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Vermont Legislative Research Shop

Addressing Opiate Overdose Problems

Opiate use and Opiate overdoses are a growing problem in Vermont. Between 1999 and 2002, eighty-five Vermonters died from opiate overdoses. According to Cindy Hooley, the Vital Statistics Information Manager at the Vermont Department of Health (Agency of Human Services), the total number of drug related deaths in Vermont in 2007 (which includes all cases up to the end of November 2007) was 80. Of these 80 deaths, the total number of opioid/opiate (which includes heroin) deaths was 58. As Figure 1 shows, the number of deaths from opiate overdose grew from 41 in 2004 to 58 in 2007.

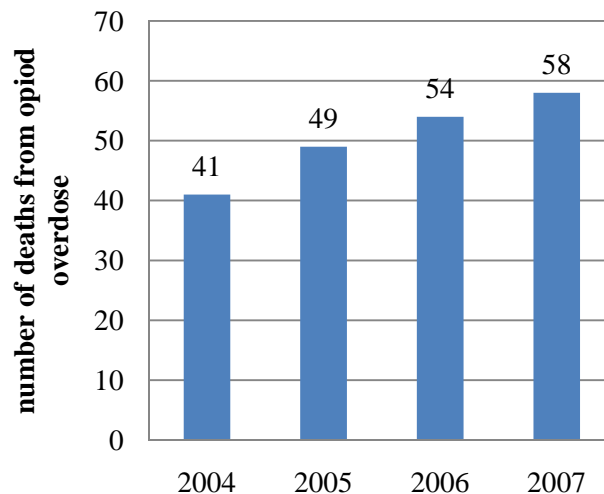


Figure 1: Number of Opiod/opiate deaths in Vermont

Source: Vermont Department of Health

Opiate Effects on Vermont's Population

State Health officials estimate the number of Vermonters seeking treatment for opiate use is about 1,200; the number of people using the drug is estimated to be around 2,000 to 3,000 (Office of Senator Leahy 2008). An anonymous intake study, done by the Howard Center Safe Recovery Syringe Exchange program in Burlington, Vermont found that out of 134 surveyed users, 63 users (or 47 percent of the sample) witnessed someone overdosing and 40 of those users (or 30 percent) had experienced an overdose personally (Keller, 2008).

Naloxone

The prescription drug Naloxone is the standard treatment for opiate overdose, and is administered in hospital emergency rooms and by first responders. Naloxone is not a controlled substance but a prescription drug subject to general laws and regulations. There is no Vermont case-law discussing physicians' general authority to prescribe this drug, nor is there case-law challenging the legality of Naloxone as a prescription (Burris 2007).

Naloxone Hydrochloride (Naloxone) is an opoid receptor antagonist that can be administered via intramuscular, intranasal, intravenous, or subcutaneous routes, and is used to reverse opiate overdoses from drugs such as heroin. It works by competing for the same receptors in the brain, displacing the opiate. Immediate administration is critical in situations of overdose.

Naloxone carries no agonist properties or potential for abuse (due to its markedly unpleasant withdrawal syndrome in opiate users), it is inexpensive and nonscheduled, and it is effective at reversing the effects of opiate—thus it is common practice for paramedics to use Naloxone in emergency medical systems. Naloxone is dispensed in labeled kits contained in needle-proof hardened plastic containers.

Currently, in Vermont, it is illegal for Naloxone to be administered to an overdose patient to whom it was not prescribed.

First Responders and Naloxone

As police are often the first to arrive at the scene of an overdose, some states have implemented programs that allow police and other first responders to administer Naloxone to an overdose victim (similar to how police are trained to use a defibrillator for victims of heart attacks). In some municipalities only paramedics are qualified to administer Naloxone while EMTs (emergency medical technicians) are not trained to do so. In situations where EMTs cover neighborhoods not covered by paramedics, users who overdose might go without Naloxone, which would add to the number of preventable overdose deaths. First responders have commented that a program that trains police, EMTs, as well as paramedics in emergency administration of Naloxone should also include a mechanism to protect against legal liability should the treatment prove ineffective (Sullivan 2006).

Good Samaritan Laws

Most lethal opiate overdoses occur in the company of others between, one to three hours after injection, and almost all overdoses are treatable (Sporer 2006). Research shows that witness concern over police involvement has been the largest barrier in seeking medical help through the 911 system. Even when such help is sought, it may be sought too late because it is seen as a last resort. Because opiates are illegal substances, bystanders are often afraid to call 911 because they may be opiate users themselves, or they may either be on parole or have outstanding warrants. Instead of calling EMS (emergency medical services), for fear of police involvement,

bystanders may try a variety of methods in order to aid the victim—some of these responses can be helpful, others provide uncertain benefit, and some are definitely harmful. In other cases, an overdose victim might be taken to a public area and dropped off to be discovered by others who will then contact emergency services. Because of these problems, recent initiatives have looked to change policy involving the arrest of overdose victims and witnesses by adding or establishing Good Samaritan laws sensitive to overdose situations.

Laws that make it possible for opiate users who have been trained to administer Naloxone to administer the drug to others without punishment—even though such people would not have a prescription for Naloxone—have been adopted by some states and local governments (see below). There also exist a number of nongovernmental organizations that train individuals on how to report an overdose without incriminating themselves, reducing the possibility of problems with police.

Concerns

The primary concern about prescribing Naloxone and passing Good Samaritan laws is that such laws might encourage an increase in opiate use because users feel they have a safety net in case of an overdose. To date, the only published evaluation of the impact of these laws found no increase in the frequency of reported opiate injections or rate of personal overdoses associated with such laws (Sporer *et al* 2005). Some consider the distribution of Naloxone as condoning the use of opiates, or that it might encourage people to start using opiates. There is currently no research evidence to justify these concerns either.

Another concern is that the 911 system will not be used after successful resuscitation using Naloxone. This could be alarming since complications following resuscitation may require in-hospital treatment. Two studies have shown that the incidences of EMS being called in the case of an opiate overdose have declined (from 30-50% to 10-31% of cases) when situations involved the use of prescription Naloxone (Sporer *et al* 2005, Dettmer K. *et al* 2001). A study of a pilot program in San Francisco, however, did not find that the availability of Naloxone would change the rate of calling emergency services (Baca 2005).

There are also medical concerns involved with widespread prescription of Naloxone. The drug has been associated with a small but consistent rate of complications such as seizures, pulmonary edema, and arrhythmias. Transient moderate to severe withdrawal (in 17% to 33% of cases) is associated with Naloxone treatment of opiate overdose. The half-life of Naloxone is shorter than that of opiates, and sedation and respiratory depression may recur in 15% of suspected opiate overdose patients treated with Naloxone. Using unsterile needles to administer may transmit blood-borne infections (Sporer, 2006). Any such adverse health side effects could bring legal implications in the event Naloxone is administered to whom it is not prescribed.

Finally, Naloxone alone may be insufficient in some overdose situations and CPR, especially rescue breathing, may be necessary. A second dose of Naloxone may also sometimes be necessary.

Government Activity

There are a number of programs that prescribe Naloxone to opiate users. These programs began in Europe, starting in Germany and England. Naloxone became available over the counter in Turin, Italy in 1995 and Australia soon followed suit. The drug was first distributed in the United States in 1999 through underground programs and informal networks. Since then a number of Naloxone-prescribing programs have sprung up across the country, including programs in four major cities. The following section will outline some of the major programs in the U.S.

New Mexico

In 2001, New Mexico passed legislation legalizing the use of Naloxone and legislation that dealt with medical liability by releasing those involved with the prescription and administration of the drug from liability. In 2007, the legislature enacted the “911 Good Samaritan Law,” which provides limited immunity for those who seek help for an overdose victim. Under the law, “limited immunity” means that the law does not protect against prosecution for other offences, including drug trafficking and outstanding warrants. The law protects those seeking help for the overdose victim, by disallowing prosecution based on the evidence gained through the overdose incident. Drug users, themselves, are protected from prosecution if the “process of seeking help for an overdose provides the only evidence against them” (Blumenthal 2007). In 2004, New Mexico had the third highest number of drug-related deaths in the nation, averaging about 17.8 deaths per 100,000. Between 2005 and 2006, the rate of users dying from unintentional opiate overdoses dropped 21 percent (Busemeyer 2008).

New York

In 2003, New York’s Syringe Exchange Program received permission from the state to initiate pilot overdose prevention programs in New York City. Under New York laws, Naloxone prescriptions are provided for solely the patient’s use, but these pilot programs were authorized to prescribe the drug to users with the goal of administering it to others. After the development of the pilot program health officials began discussions with the state government. In 2005 a new bill that provided “standards for opioid overdose prevention programs in New York State” was passed by the state legislature. This bill effectively provided funding for programs that emulated the New York City program (Heller 2007).

Chicago

In Chicago, the Chicago Recovery Alliance (CRA) has been operating an overdose-management training program since 2001. It started as an informal, underground effort in 1997 and was formally adopted by the city in 2001. People interested in learning how to respond to overdoses can stop by the CRA van or the drop-in center/needle exchange for training. Training is conducted in groups, pairs, or one-on-one and a medical history is collected on all patients before training. The trainees are taught basic opioid neurophysiology, risk factors and prevention techniques for an opioid overdose, signs and symptoms for early recognition, prevention of

choking in the patient, rescue breathing and CPR, routes of administration and dosing guidelines for Naloxone, as well as protocols for follow up care. Upon completion of the program, the trainee is given a vial of Naloxone, sterile syringes for administration use, an instruction card on overdose recognition and response, and a prescription to carry Naloxone. Since 2001, 6,200 ten-dose vials of Naloxone have been prescribed by the CRA and 465 reports of successful peer overdose reversals, with one report of an unsuccessful reversal in a multi-drug overdose. In Chicago in 2001, opiate overdose deaths decreased by 20%, and by 10% in both 2002 and 2003 (Chicago Recovery Reliance 2006).

San Francisco

In San Francisco, a pilot program was developed in 2001 to "investigate the safety and feasibility of training injection drug using partners to perform cardiopulmonary resuscitation (CPR) and administer Naloxone in the event of heroin overdose" (Sporer *et. al* 2005). In May and June of 2001, the study developers recruited 24 street users to form 12 pairs of injection partners (IDU's). The participants took part in an 8-hour program which focused on opiate overdose prevention, CPR, and the use of Naloxone. After the training session, the participants were followed for 6 months, and a study cited the number and outcomes of witnessed opiate overdoses by the participants. Within the 6 months, the participants witnessed a total of 20 opiate overdoses. In 16 (80%) of the cases, CPR was performed and in 15 of the cases (75%) Naloxone was administered (Sporer *et. al*, 2005).

Table 1. Large and established Naloxone prescription programs in the United States (February 2006).

City	Year of Establishment	Number of Trainings/Prescriptions	Number of Reported Overdose Reversals
Chicago	1999	4,600	416
New Mexico	2001	1,312	222
San Francisco	2003	650	141
Baltimore	2004	951	131
New York City	2005	938	73

Sources: Chicago: D. Bigg, written communication, March 2006; New Mexico: P Fluty, written communication, March 2006; San Francisco: E. Huriaux, written communication, March 2006; Baltimore: M. Rucker, written communication, March 2006; New York: S Stancliff, written communication, March 2006.

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Disclaimer: This report has been compiled by undergraduate students at the University of Vermont under the supervision of Professor Anthony Gierzynski. The material contained in the report does not reflect the official policy of the University of Vermont.