

UPDATED: Cases of dependence and overdose linked to nitazenes (strong opioids) in refillable vape liquids



SAFETY NOTICE 023/24

Issue date:	26 August 2024
Content reviewed by:	Centre for Alcohol and Other Drugs – NSW Ministry of Health, NSW Standing Panel on Toxicity Risk, Emergency Care Institute Clinical Director
Replaces:	Safety Notice 031/23
Distributed to:	Chief Executives; Directors of Clinical Governance; Director, Regulation and Compliance Unit
KEY MESSAGE:	Inform NSW Health clinicians of the risk of overdose and dependence associated with refillable vapes containing nitazenes, and pathways for reporting.
ACTION REQUIRED BY:	Chief Executives; Directors of Clinical Governance
REQUIRED ACTION:	<ol style="list-style-type: none"> 1. Distribute this Safety Notice to all relevant clinicians and clinical departments where patients who use refillable vapes may present with toxicity, dependence or withdrawal. 2. Ensure that clinicians and other relevant staff are aware of the Recommendations and Notification sections of this Safety Notice and take appropriate action. 3. Confirm receipt and distribution of this Safety Notice within 72 hours to: MOH-PRISE@health.nsw.gov.au
DEADLINE:	COB 29 August 2024
We recommend you also inform:	<p>Directors, Managers and Staff of:</p> <ul style="list-style-type: none"> • Emergency Departments • Drug and Alcohol services • Mental Health services • Intensive Care Units • Paediatric Units (including Paediatric Outpatient Departments) • Settings providing services to adolescents/youth (for example, Youth Health Services) • Forensic Medicine services • Toxicology Units • NSW Ambulance
Website:	https://www.health.nsw.gov.au/sabs/Pages/default.aspx http://internal.health.nsw.gov.au/quality/sabs/index.html
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What is updated in the Safety Notice from SN:031/23?

This Safety Notice replaces SN:031/23 – Cases of harm linked to strong opioids (nitazenes) in refillable vape (e-cigarette) liquids, which has now been rescinded. This Safety Notice has been expanded to update clinicians on presentations of acute poisoning, dependence and withdrawal in relation to nitazenes in refillable vapes (e-cigarettes).

Situation

Since July 2024, 4 patients in Sydney have presented in severe opioid withdrawal after ceasing prolonged use of vapes, refilled with illicit vape liquid. The vape liquids come in a variety of colours, flavours and strengths. They were sold as non-nicotine vape liquids and in some cases were described as containing cannabinoids. Protonitazene was identified from testing of blood samples and/or the vape liquid for 3 of the cases. The fourth case reported intentionally using a vape liquid containing a nitazene. Protonitazene is a benzimidazole opioid which is about 200 times more potent than morphine (1).

These 4 patients required complex medical management of their severe opioid withdrawal. The patients were all in early adulthood, previously opioid naïve, and had been using vapes for several years. The use of these vape liquids containing nitazenes is thought to be more widespread among young people.

In 2023 (SN:031/23), there were 3 cases of harm including one death that were linked to the use of vape liquids found to contain a nitazene (protonitazene or isotonitazene). Poisoning occurred in 2 cases after using only 6-8 puffs of their vape device. All 3 cases were seeking to use non-nicotine drugs – one was expecting cannabinoids and the other 2 were expecting a synthetic opioid.

NSW Health is not aware of any cases of nitazene poisoning in patients seeking only to use a nicotine-containing vape liquid (both illicitly and legally sold). 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 and Australian drug markets. Overdoses after use of vape liquid containing a nitazene have also been reported interstate (2). Several different nitazene compounds are in circulation, and each nitazene compound probably has differing pharmacodynamics and pharmacokinetics. Nitazenes are mostly highly potent μ -opioid receptor agonists, with some having a potency similar to, or greater than fentanyl. Nitazenes can have a longer duration of action compared to other opioids, so toxicity can recur despite initial reversal with naloxone, and can pose a higher risk of respiratory depression. As with all opioids, repeat nitazene use can cause dependence and withdrawal syndromes.

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Recommendations

- All cases of suspected use of nitazenes, particularly acute poisoning or withdrawal should be notified as per 'Notification' section.
- Please ensure that urine, blood and vape device/liquid samples are collected and retained. Analysis may be performed for clinical management or public health purposes. Take a detailed history from patients using vapes, particularly those with refillable vape liquid. Focus on which drugs are being sought. Patients should be asked about whether the effects of the vape are as expected, and particularly if they are opioid-like. In documentation, include a description of the vape device and vape liquid (and include images if possible).
- Patients using an illicit vape should be advised to keep their device and associated paraphernalia in a locked box, particularly if children live with, or visit them.
- If a patient presents requesting withdrawal management from vapes suspected to contain nitazenes or other novel synthetic opioids, advice can be sought from local drug and alcohol services, or the [Drug and Alcohol Specialist Advisory Service](#) on 1800 023 687. Further advice on how to manage these patients is in development and will be distributed to Directors of Drug and Alcohol services in each LHD.
- Higher titrated doses of intravenous/intramuscular naloxone of 800 micrograms or more may be required to reverse severe opioid effects. In some cases, repeat doses or an infusion may be necessary. For patients who have been treated with naloxone, observation for at least 4 hours after the last dose of naloxone is required. Longer observation may be required for patients receiving high doses of naloxone. Seek specialist advice if uncertain.
- Discuss the extremely high potency of nitazenes with patients considering their use, and that this can translate to a higher risk of overdose.
- Where available, supply take-home naloxone to people who use illicit drugs (including in vape liquid) on discharge following opioid poisoning. Advise patients that take home naloxone can also be accessed free without prescription through many community pharmacies, needle and syringe programs, opioid treatment services and NGOs such as NUAA. The Your Room website has details of participating sites and more information on take-home naloxone. NUAA also offer a mail order program for naloxone (shop.nuaa.org.au or call 02 9171 6650).

Notification

- All cases of suspected use of nitazenes, particularly poisoning or withdrawal should be notified to the NSW Poisons Information Centre (13 11 26) or NSW Ministry of Health (MOH-PRISE@health.nsw.gov.au). Please also notify of any toxicity or death following any vape use.

Further information

[Your Room Nitazene Fact Sheet](#) (can be given to patients or posted in clinics)

References

1. The National Centre for Clinical Research on Emerging Drugs Emerging drug briefing Increasing reports of nitazene toxicity in Australia [Internet]. 2024. Available from: <https://nccred.org.au/wp-content/uploads/2024/04/Nitazenes-Emerging-Drug-Briefing.pdf>
2. Rebekka Syrjanen, Schumann JL, Castle JW, Sharp L, Griffiths A, Blakey K, et al. Protonitazene detection in two cases of opioid toxicity following the use of tetrahydrocannabinol vape products in Australia. *Clinical Toxicology*. 2024 Jul 30;1–3.