



---

## Preliminary Evidence of Health Care Provider Support for Naloxone Prescription as Overdose Fatality Prevention Strategy in New York City

Phillip O. Coffin, Crystal Fuller, Liza Vadnai,  
Shannon Blaney, Sandro Galea, and David Vlahov

---

**ABSTRACT** *Preliminary research suggests that naloxone (Narcan), a short-acting opiate antagonist, could be provided by prescription or distribution to heroin users to reduce the likelihood of fatality from overdose. We conducted a random postal survey of 1,100 prescription-authorized health care providers in New York City to determine willingness to prescribe naloxone to patients at risk of an opiate overdose. Among 363 nurse practitioners, physicians, and physician assistants responding, 33.4% would consider prescribing naloxone, and 29.4% were unsure. This preliminary study suggests that a substantial number of New York City health care providers would prescribe naloxone for opiate overdose prevention.*

---

### INTRODUCTION

Preliminary research suggests that naloxone (Narcan) could be provided by prescription or distribution to heroin users to reduce the likelihood of fatality from overdose.<sup>1</sup> Naloxone is a potent and specific opioid receptor antagonist used clinically to reverse an opiate overdose or the effects of opiate analgesia. Effects occur within 1–2 minutes of administration and last 45 to 90 minutes.<sup>2</sup> Opiate overdose reversal with naloxone is nearly universal, and adverse effects are rare at therapeutic doses.<sup>3,4</sup>

Naloxone is regulated as a prescription drug in the United States, but is neither carried by nonhospital pharmacies nor traditionally prescribed for take-home use. Naloxone was prescribed in conjunction with rescue breathing training in a trial in 2001–2002 in San Francisco, California<sup>5</sup>; since 1999 in Chicago, Illinois<sup>6</sup>; and as part of a state overdose prevention initiative in New Mexico since 2001. Since the 1980s, naloxone has been available as an over-the-counter medication in Italy<sup>7</sup> and distributed through low-threshold services in Berlin, Germany, and Jersey, United Kingdom.<sup>8</sup> Preliminary results from Berlin, Jersey,<sup>8</sup> and Chicago<sup>6</sup> document lifesaving events through peer administration of naloxone and no observed adverse effects. Evaluations of the acceptability of naloxone distribution to drug users found the proposal to be appealing and feasible.<sup>9–11</sup>

A survey of health care providers' opinions about naloxone administration had not been conducted. To explore the feasibility of a naloxone program in New York City, we evaluated the willingness of providers to prescribe naloxone for patients at risk of opiate overdose.

---

All authors are affiliated with the Center for Urban Epidemiologic Studies at the New York Academy of Medicine.

Correspondence: Phillip O. Coffin, MIA, 255 Lincoln Way, San Francisco, CA 94122. (E-mail: pcoffin9@itsa.ucsf.edu)

## METHODS

Through a Freedom of Information Act request, we obtained a list of all health care providers with prescription authority (nurse practitioners [NPs], physicians [MDs], and physician assistants [PAs]) registered with the New York Department of Education. We limited NPs and MDs to a broad subset of medicine specialties that address issues related to patients' illicit drug use and drew a random sample of 1,100 subjects. The sample was weighted to capture 70% MDs. A survey 7–10 minutes long was used that measured health care attitudes and practices surrounding several aspects of health care for injection drug users (IDUs). The New York Academy of Medicine Institutional Review Board approved this study in April 2001.

## RESULTS

There were 29 surveys that were undeliverable, and 364 providers responded within 6 weeks, for an overall response rate of 34.0%. A total of 363 responses were included in the analysis. Males comprised 54.0%; 68.4% were white, 13.6% were Asian or Pacific Islander, 9.4% were African American or black, and 5.8% were Latino. In accordance with our weighted sample, 15.6% of respondents were NPs, 68.0% were MDs, and 16.4% were PAs. The largest plurality of respondents specialized in internal medicine (23.3%), psychiatry (17.5%), pediatrics (12.3%), and general practice (10.4%). Over one third (39.6%) practiced in an office, 32.1% in a hospital, 14.8% in a clinic, and 2.5% in other settings. One fifth (19.8%) directed a program or clinic. Most respondents had panels of 40–600 patients. Nearly one quarter (24.7%) reported active IDUs in their panel, and among those respondents, 45.7% reported that more than 5% of their panel were IDUs.

Overall, 33.4% of respondents reported that they would consider prescribing naloxone to patients at risk of opiate overdose; 29.4% were unsure, and 37.1% would not prescribe naloxone (see Table). There were no significant differences in support by provider characteristics. Among respondents with active IDUs in their panel, 46% would consider prescribing naloxone, although this difference was not significant. Specialties for which at least 40% would prescribe naloxone included family practice (45%), gynecology (50%), critical care (42%), and addiction psychiatry (40%).

**TABLE. Percentage that would consider prescribing naloxone to patients at risk of heroin overdose**

	Yes, %	Unsure, %	No, %
Total	33	29	37
Nurse practitioner (N = 57)	30	44	26
Physician (N = 234)	33	26	41
Physician assistant (N = 59)	37	31	32
Active IDUs in panel (N = 69)	46	22	32
No active IDUs in panel (N = 210)	33	27	40

IDU, injecting drug user.

## DISCUSSION

The response rate is low for epidemiologic research, but is within the normal range for postal surveys and relatively high for postal surveys of this population. We did not study the reasons respondents would or would not prescribe naloxone. Concerns about prescription have been addressed in other studies. Burris et al.<sup>12</sup> found no likely legal risks to providers from prescription of naloxone in the United States. Surveys of drug users found that naloxone distribution is unlikely to lead to more opiate use, if only due to the unpleasant effects of naloxone.<sup>10</sup> Among 34 peer naloxone administrations, Dettmer et al.<sup>8</sup> found administration to be inappropriate in only 1 case (a cocaine overdose). Premature reinjection of heroin leading to a new overdose has not been found to be a problem among overdose patients released against medical advice after naloxone administration.<sup>13</sup> Nonetheless, these and other risks should be addressed and monitored in any distribution program.

These preliminary data suggest that a substantial portion of health care providers in New York City would prescribe naloxone for opiate overdose prevention. Support may be greater for more comprehensive naloxone programs, including training in the administration of naloxone, rescue breathing, or cardiopulmonary resuscitation. Further research should identify concerns about naloxone prescription and evaluate provider and patient experiences in naloxone distribution initiatives.

## REFERENCES

1. Strang J. Take-home naloxone: the next steps. *Addiction*. 1999;94:207.
2. Chamberlain JM, Klein BL. A comprehensive review of naloxone for the emergency physician. *Am J Emerg Med*. 1994;12:650–660.
3. Strang J, Darke S, Hall S, Farrell M, Ali R. Heroin overdose: the case for take-home naloxone—editorial. *BMJ*. 1996;312:1435–1436.
4. Sporer KA. Acute heroin overdose. *Ann Intern Med*. 1999;130:584–590.
5. Seal KH, Hammond JP, Ciccarone D, Downing M, Thawley R, Edlin B. Providing naloxone to IDUs can save lives. Paper presented at: Fourth National Harm Reduction Conference; December 1, 2002; Seattle, WA.
6. Bigg D, Maxwell S. Enabling people to stay alive: an effective opiate overdose prevention program. Paper presented at: Fourth National Harm Reduction Conference; December 1, 2002; Seattle, WA.
7. Campana S. Overdose mortality and naloxone distribution in Italy. Paper presented at: Prevention Heroin Overdose: Pragmatic Approaches; January 13–14, 2000; Seattle, WA.
8. Dettmer K, Saunders B, Strang J. Take home naloxone and the prevention of deaths from opiate overdose: two pilot schemes. *BMJ*. 2001;322:895–896.
9. Seal K, Downing M, Kral AH, et al. Attitudes about prescribing take-home naloxone to injection drug users for the management of heroin overdose: a survey of street-recruited injectors in the San Francisco Bay area. *J Urban Health*. 2003;80:290–301.
10. Strang J, Powis B, Best D, et al. Preventing opiate overdose fatalities with take-home naloxone: pre-launch study of possible impact and acceptability. *Addiction*. 1999;94:199–204.
11. Lenton SR, Hargreaves KM. Should we conduct a trial of distributing naloxone to heroin users for peer administration to prevent fatal overdose? *Med J Aust*. 2000;173:260–263.
12. Burris S, Norland J, Edlin B. Legal aspects of providing naloxone to heroin users in the United States. *Int J Drug Policy*. 2001;12:237–248.
13. Vilke GM, Buchanan J, Dunford JV, Chan TC. Are heroin overdose deaths related to patient release after prehospital treatment with naloxone? *Prehosp Emerg Care*. 1999;3:183–186.