

Governor's Office of Crime Control & Prevention

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Naloxone

What is Naloxone?

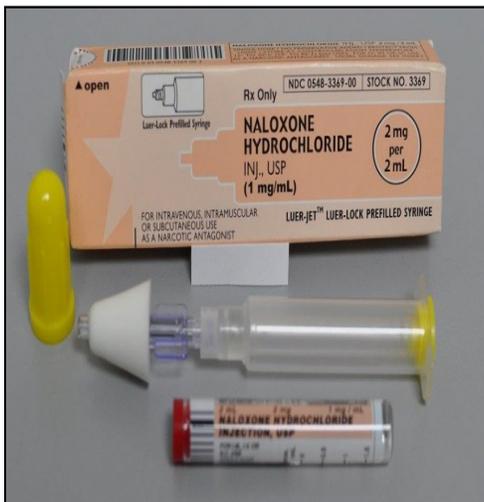
Naloxone is an antidote used as a pharmaceutical ingredient for the emergency treatment to reverse the life-threatening effects of an opioid overdose. Patented in 1961 and FDA approved in 1971, Naloxone was originally administered in an injectable form, most commonly delivered by syringe or auto-injector. With the increasing epidemic of opioid overdose deaths, efforts were increased to have the product available for first responders, including law enforcement.

Naloxone Kits

The next development in naloxone administration was the creation of a “kit” which continued to incorporate a syringe but also contained a nasal atomizer. Immediately prior to use, the nasal atomizer is manually connected to the syringe. This began the nasal spray method of administration. These “kits” have been effective in saving lives but a certain amount of time is required to attach the atomizer. Also, an uneven amount of naloxone may be administered. These “kits”, produced by Amphaster Pharmaceuticals, are a pre-filled syringe with atomizer. They deliver a 2mg dose of naloxone in a 2ml nasal spray and are not FDA approved.

Narcan®

The next developmental step took place when Adapt Pharma, Inc. collaborated with the National Institute on Drug Abuse (NIDA) to develop Narcan® (naloxone hydrochloride) Nasal Spray. It was approved by the FDA under priority review in November 2015. Narcan is a ready to use, needle-free treatment option that can be used by non-medically trained individuals. Narcan delivers a 4mg dose of Naloxone in a single concentrated 0.1ml nasal spray. As with other methods, Narcan is not a substitute for emergency medical care and may cause severe opioid withdrawal symptoms.



Naloxone Research

There does not appear to be a lot of research regarding the forms of Naloxone administration. Of the studies found, none made strong statements as to the effectiveness of one type of administration or another. One study concludes that “intranasal naloxone may provide a safe, rapid, effective way to manage suspected opioid overdoses, and use of this route – rather than intravenous naloxone - may be preferential as associated risks are minimal.”

Another study from Australia aims to determine the effectiveness of intranasal Naloxone compared with intramuscular Naloxone. This study concluded that, “in prehospital settings at least – the intranasal delivery of Naloxone may be preferable as it could reduce the risk of needlestick injuries and exposure to blood-borne infections.”

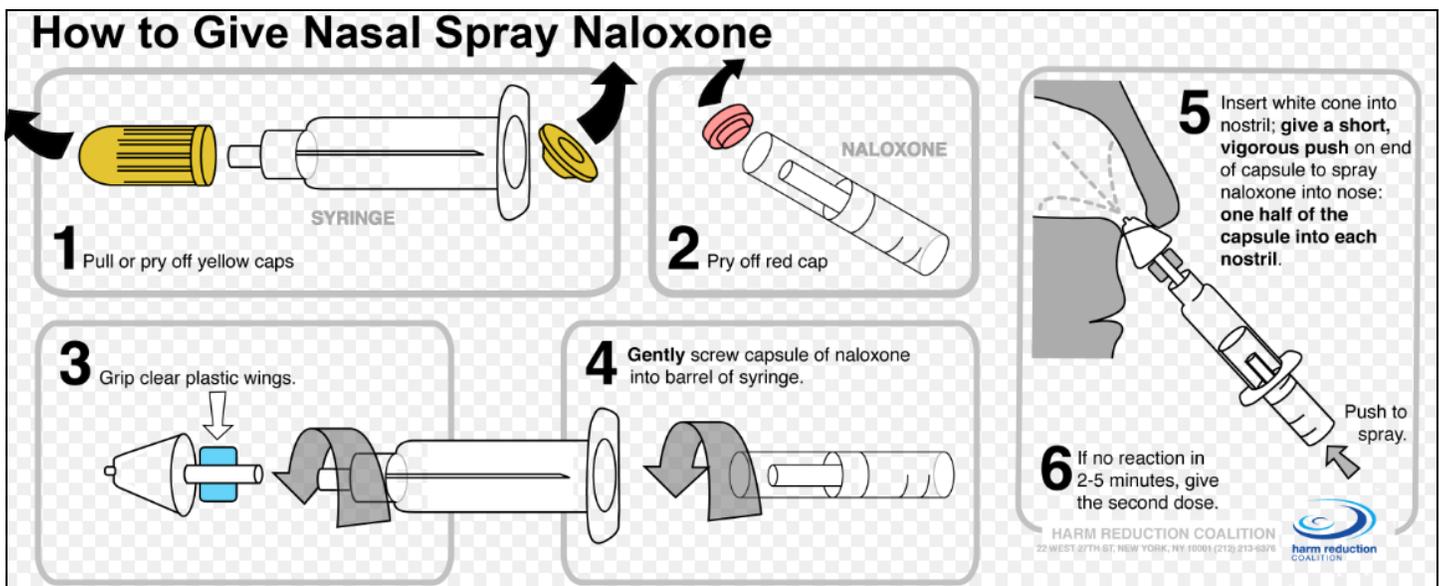
As stronger opioids become available for street usage, Naloxone formulations and dosage amounts may need to be redefined. The FDA conducted hearings on this topic in September, 2016 but they have not yet issued their findings.

Conclusion

No study shows that one product is much more efficient than the other and all three groups of products have saved lives. The intranasal delivery method is safer and easier to use than the injector method while the Narcan product is more user friendly, does not require assembly and delivers a consistent, measured dose.

Studies and behavioral health personnel emphasize that the availability of Naloxone must spread beyond first responders and medical personnel. The goal is now to have Naloxone widespread throughout the general community to include those known to have a substance use disorder. With the expansion of availability to consumers outside of healthcare settings, increased emphasis is placed on the more user-friendly and FDA approved, nasal delivery systems.

Naloxone is a life saving tool but it is not a treatment tool. Upon recovery from an overdose situation, every effort must be made to have the victim enter into an appropriate treatment setting.



Referenced Illustrations:

Narcan.com

National Council on Alcoholism and Drug Dependence

Fox News