Prescribe Naloxone and Save a Life!

Opioid Overdose Education and Naloxone Distribution (OEND)

VA

U.S. Department of Veterans Affairs
Veterans Health Administration
PBM Academic Detailing Services

Contents

VA | U.S. Department of Veterans Affairs

Veterans Health Administration

PBM Academic Detailing Services

These materials were developed by:

VA PBM Academic Detailing Services

Your Partner in Enhancing Veteran Health Outcomes

VA PBM Academic Detailing Services Email Group:

PharmacyAcademicDetailingProgram@va.gov

VA PBM Academic Detailing Services SharePoint Site:

https://dvagov.sharepoint.com/sites/vhaacademicdetailing

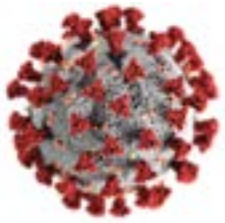
VA PBM Academic Detailing Services Public Website:

http://www.pbm.va.gov/PBM/academicdetailingservicehome.asp

Prevent death from an overdose with opioid overdose education and naloxone distribution (OEND)

Overview of OEND

Drug overdoses—both intentional and accidental—are a leading cause of death.[1,2] Opioid overdoses alone contributed to nearly 450,000 deaths in the United States between 1999-2018.[3,4] In the United States in 2020, 255 people died every day from a drug overdose.[5]



Overdose deaths

Drug overdose deaths declined by 4.1% between 2017 to 2018,[6] **however in 2020, there was a 29.4% increase in deaths.** This increase is thought to be related to the prevalence of fentanyl in non-prescribed substances along with stress related to the pandemic and a reduction in access to health care.[7]

OEND is a risk mitigation initiative to prevent opioid-related overdose deaths.

Naloxone, along with opioid overdose education, can prevent a fatal overdose—a few minutes of training that could save a life.[8,9]

- **Opioid Overdose Education (OE)**
  - Provide education to the Veteran, family members, friends, acquaintances, and potential bystanders on how to prevent, recognize, and respond to an opioid overdose.
- **Naloxone Distribution (ND)**
  - Provide the Veteran with naloxone.
  - Train the Veteran and potential bystanders on how to use naloxone.

TAKE ACTION

It is time to take action and reverse the course of opioid overdose deaths. Putting naloxone in the hands of at-risk Veterans and training their family and friends is critical. Opioid overdose education helps Veterans reduce risky opioid use behaviors and can reduce the need to use naloxone.

Naloxone temporarily reverses the effects of opioids and can save lives.

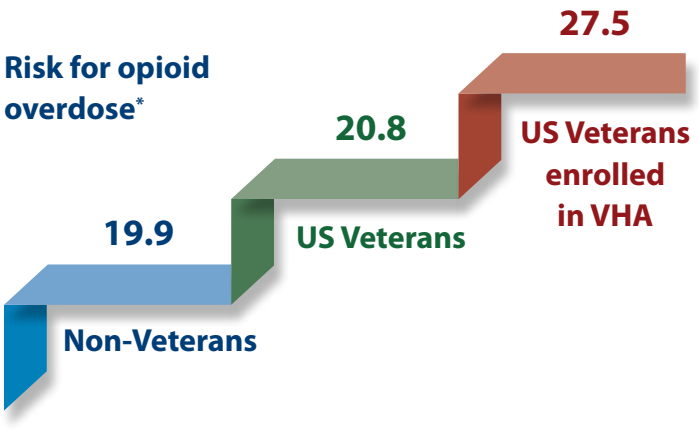
Naloxone is like a fire extinguisher—everyone at risk for an opioid overdose should have one.

- At-risk Veteran Health Administration (VHA) patients can get naloxone for **FREE**—no co-pay.
- VA handouts and videos are available on the **Academic Detailing OEND SharePoint** to help with patient education.

Understanding opioid overdose

Overdoses can be accidental or intentional. Among Veterans, 86% of overdoses were accidental in 2017.[10]

Figure 1. Veterans are at higher risk for opioid overdose.[10]



Fatal overdoses mostly involve opioids.[11] Despite reductions in opioid prescribing in the VHA, opioid overdoses continue to increase.[12,13,14] Synthetic opioids like fentanyl comprise most Veteran overdose-related fatalities with an estimated 56.9% in 2017.[10,12]

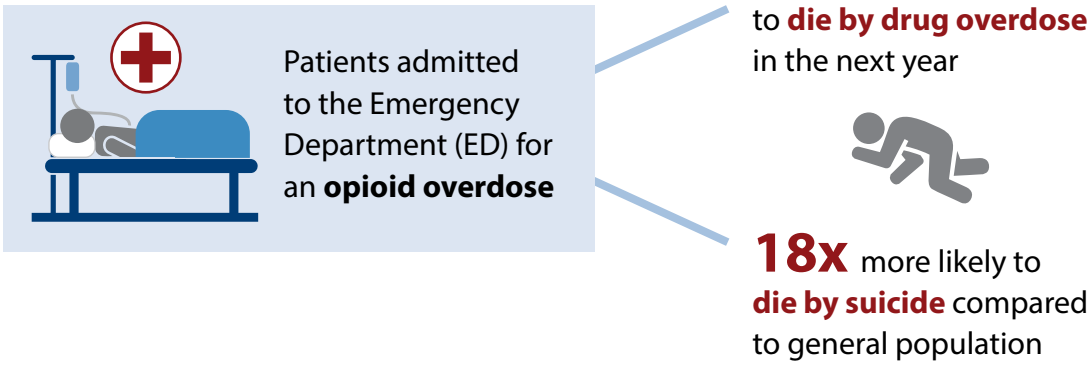
*Age Adjusted Rate per 100,000. Includes intentional and accidental opioid overdoses.

Figure 2. Non-fatal overdose is associated with an increased risk of future overdose.[15]

Among patients who died of an overdose,
1 in 6 had a non-fatal overdose in the year prior.

Naloxone can be an added safety measure to prevent death when opioids are involved in an overdose.

Figure 3. Opioid overdose survivors not only have a higher risk of overdose but also suicide.[16]



DID YOU KNOW

- Diagnosis of opioid use disorder (OUD) is 7 times higher in VHA patients than non-VHA patients.[17]
- Opioid-related suicide deaths are 13 times higher in people with OUD.[18,19]
- Opioids are the most common class of substances found in suicide by overdose.[20]

Given the overlap in risk for overdose and suicide, if a Veteran is also at risk for suicide you can:

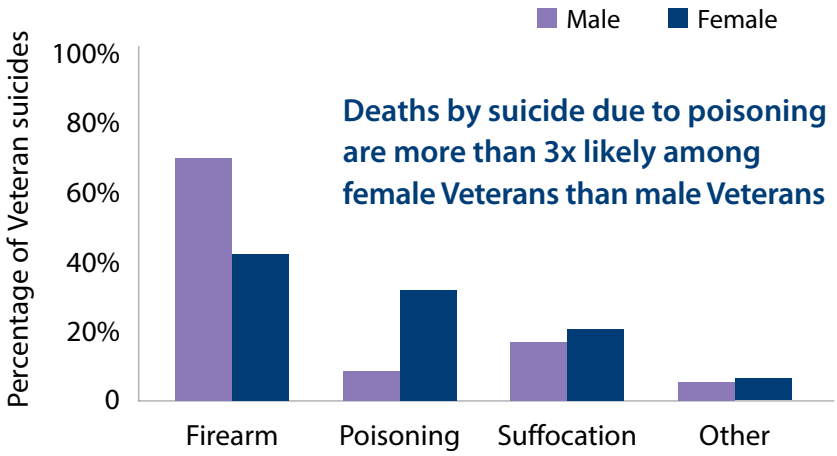
- Limit quantities of medications prescribed.
- Ask the Veteran to include a family member or friend in medication management.
- Discuss lethal means safety counseling, safety planning, and other risk mitigation strategies using the GROW framework *(see Figure 5 on the next page)*.

Lethal means safety

Lethal means safety is a strategy to put time and space between a person's thoughts of suicide and means to act on those thoughts. Firearms remain the most common method of suicide used by both male and female Veterans.

Poisonings remain a common method of suicide and are more likely among female Veterans.[21]

Figure 4. Method of suicide in Veterans[21]



Once Veterans are identified as being at risk for overdose and/or suicide, discussing lethal means safety is important.

(See Figure 7 for who is at risk.)

"Sometimes when a crisis hits, people can experience thoughts of killing themselves. There are things you can do to stay safe if that were to happen. ***Is it okay if I talk with you more about how to stay safe?"***

Figure 5. Tips for discussing opioids as lethal means using the GROW framework[22]

G	R	O	W
GET READY	**REASON FOR THE DISCUSSION**	**OFFER BRIEF ADVICE**	**WE ARE HERE TO HELP**
• What is the Veteran's suicide risk? • What is the Veteran's risk for overdose? • Does the Veteran live with other people?	• Help the Veteran understand the rationale for the conversation.	• Safety planning, e.g., discuss safe storage and disposal of any opioid medications. • Encourage treatment for pain and substance use disorders.	• Prescribe naloxone for Veterans with access to opioids. • Provide resources such as the Veterans Crisis Line to all Veterans.

For more information, go to the Office of Mental Health and Suicide Prevention (OMHSP) VA Website. Additional academic detailing resources are available on the Pain and OUD SharePoint.

Reducing access to lethal means, including opioids, works![23]

Figure 6. Lethal means safety—opioids, naloxone, and safe disposal

Locking up opioids and other medications can prevent suicide attempts.

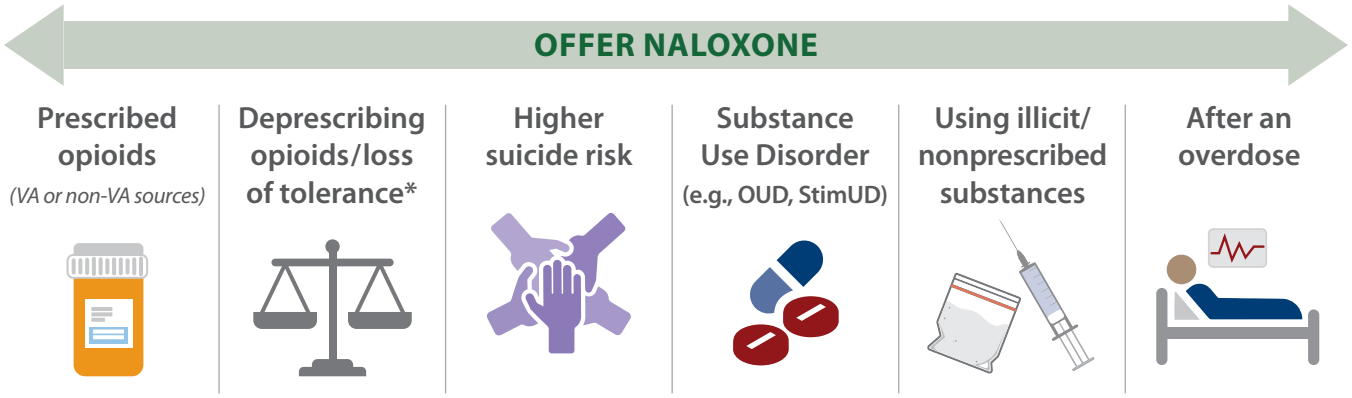
Having naloxone on hand and easily available can help reverse intentional and unintentional opioid overdoses.

Offer medication disposal envelopes* and encourage disposal of medications if they are discontinued or no longer needed.

*Veterans can contact their local VA pharmacy to receive disposal envelopes and get more information about local disposal options. The Drug Enforcement Agency (DEA) also has local take back events. More information can be found at: Take Back Day: https://takebackday.dea.gov.

Who is at risk for an overdose?

Figure 7. Offer naloxone to at-risk Veterans in these groups.[21,24,25]



*Includes Veterans undergoing an opioid taper or who have loss of tolerance from not taking an opioid for several days, e.g., hospitalization or incarceration.

Using dashboards to find at-risk Veterans

Table 1. Dashboards can help identify Veterans who could benefit from naloxone.[26]

Properties	Dashboard tool*		
	STORM	ADS tools	OSI
Updated daily	✓	✓	Quarterly
Identifies proactive risk mitigation strategies (informed consent, PDMP check, urine drug test (UDT), naloxone)	✓	✓	Only UDT for patients on LTOT
Provides detailed patient information about key risk factors	✓	✓	
Facilitates review required prior to initiating opioid therapy	✓		
Includes one-year risk of overdose or suicide for any Veteran, including those not currently prescribed opioids	✓		
Provides the official public facing opioid prescribing metrics			✓

*These dashboard tools are for internal VA use only: Stratification Tool for Opioid Risk Mitigation (STORM) dashboard tool,[26] Academic Detailing dashboard tools, and the Opioid Safety Initiative (OSI) Dashboard. LTOT = long-term opioid therapy; PDMP = prescription drug monitoring program; UDT = urine drug testing.

Offer naloxone to Veterans at risk for opioid overdose.

Provide education

Start the conversation

Keep the conversation open and create a safe space for the Veteran to talk.

Ask

- *"Accidental overdoses are a leading cause preventable death. Do you know what puts you at risk for an overdose?"*
- *"Do you have naloxone?"*
  - If yes, ask where it is, if they have any questions about it, how to use it, and if they have used it before. Encourage the Veteran to keep naloxone on hand and let people know where they keep it.
  - If no, let them know how naloxone can save not just their lives, but also the lives of others.
  - Review how and when to use naloxone.

Reinforce

- Discuss how easy it can be to overdose—loss of tolerance when in treatment, mixing substances, and the importance of having naloxone "just in case."
- Review the signs and symptoms of an overdose with the Veteran, family members, and acquaintances.
- Review how to use naloxone. If Veterans or their family members are concerned that having naloxone could increase opioid misuse, try using this analogy: *"Think of naloxone like a fire extinguisher you would have just in case of an emergency. If you have a fire extinguisher at your home it can stop a fire, but it does not make you start a fire."*
- Ask, *"Do you have any questions about overdose prevention or using naloxone?"*
- Provide handouts: e.g., *Naloxone Nasal Spray*, *Opioid Overdose Prevention and Reversing an Overdose with Naloxone*
- Links to Videos: Naloxone Nasal Spray; Naloxone Intramuscular Injection

Encourage the Veteran to contact their healthcare team after naloxone is used or after an overdose

- Getting a refill is vital.
- Connecting the Veteran with services after an overdose is critical to prevent a possibly fatal future overdose.

Educate Veterans and their friends and family members on how to prevent an overdose and use naloxone.

Naloxone products

Table 2. Overview of naloxone nasal spray and injectable intramuscular naloxone[8,9,27]

	Nasal spray 4 mg *(preferred)* or 8 mg	Injectable 5 mg prefilled syringe	Injectable intramuscular 0.4 mg
Strength	4 mg/0.1 ml (Narcan®) or 8 mg/0.1 ml (Kloxxado™)	5 mg/0.5 ml (Zimhi)	0.4 mg/ml
Total volume of kit/ package	2 nasal devices each containing 0.1 ml (one dosage per device)	2 prefilled syringes each containing 5 mg/0.5 ml dose (one dose per syringe)	2 vials containing 1 ml (one dosage per vial), 2 syringes, 2 alcohol pads, 1 pair nitrile gloves, 1 patient brochure
Assembly	None required	None required	Put on gloves (optional), remove cap from naloxone vial, uncover needle; use alcohol pad on rubber plug on vial (optional); turn vial upside down and insert needle through rubber plug. Pull back on plunger to 1 ml.
Dosing	Spray 0.1 ml into one nostril. If no or minimal response after 2 to 3 minutes or if breathing stops again, give a second dose. Use a second device in other nostril. 1 nasal device = 1 dose	Remove needle cap and inject 0.5 ml (5mg) into the outer thigh. Can be used through clothing. Push plunger all the way down until it clicks; hold for 2 seconds. If no or minimal response after 2 to 3 minutes or if breathing stops again, give a second dose. Use a second prefilled syringe.	Inject 1 ml (0.4 mg) at 90˚ angle into large muscle (upper arm, thigh, outer buttock). If no or minimal response after 2 to 3 minutes or if breathing stops again, give a second dose using a new vial and syringe.
Usability	90.5% successful use without training	100% successful completion of all steps without training	FDA approved option for community distribution and use by individuals with and without medical training.
Disposal	No defined requirements	Put used syringe in blue case and give to 911 responder. May also follow instructions at www.safeneedledisposal.org.	Biohazard sharps container
Formulary considerations	Formulary preferred product	Consider for patients with nasal septum abnormalities or trauma, excessive mucus, epistaxis, or intranasal damage from drug use.	Consider for patients with nasal septum abnormalities or trauma, excessive mucus, epistaxis, or intranasal damage from drug use.

See VA PBM Naloxone Rescue document for more information: Recommendations for issuing February 2022.

Patient education can be found on MyHealtheVet:
My HealtheVet Veterans Health Library (va.gov)

Training Videos are also available: Video Library (va.gov)

www.myhealth.va.gov

Considerations for specific opioids when providing naloxone and education

Synthetic opioids like fentanyl and carfentanil[28]

- **More than one dose of naloxone may be needed** for high-potency opioids like fentanyl and carfentanil.
- **Nonprescribed opioids and stimulants can be contaminated with synthetic opioids.** Advise Veterans to never use alone, have naloxone available, and call 911 and get medical attention for this emergency, especially since more naloxone may be needed.

Long-acting opioids and opioids in sustained release products[29,30]

- Methadone is a long-acting opioid that has a very long half-life (up to 59 hours) compared to other opioids. Several opioids are also available in sustained release products (e.g., oxycodone, morphine, oxymorphone, fentanyl). **Getting medical attention is critical for overdoses involving these drugs since monitoring is required after the initial naloxone dose due to the long half-life of the drugs.** The Veteran could start overdosing again and require additional naloxone doses until the drug is cleared from the body.

Tramadol[31,32]

- Tramadol has low mu receptor affinity and the analgesic effect may be related to a non-opioid mechanism of action. **Studies have indicated that naloxone may have questionable efficacy for a tramadol overdose** and can increase the risk of seizure induction.
- **While most low-risk patients on single agent tramadol may not warrant a naloxone prescription, high-risk patients** including those with opioid use disorders (OUD), substance use disorders (SUD), prior history of overdose, history of positive urine drug screens, prescription opioid misuse, and mental health conditions **are candidates for naloxone.** Patients prescribed tramadol should receive opioid overdose education to ensure that if they have other opioids available they are aware of the risks of possible opioid overdose.

Buprenorphine[33,34,35,36]

- **Risk for respiratory depression** with buprenorphine alone is lower than full mu opioid agonists. Most fatalities involving buprenorphine occurred in cases of mixed overdose (e.g., other opioids, alcohol, or benzodiazepines).

  Respiratory depression caused only by buprenorphine can be difficult to reverse with naloxone due to the high affinity with the opioid receptor. **Reversal may require higher doses and observation over several hours.** In Veterans using buprenorphine with OUD, other SUD, or history of overdose, naloxone should be provided.

Provide follow up and support after an overdose

STEP 1 Document the overdose

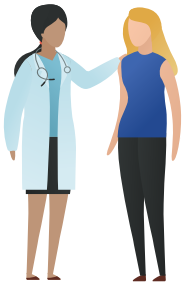
Documenting intentional and unintentional overdoses is important and mandated: ***Suicide Behavior and Overdose Reporting Memorandum.***

Because overdose survivors are an extremely high-risk group, two **National Note Templates** are available to improve post-overdose care:

1. **Suicide Behavior and Overdose Report (SBOR) Note Template** is used for all unintentional and intentional overdoses **involving the Veteran**.* The SBOR note provides a highly visible place in the medical record for clinicians and staff to review recent and past events to assist with treatment plans.
2. **Comprehensive Suicide Risk Evaluation (CSRE)** is used by clinical staff to evaluate suicide risk. It may be used in lieu of the SBOR.

* **Naloxone use note** is used when a Veteran's naloxone was used on someone else, not the Veteran.

STEP 2 Address comorbidities that can increase overdose risk[24,25]



Substance use disorder (SUD)

- Assess for OUD and other SUD.
- Treat OUD with buprenorphine, methadone, or extended release injectable naltrexone.
- Treatment can be in primary care, mental health, pain clinic, or SUD clinic.

Mental health conditions

Provide treatment and support for depression, bipolar disorder, schizophrenia, and PTSD. If the Veteran has warning signs for suicide, use the VA Standardized Suicide Risk Screening and Evaluation Tools—C-SSRS and CSRE (Risk ID Resources).*

Evaluate pain and provide alternative options.

- Consider consultation with a pain specialty clinic.
- Provide alternatives to opioids, including nonpharmacologic options and nonopioid pharmacotherapy.

Refer to specialty care when indicated.

* C-SSRS = Columbia Suicide Severity Rating Scale; CSRE = VA Comprehensive Suicide Risk Evaluation.

STEP 3 Review the Veteran's treatment plan and modify when appropriate

Opioid prescriptions should be evaluated after an overdose.[24,25]

If opioid doses are reduced, providing alternatives for pain management is necessary. Opioid dose reductions need to be made very slowly (e.g., 2 to 10% every 4 to 8 weeks with pauses in taper as needed).

All Veterans prescribed opioids who have had an overdose need to be evaluated for opioid dependence/opioid use disorder (OUD). If diagnosed with OUD, they should receive evidence-based treatment.

Address medications that increase overdose risk.

These include sedating medications such as benzodiazepines, z-drugs (e.g., zolpidem), tricyclic antidepressants, and gabapentinoids (e.g., gabapentin, pregabalin).

Reduce doses slowly!

Providers should review and determine if either the opioid or other sedating medication should have a dose reduction or be discontinued. If a medication is to be reduced or discontinued, do this one drug at a time and taper slowly. Information on opioid tapering can be found in the ***VA ADS Opioid Taper Tool*** and on benzodiazepine tapering using the ***VA ADS Benzodiazepine Quick Reference Guide***.

Follow up with Veteran after any changes are made in their treatment plan.

STEP 4 Engage Veterans experiencing pain in non-pharmacologic treatments

Whole Health

Recommend that Veterans complete a Personal Health Inventory and create a Personal Health Plan. Veterans can choose well-being programs and clinical treatments based on what matters most to them. More information is available at the Whole Health Home (www.va.gov/wholehealth).

Manual therapies

These include massage, acupuncture, and manipulation.

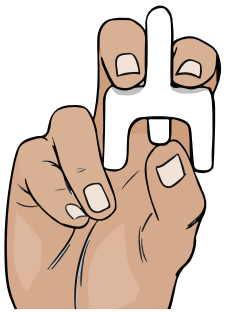
Exercise/movement therapies

These include physical therapy, aerobic exercise, coordination/stabilization exercise, resistance training, yoga, and tai chi.

Behavioral/psychological therapies

These include cognitive behavioral therapy (CBT), mindfulness based stress reduction (MBSR), and acceptance and commitment therapy (ACT).

STEP 5 Provide naloxone after an overdose



- Opioid overdose education (OE) includes education and training regarding prevention, recognition, and response to an opioid overdose. This is important to provide to Veterans and their caregivers and family members to prevent future overdose mortality.
- Naloxone distribution (ND) ensures naloxone is on hand in case of an overdose. At-risk Veterans can get naloxone for FREE—no copay.
- Approximately 7.2% of patients had a repeat opioid overdose during the year after a nonfatal overdose. The only SUD diagnosis significantly associated with greater risk of repeat overdose was OUD (Hazard ratio 1.51).[37]
- If the Veteran has naloxone, ask if they know where it is, if they have any questions about it, how to use it, and if they have used it before. Encourage the Veteran to keep naloxone on hand and let people know where they keep it. Having naloxone available may not just save their life, but also the lives of others in their community who may be susceptible to an opioid overdose.
- Providers should review OEND and assess the need to renew naloxone at least annually. When renewing naloxone prescriptions, add one refill so the prescription remains active for one year on the medication profile in the electronic medical record.

After an overdose, provide follow up and support to prevent a future overdose.

References

1. Hedegaard H, Miniño AM, Warner M. Drug overdose deaths in the United States, 1999–2018. NCHS Data Brief, no 356. Hyattsville, MD: National Center for Health Statistics. 2020.
2. Xu J, Murphy SL, Kochanek KD, Arias E (2020). Mortality in the United States, 2018. National Center for Health Statistics.
3. Wide-ranging online data for epidemiologic research (WONDER). Atlanta, GA: CDC, National Center for Health Statistics; 2020. Available at http://wonder.cdc.gov.
4. Seth P, Scholl L, Rudd RA, et al. Overdose Deaths Involving Opioids, Cocaine, and Psychostimulants—United States, 2015-2016. *MMWR Morb Mortal Wkly Rep.* 67, 349–358. (2018). doi:10.15585/mmwr.mm6712a1pmid:29596405.
5. Ahmad FB, Rossen LM, Sutton P. Provisional Drug Overdose Death Counts. National Center for Health Statistics. 2021.
6. Wilson N, Kariisa M, Seth P, Smith H IV, Davis NL. Drug and Opioid-Involved Overdose Deaths—United States, 2017–2018. *MMWR Morb Mortal Wkly Rep.* 2020;69:290–297.
7. NIDA. 2021, July 20. The Federal Responses to the Drug Overdose Epidemic. https://www.drugabuse.gov/about-nida/legislative-activities/testimony-to-congress/2021/the-federal-responses-to-the-drug-overdose-epidemic. Last accessed: August 16, 2021.
8. Narcan® (naloxone HCl) nasal spray [prescribing information]. Plymouth Meeting, PA: Adapt Pharma, Inc., August, 2020.
9. Sharpless NE. FDA Statement: Statement on continued efforts to increase availability of all forms of naloxone to help reduce opioid overdose deaths. FDA. September 20, 2019. Last accessed: March 15, 2021.
10. VA Office of Mental Health and Suicide Prevention. Unpublished analysis. Veteran Overdose Mortality, 2010–2017.
11. Miller TR, Swedler DI, Lawrence BA, et al. Incidence and Lethality of Suicidal Overdoses by Drug Class. *JAMA Network Open.* 2020;3(3):e200607-e200607.
12. Lin LA, Peltzman T, McCarthy JF, et al. Changing Trends in Opioid Overdose Deaths and Prescription Opioid Receipt Among Veterans. *Am J Prev Med*. 2019;57(1):106-110.

References *(continued)*

13. VA PBM Opioid Safety Initiative Dashboard. Accessed 11/2020.
14. Ilgen MA, Bohnert AS, Ganoczy D, et al. Opioid dose and risk of suicide. *Pain*. 2016;157(5):1079-1084.
15. Larochelle MR, Bernstein R, Bernson D, et al. Touchpoints–Opportunities to predict and prevent opioid overdose: A cohort study. *Drug Alcohol Depend.* 2019;204. Article 107537.
16. Goldman-Mellor S, Olfson M, Lidon-Moyano C, et al. Mortality following nonfatal opioid sedative/hypnotic drug overdose. *Am J Prev Med.* 2020;59(1) 59-67.
17. Baser OL, Mardekian XJ, Schaaf D, et al. Prevalence of diagnosed opioid abuse and its economic burden in the Veterans Health Administration. *Pain Pract.* 2014;14(5):437–445. doi: 10.1111/papr.12097.
18. Wilcox HC, Conner KR, Caine ED. Association of alcohol and drug use disorders and completed suicide: an empirical review of cohort studies. *Drug Alcohol Depend.* 2004;76(suppl):S11–S19. doi: 10.1016/j.drugalcdep.2004.08.003.
19. Ahonle, Zaccheus J, Mudra S, et al. Drug Overdose and Suicide Among Veteran Enrollees in the VHA: Comparison Among Local, Regional, and National Data. *Fed Pract.* 2020;37(9):420–425. doi:10.12788/fp.0025.
20. Sinyor M, Howlett A, Cheung AH, Schaffer A. Substances used in completed suicide by overdose in Toronto: an observational study of coroner's data. *Can J Psychiatry.* 2012;57(3):184–191. doi: 10.1177/070674371205700308.
21. Office of Mental Health and Suicide Prevention. 2020 National Veteran Suicide Prevention Annual Report. https://www.mentalhealth.va.gov/mentalhealth/suicide_prevention/data.asp
22. US Department of Veterans Affairs Office of Mental Health and Suicide Prevention. Tips for Discussing opioids as lethal means using the GROW framework. https://www.mentalhealth.va.gov/suicide_prevention/docs/Means_safety_messaging_for_clinical_staff.pdf
23. Simon OR, Swann AC, Powell KE, et al. Characteristics of Impulsive Suicide Attempts and Attempters. *SLTB.* 2001; 32(supp):49-59.
24. US Department of Veterans Affairs, Department of Defense. VA/DoD Clinical Practice Guidelines for Opioids Therapy for Chronic Pain. February 2017.
25. Dowell D et al. CDC guidelines for prescribing opioids for chronic pain–United States, 2016. *JAMA.* April 19, 2016; 315(15):1624-1645.
26. Oliva EM, Bowe T, Tavakoli S, et al. Development and applications of the Veterans Health Administration's Stratification Tool for Opioid Risk Mitigation (STORM) to improve opioid safety and prevent overdose and suicide. *Psychol Serv.* 2017;14(1):34-49.
27. Rzasa Lynn R, Galinkin JL. Naloxone dosage for opioid reversal: current evidence and clinical implications. *Ther Adv Drug Saf.* 2018;9(1):63-88. doi:10.1177/2042098617744161.
28. Center for Disease Control and Prevention Health Alert Network. Rising Numbers of Deaths Involving Fentanyl and Fentanyl Analogs, Including Carfentanil, and Increased Usage and Mixing with Non-opioids. July 11, 2018. HAN Archive - 00413 | Health Alert Network (HAN) (cdc.gov) Last accessed: March 15, 2021.
29. Rzasa Lynn R, Galinkin JL. Naloxone dosage for opioid reversal: current evidence and clinical implications. *Ther Adv Drug Saf.* 2018;9(1):63-88. doi:10.1177/2042098617744161.
30. Khosravi N, Zamani N, Hassanian-Moghaddam H, et al. Comparison of Two Naloxone Regimens in Opioid-dependent Methadone overdosed Patients: A Clinical Trial Study. *Curr Clin Pharmacol.* 2017; 12(4):259-265.
31. Tsutaoka BT, Ho Ry, Fung AM, et al. Comparative Toxicity of Tapentadol and Tramadol Utilizing Data Reported to the National Poison Data System. *Annals Pharmacother.* 2015; 49: 1311-6.
32. Ultram® (tramadol HCL) tablets [prescribing information]. Gurabo, PR: Janssen Ortho, LLC, Oct, 2019.
33. Kintz P. A new series of 13 buprenorphine-related deaths. *Clin Biochem.* 2002;35(7):513-6.
34. VanDorp E, Yassen A, Sarton E, et al. Naloxone reversal of buprenorphine-induced respiratory depression. *Anesthesiology.* 2006;105(1):51-7.
35. Megarbane B, Buisine A, Jacobs F, et al. Prospective comparative assessment of buprenorphine overdose with heroin and methadone: clinical characteristics and response to antidotal treatment. *J Subst Abuse Treat.* 2010;38(4):403-7.
36. Wightman RS, Perrone J, Scagos R, Krieger M, Nelson LS, Marshall BDL. Opioid Overdose Deaths with Buprenorphine Detected in Postmortem Toxicology: a Retrospective Analysis. *J Med Toxicol.* 2021 Jan;17(1):10-15. doi: 10.1007/s13181-020-00795-3.
37. Karmali RN, Ray GT, Rubinstein AL, et al. The role of substance use disorders in experiencing a repeat opioid overdose, and substance use treatment patterns among patients with a non-fatal opioid overdose. *Drug Alcohol Depend.* 2020 Apr 1;209:107923. doi: 10.1016/j.drugalcdep.2020.107923.

The Veterans Crisis Line also offers free, confidential support and crisis intervention 24 hours a day, 7 days a week, 365 days a year.

To reach the crisis line:

- **Call 1-800-273-8255 and press 1**
- **Text to 838255**
- **Chat online at VeteransCrisisLine.net/Chat**

Acknowledgments

THIS GUIDE WAS WRITTEN BY:

Julianne E. Himstreet, PharmD
Daina L. Wells, PharmD, MBA, BCPS, BCPP
Sarah J. Popish, PharmD, BCPP

WE THANK OUR EXPERT REVIEWERS:

Mitchel Nazario, PharmD
Friedhelm Sandbrink, MD
Elizabeth Oliva, PhD
Tessa Rife, PharmD, BCGP
Bridget Roop, PharmD
Margaret Mendes, PharmD
John Hoeldtke, PharmD, BCPS
Terri Jorgenson, RPh, BCPS
Joseph Liberto, MD

VA

U.S. Department of Veterans Affairs

Veterans Health Administration
PBM Academic Detailing Services

This reference guide was created to be used as a tool for VA providers and is available from the Academic Detailing SharePoint.

These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

VA PBM Academic Detailing Services Email Group:
PharmacyAcademicDetailingProgram@va.gov

VA PBM Academic Detailing Services SharePoint Site:
https://dvagov.sharepoint.com/sites/vhaacademicdetailing

VA PBM Academic Detailing Services Public Website:
http://www.pbm.va.gov/PBM/academicdetailingservicehome.asp

Revised July 2022 V2

IB 10-1522 P97042