



Potent synthetic opioids implicated in heroin overdoses and deaths

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This alert is for action by: Acute, mental health and community trusts, private and voluntary sector drug and alcohol services, ambulance and 999/111 service providers, general practice and community pharmacists

This is a safety critical and complex National Patient Safety Alert. Implementation should be co-ordinated by an executive lead (or equivalent role in organisations without executive boards).

Explanation of identified safety issue:

In the past 8 weeks there has been an elevated number of overdoses (with some deaths) in people who use drugs, primarily heroin, in many parts of the country (reports are geographically widespread, with most regions affected but only a few cities or towns in each region).

Opioid drug deaths are, sadly, not uncommon (averaging 40 a week across England and Wales) but what has been seen in these areas is an unusual increase, with some common patterns and some limited evidence of a common cause.

Testing in some of these cases has found nitazenes, a group of potent synthetic opioids. Nitazenes have been identified previously in this country, but their use has been more common in the USA. Their potency and toxicity are uncertain but perhaps similar to, or more than fentanyl, which is about 100x morphine.

There is good evidence from reports that naloxone, the 'antidote' to opioid overdoses, works in these cases. The treatment required for an overdose that may be related to potent synthetic opioids is the same as for other opioid overdoses, but delivering it rapidly and completely is even more critical, as progression to respiratory arrest, and recurrence of respiratory arrest, are more likely.

People who have overdosed may need longer-term monitoring in a medical setting for up to 24 hours even if reversal of the opioid overdose has occurred.

Those in contact with heroin users should be alert to the increased possibility of overdose arising from 'heroin' containing synthetic opioids, be able to recognise possible symptoms of overdose and respond appropriately.

However, adulterated heroin is not the only risk – there have been findings of potent synthetic opioids in fake oxycodone tablets, and less commonly in fake or 'street' benzodiazepines and in synthetic cannabinoids (SCRAs).

There is no evidence for absorption of synthetic opioids through the skin but usual precautions, including masks, should be taken when handling unknown substances, especially if they have become airborne.

Actions required



Actions to be completed as soon as possible and no later than Friday 4 August 2023

1. All organisations where staff may encounter people who use drugs should ensure those staff are:

- made aware of the risk of severe toxicity resulting from adulteration of heroin with potent synthetic opioids
- able to rapidly assess suspected opioid overdose cases
- made aware the potency and toxicity of nitazenes is perhaps similar to, or more than, fentanyl, which is about 100x morphine
- alert to the symptoms of opioid overdose in known and suspected heroin users
- communicate these risks and [harm reduction messages](#) to heroin users during any contacts
- ensure people who use heroin and others who might encounter an opioid overdose have naloxone available
- able to provide or administer naloxone if appropriate.

2. All organisations that provide emergency care for opioid overdose should ensure staff are supported to:

- treat suspected cases as for any opioid overdose, using naloxone and appropriate supportive care.
- recognise the duration of action of naloxone is shorter than that of many opioids and appropriate monitoring and further doses of naloxone may be required.

In the community this could include injectable or intranasal naloxone, administering a single dose and waiting for no response before administering more.

In specialist medical settings only:

- treatment may involve the intravenous naloxone titration regimen recommended by the National Poisons Information Service (overleaf).
- intramuscular naloxone can be used as an alternative in the event that IV access is not possible or is delayed.

Additional information:

Naloxone dosing in acute medical care

The standard naloxone dosing regimen where potent opioid overdose is suspected (for adults and children > 12 years) for use in acute hospitals, subject to clinical assessment of the individual case, is:

- Give an initial dose of 400 micrograms (0.4 mg) intravenously
- If there is no response after 60 seconds, give a further 800 micrograms (0.8 mg).
- If there is still no response after another 60 seconds, give another 800 micrograms (0.8 mg).
- If still no response give a further 2 mg dose. Large doses (4 mg) may be required in a seriously poisoned patient.
- Aim for reversal of respiratory depression, not full reversal of consciousness.

This regimen provides the appropriate doses needed in severe toxicity, while minimising the risk that excessive naloxone doses might precipitate acute opioid withdrawal.

For further advice, medical professionals can use the National Poisons Information Service 24-hour telephone service on 0344 892 0111 or its online database, TOXBASE.

Further advice and reporting

- Earlier [Guidance for local areas on planning to deal with fentanyl or another potent opioid](#), which includes patient messaging, is still relevant and will shortly be updated
- To report any additional intelligence about the use of and harm from synthetic opioids please go through your local drug information system or email drug.alerts@dhsc.gov.uk. This will enable suitable information to be shared with relevant agencies, and help in assessment of the need for any further action.
- Up to date information for people considering using drugs, including advice on reducing risk, is available from www.talktofrank.com or from the FRANK helpline on 0800 77 66 00.
- [Information for clinicians on the clinical management of synthetic opioids](#) was produced by the Novel Psychoactive Treatment UK Network (NEPTUNE) in 2018
- Advice on responding in the community to an opioid overdose with naloxone is available from <http://www.prenoxadinjection.com/> (for injectable Prenoxad®), <https://www.nyxoid.com/uk> (for nasal Nyxoid®) and <https://naloxone.uk> (for Naloxone 1.26mg Nasal Spray)

Stakeholder engagement

A draft of this alert was shared with:

- Medical and pharmacy leads of drug and alcohol treatment provider organisations
- Ambulance service representative
- Patient and public representative
- NHS England & NHS Improvement

Advice for Central Alerting System (CAS) officers and risk managers

This is a safety critical and complex National Patient Safety Alert. In response to CHT/2019/001 your organisation should have developed new processes to ensure appropriate oversight and co-ordination of all National Patient Safety Alerts. CAS officers should send this Alert to the executive lead nominated in their new process to coordinate implementation of safety critical and complex National Patient Safety Alerts