

Issue date
7 November 2023

Distributed to:

Chief Executives
Directors of Clinical Governance
Director, Regulation and Compliance Unit

Action required by:

Chief Executives
Directors of Clinical Governance

We recommend you also inform:

Directors, Managers and Staff of:

- Emergency Departments
- Drug and Alcohol services
- Mental Health services
- Toxicology Units
- Ambulance
- Forensic medicine services
- Intensive Care Units

Expert Reference Group

Content reviewed by:

- Centre for Alcohol and Other Drugs, NSW Ministry of Health
- Standing Panel on Toxicity Risk, NSW Ministry of Health
- Emergency Care Institute Clinical Director
- Centre for Population Health, NSW Ministry of Health

Clinical Excellence Commission

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Review date
November 2024

Cases of harm linked to strong opioids (nitazenes) in refillable vape (e-cigarette) liquids

Background

NSW Health has previously issued public drug warnings and a clinician Safety Notice ([SN:011/22](#)) on harms related to nitazenes (benzimidazole opioids). This Notice is to alert clinicians of new detections of nitazenes in refillable vapes (e-cigarettes) and liquids.

Situation

Two recent cases of harm including one death have been linked to the use of vape refill liquids found to contain nitazenes. A third case of nitazene overdose through refillable vape use was notified to NSW Health earlier this year. Two of these cases experienced overdose after using only 6-8 puffs of their vapes. All three cases were seeking to use illicit drugs through their vape device. However, in one case, the patient expected the refill liquid to contain only cannabinoids. NSW Health is not aware of any cases of nitazene poisoning in patients only seeking to use a nicotine-containing vape liquid.

Illicit drugs identified from previous police seizures of vape liquids include nitazenes, novel benzodiazepines, synthetic and natural cannabinoids and dimethyltryptamine (DMT).

Assessment

Nitazenes are synthetic opioids and are becoming more prevalent in international drug markets. Nitazenes are highly potent μ -opioid receptor agonists, with some having a potency similar to, or greater than fentanyl, and can have a longer duration of action. Nitazenes pose a higher risk of respiratory depression compared with other opioids.

Clinical Recommendations

- Have high index of suspicion for illicit substances e.g., nitazenes in patients using vape devices, particularly refillable devices, in patients with atypical effects, such as an opioid toxidrome.
- Provide airway management, oxygenation, and ventilation support in addition to naloxone, where nitazene poisoning is suspected.
- Higher titrated doses of naloxone of 800microg or more may be required.

Nitazenes are non-fentanyl-derived synthetic opioids so will not show up on commercially available fentanyl testing strips. There are also not detectable using common urine drug screening methods.

- Contact the NSW Poisons Information Centre (PIC) or your local toxicology service for advice.
- Discuss the extremely high potency of nitazenes with patients considering using nitazenes. Where available, supply take-home naloxone to people who use illicit drugs or on discharge following opioid poisoning. Take home naloxone can also be accessed free through many [pharmacies](#), [NSPs or NGOs](#), or through a free [postal service](#).

Notification

Notify the NSW Poisons Information Centre (13 11 26) or NSW Ministry of Health (MOH-PRISE@health.nsw.gov.au) of any toxicity or death following vape use, and any case of opioid overdose requiring high doses of naloxone, or for clusters of presentations. Please ensure that urine, blood and vape device/liquid samples are collected and retained.

Required actions for the Local Health Districts/Networks

1. Distribute this Safety Notice to all staff (including emergency department staff) who may encounter cases of toxicity following vape use.
2. Ensure there is adequate supply of naloxone for emergency use and consider that higher doses may be required. Consider providing take-home naloxone to at-risk patients.
3. Ensure staff notify the NSW Poisons Information Centre (13 11 26) or NSW Ministry of Health (MOH-PRISE@health.nsw.gov.au) of any toxicity or death following vape use, and any case of opioid overdose requiring high doses of naloxone, or for clusters of presentations. Please ensure that urine, blood and vape device/liquid samples are collected and retained.
4. Confirm receipt and distribution of this notice **within 72 hours** to CECMedicationSafety@health.nsw.gov.au

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