Naloxone for Opioid Safety

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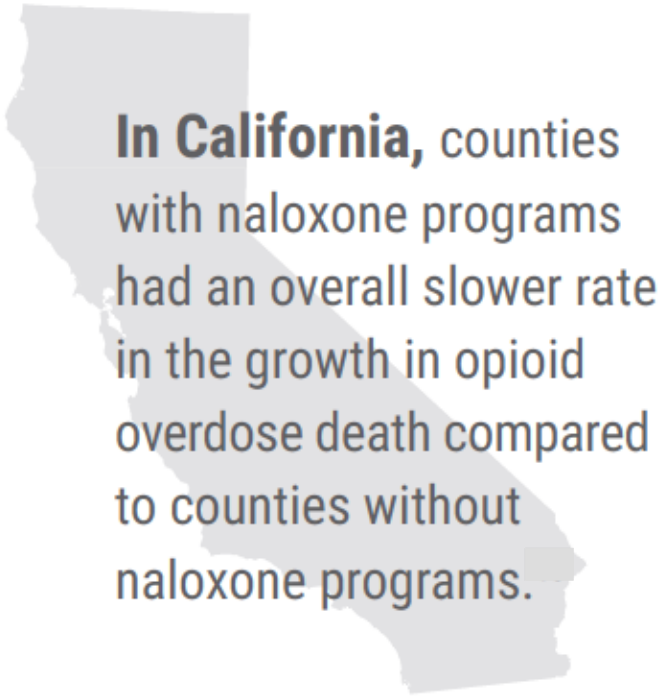
Disclosure Information

Gilead, Donated ledipasvir-sofosbuvir, Study, 2016-present
Alkermes, Donated ER-naltrexone, Study, 2014-2015

Fatal Opioid Overdose Rates by Naloxone Distribution in Massachusetts



In California, counties with naloxone programs had an overall slower rate in the growth in opioid overdose death compared to counties without naloxone programs.

* Adjusted Rate Ratios (ARR) adjusted for population age <18, male, race/ethnicity, below poverty level, medically supervised inpatient withdrawal, methadone and buprenorphine treatment, prescriptions to doctor shoppers, year

Sources: Walley et al., Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. BMJ. 2013;346:f174; Davidson et al., Naloxone distribution to drug users in California and opioid-overdose death rates. Drug & Alc Dep. 2015; 156: e54.

Naloxone Cost-Effectiveness

Cost:

$421 per quality-adjusted life-year gained

Benefit:

164 naloxone scripts = 1 prevented death

Emerging data suggests that providing naloxone may encourage patients to be safer with their opioid use. If this is the case, the intervention would be cost-saving and **36 prescriptions** would prevent one death.

Source: Coffin PO, Sullivan SD. Cost-effectiveness of distributing naloxone to heroin users for lay overdose reversal. Ann Intern Med. 2013;158:1-9.

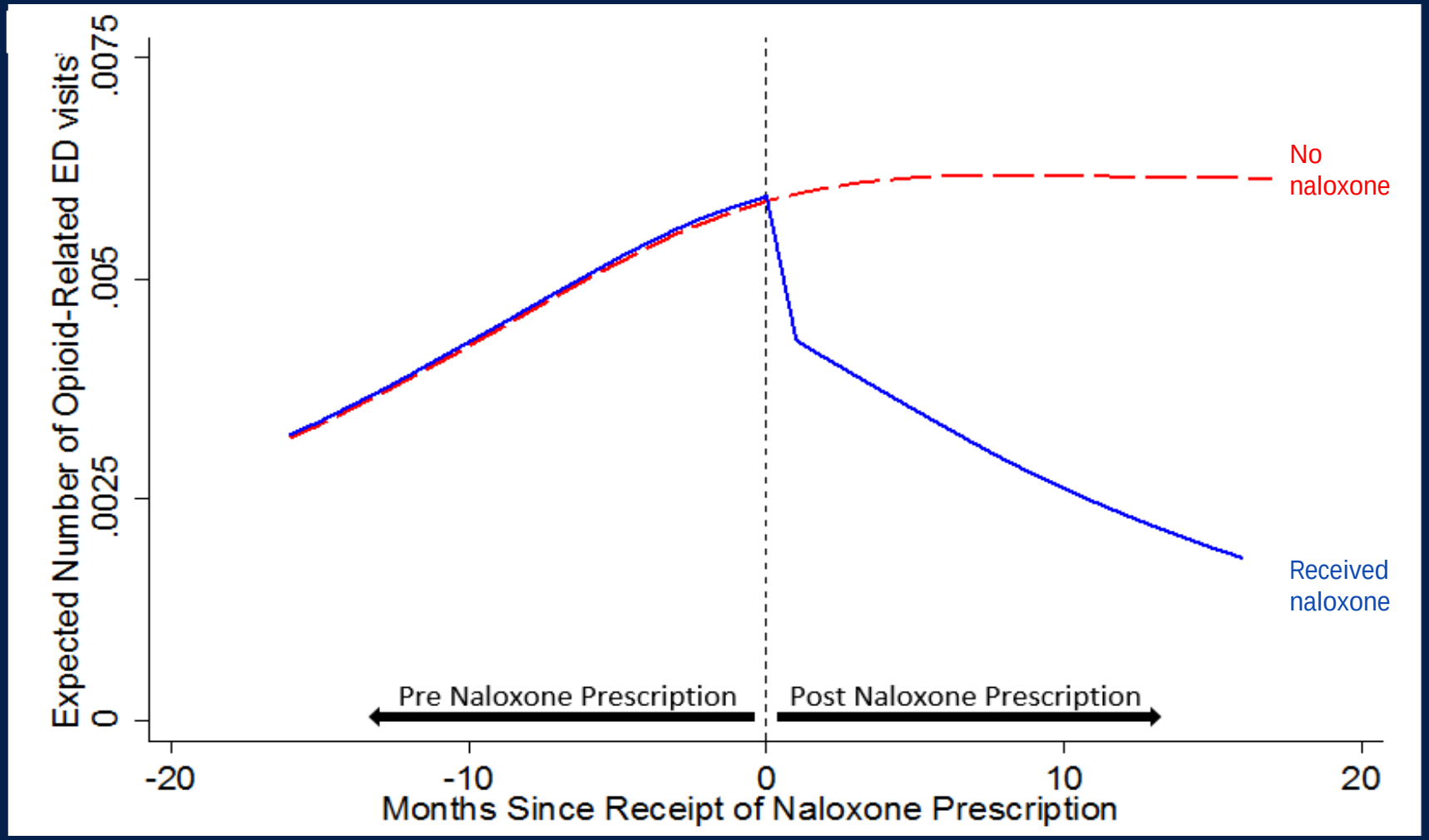
Predictors of Receiving a Naloxone Prescription Among Primary Care Patients Prescribed Opioids for Chronic Pain (N=1,985)

	aOR
Age (5 year units)	0.94 (0.89-1.00)
Log MEQ dose	1.73 (1.56-1.92)
Opioid-related ED visit in 12 months prior to program	2.54 (1.54-4.18)
Non-significant parameters	
Race/ethnicity	
Gender	
Provider type	
Number of PMR patients seen by provider	

Model also adjusted for patient clinic, number of days elapsed between the earliest data of program initiation (2/1/13) and patient baseline data and number of years elapsed between patient baseline date and subsequent follow-up date

Source: Coffin PO, Behar E, Rowe C, et al. Nonrandomized intervention study of naloxone coprescription for primary care patients receiving long-term opioid therapy for pain. Ann Intern Med. 2016.

Expected Opioid-Related ED Visits / Month by Receipt of Naloxone

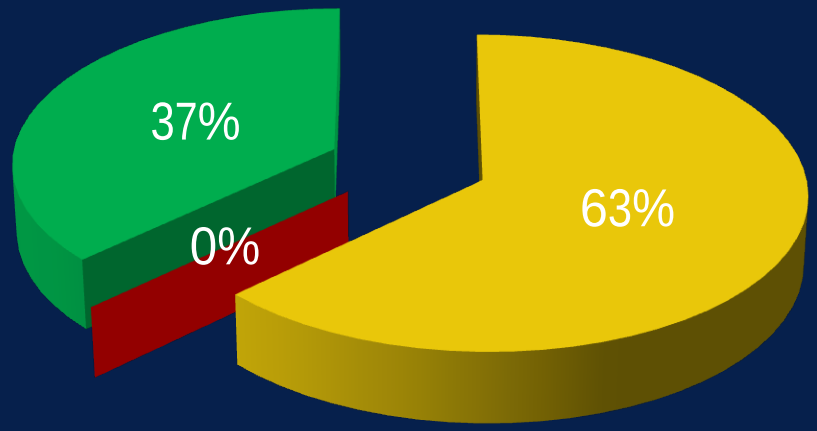


Source: Coffin PO, Behar E, Rowe C, et al. Nonrandomized intervention study of naloxone coprescription for primary care patients receiving long-term opioid therapy for pain. Ann Intern Med. 2016.

Behavior Change Tied to Receipt of Naloxone (N=60)

Positive

- More cautious about dosing or timing
- Improved knowledge about opioids and overdose
- Reduced polysubstance use
- Not using opioids alone



Neutral

"I've probably been a little more cautious. Just being careful to take the right amount, count the hours…just thinking more cautiously about dosing."

Source: Behar E, Rowe C, Santos G-M, Murphy S, Coffin PO. Primary Care Patient Experience with Naloxone Prescription. Annals of Family Medicine. 2016;14:431-6.

Opioid / Overdose History of Patients on Opioids for Chronic Pain

Patient Characteristics (N=60)	Percent
Previously received take-home naloxone	10%
History of overdose	37%
Overdose	20%
"Bad reaction" consistent with overdose	17%
Perceived risk of personal overdose	Low (2 / 10)

Source: Behar E, Rowe C, Santos G-M, Murphy S, Coffin PO. Primary Care Patient Experience with Naloxone Prescription. Annals of Family Medicine. 2016;14:431-6.

"Overdose" is Often the Incorrect Term

Interviewer: How many times would you say you've had these bouts of delirium, or you've stopped breathing because of opioids?

Patient: Ever? 8-10 times.

Interviewer: And how many times has [naloxone] been used on you?

Patient: Oh boy. That would be really hard to answer. I'd say somewhere in the neighborhood of 12-15 times.

Interviewer: So, around 12-15 times someone has given you [naloxone] because you've stopped breathing because of opioids?

Patient: Yes. Medical staff each time. Because of the opioids, I've stopped breathing.

Interviewer: Over what period of time?

Patient: Over 1 year.

Source: Behar E, Rowe C, Santos G-M, Murphy S, Coffin PO. Primary Care Patient Experience with Naloxone Prescription. Annals of Family Medicine. 2016;14:431-6.

CDC Guidelines for Prescribing Naloxone to Patients on Opioids for Chronic Pain

"Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (≥50 MME/day), or concurrent benzodiazepine use, are present."


Clinical Review & Education

Special Communication

CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016

Deborah Dowell, MD, MPH; Tamara M. Haegerich, PhD; Roger Chou, MD

Summary

- Co-prescribing naloxone with opioids is feasible and may have ancillary benefits
- The term “overdose” may not be appropriate for many patients prescribed opioids for pain