

# Naloxone (Narcan): The Opioid Overdose Antidote



Susan Wolfe, Ph.D.  
DMHAS

## Disclosure Statement:

I have no relevant financial relationships with commercial interests now nor within the last 12 months.

# Scope of the Prescription Drug Abuse Problem

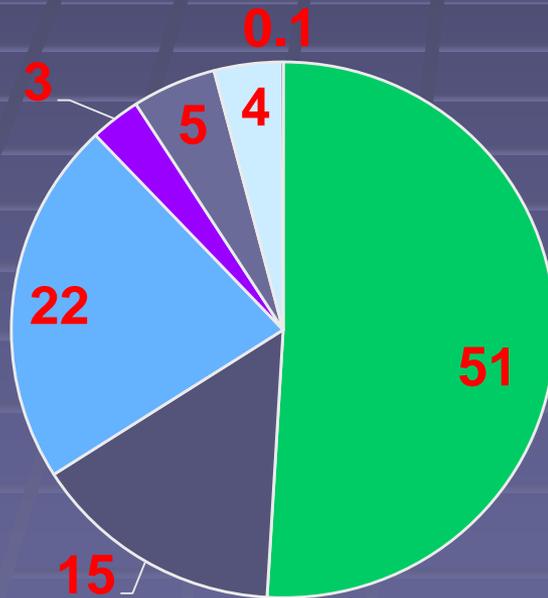


# Past 30 days Illicit Drug Use among Persons 12 and Older: 2014 (in millions)



# Source where pain relievers were obtained for most recent nonmedical use : 2013-2014

Two-thirds (66%) were obtained from a friend/relative



Values in percentages

- Free from Friend/Relative
- Bought/Took from Friend/Relative
- One Doctor
- More than one Doctor
- Bought from Drug Dealer/Stranger
- Other
- Bought on Internet

# Why the Concern about Prescription Drugs?

- In 2010, enough painkillers were prescribed to medicate *every adult American around the clock for one month*
- People think they are safe
- Risk of Tolerance, Dependence, Addiction, Overdose, and Death
- Diversion
- Transition

# Gateway to Heroin Use

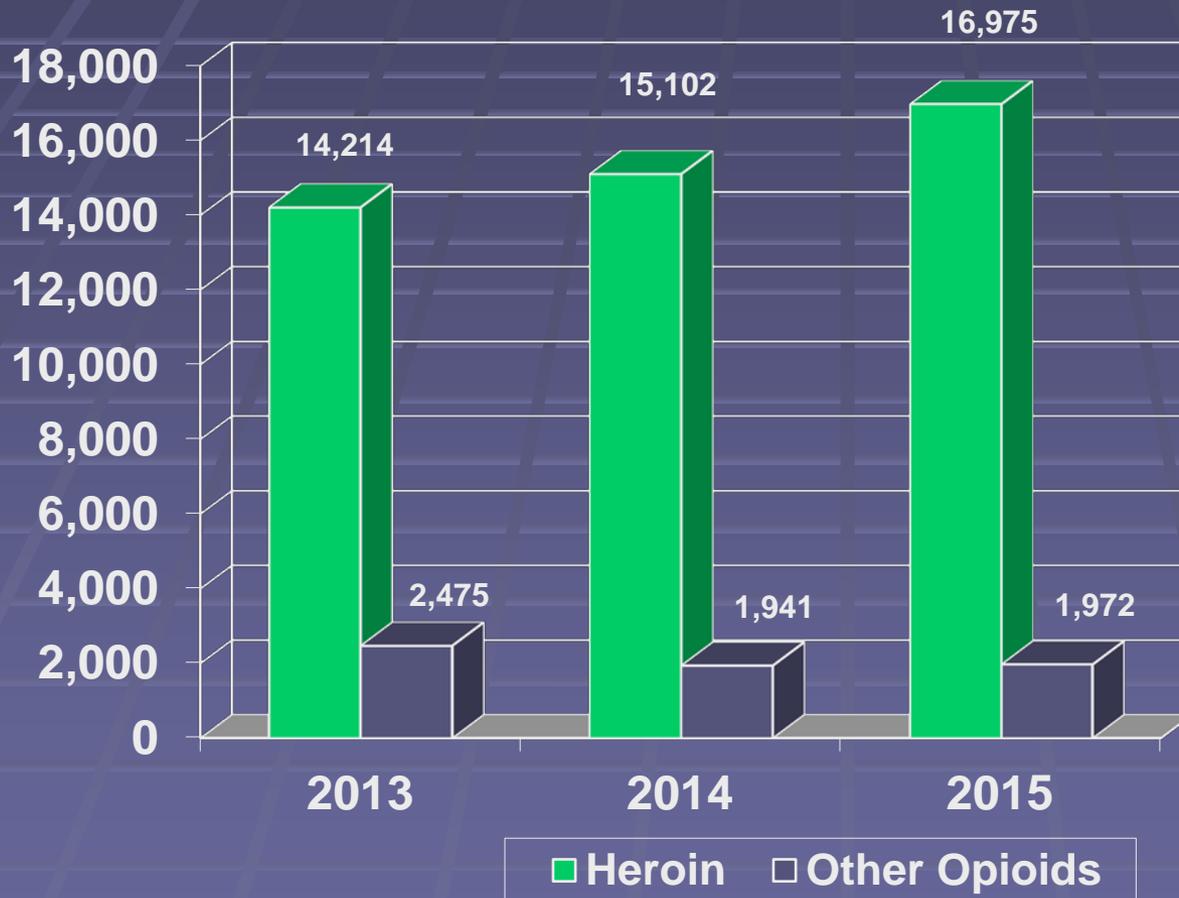
According to the CDC, past misuse of prescription opioids is the strongest risk factor for heroin initiation and use.



# Connecticut's Opioid Problem



# Primary Substance at Admission: DMHAS Substance Use Services



**45% of  
substance use  
services  
admissions are  
for opioids  
compared to  
35% for alcohol**

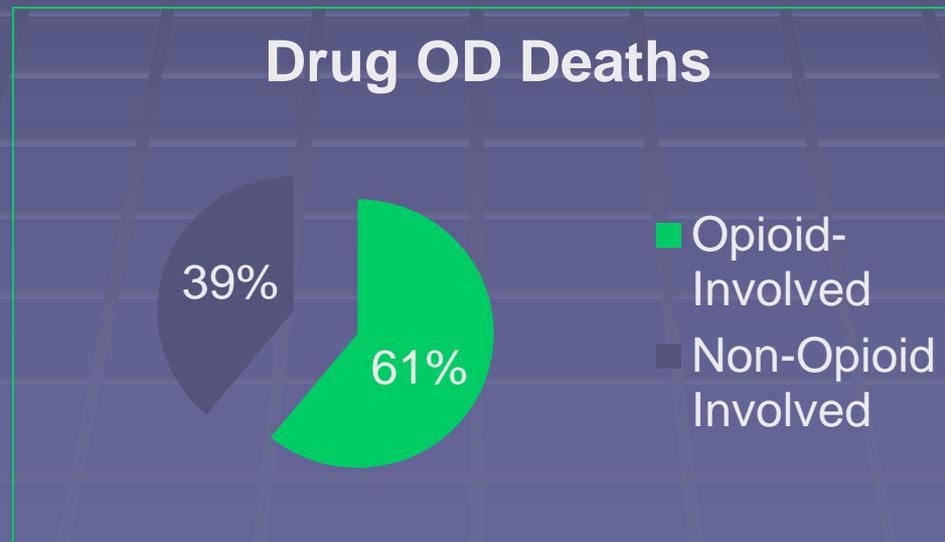
# OVERDOSES



# Opioid OD Deaths Up 14% from 2013 -14

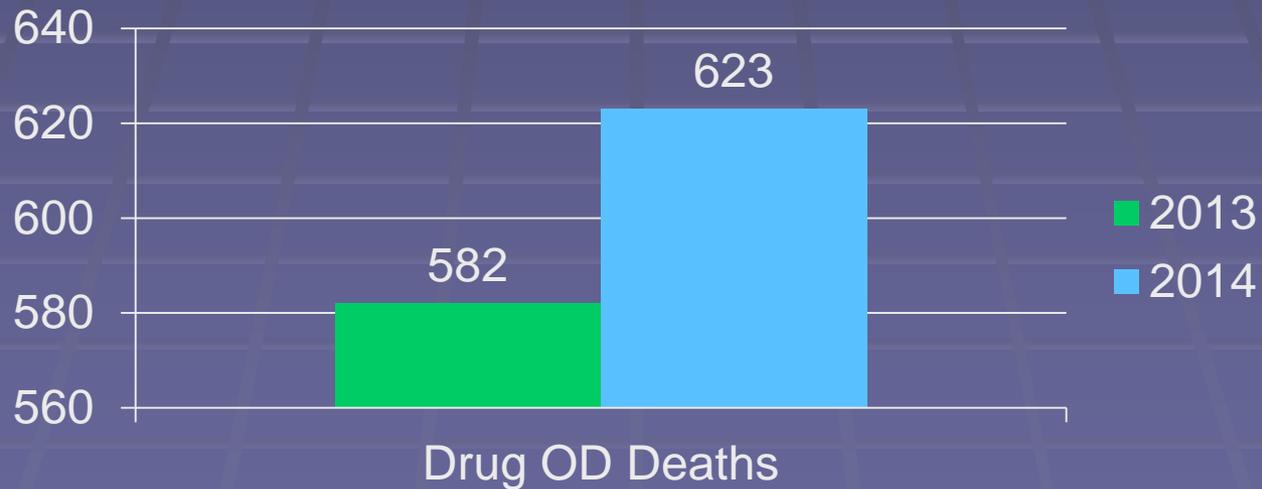
61% of 47,055 drug OD deaths in 2014 involved opioids:

- Synthetic opioids (e.g. illicit fentanyl) up 80%
- Heroin up 26%
- Natural and semisynthetic opioids (e.g., oxycodone, hydrocodone) up 9%
- Methadone unchanged



# Drug Overdose Deaths: CT 2013 - 2014

2013		2014		% Change
#	Rate	#	Rate	(2013-2014)
582	16.0	623	17.6	+10.0



# Drug Overdoses in Connecticut

- On average, 1 - 2 people die *every day* in CT from an opioid overdose
- Most overdose deaths in CT are due to use of opioids, alone or in combination
- It's the leading cause of adult injury death, more than due to MVA, fires and firearms *combined.*



# State Rankings: OD Death Rates

1. WV: 35.5	19. CT: 17.6	35. OR: 12.8
2. NM: 27.3	20. MD: 17.4	36. AR: 12.6
3. NH: 26.2	21. LA: 16.9	37. MT: 12.4
4. KY: 24.7	22. AK/ME: 16.8	38. GA: 11.9
5. OH: 24.6	24. CO: 16.3	39. VA/KS: 11.7
6. RI: 23.4	25. AL: 15.2	41. MS: 11.6
7. UT: 22.4	26. WI: 15.1	42. NY: 11.3
8. PA: 21.9	27. SC: 14.4	43. CA: 11.1
9. DE: 20.9	28. NJ: 14.0	44. HI: 10.9
10. OK: 20.3	29. VT: 13.9	45. TX: 9.7
11. TN: 19.5	30. NC: 13.8	46. MN: 9.6
12. WY: 19.4	31. ID: 13.7	47. IA: 8.8
13. MA: 19.0	32. WA: 13.3	48. SD: 7.8
14. NV: 18.4	33. FL: 13.2	49. NE: 7.2
15. MO/AZ/IN: 18.2	34. IL: 13.1	50. ND: 6.3
18. MI: 18.0		

# Who is Overdosing?

- 2 main groups at risk for an opioid OD:
  - Those prescribed high daily doses of painkillers
  - Those who misuse multiple abuse-prone prescription drugs

# Special Populations

- **Women:** Deaths from Opioid Painkillers increased 5-fold between 1999 – 2010
- **Baby Boomers/ 50+:** (1947-1964) higher substance use rates; more pain/medical issues; more prescriptions; 6-fold increase in opioid painkiller deaths between 1999-2010
- **Chronic Pain Clients:** 3% of Americans; there is no convincing evidence of long-term efficacy of opioids for chronic pain
- **Medicaid Recipients:** prescribed painkillers at 2X the rate of non-recipients and have 6X the rate for painkiller overdose

# Anyone can overdose

- Children < 6 (40% of calls to poison control involve Pharmaceuticals)
- Teenagers at parties
- Confusion/forgetfulness of Seniors



# CDC Guidelines for Prescribing Opioids for Chronic Pain – United States 2016

1. Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain. Only consider adding opioid therapy if benefits for both pain and function are expected to outweigh risks.
2. Establish treatment goals before starting opioid therapy for chronic pain, including for pain and function. Don't start opioid therapy without considering how to discontinue if unsuccessful. Only continue opioid therapy if there is clinically meaningful improvement in pain and function that outweighs risks.
3. Discuss known risks and benefits of opioid therapy & patient and provider responsibilities for managing therapy.
4. Prescribers should start with immediate-release opioids instead of extended-release/long-acting opioids for treating chronic pain.

# CDC Guidelines for Prescribing Opioids for Chronic Pain – United States 2016

5. Prescribers should start with the lowest effective dosage. Providers should use caution when prescribing opioids at any dosage, should implement additional precautions when increasing dosage to  $\geq 50$  morphine milligram equivalents (MME)/day, and should generally avoid increasing dosage to  $\geq 90$  MME/day.
6. Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, providers should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three or fewer days usually will be sufficient.

# CDC Guidelines for Prescribing Opioids for Chronic Pain – United States 2016

7. Providers should evaluate benefits and harms with patients within 1 – 4 weeks of starting or increasing opioid therapy for chronic pain and at least every 3 months for those on continuous therapy. If benefits do not outweigh harms, providers should work with patients to reduce opioid dosage & to discontinue opioids.
8. Before starting and periodically during continuation of opioid therapy, providers should evaluate risk factors for opioid-related harms. Providers 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 OD, history of SUD, or higher opioid dosages ( $\geq 50$ MME), are present.

# CDC Guideline for Prescribing Opioids for Chronic Pain – United States 2016

9. Providers should review the state prescription drug monitoring data to determine whether the patient is receiving high opioid dosages or dangerous combinations that put him/her at high risk for OD. Providers should review such data when starting and periodically during opioid therapy for chronic pain, ranging from every prescription to every 3 months.
10. When prescribing opioids for chronic pain, providers should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs.

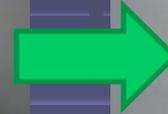
# CDC Guideline for Prescribing Opioids for Chronic Pain – United States 2016

11. Providers should avoid prescribing opioid pain medication for patients receiving benzodiazepines whenever possible.
12. Providers should offer or arrange evidence-based treatment for patients with opioid use disorder (usually Methadone or Buprenorphine with behavioral therapies).

# Naloxone Distribution Programs

- Naloxone Distribution Programs started in 1996
- As of June 2014, there were 644 sites distributing kits & reporting **26,463 opioid overdose reversals**
- Many states now have programs
- Strategies/legislation vary by state
- Education is an expectation

# Naloxone (Narcan): IM & IN



# Naloxone (Narcan)

- Prescription medication
- Safe medication
- Only has an effect if the person has opioids in their system
- You cannot get high from it/has no abuse potential or street value and if you are high on opioids, it causes withdrawal

# How does Narcan Work?

- In an opioid overdose, the automatic drive to breathe is diminished – **people die from a lack of oxygen over a 1 – 3 hour period**
- Narcan “steals the spot” of the opioid in the brain receptor site for 30 – 90 minutes - so breathing resumes while the Narcan lasts
- Works on any opioid



# Standard Training on Naloxone (Narcan)

- Overdose Risk Factors
- Identifying an Opioid Overdose
- Calling 911
- Rescue Breathing
- Naloxone (Narcan) administration
- Recovery Position

# Overdose Risk Factors

- **Decreased Tolerance:** after a detox, program, hospital stay or jail
- **Using alone:** *(although most people aren't alone)*
- **Mixing:** opioids, especially in combination with benzodiazepines and/or alcohol
- **Quality/strength:** of drugs can be unpredictable
- **Other health issues:** (asthma, liver and heart disease, AIDS, malnourishment, etc.)
- **Previous overdose:** (risky use or health issues)
- **Mode of administration:** (IV and smoking ↑ risk)
- **Age:** (↑ age & longer drug hx – more fatal ODs)

# Identifying an Opioid Overdose

- Unresponsive or minimally responsive
- Blue or gray face, especially fingernails and lips
- Shallow breathing with rate less than 10 breaths per minute or not breathing at all
- Pinpoint pupils
- Loud, uneven snoring or gurgling noises
  
- Other evidence: known opioid user, track marks, syringes, pills or pill bottles, information from bystanders

# Try to rouse them

- Call their name and shake them
- Check for a pain response: rub hard up and down on the person's sternum with your knuckles
- IF NO RESPONSE: CALL 911

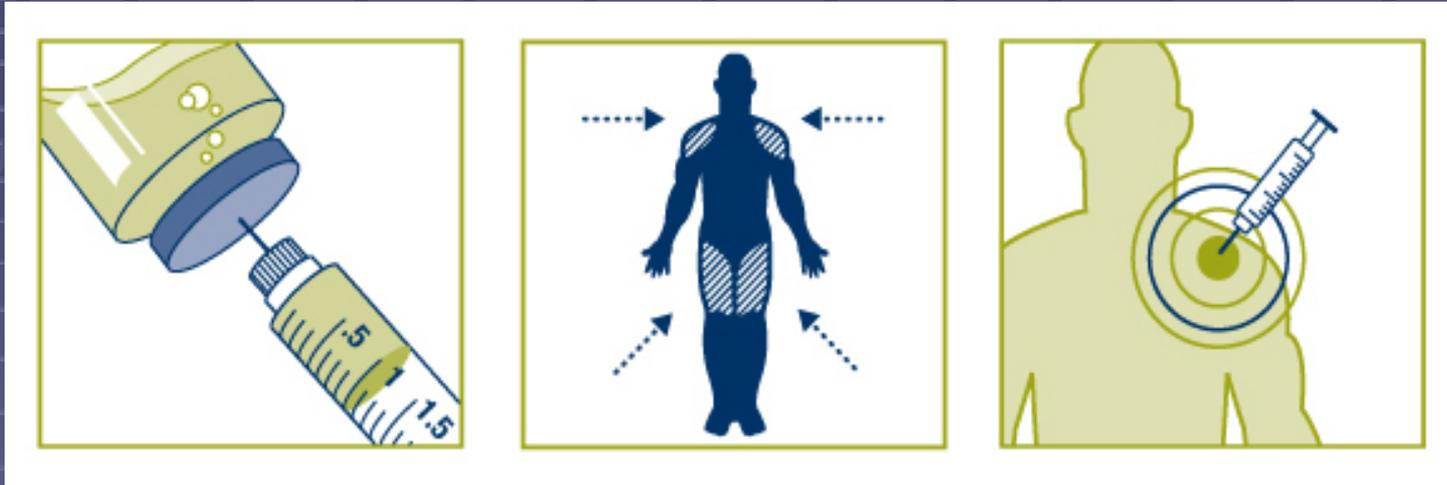
# Call 911

- Tell them the person isn't breathing or is having trouble breathing, this makes the call a priority
- Describe exactly where the person is located

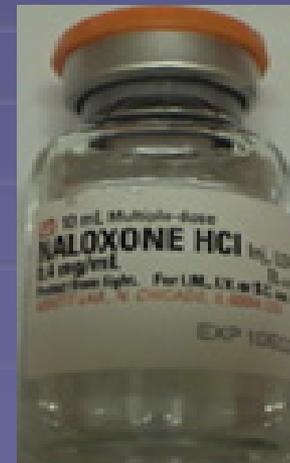
# Rescue Breathing

- If you are alone with the victim, start rescue breathing and then go get the Naloxone after you have given a few breaths
- Head tilt/chin lift/pinch nose
- Look, listen and feel to see if chest rises/falls
- Give 2 normal size breaths
- Then one breath every 5 seconds
- Breathe for victim until they respond to the Naloxone or EMS arrives

# Intramuscular Administration



- Clean with alcohol wipe
- Inject into muscle (shoulder or thigh) at 90°
- Push in plunger



# Intranasal Naloxone Device



- Pull off plastic caps, screw spray device onto syringe
- Pull plastic cap off the vial and screw into bottom of syringe
- Spray half of vial up one nostril and half up the other

# Auto-Injector Naloxone Device



Talks you through the process.

# Narcan Nasal Spray

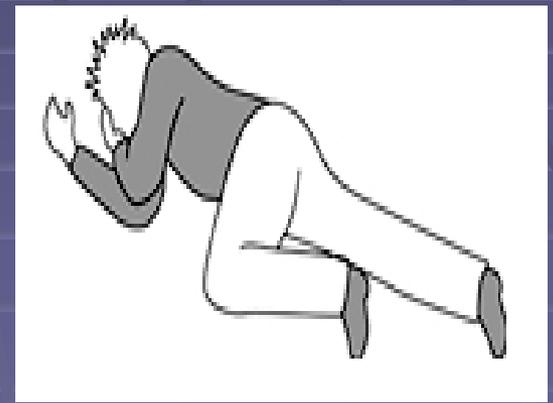
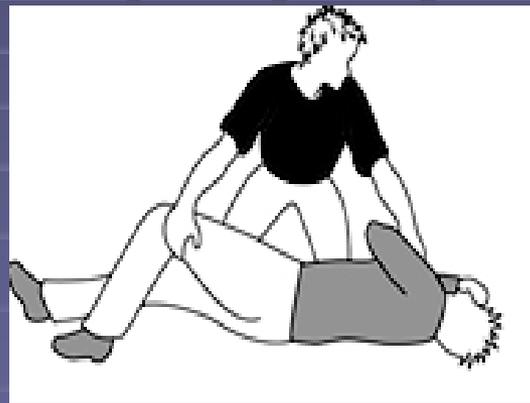
- Lay the person on their back
- Press firmly on the plunger & spray into one nostril while tilting the head back with the other hand
- Monitor & administer additional doses every 2 – 3 minutes if no response or if the person re-overdoses



Adapt Pharma Prescribing Information Highlights



# Rescue Position



# Afterwards

- People usually revive in 2 – 8 minutes, feeling sick and not realizing that they've overdosed
- If the person doesn't respond to the Naloxone within that time, give a second dose
- They may be agitated, in withdrawal, and in need of an explanation
- The person could re-overdose based on how much they used and how long the Naloxone lasts; don't let them use more opioids
- They should be monitored for at least one hour

# CT Narcan Legislation

- 11-210 (21a-279): Good Sam law; ↑ calls to 911
- 12-159 (17a-714): Narcan could be prescribed to anyone; Prescribers protected from civil liability/criminal prosecution
- 14-61(17a-714): 3rd party administering narcan is protected from civil liability and criminal prosecution
- 15-198: Governor's Omnibus Bill:  
Pharmacist prescribing/dispensing; CMEs; checking CPMRS; clarify 2012; ADPC

# Naloxone Kit Materials:

(from the Harm Reduction Coalition Website)



Container, 2 doses of Narcan, pair of gloves, instructions, if IM: alcohol swabs, if IN: atomizer

# Storage and Expiration

- Store in moderate temperatures
- Out of direct sunlight
- Not in refrigerator
- Generally expires after 12 – 24 months

# Questions/Discussion

# References

- CDC Guidelines for Prescribing Opioids for Chronic Pain – United States, 2016 at [www.regulations.gov/#!documentdetail;D=CDC-2015-0112-0001](http://www.regulations.gov/#!documentdetail;D=CDC-2015-0112-0001)
- CDC MMWR: Increases in Drug and Opioid Overdose Deaths – United States, 2000-2014; Vol. 64; December 18, 2015.
- CDC :Opioid Overdose Prevention Programs Providing Naloxone to Laypersons – US, 2014, MMWR, June 19, 2015/64 (23): 631-635.
- CDC Prescription Drug Overdose in the US: Fact Sheet October 17, 2014.
- CDC Vital Signs: Overdoses of Prescription Opioid Pain Relievers and other drugs among women – US, 1999-2010, July 5, 2013/62 (26): 529-544.
- CDC Vital Signs: Opioid Painkiller Prescribing; July 1, 2014.
- Center for Behavioral Health Statistics and Quality. (2015). *Behavioral Health trends in the United States: Results from the 2014 National Survey on Drug Use and Health* (HHS Publication No. SMA 15-4927, NSDUH Series H-50). Retrieved from <http://www.samhsa.gov/data/>
- DMHAS Annual Statistical Report at [www.ct.gov/dmhas/lib/dmhas/publications/dmhas annual report sfy2013-14.pdf](http://www.ct.gov/dmhas/lib/dmhas/publications/dmhas%20annual%20report%20sfy2013-14.pdf)
- Green TC, Grau LE, Carver HW, Kinzly M, & Heimer, R. Epidemiologic trends and geographic patterns of fatal opioid intoxication in Connecticut, USA: 1997- 2007; June 1 2011, Drug and Alcohol Dependence, 115 (3): 221-228.

# References

- <http://www.cga.ct.gov/2011/sum/2011sum00210-R02HB-06554-sum.htm>
- <http://www.cga.ct.gov/2012/act/PA/2012PA-00159-R00HB-05063-pa.htm>
- <http://www.cga.ct.gov/2014/ACT/PA/2014PA-00061-R00HB-05487-PA.htm>
- <http://www.cga.ct.gov/2015/FC/2015HB-06856-R000913-FC.htm>
- Manchikanti L et al., Controlled Substance Abuse and Illicit Drug Use in Chronic Pain Patients: An Evaluation of Multiple Variables, Pain Physician, 2006; 9: 215 -226.
- Manchikanti, L et al., Opioids in Chronic Noncancer Pain: Have we Reached a Boiling Point Yet? Pain Physician. (2014); 17: E1 – E10.
- Substance Abuse and Mental Health Services Administration, *Results from the 2013 National Survey on Drug use and Health: Summary of National Findings*, NSDUH Series H – 48, HHS Publication No. (SMA) 14 – 4863. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.

# Resources

- Opioid Overdose Prevention/Naloxone (Narcan) on the DMHAS website;  
<http://www.ct.gov/dmhas/cwp/view.asp?a=2902&q=509650>
- Harm Reduction Coalition; Harm Reduction. org
- Prescribe to Prevent. org
- <http://intranasal.net/OpiateOverdose/>
- Susan Wolfe, PhD
  - [susan.wolfe@ct.gov](mailto:susan.wolfe@ct.gov)
  - 860-418-6993