal to vomit and a protocol should be developed with your agency's veterinarian for dosing amounts, frequency, etc. Also, administering activated charcoal after vomiting has ceased can slow absorption of any residual toxin.

While some in the veterinary and OpK9 communities are acting like the use of naloxone for OpK9s is a novel idea, others with experience in the OpK9 community have been advocating narcotic detection OpK9 handlers possess naloxone for many years.

However, given the more widespread danger threatening ALL OpK9s, the current recommendation is that ALL OpK9 handlers carry a minimum of 2 doses of naloxone ON THEIR PERSON during their duties. Administering naloxone should be a first line treatment for any suspected opioid contact. Naloxone acts by breaking the bond between the drug and the receptors on the nerves in the brain. There is a wide range of dosing recommendations but 0.04 mg/kg of body weight is a generally accepted dose. Fortunately, there is a very wide safety range for this drug so overdose is nearly impossible to achieve. In fact, given the potency of some the opioid derivatives currently being seen, higher or repeated dosing may be necessary to counteract the effects of the opioid. Naloxone can be given intravenously (IV), intramuscularly (IM) or intranasally (IN). Subcutaneous (SC) administration is NOT recommended as absorption via this route can be inconsistent in compromised patients. Intravenous administration requires advanced training, constant practice and can be limited logistically due to local veterinary laws that may preclude non-medical or even non-veterinary medical professionals from administering drugs to an OpK9. If an agency is working with a tactical veterinarian, he/she would most likely use the IV route as this provides the fastest, most effective administration of the drug into the OpK9. Intramuscular administration is also likely to be effective and is the current recommended mode of administration by some large OpK9 agencies. This method requires some advanced training and maintenance and carries with it some potential significant complications if not performed correctly- including ineffective administration (if not given into fat instead of muscle for example) or nerve or blood vessel damage if appropriate administration and landmarks are not used.

Currently, the use of intranasal naloxone is being advocated by many veterinary professionals that work with OpK9s. Intranasal absorption of naloxone in the canine has been scientifically proven. The standard human dose of 2mg ampules is well within the safe dosing ranges for almost all OpK9 weight ranges. While the use of the intranasal route has many advantages including lower potential complications and ease of administration, the most important advantage may be wide availability of the product and the familiarity many officers have with this method of administration due to their training regarding potential human overdose victims; the protocol for use is virtually the same for humans and OpK9s. This pre-existing familiarity or so called 'muscle memory' may make administration easier and more effective. It is the authors hope that further research into this method of deliver will be forthcoming in the near term so that a consensus opinion on best methods of administration can be determined.

Conclusion:

Lethal contact with an opioid is a clear and present danger to the all members of the OpK9 community- not just narcotic detection teams. Whether accidental or malicious, a very small dose of drug can have tragic consequences unless the handler recognizes the exposure immediately and takes aggressive, decisive action to mitigate the effects of the drug. Naloxone, in intra-nasal or other form, is considered a necessary component of all handler's duty equipment and failure for handlers to be appropriately trained in its use and/or failure to carry this potentially life-saving drug during their duties is inexcusable in this author's opinion.

(Author's note: As with all medical treatments and protocols, verify appropriate dosing/etc with your agencie's veterinarian and make sure that up-to-date protocols are in place to address all veterinary related treatments/procedures/etc. Canine handlers should seek immediate veterinary care for even a suspected exposure or any other condition that may negatively impact the OpK9.)

TO: XXX

FROM: Paul S. McNamara, DVM, DACVS, Consulting Veterinarian- XXXX

DATE: June 6, 2017

SUBJECT: Combating the opioid threat against Law Enforcement Canines (OpK9s)

RECCOMENDATION:

That **ALL** OpK9 handlers carry on their person a minimum of two, 2mg doses of intranasal naloxone during on duty activities.

RATIONALE FOR PROTOCOL:

- Given the extreme potency of the opioid derivatives being encountered, contact with even an extremely small amount of drug can be fatal.
- While narcotic detection K9s are at highest risk, any 'search-trained' OpK9 (explosive, tracking, evidence recovery, etc) may have an inadvertent exposure to a fatal dose of drug.
- There is concern that high-potency opioid derivatives can be used offensively to incapacitate/kill any OpK9.
- There have already been reported cases of non-narcotic OpK9s (and human officers) becoming ill due to inadvertent exposure to opioid derivatives.
- Effective absorption from intra-nasally administered naloxone has been scientifically proven.

-The standard dose of intranasal naloxone (2mg) falls within safe dosing for most OpK9 weight ranges.

-The administration of intranasal naloxone is much easier, has less risk of complications, and 'piggy-backs' onto human-based training that many officers/agents have already received. Protocol for use is virtually identical between humans and OpK9s.

-Carrying intranasal naloxone has a potential dual purpose benefit such that a handler can treat any inadvertent or malicious exposure directed toward their OpK9 OR any other human LEO who may be similarly exposed.

-Carrying a minimum of 2 doses allows for accidental loss of one dose or re-administration of naloxone if one dose is insufficient.

-The 'narcase' is an easily used, rigid, specifically designed case that allows for the safe carrying of 2 doses of intranasal naloxone on an officer's/agent's duty belt for immediate use.

If there any questions or concerns regarding this information, please feel free to contact me directly at: (518) 424-7212 or email me at: Doc@Odinsfund.org