This presentation aims to refresh knowledge on the causes, risk factors and management of opioid overdose and drug-related death.

Staff should ensure they are familiar with this information as it forms the basis of delivering the intervention. NB. A ‘recap’ Quiz based on the information within this presentation will be used at the Face 2 Face session in order to consolidate knowledge prior to beginning practice of the intervention.

The SDF booklet “Drug Related Deaths: What should you know” should be used in conjunction with this material (PDF version supplied)
Purpose of Training

- For many professionals working with individuals who use drugs, discussing overdose risks is already a key focus for discussion.
- The naloxone programme aims to build on this knowledge to ensure that key messages are discussed consistently and extend it to allow the supply of naloxone.
- For clients who find themselves in an overdose situation, the intervention will equip them to take the correct course of action and dispel any pre-existing myths.
- Training will focus on the delivery of the specific intervention and help you find your own style of delivery. If you would like to learn more about formal adult learning techniques follow the link at the end of the presentation.
Key Learning Outcomes

- Refresh & test knowledge – Opioid overdose risks
- Understand the importance, relevance and need for the Take Home Naloxone programme
- Refresh Basic Life Support knowledge highlighting respiratory events
- Introduce and understand naloxone administration and good practice
- Improve awareness of naloxone promotion & resources
- Understand need to communicate key points with clients
Drug-related Deaths

Background

- In 2011 438 people in Scotland lost their lives through drug overdose, **48 of these deaths were in Grampian**.
- Around 70% were experienced drug users who had been taking drugs for 6 years or more as opposed to opioid naïve individuals who were new to drug taking.
- The majority of these deaths (80%) occurred in the homes of themselves or another. **In 60% another person was present**.
- At time of death almost 90% of individuals were found to have an opioid drug present in their system.
- If naloxone had been available and those present equipped to use it, lives may have been saved.
What is an overdose?

Overdose happens when a person takes more of a drug or combination of drugs than the body can handle. As a consequence, the central nervous system is not able to properly control basic life functions. The person may pass out, stop breathing, have heart failure or experience seizures. Overdose can be fatal, although in the majority of cases it is not. Non-fatal overdose, which can be associated with several health harms, is also a cause for concerns.
### Key drugs associated with drug overdose and death

<table>
<thead>
<tr>
<th>Drugs present at time of death</th>
<th>Drugs implicated in drug death</th>
</tr>
</thead>
<tbody>
<tr>
<td>81.4% Diazepam</td>
<td>53.4% Methadone</td>
</tr>
<tr>
<td>57.3% Methadone</td>
<td>38.6% Heroin</td>
</tr>
<tr>
<td>51.5% Heroin</td>
<td>23.1% Diazepam</td>
</tr>
<tr>
<td>37.1% Alcohol</td>
<td>21.2% Alcohol</td>
</tr>
</tbody>
</table>

This information is subjective and open to the interpretation of the pathologist in each area, however it provides us with a useful overview:

1. The key drugs involved in overdose are **ALL DEPRESSANT** drugs.
2. The drugs most commonly **IMPLICATED** in drug related deaths are **OPIOID** drugs.
Effects of Depressant and Stimulant Drugs

**DEPRESSANTS**
- Slows Heart Rate
- Slows Breathing
- Lowers Temperature
- Feel less alert
- Dulls Pain
- Unconsciousness

**STIMULANTS**
- Increases Heart Rate
- Faster Breathing
- Increases Temperature
- Feel More Alert

NB: Although the effects appear to be directly opposing, administering a stimulant drug to somebody who is experiencing a depressant overdose will not reverse the overdose – a common myth. It is likely to cause further harm
The two key risk factors in overdose and drug death are reduced tolerance and poly-drug use.

1. REDUCED TOLERANCE

As our bodies get used to the repeated presence of a drug and learn to tolerate it, a higher dose is needed to maintain the same effect. Tolerance will be reduced if there is a break or reduction in drug use for a period. There will be a risk of overdose if individuals return to high levels of drug use following a break or reduction in consumption. This is a key cause of overdose and drug death.
Risk Factors

The two key risk factors in overdose and drug death are reduced tolerance and poly-drug use.

2. MIXING DRUGS INCLUDING ALCOHOL

Mixing drugs, especially depressants, is extremely dangerous. Each depressant on its own can slow down breathing and heart rate – but when used in combination these physical effects become enhanced and much more dangerous. The long-acting nature of some depressant drugs can also lead to the risk of unintentional “topping up” or poly-drug misuse.
Risk Factors

Following also increase likelihood of overdose and death:

- Using too much
- Using alone
- Injecting Drug Use
- Varying levels of purity
- Longer history of drug use
- History of non-fatal overdose
- Poor mental and/or physical health
- Homelessness
- Not being in treatment/supported/disconnected
Risk Factors continued

Following are ‘danger’ periods when individuals may be more at risk of overdose:

- On release from prison
- On leaving residential rehabilitation or hospital
- On recent detoxification
- During period of relapse
- After a recent life event (bereavement, relationship breakdown etc)
- During festive periods, weekends, holidays
Common Myths

- Do not walk the casualty around (risk of further injury)
- Don’t inflict pain (will not work on someone unconscious or who has taken a strong painkiller such as heroin)
- Don’t inject stimulant drugs (stimulant drugs cannot counteract or reverse effects of opioid overdose)
- Don’t inject salty water (there is confusion that this is similar to a hospital saline drip)
- Don’t throw water or put casualty in bath / shower (trigger shock or accidental drowning)
- Don’t put the casualty outside (risk of hypothermia)
Common Myths

- DON’T DO NOTHING!
- Dispelling myths with patients - Even if the ‘don’ts’ on the previous slide appear to have worked in the past – it is likely the drugs had worn off or the amount of drugs consumed were not enough to lead to a fatal overdose situation.
How does opioid overdose kill?

- Depresses Central Nervous System – depressed functioning
- Cyanosis (breathing too slow)
- Apnoea (breathing stops)
- Cardiac Arrest (heart stops from not getting enough oxygen)
- Circulatory Collapse (circulation of blood to the brain stops)
Observable Signs & Symptoms

**Signs of opiate overdose**

- Unraversable
- Pale skin
- Pinpoint pupils
- Blue lips
- Shallow/slow/rasping breathing or snoring

Watch film “Signs and symptoms of an opioid overdose” (Click Logo)
Appropriate Actions

The **S.A.F.E.** approach

- **SHOUT** for help
- **APPROACH** with care
- **FREE** from danger
- **EVALUATE**

Be vigilant of any present hazards to both yourself and the casualty e.g. discarded needles.
Appropriate Actions

- Dial 999
- Ask calmly for an ambulance
- Give the location and status of casualty
- Stay with the person until ambulance arrives
What is Naloxone?

- Naloxone is a pure opioid antagonist.
- It is for coma or respiratory depression (reduced breathing caused by opioids).
- Naloxone can reverse the effects of overdose if used within a short period following an overdose.
- There are no clinical exclusions from treatment where opioid overdose is suspected. Exclusion may result in the death of the patient.
- *Does not counter the effect of benzodiazepines or alcohol* (although these may of course contribute to the overdose effect).
What is Naloxone - FACTS

- Naloxone cannot make someone intoxicated / high
- Naloxone is not poisonous (if swallowed)
- Prescription only Medication currently licensed for administration subcutaneous, intramuscular or intravenous injection
- In Scotland supplied under Patient Group Direction (PGD) to individuals at risk of overdose
- **Naloxone counteracts opioid drugs for around 20 – 30 minutes and is therefore temporary**
- It does not rid the body of opioid drugs. It can buy time until an ambulance arrives
How Naloxone Works

Opioid exerting effect e.g. heroin, methadone

CNS Depressant Effect
- reduced breathing, heart rate, temperature

Euphoric effect
- sleepy / gouchy

Perfect fit – Maximum Opioid Effect.
How Naloxone Works

Effects are temporary (20 – 30 minutes)

When opioids are displaced from these receptors, the person may start to experience withdrawal. CNS controlled functions will no longer be depressed and overdose temporarily reversed.
How Naloxone Works

When naloxone leaves the receptor – the opioid drug can take its place. This *may* lead to further overdose.
Naloxone preparation & administration

Click on Image 8 below for more detailed information

Watch Film “Administering Prenoxad Injection” (Click Logo)
Recovery Position

- Remove casualties glasses (if worn)
- Kneel beside the casualty ensure both their legs are straight
- Check breathing regularly
- Tilt / adjust head back make sure airway remains open
- **Watch Film “The Recovery Position” (Click Logo)**
Basic Life Support

- Clear Airway
- Support Breathing – Rescue Breaths
- Support Circulation – Chest Compression
- 30 Compressions to 2 Rescue Breaths
  - (Breaths recommended as this is a respiratory event)
- Look, Listen & Feel for normal breathing
- Watch chest for signs of movement – no more than 10 seconds
- Start resuscitations with compressions then administer 2 breaths

Watch Film “Performing CPR” (Click Logo)
When and How – aide memoire

Click on image to see Flow Chart in full size
Preparation – Face 2 Face Training Session

On completion of Pre-reading, a half-day face-2-face session will take place and include:

- Pre-reading session & quiz (re-cap)
- Naloxone demonstration
- Recovery Position & Basic Life Support demonstration
- Role Play Practice Session (all elements above)
- Post-session evaluation
- Patient Group Direction - Naloxone (nursing staff)
Further Reading Links

- Adult Learning Styles:
  [http://www.exploreadultlearning.co.uk/the-different-learning-styles-explained.html](http://www.exploreadultlearning.co.uk/the-different-learning-styles-explained.html)

- Drug Related Death Information:

- SDF Naloxone Website:
  [http://www.naloxone.org.uk](http://www.naloxone.org.uk)

- SDF Naloxone Briefing Paper:

- Naloxone (Lord Advocate's Guidelines):

- SCSWIS Guidance - National Naloxone Programme (pdf)

- Injecting Advice Website Overdose Workshop:
Resources Available

(click graphics below to access links)
Contacts:

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