Increase in Overdose Deaths and Health Hazards Associated with Xylazine in South Carolina

Summary
The purpose of this Health Alert Network (HAN) Advisory is to alert stakeholders to:

1. Increasing presence of xylazine in the drug supply nationally and in South Carolina, particularly mixed with heroin, cocaine, and illicitly manufactured fentanyl;
2. Health hazards associated with use of xylazine;
3. Recommendations for monitoring and treating individuals exposed to xylazine.

Background
The South Carolina Opioid Emergency Response Team, to include DHEC, has been monitoring deaths involving the drug Xylazine. According to provisional estimates from the DHEC Division of Biostatistics, deaths involving Xylazine have been on the rise, with an anticipated 379 percent increase between years 2020 and 2021.

Xylazine is a veterinary tranquilizer and long-acting sedative with analgesic and muscle relaxant properties. Xylazine is not approved by the Food and Drug Administration for human consumption. In humans, xylazine can cause slowed heart rate, reduced breathing, lowered blood pressure, and unresponsiveness.

Xylazine is commonly found in combination with fentanyl, heroin and other substances not purchased from a pharmacy. Xylazine can be present in powder form or in pills that are not purchased with a prescription from a pharmacy. Common names of drugs cut with xylazine are “tranq or “tranq dope.” Xylazine is often in drugs without a person’s knowledge.

Xylazine can increase risk of overdose and death. When taken in combination with opioids, it can prolong their effects, but it does not respond to naloxone because it is not an opioid. However, in both drug seizure and toxicology reports, xylazine has most commonly been found with fentanyl. Providers of alcohol and drug treatment services have also observed increased presence of xylazine in urine drug screens within recent months. Because xylazine is often hard to detect, mimics the signs and symptoms of opiate overdose, and is often adulterated in heroin and fentanyl, Naloxone should still be administered.
Furthermore, xylazine increases risks for skin ulcers, which can lead to skin and soft tissue infections or tissue death. These wounds can occur regardless of whether xylazine was used by smoking, snorting, or injecting. Prolonged periods of oversedation can also restrict blood flow, increasing risk of falls, damage to muscles, nerves, and kidneys, and hypothermia or heat-related emergencies if outside.

**Recommendations**

These emerging trends, coupled with the known toxic effects of xylazine, highlight the need for healthcare, first responder, coroner, and community stakeholders to take the following actions:

1. **Recognize the signs and symptoms of toxic effects of xylazine consumption and intervene early**
   
   *First responders, hospitals, health care providers:*
   
   Because xylazine can contribute to oversedation alongside opioids, an individual experiencing an overdose may remain unresponsive even after naloxone administration if xylazine is present, and the person may need rescue breaths.
   
   If a person is using fentanyl, heroin, or other substances, consider whether the person may have been exposed to xylazine and examine for infections and wounds so appropriate treatment can be provided. When conducting post-overdose outreach or providing other mobile services, offer wound care education and kits to help prevent infection.
   
   If infection, wounds, and necrosis are observed without other clear causes, consider screening the individual for substance use and referring to treatment and peer support services appropriately.

2. **Improve detection of xylazine to facilitate an effective response and report**
   
   *Coroners, hospitals, health care providers:*
   
   Test for xylazine in clinical drugs screens and toxicology panels when xylazine may be present. Including xylazine in routine testing enables tracking trends locally.

3. **Educate patients and community members about the risks of using drugs that are not prescribed and purchased from a legitimate pharmacy, including risks of exposure to xylazine**
   
   *Health care providers, community-based organizations:*
   
   Communicate key messages with patients and public populations to take medications only as prescribed. Taking drugs that are either ordered from a website that is not a safe online pharmacy requiring a valid prescription or purchased from a local source that is not a pharmacy can be dangerous because they may contain toxic ingredients like xylazine.

4. **Expand the provision and use of naloxone and overdose prevention education**
   
   It is important to administer naloxone for a suspected opioid overdose. Although naloxone will not reverse the effects of xylazine, naloxone will reverse the effects of any opioids present.
   
   *Community-Based Organizations:*
   
   Raise awareness about the critical need for bystanders to have naloxone on hand and use it during an overdose.
   
   Increase awareness about the risk of using drugs when alone and emphasize the need for risk reduction strategies among people who use drugs.
Increase the provision of overdose prevention education and take-home naloxone.

**Healthcare Providers:**

SC Code of Laws 1976 was amended in 2021 to include Sec 44-53-361, which directs prescribers to prescribe naloxone to individuals at risk for opioid overdose, such as those with a prior history of overdose, those with opioid use disorder, and individuals using illicit opioids and other drugs that might be mixed with illicitly manufactured fentanyl. Prescribers should also co-prescribe naloxone to patients prescribed opioids with high morphine milligram equivalents and those receiving both opioid and benzodiazepines.

Expand locations in which overdose prevention education and take-home naloxone are provided, especially in rural areas.

Establish protocols for first responders leaving behind naloxone with individuals who use drugs and family members or friends after incidents involving a drug-related emergency response.

5. **Expand and sustain processes for linking patients to treatment for substance use disorders**

   **For hospitals:**

   Help identify and intervene with patients at risk for psychosocial or healthcare problems related to substance use using the Screening, Brief Intervention, and Referral to Treatment (SBIRT) model. Patients who receive care in the ED and have an untreated opioid use disorder should be stabilized and referred to a provider for long-term medication-assisted treatment. This referral can be accompanied by initial doses of buprenorphine or a short-term prescription that can be filled right away. This will serve as a bridge until the patient can access outpatient treatment.

   Work with a recovery organization or treatment provider to employ a Certified Peer Support Specialist in the ED or inpatient unit or establish referral processes to recovery services that can help motivate and engage individuals in treatment.

   **For health-care providers:**

   Provide Medications for Opioid Use Disorder (MOUD). Treatment with the FDA-approved medications methadone, buprenorphine, or naltrexone are lifesaving and the most effective forms of treatment for opioid use disorder.

   Provide Stimulant (Cocaine, Methamphetamine) Use Disorder Treatment. Unlike opioid use disorder treatment, there are no FDA-approved medications to treat stimulant use disorders, but other therapies have demonstrated effectiveness. For additional information about treatment strategies, see SAMHSA’s Treatment for Stimulant Use Disorders.

   **For correctional facilities:**

   Initiate or continue medications for opioid use disorder among people leaving correctional and detention facilities. Offer naloxone to individuals returning to the community and visitors.
Resources for Additional Information:

- SC, Access to Naloxone
  http://naloxonesavessc.org

- SC, Screening, Brief Intervention, and Referral to Treatment (SBIRT) model
  http://scsbirt.com

- SC, Finding Help
  http://justplainkillers.com/find-help/

- SC, Safe Medication disposal sites for unused prescriptions
  http://justplainkillers.com/drug-safety/

- SC, For overdose prevention messages and community resources
  https://www.justplainkillers.com

- National Institute on Drug Abuse – Xylazine
  https://nida.nih.gov/research-topics/xylazine

- Drug Enforcement Administration Xylazine

- Centers for Disease Control – MMWR Xylazine (does not include South Carolina)
  https://www.cdc.gov/mmwr/volumes/70/wr/mm7037a4.htm

- Addiction Training Center – Zeroing in on Xylazine
  https://www.addictiontraining.org/training/register/event/?category=&start=1107&id=1186&pkIdDed =1236