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This entry is our account of a document selected by Drug and Alcohol Findings as particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original document was not published by Findings; click on the Title to obtain copies. Links to source documents are in blue. Hover mouse over orange text for explanatory notes. The Summary is intended to convey the findings and views expressed in the document. Below is a commentary from Drug and Alcohol Findings.

Community management of opioid overdose.

World Health Organization.
World Health Organization, 2014.

Experts convened by the World Health Organization judged the risk-benefit profile to be strongly in favour of naloxone distribution to prevent opiate overdose deaths, but also cautioned that this "does not address the underlying causes of opioid overdose".

SUMMARY This account is an edited version of the summary and main recommendations of the featured report plus the section from the body of the report dealing with evidence on harms and benefits of naloxone distribution to prevent opiate overdose deaths.

Opioids are potent respiratory depressants, and overdose is a leading cause of death among people who use them. Worldwide, an estimated 69,000 people die from opioid overdose each year. The number of opioid overdoses has risen in recent years, in part due to increased use of opioids to manage chronic pain. In 2010, an estimated 16,651 people died from an overdose of prescription opioids in the United States of America alone.

Opioid overdose is treatable with naloxone, an opioid antagonist which rapidly reverses the effects of opioids. Death does not usually occur immediately, and in most cases, overdoses are witnessed by a family member, peer or someone whose work brings them into contact with people who use opioids. Increased access to naloxone for people likely to witness an overdose could significantly reduce the high numbers of opioid overdose deaths.

In recent years, programmes around the world have shown that it is feasible to provide naloxone to people likely to witness an opioid overdose (so-called 'take-home' naloxone), in combination with training on the use of naloxone and the resuscitation of people experiencing opioid overdose, prompting calls for the widespread adoption of this approach. In 2012, the United Nations Economic and Social Council called upon the World Health Organization (WHO), in collaboration with the United Nations Office on Drugs and Crime, to provide advice and guidance, based on scientific evidence, on preventing mortality from drug overdose, in particular opioid overdose.

Summary of recommendations

People likely to witness an opioid overdose should have access to naloxone and be instructed in its administration to enable them to use it for the emergency management of suspected opioid overdose.

Naloxone is effective when administered by intravenous, intramuscular, subcutaneous and intranasal routes. Persons using naloxone should select a route based on the formulation available, their skills in administration, the setting and local context.

In suspected opioid overdose, first responders should focus on airway management, assisting ventilation and administering naloxone.

After successful resuscitation following the administration of naloxone, the level of consciousness and breathing of the affected person should be closely observed until they are fully recovered.

While community management of opioid overdose with naloxone is expected to reduce the proportion of witnessed opioid overdoses which result in death, it does not address the underlying causes of opioid overdose. To further reduce the number of deaths due to opioid overdose other measures should be considered, such as:
• monitoring opioid prescribing practices;
• curbing inappropriate opioid prescribing;
• curbing inappropriate over-the-counter sales of opioids;
• increasing the rate of treatment of opioid dependence, including for those dependent on prescription opioids.

Objectives of the guidelines

These guidelines aim to reduce the number of deaths from opioid overdose by providing evidence-based recommendations on the availability of naloxone for people likely to witness an opioid overdose along with advice on the resuscitation and post-resuscitation care of opioid overdose in the community. Specifically, they seek to:
• increase the availability of naloxone to people likely to witness an opioid overdose in the pre-hospital setting;
• increase the preparedness of people likely to witness an opioid overdose to respond safely and effectively by carrying naloxone and being trained in the management of opioid overdose;
• increase the rate of effective resuscitation and post-resuscitation care by persons witnessing an opioid overdose.

The guidelines aim to meet these objectives by:
• informing health policy-makers of the benefits of increased availability and use of naloxone and effective resuscitation in the pre-hospital setting;
• informing programme managers of the benefits of developing programmes to equip people likely to witness an opioid overdose with naloxone and to train them in managing an opioid overdose;
• informing medical practitioners of the benefits of prescribing naloxone to people at risk of opioid overdose and providing advice on the management of opioid overdose.

How these guidelines were developed

Development of these guidelines began in October 2013 with the identification of the key issues for which advice was needed. The WHO steering group and Guideline Development Group were established and appropriate clinical questions were formulated. These were then set in the 'PICO' format (population, intervention, comparator, outcome) and systematic reviews were conducted for each PICO question. The quality of the evidence was then assessed according to formal criteria and a narrative evidence synthesis was also provided.

In 2014 a meeting of the Guideline Development Group was presented with evidence of values and preferences, cost-effectiveness, feasibility and resource use, along with the evidence of benefits. The group formulated recommendations (▶ panel above) taking all these domains into consideration. All except the second recommendation (about ways to administer naoloxone) were considered 'stron', meaning the group was confident that the evidence of effect, combined with certainty about the values, preferences, benefits and feasibility, made this a recommendation that should be applied in most circumstances and settings. The second recommendation was considered 'conditional', meaning there was less certainty about the evidence of effect and values, preferences, benefits and feasibility, so there may be circumstances or settings in which the recommendation does not apply.

Evidence on benefits and harms

For all the recommendations, high quality studies were lacking or very few. However, 20 studies were found which reported some data relevant to the benefits versus harms of making naloxone available to people likely to witness an opioid overdose. Also, more than 50,000 doses have been distributed in the USA alone. Based on this data, the estimated number of deaths per 100 overdoses witnessed by people who have been given naloxone was just one, compared to two to four per hundred when community use of naloxone was not available. These studies estimated that in just under 8 in 100 cases administering naloxone was followed by acute opioid withdrawal symptoms; the only adverse event reported was seizures, noted in less than 1 in 200 cases. An before-and-after study of the implementation of overdose education and nasal naloxone distribution in Massachusetts found that take-home naloxone was associated with lower opioid overdose rates.

The Guideline Development Group judged the risk-benefit profile to be strongly in favour of naloxone distribution, due to its clear potential for saving lives and apparent low risk of significant adverse effects. While training was considered an important and intrinsic component of increased naloxone availability, the group cautioned against making it compulsory or institutionalising it as there were concerns that lack of certified training may be used as a barrier to provision of naloxone. The panel noted that while minor adverse events from naloxone administration (such as vomiting and opioid withdrawal) were not uncommon, serious adverse events were extremely rare.

FINDINGS COMMENTARY An Effectiveness Bank hot topic entry has examined the UK's record on controlling drug-related deaths and opiate overdoses in particular, and the role of naloxone. Like the featured report, it saw naloxone as valuable but far from a total solution. The experts convened to produce the report cautioned that naloxone "does not address the underlying causes of opioid overdose", and that further reducing the number of deaths would also entail monitoring and curbing inappropriate opioid prescribing and over-the-counter sales, and extending treatment for opioid dependence. Wider initiatives of this kind were among those recommended by Public Health England in its guidelines on preventing drug-related deaths and by the US authorities in their *Opioid overdose toolkit*.

One of the limitations of naloxone is that for treatment services and especially those with a recovery orientation, catering for the likelihood that their patients will not recover but relapse to life-threatening opiate use may be a hard pill to swallow; swallowing it by training clients and families to prepare for relapse may seem to counter-therapeutically undermine the optimism at the heart of the recovery movement. Similarly, for patients looking forward to a new life where they have escaped drugs and drugtaking circles, learning a lifesaving technique predicated on continued contact with (largely) injecting drug use(rs) can seem undermining and irrelevant.

See the Effectiveness Bank hot topic referred to above for more on overdose prevention and naloxone.

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Consideration of naloxone REVIEW 2012

Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence DOCUMENT 2009

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