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Naloxone for Opioid Overdose: Considerations for Congress

Opioids, such as heroin, fentanyl, and some prescription pain medications (including morphine and oxycodone), are substances that act on receptors in the body important in regulating pain and emotion. As opioid *agonists*, these substances attach to and activate opioid receptors that can relieve pain, induce euphoria, or depress the central nervous and respiratory systems. In an overdose, opioids cause dangerously slow breathing, coma, and even death. In 2021, opioids were involved in over 80,000 overdose deaths in the United States.

Opioid Overdose Reversal Medications: Naloxone

Naloxone is a medication that can reverse an opioid overdose. As an opioid *antagonist*, it attaches to opioid receptors but does not activate them. When administered during an opioid overdose, naloxone temporarily displaces opioid agonists from the opioid receptors and blocks additional opioid agonists from attaching, thus temporarily stopping their effects and reversing the overdose. (Naloxone is the most commonly used, though not the only, opioid overdose reversal medication. Nalmefene, another opioid antagonist, works in a similar manner.) Naloxone can cause withdrawal symptoms to an opioid user, though it is mostly harmless when administered to someone not using opioids. Naloxone only works to counteract the effects of opioid drugs; it has no effect in reversing overdoses from other substances. Comparable overdose reversal medications for non-opioid drugs, such as methamphetamine and cocaine, do not yet exist.

Federal Regulation of Naloxone

Naloxone is regulated under the Federal Food, Drug, and Cosmetic Act (FFDCA, 21 U.S.C. §§301 et seq.), which gives the U.S. Food and Drug Administration (FDA) primary responsibility for ensuring the safety and effectiveness of drugs. (See CRS Report R41983, *How FDA Approves Drugs and Regulates Their Safety and Effectiveness*.) Naloxone is not a controlled substance and does not carry risk of misuse.

Until 2023, naloxone was available only by prescription. To increase accessibility of naloxone, many states issued *standing orders* or *third-party prescriptions*, which allow pharmacists to dispense naloxone without a prescription. These state laws also permit broad distribution and use of naloxone via community organizations and schools.

Naloxone Formulations

From its approval in 1971 through 2014, naloxone was available only in an injectable form. This formulation can be difficult for nonprofessionals to administer and poses risks of needle sticks when giving injections. An atomization attachment can transform liquid naloxone from a syringe into a mist for intranasal use, though this process requires multiple steps for use during an overdose. In 2015, the FDA approved naloxone in a more user-friendly nasal spray form (Narcan®), and a generic nasal spray in 2019 (**Table 1**). In March 2023, FDA approved Narcan as an over-the-counter drug (OTC), and a second nasal spray, RiVive, in July 2023. Naloxone is currently available in several prescription and nonprescription (i.e., OTC) forms. Depending on the strength of the formulation and the overdose circumstances, multiple doses of naloxone may be needed for effectiveness.

Table 1. Naloxone Nasal Spray Product Examples

Product and Manufacturer	Formulation	FDA Status
Narcan® by Emergent BioSolutions	4 mg naloxone HCl nasal spray	OTC
RiVive by Harm Reduction Therapeutics	3 mg naloxone HCl nasal spray	OTC
Naloxone HCl (generic) by Padagis Israel Pharmaceuticals	4 mg naloxone HCl nasal spray	OTC
Naloxone HCl (generic) by Teva Pharmaceuticals	4 mg naloxone HCl nasal spray	Rx
Kloxxado by Hikma Pharmaceuticals	8 mg naloxone HCl nasal spray	Rx

Source: FDA *Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations.* (List is not exhaustive.)

Notes: FDA=U.S. Food and Drug Administration; HCl=hydrochloride (a salt included for drug administration); OTC=available over-the-counter (i.e., without a prescription), mg=milligram, Rx=available by prescription only.

Considerations for Congress

Naloxone is effective only if it is available and administered during an overdose. As such, Congress may have an interest in increasing accessibility of the drug. Most determinations on distribution and use of naloxone are made at the state and local levels, though Congress has some relevant authorities. A common strategy at the federal level, for instance, is to provide support for state and local initiatives through grants or technical assistance.

Distribution of Naloxone

Naloxone is currently distributed by pharmacies, health care facilities, and entities outside the traditional health care system, such as harm reduction organizations, first responders, prisons, and schools. According to a March 2023 report by the Reagan-Udall Foundation, nearly half (45%) of the 17 million doses of naloxone distributed in the United States in 2021 were distributed outside retail pharmacies and health care facilities. In these instances, local health departments, harm reduction organizations, first responder groups, schools, and other community

organizations may purchase or receive doses of naloxone to further distribute or administer. These doses may be purchased directly from manufacturers by organizations, or by states using federal or state funds.

Figure 1. Naloxone Nasal Spray

Source: Centers for Disease Control and Prevention.

Cost of Naloxone

The price of over-the-counter products is determined by individual retailers. When Narcan became available on store shelves without a prescription in September 2023, Emergent BioSolutions announced a Manufacturer's Suggested Retail Price of $45 for a two-dose carton (and $41 for public interest partners). Costs for prescription-only forms of naloxone are subject to many factors (see CRS Report R44832, *Frequently Asked Questions About Prescription Drug Pricing and Policy*). While prescription naloxone dispensed at pharmacies or health facilities may be covered by many insurance plans and by Medicare and Medicaid, the outlook for private and public coverage of OTC naloxone is less clear.

Federal Funding for Naloxone

Naloxone distributed at no cost to consumers or insurance programs may be supported by a blend of federal, state, and private funding. States and localities may use state funds or opioid settlement money to acquire naloxone (some settlement agreements include specific naloxone purchasing, donation, or availability requirements). Most federal funding supporting substance use treatment and harm reduction (including naloxone purchasing and distribution) is in the form of block grants to states. There is no national stockpile of naloxone, or any federal requirement for states to procure and distribute a certain amount. Some federal programs directly support overdose reversal medication training and distribution (**Table 2**).

Education, Training, and Accessibility

Federal law requires all prescribers of controlled substances to complete training in using FDA-approved medications for the treatment of opioid use disorder. Mandates for co-prescribing naloxone with opioid pain medications are determined by states. Similarly, requirements for naloxone access in specific locations, such as schools, are mostly determined by state or local governments. Federal agencies provide grants and technical assistance for education and training in how to administer naloxone via professional development for first responders or school personnel, for example, or to the public via awareness campaigns.

Table 2. Selected Federal Grant Programs for Opioid Overdose Reversal Drugs

Program	Authorization	Appropriation
State Opioid Response (SOR)	42 U.S.C. §290ee-3a; $1.75 billion for each of FY2023-FY2027	$1.5 billion for FY2023
Grants to Prevent Prescription Drug/Opioid Overdose-Related Deaths (PDO)	42 U.S.C. §290bb-22	$16 million for FY2023
First Responder Training	42 U.S.C. §290ee-1; $36 million for each of FY2019-FY2023	$56 million for FY2023
Improving Access to Overdose Treatment	42 U.S.C. §290dd-3; $5 million for the period of FY2023-FY2027	$1.5 million for FY2023
Harm Reduction Grant Program	Section 2706 of the American Rescue Plan Act (P.L. 117-2)	$30 million in P.L. 117-2 (available until expended)
Rural Emergency Medical Services Training Grant	42 U.S.C. §254c-15; such sums as necessary for each of FY2019-FY2023	$10.5 million for FY2023
Comprehensive Opioid, Stimulant, and Substance Use Program	34 U.S.C. §10701 et seq.	$190 million for FY2023

Source: CRS.

Notes: Authorizations included here typically cite drugs approved under the FFDCA for emergency treatment of an opioid overdose; they do not explicitly name naloxone. See authorizations for allowable uses of funds. This list is not exhaustive; other grants may also allow for the purchase and distribution of naloxone. For SOR grant information, see CRS In Focus IF12116, *Opioid Block Grants*.

Good Samaritan Laws and Liability Protections

Witnesses of overdoses sometimes hesitate to intervene or call 911 for fear of criminal prosecution on drug charges. Laws providing immunity for those who act in good faith to seek medical care may allay such fears and increase treatment-seeking behavior. Similarly, liability protections for people who distribute naloxone kits or administer naloxone may also encourage bystanders to act during a suspected overdose.

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