NALOXONE: THE UNDERUSED AND OVERUSED SOLUTION TO THE OPIOID EPIDEMIC

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DISCLOSURES

The presenter has no conflicts of interest to disclose

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OBJECTIVES

1. Identify opportunities for advanced naloxone dispensing in the community pharmacy setting

2. Describe the key points for patient education and the key rules/regulations that may apply to the state in which you practice

3. Develop strategies to identify and assist patients at risk of opioid toxicity and/or problematic opioid use

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INTRODUCTIONS

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BACKGROUND

OPIOID EPIDEMIC

Do you know somebody that has been caught in the “opioid epidemic?”

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OPIOID EPIDEMIC

47,000 deaths/year in US

Misuse of opioids = 2x increase risk of overdose/death

29% of patients prescribed opioids misuse them

What is misuse?

- Using to cope and/or psychoactive effects
- Seeking early refills
- Inappropriately using multiple prescribers and/or pharmacies
- Diverting
- Taking higher doses or more frequently than prescribed

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Prins A, Ouimette P, Kimerling R, et al. The primary care PTSD screen (PC-PTSD): Development and operating characteristics. *Primary Care Psychiatry.* 2003;9:9-14.
Cochran G, Gordon AJ, Lo-Ciganic WH, et al. An Examination of Claims-based Predictors of Overdose from a Large Medicaid Program. *Med Care.* 2017;55(3):291-298.
Vowles KE, McEntee ML, Julnes PS, Frohe T, Ney JP, van der Goes DN. Rates of opioid misuse, abuse, and addiction in chronic pain: a systematic review and data synthesis. *Pain.* 2015;156(4):569-576.

CALLS TO ACTION

CDC Guideline for Prescribing Opioids for Chronic Pain, 2016

- Recommendation: Minimize risk of opioid-related harms, especially if high overdose risk
    - Example strategy: Offer naloxone

US Dept of HHS – 5-Point Strategy t o Combat the Opioid Crisis

- Strategy #4: Increased availability of overdose-reversing drugs

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Centers for Disease Control. MMWR Recomm Rep. 2016.
Hhs.gov/opioids. Accessed February 28, 2020.

NALOXONE

Opioid antagonist with no analgesic effect; antidote to opioid toxicity

Can be used via IM, IV, SQ, Intranasal, Inhalation (nebulizer)

From 1996-2010, outpatient naloxone estimated to have saved 10K+ lives

Common outpatient dosage forms:

- Intranasal naloxone (Narcan)
- IM/SQ auto-injector (Evzio)
- IM/SQ solution (generic) combined with nasal atomizer and/or needle

Wheeler E, Jones TS, Gilbert MK, Davidson PJ. Opioid Overdose Prevention Programs Providing Naloxone to Laypersons - United States, 2014. MMWR 2015;64(23):631-5.

NALOXONE ACCESS LAWS

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NALOXONE ACCESS LAWS (NALS)

Naloxone Access Laws (NALs)

- Laws increasing public access to outpatient naloxone products
- May include civil and/or criminal immunity for naloxone administration and/or dispensing

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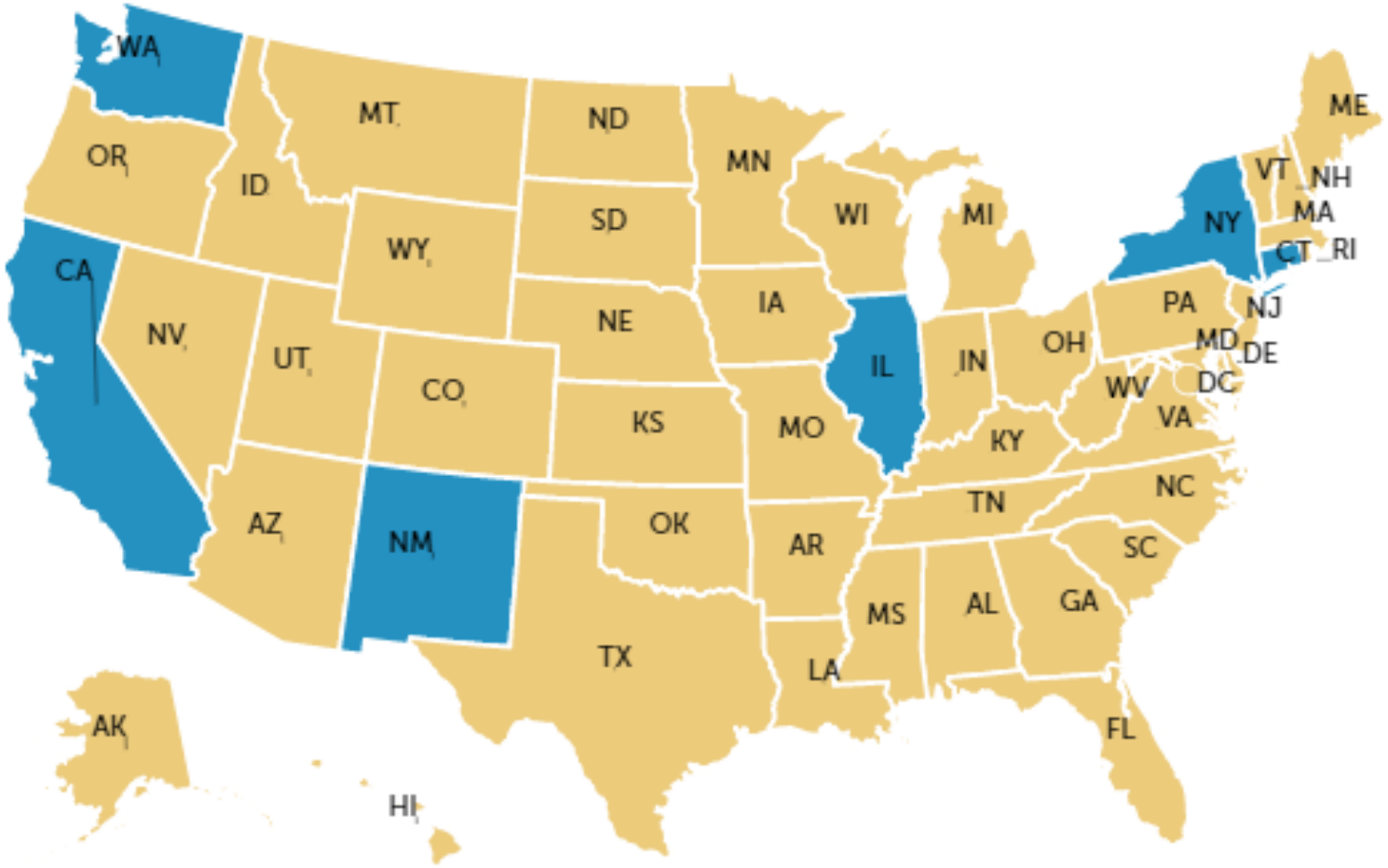
Xu J, Davis CS, Cruz M, Lurie P. State naloxone access laws are associated with an increase in the number of naloxone prescriptions dispensed in retail pharmacies. Drug and alcohol dependence 2018; 189: 37-41.

2010 – STATES WITH NAL



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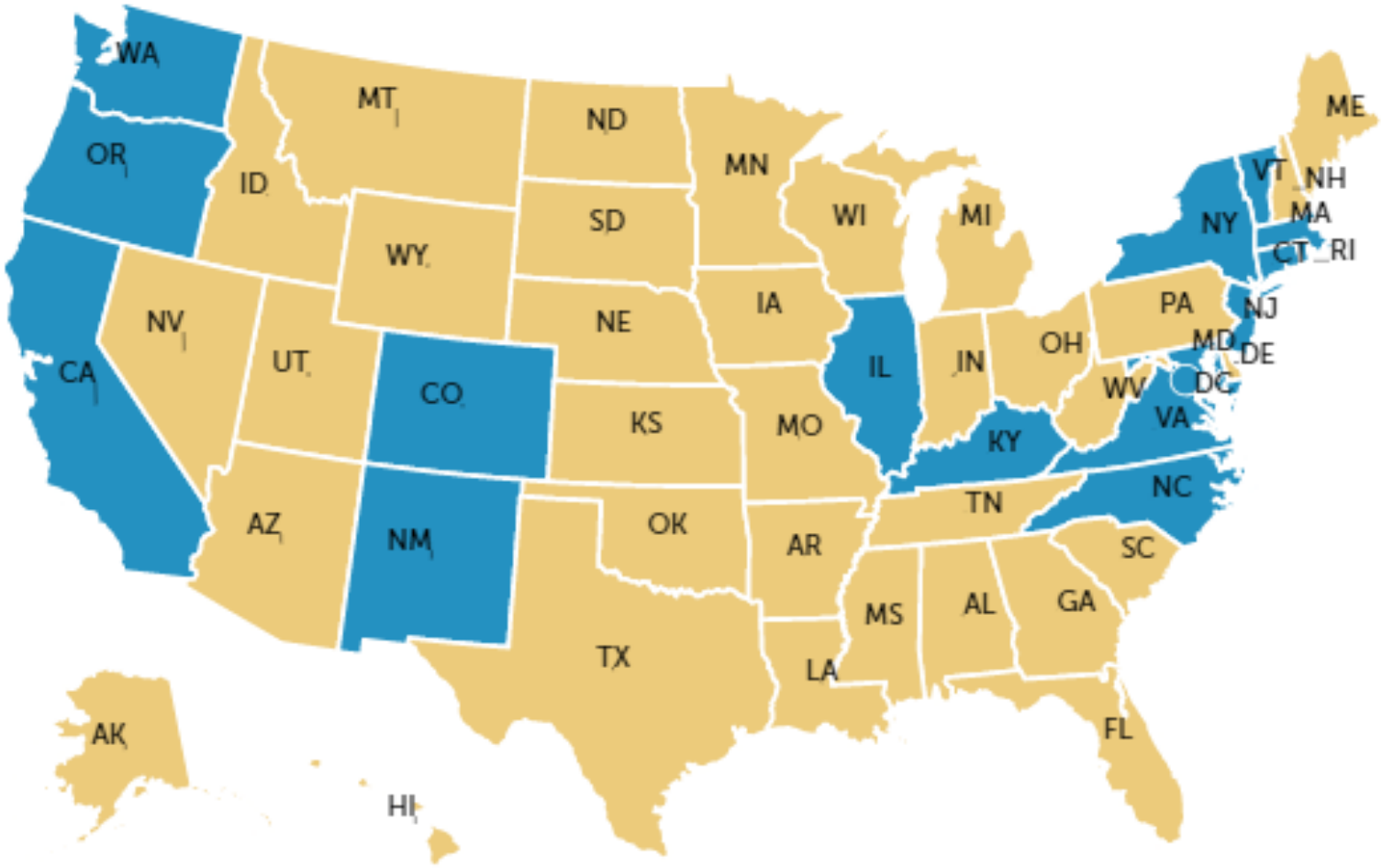
http://pdaps.org. Accessed February 25, 2020.

2013 – STATES WITH NAL



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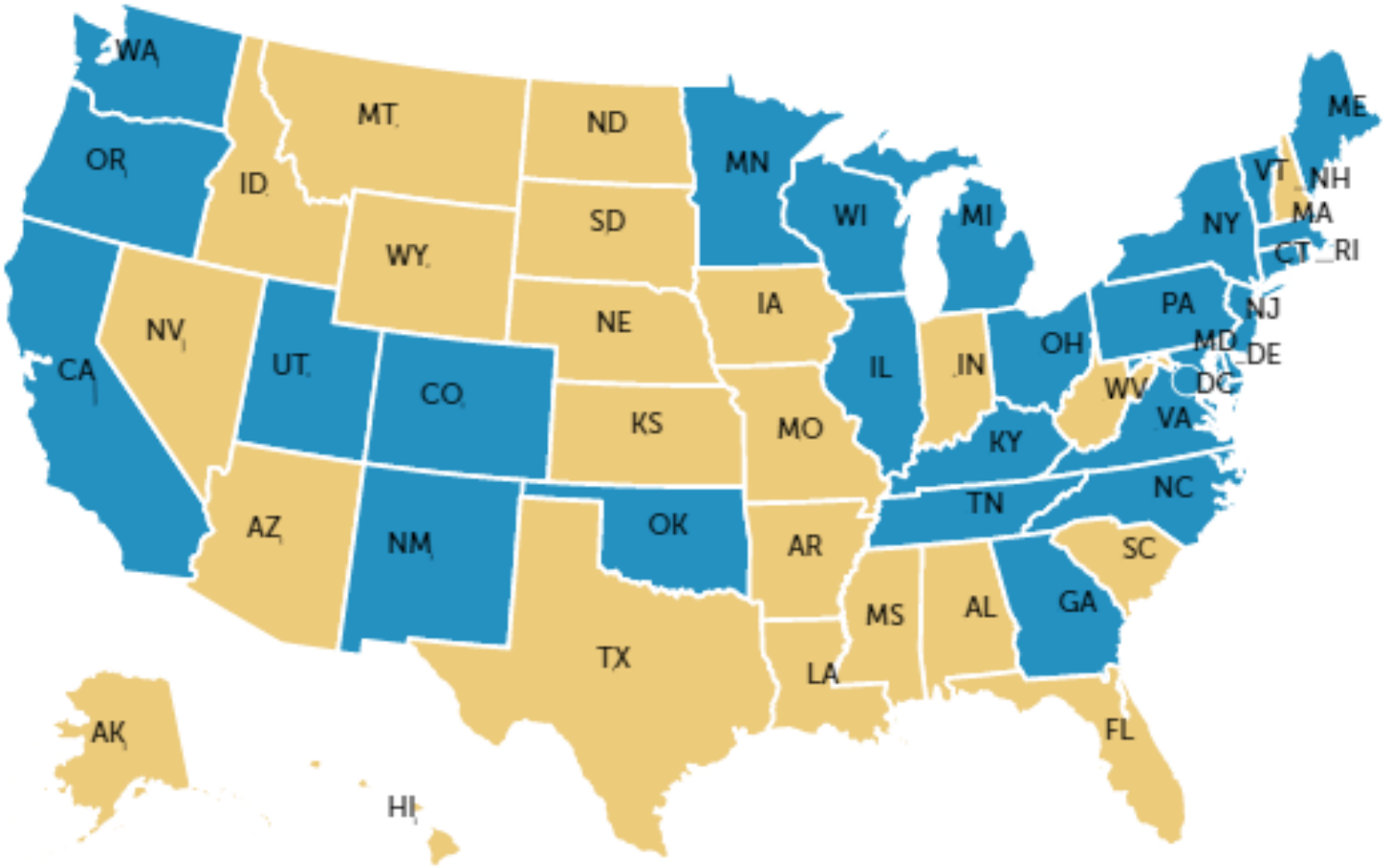
http://pdaps.org. Accessed February 25, 2020.

2015 – STATES WITH NAL



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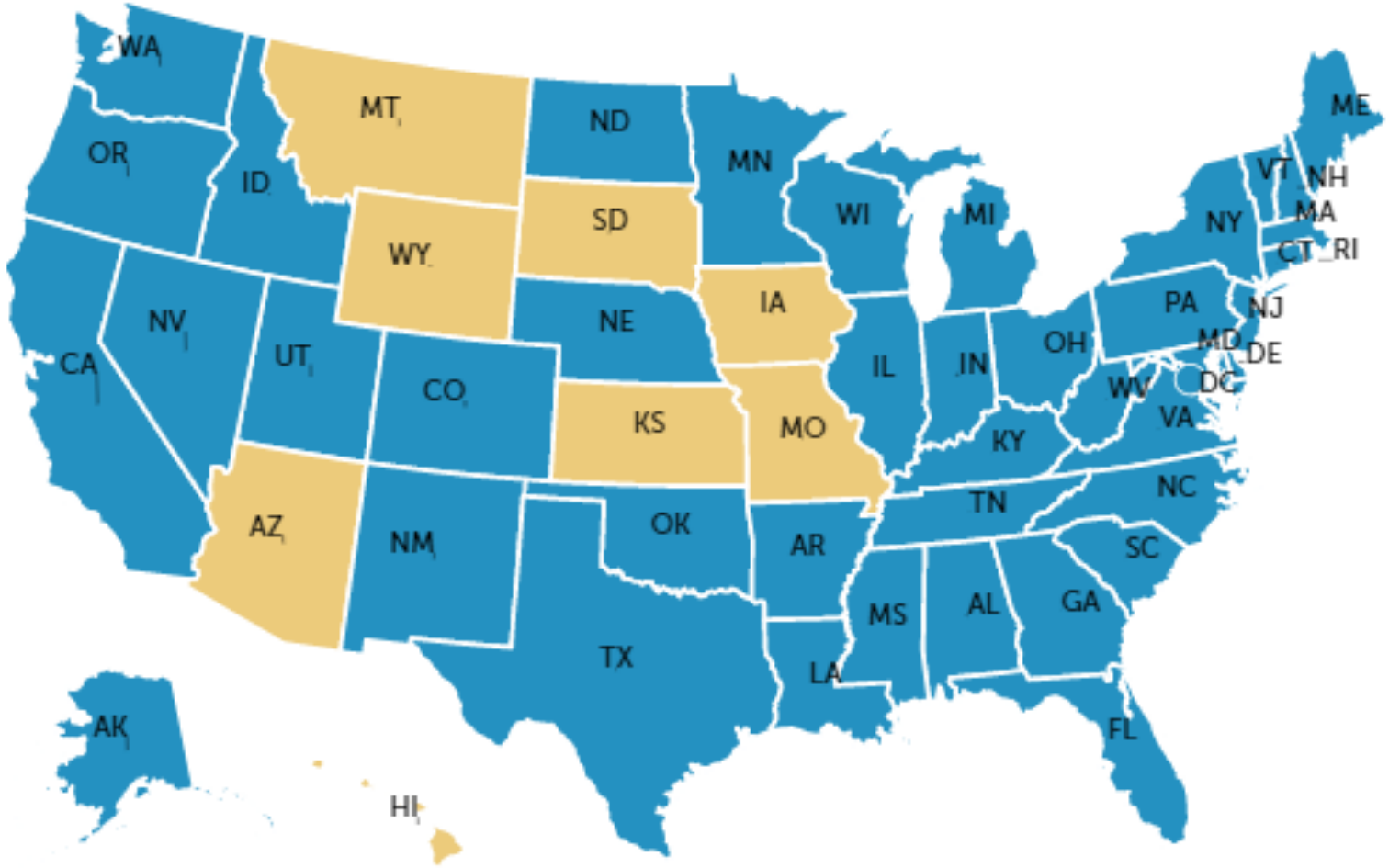
http://pdaps.org. Accessed February 25, 2020.

2016 – STATES WITH NAL



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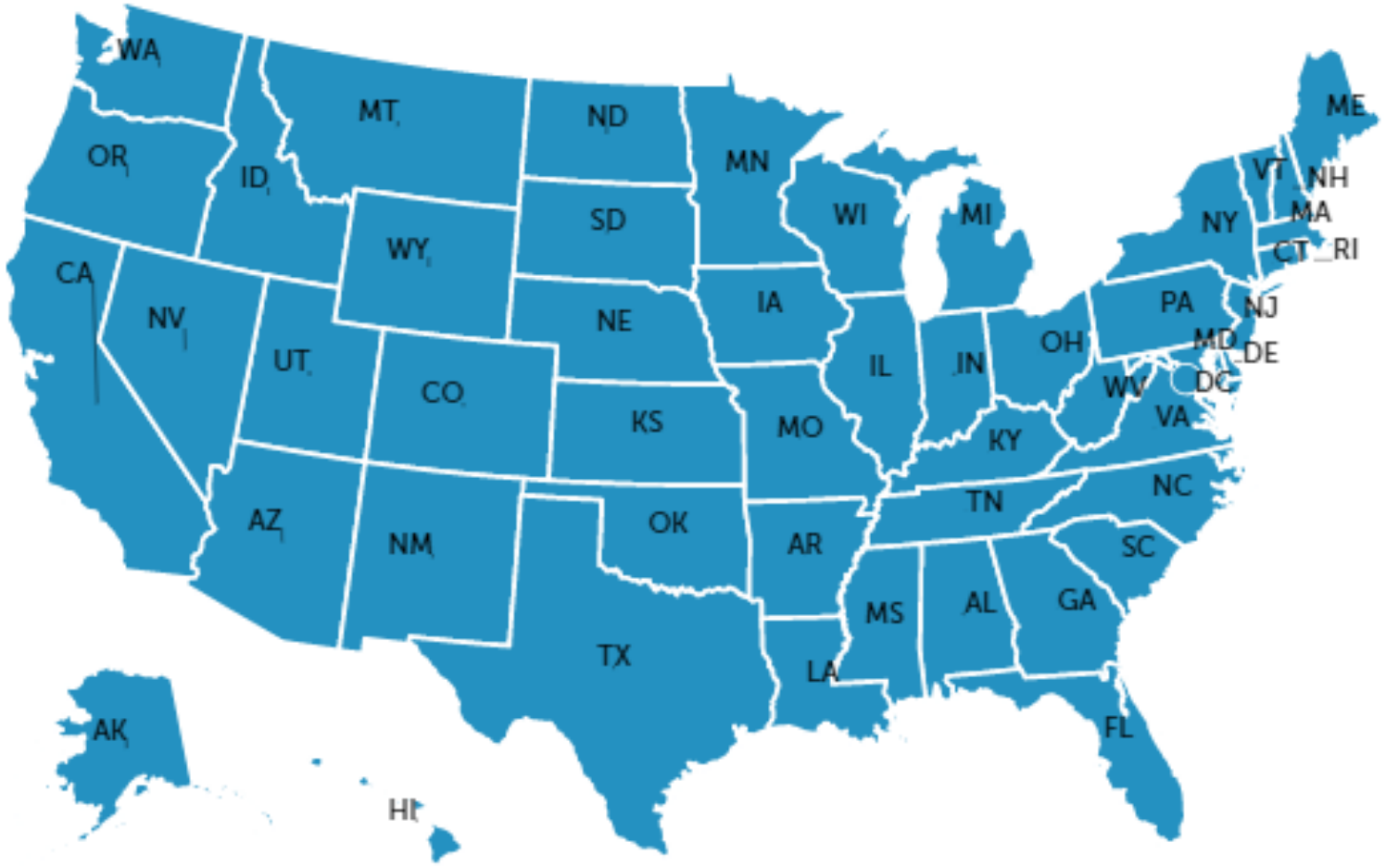
http://pdaps.org. Accessed February 25, 2020.

2017 – STATES WITH NAL



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NAL – PHARMACIST AUTHORITIES

DIRECT AUTHORITY	INDIRECT AUTHORITY	OTHER LAWS
AK, CA, CT, ID, NM, ND, OK, OR, SC	AL, AR, AZ, CO, DE, FL, GA, HI, IL, IN, IA, KS, KY, LA, ME, MD, MA, MN, MS, MO, MT, NV, NH, NJ, NY, NC, OH, PA, RI, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	MI, NE

- **Direct authority**: pharmacists have explicit permission to dispense naloxone by having prescriptive authority or by not requiring a prescription.
- **Indirect authority**: pharmacists are able to dispense through standing orders or statewide protocols.
- **Weak laws**: any other naloxone laws providing protections other than those in the first two categories.

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Abouk R, Liccardo Pacula. R, Powell D. Association between state laws facilitating pharmacy distribution of naloxone and risk of fatal overdose. JAMA Intern Med. 2019; 179: 805-11.

NAL SUBTLETIES

- Is counseling required? If so, are there specific required points?
- Is reporting required? How often (e.g., yearly)?
- Is documentation required?
- Is training required?
- What is the associated liability for prescribing, dispensing, administering?
- State-based patient assistance programs?
- In CPA-based states, the rules may vary by CPA partner

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WHY SHOULD I CARE ABOUT NALOXONE ACCESS LAWS?

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WHY SHOULD I CARE ABOUT NAL?

- States enacting NAL and Good Samaritan Laws have demonstrated a decrease in opioid deaths

BUT

UNDERUTILIZATION OF NALOXONE AND NAL

- Even in states with permissive NAL, practice change has been slow
  - e.g., California: <25% of pharmacies dispensed naloxone without a prescription in 2 years following state adopted NAL
  - e.g., Wisconsin: 27% of surveyed pharmacists indicated a prescription is required and were not aware of state standing order
- Only 1 in 70 opioid prescriptions are dispensed with naloxone
- Only 33% of PCP recall receiving naloxone education and 92% have never prescribed it
- Pharmacists report feeling "unprepared" to fully participate
  - "Lack of training"
  - "Stigma" and "persistent bias"

McClellan C, Lambdin BH, Ali MM, et al. Opioid-overdose laws association with opioid use and overdose mortality. Addict Behav. 2018; 86: 90-95.
Rees DI, Sabia JJ, Argys LM, Latshaw J, Dave D. The effects of naloxone access and Good Samaritan laws on opioid-related deaths (No. w23171). New York, NY: National Bureau of Economic Research; 2017.
Puzantian T, Gasper JJ. Provision of naloxone without a prescription by California pharmacists 2 years after legislation implementation. JAMA. 2018; 320: 1933-1934.
Jones CM, et al. Naloxone Co-prescribing to Patients Receiving Prescription Opioids in the Medicare Par D Program, United States, 2016-2017. JAMA. 2019 Aug 6;322(4):462-464. Accessed Nov 12, 2019.
Luthern A. Under Wisconsin law, it should be easy to buy the drug to reverse and opioid overdose. It's not. *Milwaukee Journal Sentinel.* August, 23, 2018.
Binswanger IA, Koester S, Mueller SR, et al. Overdose education and naloxone for patients prescribed opioids in primary care: a qualitative study of primary care staff. J Gen Intern Med 2015;30:1837-44.
van Boekel LC, Brouwers EPM, van Weeghel J, Garretsen HFL. Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: systematic review. Drug Alcohol Depend 2013;131(1-2):23-35.

A QUICK SOAPBOX ON STIGMA

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UNDERUTILIZATION OF NALOXONE AND NAL

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WHY SHOULD I CARE ABOUT NAL?

- Type of NAL can make a difference

NAL Type	Change in Overdoses per 100,000 Population	95% CI	P-value
Direct authority	-0.387	-0.119 to -0.656	0.007
Indirect authority	0.121	-0.014 to 0.257	0.09
Other laws	0.094	-0.040 to 0.227	0.17

Abouk R, Liccardo Pacula. R, Powell D. Association between state laws facilitating pharmacy distribution of naloxone and risk of fatal overdose. JAMA Intern Med. 2019; 179: 805-11.

WHAT CAN COMMUNITY PHARMACIES DO?

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BEGINNER (PADAWAN)

Stock naloxone

- 1 in 4 pharmacies do NOT stock naloxone

Fill naloxone when prescribed

- >50% of pharmacies decline to fill naloxone >1-2 times per week

Counsel patients on every naloxone dispense

- Don’t give patients an option

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Thornton JD, Lyvers E, Scott VG, Dwibedi N. Pharmacists’ readiness to provide naloxone in community pharmacies in West Virginia. J Am Pharm Assoc. 2017;57:S12-S18.://dynamicclinic.com. Accessed February 25, 2020.

EXPERT (JEDI KNIGHT)

Help patients overcome access barriers

- Manufacturer discounts, community programs/resources
- It may not be your pharmacy!

Focus on increased knowledge and comfort of your pharmacy staff

- >50% of pharmacists report being uncomfortable dispensing naloxone

Dispense naloxone without a prescription

- Step 1: Investigate your state's NAL
- Step 2: Develop internal policies/checklists for pharmacy staff

Counsel patients AND family/friends using strategic education packets and checklists

- Stock packets
- Focus on *quality* education

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MASTER (YODA)

Advocate for improved NAL in your state

Become a “hub” of help

- Participate in clean needle exchange programs (check state laws)
- Fentanyl testing strips
- Advertise
- Other services (eg, proactive hepatitis B screening and/or vaccinations)

Reactively target patients

- Screening questionnaires (eg, Brief Risk, TAPS, CAGE, SBIRT, others)

Proactively target patients

- Reports for high risk patients and proactive outreach

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https://harmreduction.org/issues/fentanyl. Accessed February 25, 2020.
Lindley B, Cox N, Cochran G. Screening tools for detecting problematic opioid use and potential application to community pharmacy practice: a review. Integr Pharm Res Pract. 2019: 85-96.

TOP STRATEGIES TO OVERCOME BARRIERS

Top 9 Strategies

1. Help patients overcome cost barriers
2. Improve **AND** increase patient education / reduce stigma
3. Advocate for increased insurance coverage of naloxone
4. Additional training for pharmacy staff **AND** prescribers
5. Increase *prescriptions* for naloxone
6. Adjust workflow for pharmacists to provide improved counseling
7. Increase educational materials for patients
8. Electronic reminders/alerts regarding naloxone
9. Having a collaborative practice agreement in place

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Spivey CA, Wilder A, Chisholm-Burns MA, Stallworth S, Wheeler J, Evaluation of Naloxone Access, Pricing, and Barriers to Dispensing in Tennessee Retail Community Pharmacies, Journal of the American Pharmacists Association (2020)

COUNSELING

See state laws for potential required counseling points

See handout example

- What *patient-specific* risk factors does the patient have?
- What is an opioid overdose? Signs/symptoms of an overdose?
- What is naloxone?
- How do you avoid opioid overdoses?
- What are examples of opioids?
- How to administer naloxone?
- What to do in an overdose emergency?

*****EXAMPLE*** Pharmacist Naloxone (Narcan) Counseling Checklist ***EXAMPLE*****

****If utilizing the naloxone CPA to dispense naloxone without a prescription, the pharmacist must provide counseling on risk factors of opioid overdose, recognizing opioid overdose symptoms, administering the naloxone, rescue breathing, and calling 911.****

☐ **Assess opioid-induced respiratory depression risk and counsel on "What are risk factors for opioid overdose?"**

1. Review medications
2. Children in the home
3. Substance abuse history
4. Check prescription drug monitoring program
5. Ask if patient has…
    a. Overdosed or had a bad reaction to taking opioid medications
    b. Witnessed an overdose
    c. Received training to prevent, recognize, or respond to an overdose or medication-related over-sedation
6. Risk factors for opioid overdose: (help customer identify the patient-specific factors that apply)
    a. History of overdose, substance use disorder
    b. Morphine equivalency ≥ 50 mg per day
    c. Concurrent benzo-opioid use
    d. Likely to return to high doses to which they are no long tolerant (eg, recently released from prison)
    e. Legitimate medical need for analgesia, coupled with suspected/confirmed substance abuse
7. Naloxone CPA allows naloxone to be dispensed without a prescription to patients, family members, or friends under the following circumstances:
    a. Voluntary request from a patient, family member, or friend
    b. New methadone prescription
    c. Morphine equivalency ≥ 20 mg per day
    d. Opioid prescription plus respiratory disease or smoker
    e. Opioid prescription plus other comorbidities such as cardiac disease or renal insufficiency
    f. Suspected illicit or nonmedical opioid user

☐ **Counsel on "What is opioid overdose?"**

Opioids come with side effects just like other medications, but excessive use or combination with other medications can lead to life-threatening events in which you potentially stop breathing.

☐ **Counsel on "What is naloxone?"**

Naloxone is a reversal agent to treat opioid overdose. It comes as a nasal spray, IM injection, and auto-injector

☐ **Counsel on "How to avoid overdose"**

- Do NOT mix opioids with alcohol, benzodiazepines, or other CNS depressants
- Do NOT take over the prescribed dose by MD
- Tell your doctor or pharmacist when you start any new medications

☐ **Counsel on "Common opioids"**

Hydrocodone (Vicodin, Lortab, Norco)
Morphine (MS Contin, Kadian, Embeda, Avinza)
Fentanyl (Duragesic)
Oxymorphone (Opana)
Methadone (Dolophine, Methadose)
Oxycodone (Percocet, OxyContin, Roxicodone, Percodan)
Codeine (Tylenol #3, Cheratussin-AC)
Hydromorphone (Diladid)
Meperidine (Demerol)
Buprenorphine (Suboxone, Subutex, Butrans)

☐ **Counsel on "Sign and symptoms of overdose"**

- Unable to waken despite shaking, saying his/her name, or pain
- Breathing slows or stops
- Lips and fingernails turn blue or grey
- Clammy or pale skin
- Pinpoint pupils

☐ **Counsel on "Steps to take in case of opioid overdose"**

1. Rub your knuckles on the bony part of the chest (sternum) to try to get them to wake up and breathe
2. Call 911
    a. Give the address
    b. Tell them a person is not breathing
3. Give INTRANASAL naloxone
    a. Peel back the package to remove the device
    b. Hold the device with your thumb on the bottom of the plunger and 2 fingers on the nozzle
    c. Place and hold the tip of the nozzle in either nostril until fingers touch the bottom of the person's nose
    d. Press the plunger firmly to release the dose into the person's nose
    e. If breathing does not return to normal or if breathing difficulty resumes, after 2-3 minutes, give an additional dose of using a new device in the alternate nostril
4. Do rescue breathing if the person is NOT breathing
    a. Put on his/her back
    b. Tilt chin back slightly to keep airway open
    c. Pinch nose closed with one hand
    d. Make a seal over the mouth with yours and breath in to make the chest rise
    e. Give one breath every 5 seconds

☐ **Use trainer to demonstrate how to use intranasal naloxone**

☐ **Counsel on "Side effects of naloxone"**

N/V/D	Body aches	Irritability	Tachycardia	Hypertension
Fever	Restlessness	Sweating	Piloerection	

☐ **Counsel on "Steps to take after administering naloxone"**

1. Stay with person until help arrives
2. Place person on his/her side to prevent choking on vomit (potential side effect of naloxone treatment)
3. If the paramedics arrive, tell them what medications the person took if you know
4. If the police arrive, the Utah Good Samaritan and Naloxone Law allows bystanders to give naloxone if they suspect overdose
    a. Protects the victim and encourages the help of others
    b. Police can confiscate drugs and prosecute persons who have outstanding warrants if necessary but it is not the main concern at the time
    c. Provides affirmative defense to help if there are legal concerns
5. Encourage patient to seek medical evaluation after overdose or naloxone

☐ **Assess if the patient can afford intranasal naloxone**

1. If the patient has commercial insurance (and not government insurance like Medicare/Medicaid), consider a manufacturer coupon available at manufacturer website.
2. Some pharmacies (non-UUHC pharmacies) provide "kits." They are usually ~$50 and come with a vial, needle, syringe, or atomizer (for nasal kits). They require more effort and instructions to use. Apothecary Shoppe (801-521-6353) sells both kits for ~$52. They have a CPA and don't require a prescription. They will provide education how to use the kits.

☐ **If dispensing naloxone without a prescription (ie, using Naloxone CPA), document in electronic record**

a. "In accordance with the naloxone collaborative practice agreement, the patient has been dispensed naloxone on [DATE] at [PHARMACY]. The patient was counseled on risk factors of opioid overdose, recognizing opioid overdose symptoms, administering the naloxone, rescue breathing, and calling 911. [PHARMACIST NAME]

COUNSELING

Counseling – How to administer naloxone?

- Have training devices available for the products you stock/dispense
- Utilize training videos (see examples below)
    - Narcan Nasal Spray: https://www.youtube.com/watch?v=rcGILdVjpkA&feature=youtu.be
    - IM Naloxone: https://www.youtube.com/watch?v=yojGgAu7Suc&feature=youtu.be
    - Nasal Atomizer Spray: https://www.youtube.com/watch?v=J8rn6A9EaE4&feature=youtu.be
    - Evzio Injector: https://www.youtube.com/watch?v=aJmeSezkL1A&feature=youtu.be

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COUNSELING

Counseling – What to do in an overdose emergency?

- Steps to take in an overdose emergency
    - 1) Knuckle rub
    - 2) Call 911
    - 3) Administer naloxone
    - 4) Rescue breathing / place person on side
    - 5) Stay until EMS arrive

- Explain Good Samaritan Laws

COUNSELING

Who is naloxone education critical for?

Use a checklist and handouts

Create an “opioid overdose plan”

Consider how stigma may be present in your pharmacy

DOCUMENTATION

See state laws for specific requirements

Example language

- “In accordance with the naloxone collaborative practice agreement, the patient has been dispensed naloxone on [DATE] at [PHARMACY]. The patient was counseled on risk factors of opioid overdose, recognizing opioid overdose symptoms, administering the naloxone, rescue breathing, and calling 911. [PHARMACIST NAME]

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RESOURCES

prescribetoprevent.org

CDC – “Vital Signs” – Naloxone

National Institute on Drug Abuse

- https://www.drugabuse.gov/related-topics/opioid-overdose-reversal-naloxone-narcan-evzio

Kevin DeMass – Apothecary Shoppe (Utah)

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QUESTION

You are a pharmacist at a local community pharmacy. Your community has been affected by the “opioid epidemic” and you’re aware of 3 recent opioid overdose deaths in your community over the past 6 months. You’ve kept up-to-date on the news and national trends regarding opioids, but haven’t been involved much in harm reduction efforts. You recognize there is an opportunity for you to become more involved and proactive, and potentially take a leadership role.

What are kinds of interventions could you consider for your pharmacy and/or services you could advocate for in your community?

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QUESTION

Which of the following are NOT potential barriers to becoming more involved in naloxone dispensing/distribution?

A. Time/workflow to counsel
B. Provider awareness of services I provide
C. My state does not have NAL
D. All of these are barriers

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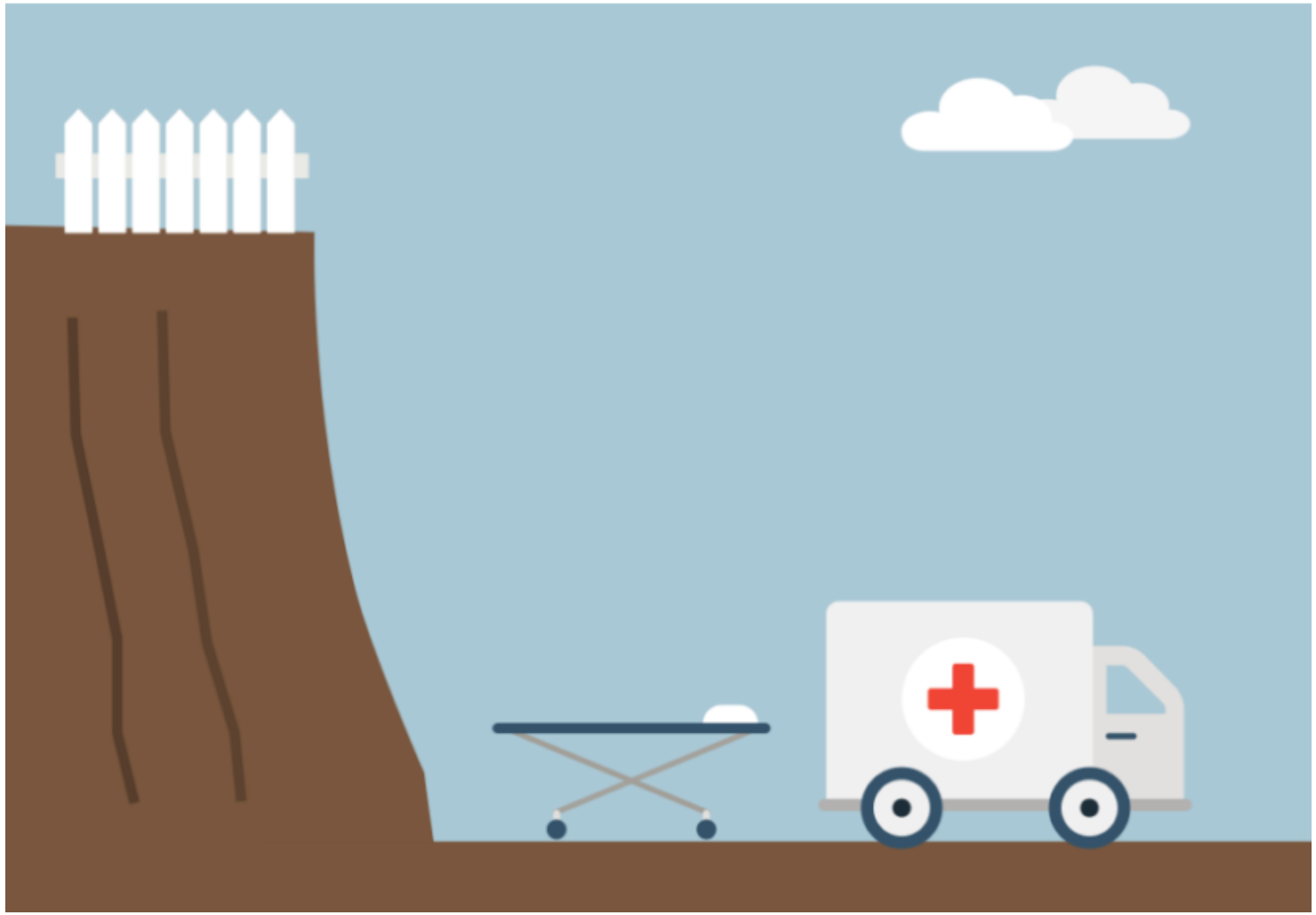
CONCLUSIONS

So…. why should I do this?

Spivey CA, Wilder A, Chisholm-Burns MA, Stallworth S, Wheeler J, Evaluation of Naloxone Access, Pricing, and Barriers to Dispensing in Tennessee Retail Community Pharmacies, Journal of the American Pharmacists Association (2020)

CONCLUSIONS

The Fence or the Ambulance (poem by Joseph Malins)



https://dynamicclinic.com. Accessed February 25, 2020.

CONCLUSIONS

"Pharmacists are in a ***strong position*** to support these strategies because they serve as patient educators, provide recommendations for the appropriate use of opioids and their adverse effects, and can advise patients and their family members about the availability of naloxone."

- More than 1/3 of the 1.7M misusing opioids received them from a pharmacy
- 90% of Americans live within 2 miles of a community pharmacy
- One of top trusted professionals
- We have the knowledge and skills

Gangal NS, Hincapie AL, Jandarov R, et al. Association Between a State Law Allowing Pharmacists to Dispense Naloxone Without a Prescription and Naloxone Dispensing Rates. JAMA Network Open. 2020.
Cochran G, Field C, Lawson K. Pharmacists who screen and discuss opioid misuse with patients: Future directions for research and practice. Journal of Pharmacy Practice. In press.
Corson K, Gerrity MS, Dobscha SK. Screening for depression and suicidality in a VA primary care setting: 2 items are better than 1 item. The American journal of managed care. 2004;10(11 Pt 2):839.
Qato DM, Zenk S, Wilder J, Harrington R, Gaskin D, Alexander GC. The availability of pharmacies in the United States: 2007-2015. PLoS One. 2017;12(8):e0183172.
Williams EC, et al. Variation in documented care for unhealthy alcohol consumption across race/ethnicity in the Department of Veterans Affairs Healthcare System. Alcoholism, Clinical And Experimental Research. 2012;36(9):1614-1622.
Field C, Cochran G, Caetano R, Foreman M, Brown C. Post-discharge nonmedical use of prescription opioids in at-risk drinkers admitted to urban level-I trauma centers. Journal of Trauma and Acute Care Surgery. In press.
Butler SF, Budman SH, Fernandez KC, et al. Development and validation of the Current Opioid Misuse Measure. Pain. 2007;130(1-2):144-156.

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