## OMA 2016

# Harm Reduction Strategies for Chronic Pain Patients

Presented by
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PM&R, Pain Medicine

### Disclosures

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Dr. Coelho has nothing to disclose. I will not be discussing any off-label use.

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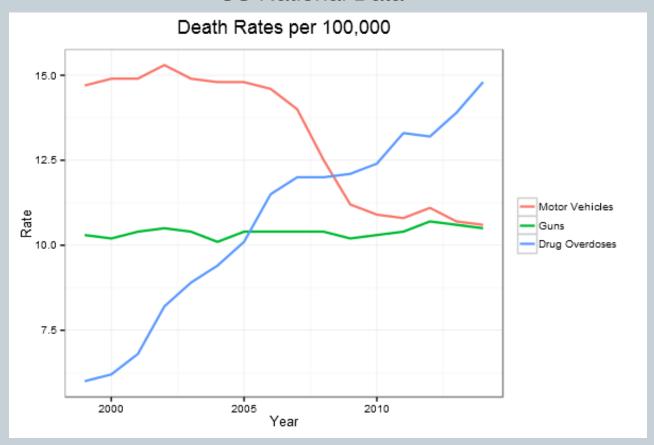
- 1. The Opioid Epidemic
- 2. Risk Factors for Overdose
- 3. Risk Factors for Opioid Use Disorder (Addiction)
- 4. Harm Reduction Strategies
- 5. Sample Cases



### Overdose Deaths 2000-2015

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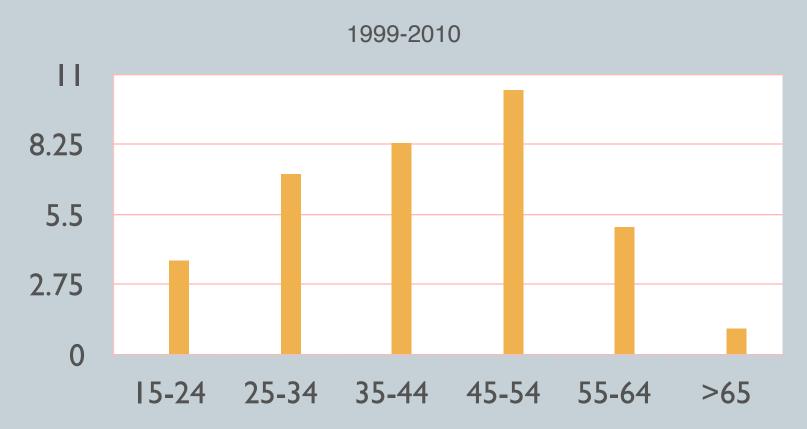
#### **US National Data**



http://www.realclearpolicy.com/blog/2015/12/21/guns\_vs\_cars\_and\_drugs\_1500.html

### Overdose Deaths By Age



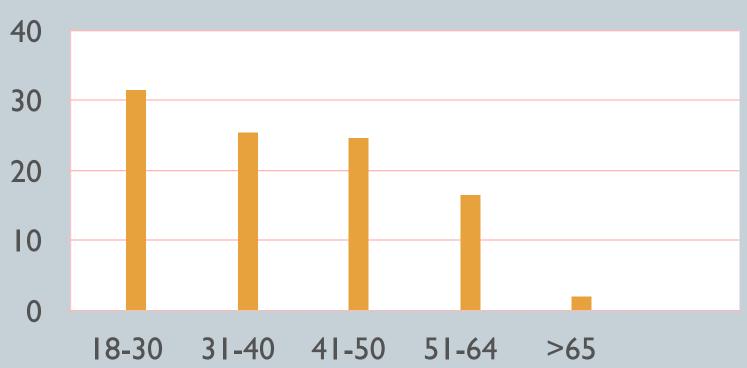


www.cdc.gov/mmwr/preview/mmwrhtml/mm6126a5.htm

### Addiction Diagnosis by Age

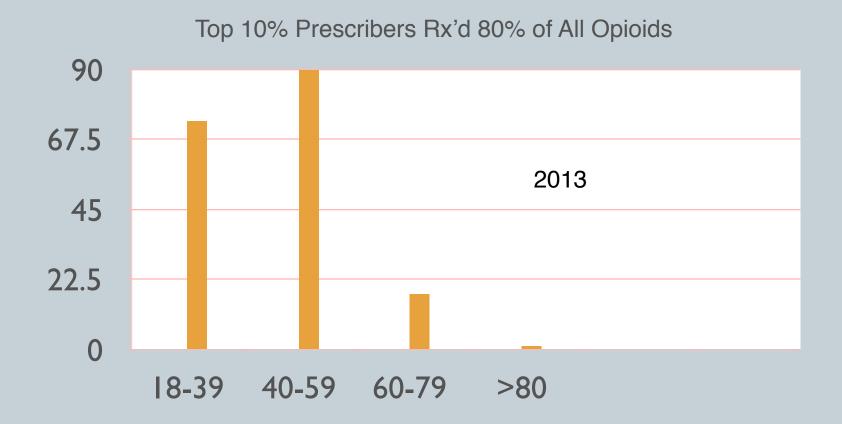






http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4032801/

### OR Medicaid Opioid Rx's by Age



http://www.ncbi.nlm.nih.gov/pubmed/26766755

Difficult Conversations & Harm Reduction Strategies

### 14% Increase In ODD's Nationally 2013-2014

Number and age-adjusted rates of drug-poisoning deaths involving

opioid analgesics and heroin: United States, 2000-2014

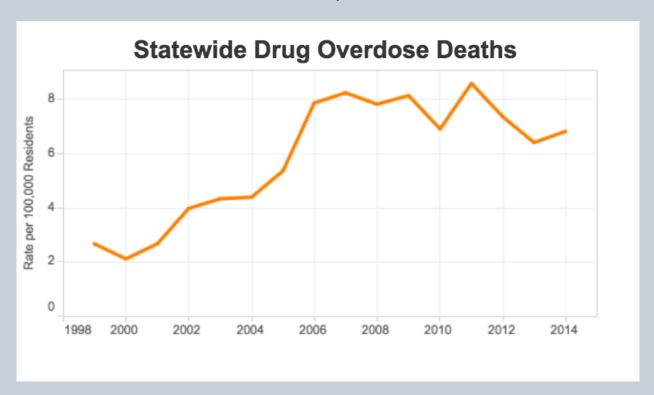
			Drug pois	oning		
	All		Opioid and	algesics	Her	oin
Year	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	16,849	6.1	4,030	1.4	1,960	0.7
2000	17,415	6.2	4,400	1.5	1,842	0.7
2001	19,394	6.8	5,528	1.9	1,779	0.6
2002	23,518	8.2	7,456	2.6	2,089	0.1
2003	25,785	8.9	8,517	2.9	2,080	0.
2004	27,424	9.4	9,857	3.4	1,878	0.
2005	29,813	10.1	10,928	3.7	2,009	0.
2006	34,425	11.5	13,723	4.6	2,088	0.
2007	36,010	11.9	14,408	4.8	2,399	0.0
2008	36,450	11.9	14,800	4.8	3,041	1.0
2009	37,004	11.9	15,597	5.0	3,278	1.3
2010	38,329	12.3	16,651	5.4	3,036	1.0
2011	41,340	13.2	16,917	5.4	4,397	1.4
2012	41,502	13.1	16,007	5.1	5,925	1.
2013	43,982	13.8	16,235	5.1	8,257	2.
2014	47,055	14.7	18,893	5.9	10,574	3.4

http://www.cdc.gov/nchs/data/health\_policy/AADR\_drug\_poisoning\_involving\_OA\_Heroin\_US\_2000-2014.pdf

### **OR Opioid Overdose Deaths**

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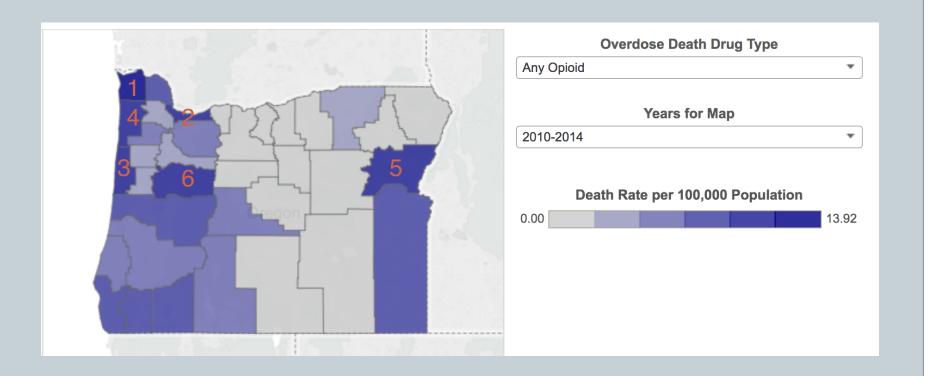
#### All Opioids



http://public.health.oregon.gov/PreventionWellness/SubstanceUse/Opioids/Pages/data.aspx

### Oregon Opioid Overdose Deaths





http://public.health.oregon.gov/PreventionWellness/SubstanceUse/Opioids/Pages/data.aspx

### Oregon Opioid Overdose Deaths

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- 1. Clatsop
- 2. Multnomah
- 3. Lincoln
- 4. Tillamook
- 5. Baker
- 6. Linn

http://public.health.oregon.gov/PreventionWellness/SubstanceUse/Opioids/Pages/data.aspx

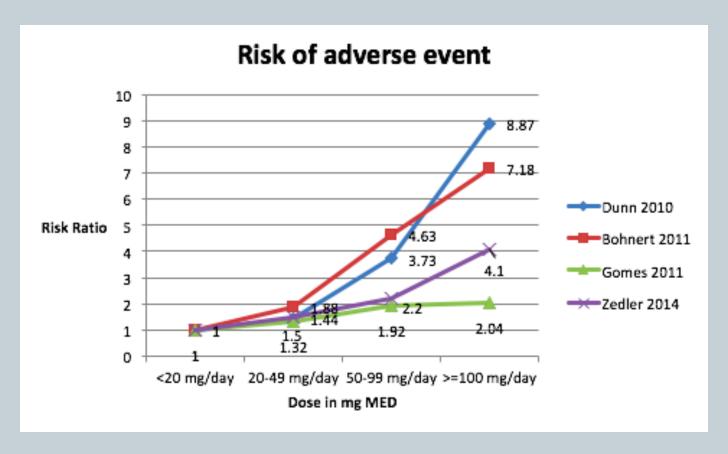
### Risk Factors for Overdose Death

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- 1. Opioid Dose ≥ 120mg Morphine/day (MED)
- 2.Methadone ≥ 40mg/day
- 3. Opioids + Benzodiazepines/Sedatives
- 4. ≥ 4 Prescribers or Pharmacies in 1yr

### Dose as a Risk Factor for Overdose Death

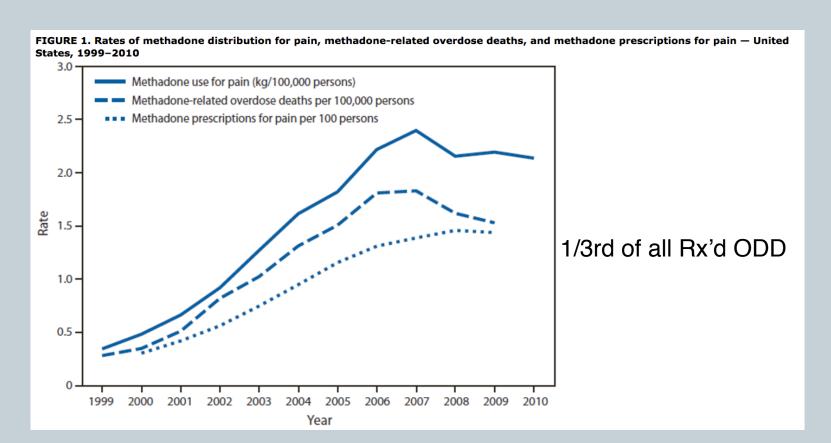




https://www.aan.com/uploadedFiles/Website\_Library\_Assets/Documents/3.Practice\_Management/2.Quality\_Improvement/2.Patient\_Safety/2.Patient\_Safe

### Methadone as a Risk Factor for Overdose Death

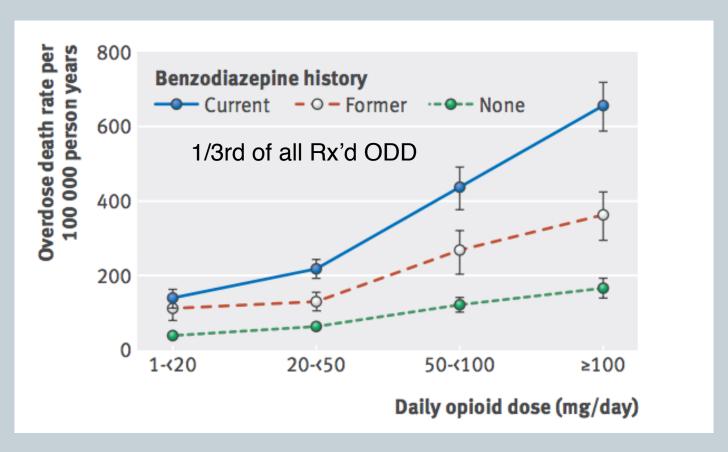




www.cdc.gov/mmwr/preview/mmwrhtml/mm6126a5.htm

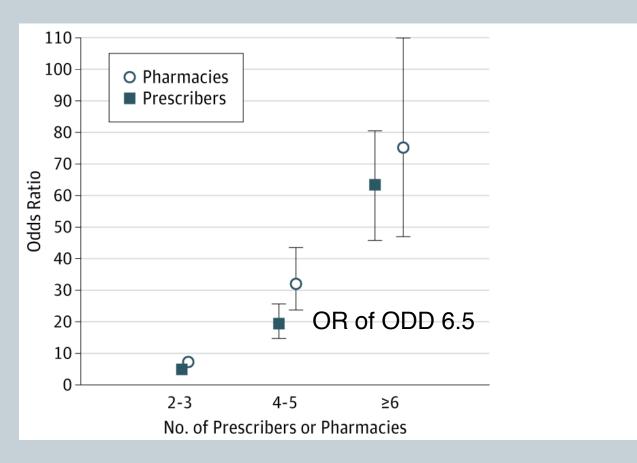
## Co-prescribed Benzodiazepines as a Risk Factor for Overdose Death





http://www.ncbi.nlm.nih.gov/pubmed/26890165

### ≥4 Pharmacies or Prescribers



http://archinte.jamanetwork.com/article.aspx?articleid=1840033

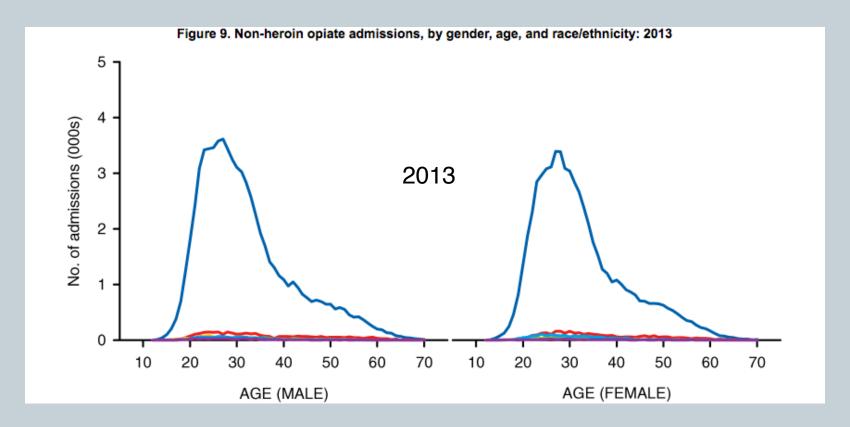
# Selected Risk Factors for Addiction DMS-V "Opioid Use Disorder"

17

- 1.Age
- 2.Length of Exposure
- 3.Dose

### Inpatient Addiction Treatment By Age



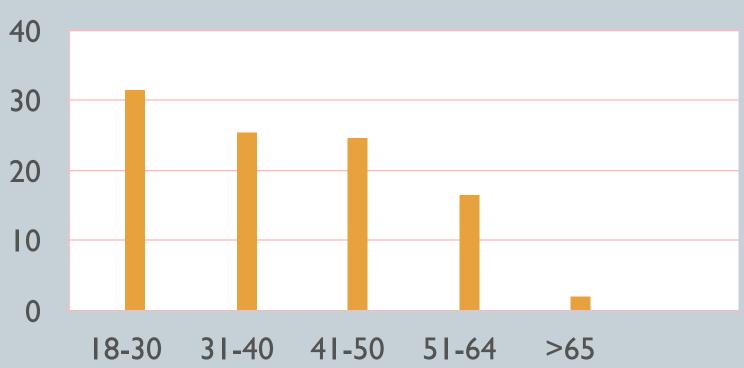


http://www.samhsa.gov/data/sites/default/files/2013\_Treatment\_Episode\_Data\_Set\_National/2003\_2013\_Treatment\_Episode\_Data\_Set\_National\_Body.html

### Addiction Diagnosis by Age





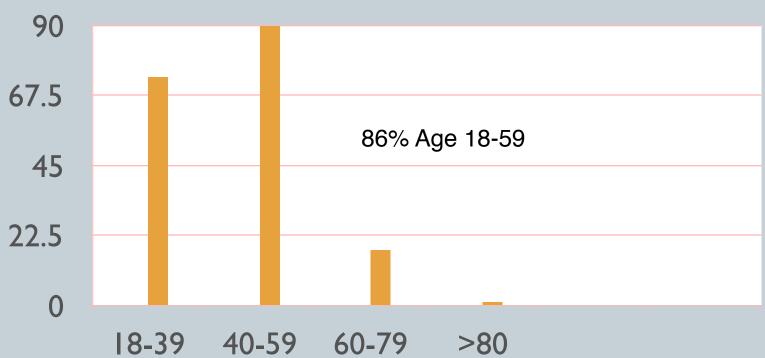


http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4032801/

### OR Medicaid Opioid Rx's by Age







http://www.ncbi.nlm.nih.gov/pubmed/26766755

### Length of Exposure ≥ 3mo



#### TROUP STUDY N = 570K

J Gen Intern Med. 2011 Dec;26(12):1450-7. doi: 10.1007/s11606-011-1771-0. Epub 2011 Jul 13.

Long-term chronic opioid therapy discontinuation rates from the TROUP study.

Martin BC<sup>1</sup>, Fan MY, Edlund MJ, Devries A, Braden JB, Sullivan MD.

Author information

±70% Stay on Opioids 5yrs

#### **Abstract**

**OBJECTIVE:** To report chronic opioid therapy discontinuation rates after five years and identify factors associated with discontinuation.

**METHODS:** Medical and pharmacy claims records from January 2000 through December 2005 from a national private health network (HealthCore), and Arkansas (AR) Medicaid were used to identify ambulatory adult enrollees who had 90 days of opioids supplied. Recipients were followed until they discontinued opioid prescription fills or disenrolled. Kaplan Meier survival models and Cox proportional hazards models were estimated to identify factors associated with time until opioid discontinuation.

RESULTS: There were 23,419 and 6,848 chronic opioid recipients followed for a mean of 1.9 and 2.3 years in the HealthCore and AR Medicaid samples. Over a maximum follow up of 4.8 years, 67.0% of HealthCore and 64.9% AR Medicaid recipients remained on opioids. Recipients on high daily opioid dose (greater than 120 milligrams morphine equivalent (MED)) were less likely to discontinue than recipients taking lower doses: HealthCore hazard ratio (HR) = 0.66 (95%CI: 0.57-0.76), AR Medicaid HR = 0.66 (95%CI: 0.50-0.82). Recipients with possible opioid misuse were also less likely to discontinue: HealthCore HR = 0.83 (95%CI: 0.78-0.89), AR Medicaid HR = 0.78 (95%CI: 0.67-0.90).

**CONCLUSIONS:** Over half of persons receiving 90 days of continuous opioid therapy remain on opioids years later. Factors most strongly associated with continuation were intermittent prior opioid exposure, daily opioid dose ≥ 120 mg MED, and possible opioid misuse. Since high dose and opioid misuse have been shown to increase the risk of adverse outcomes special caution is warranted when prescribing more than 90 days of opioid therapy in these patients.

http://www.ncbi.nlm.nih.gov/pubmed/21751058

### Risk of Dose & Length of Exposure

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#### TROUP Study 570K Individuals 2000-2005

Clin J Pain • Volume 30, Number 7, July 2014

Opioids and OUDs Among Individuals With CNCP

Variables†		Unadjusted OR (95% CI)	Adjusted OR (95% C
Opioid dose and days		1.00	1.00
No opioid use (reference)	0.00	1.00	1.00
Low dose, acute	0-36mg	3.31 (2.54-4.31)***	3.03 (2.32-3.95)***
Low dose, chronic		17.63 (12.33-25.20)***	(14.92)(10.38-21.46)***
Med dose, acute	37-120mg	3.04 (2.30-4.01)***	2.80 (2.12-3.71)***
Med dose, chronic		35.19 (24.75-50.02)***	28.69 (20.02-41.13)***
High dose, acute	>120mg	2.68 (1.45-4.98)**	3.10 (1.67-5.77)***
High dose, chronic	J	171.95 (105.97-279.00)***	122.45 (72.79-205.99)**

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4032801/

# Harm Reduction Strategies

### Identify At Risk Patients



- 1. Morphine Equivalent Dose ≥ 120mg/day
- 2. Methadone
- 3. Chronic opioid use [≥ 90days]
- 4. Opioid and co-prescribed benzodiazepine
- 5. ≥ 4 or more Rx'ers or Pharmacies in 1yr

### Prescription Drug Monitoring Program





#### **Oregon Prescription Drug Monitoring Program**



#### Oregon Healthcare Providers and Pharmacists Query Site

The Oregon Prescription Drug Monitoring Program (PDMP) is a tool to help healthcare providers and pharmacists provide patients better care in managing their prescriptions. Oregon Revised Statute 431.962 requires the Oregon Health Authority to establish and maintain a PDMP system for the reporting of all Schedules II, III and IV controlled substances dispensed by Oregon-licensed pharmacies to Oregon residents. The protected health information is collected and stored securely. The program was started to support the appropriate use of prescription drugs. The information is intended to help people work with their healthcare providers and pharmacists to determine what medications are best for them.

The Oregon Health Authority grants system access accounts to licensed healthcare providers and pharmacists and their staff. By law access to PDMP information by authorized system users is limited to patients under their care.



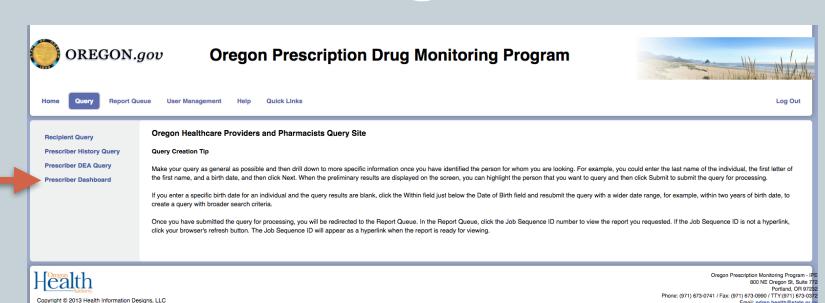
Copyright @ 2013 Health Information Designs, LLC If you need further assistance, please contact the PDMP Help Desk

800 NE Oregon St. Suite 773 Phone: (971) 673-0741 / Fax: (971) 673-0990 / TTY:(971) 673-0372

http://www.orpdmp.com/health-care-provider/

### PDMP Prescriber Dashboard





- 1. ≥ 120MED
- 2. Methadone ≥ 40mg
- 3. Opioid ≥ 90d
- 4. Opioid + Benzodiazepine
- 5. Rx from ≥ 4 Prescribers or Pharmacies

If you need further assistance, please contact the PDMP Help Desk

### Prescription Drug Monitoring Program

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County	MD/DO	PDMP Accounts	% Participation
Clatsop	146	77	53%
Multnomah	4,988	2151	43%
Lincoln	21	8	38%
*Tillamook	10	1	10%
*Baker	78	8	10%
*Linn	197	53	27%

http://www.orpdmp.com/orpdmpfiles/12\_2015\_PDMP\_YTD.pdf

### Opioid Dose Calculator



		Opioid Dose Calculator
	<u></u>	Patient's Name:
		Today's Date: April 9, 2016
This calculator can be used as aweb-based tool on mo access.	bile devices. Please refer to y	our device's instructions (or refer here: Android or iPhone/iPad) to learn how to add this calculator to your home screen for quick and easy
<b>Instructions:</b> Fill in the mg per day* for whichever of	pioids your patient is taking.	The web page will automatically calculate the total morphine equivalents per day.
Opioid (oral or transdermal):	mg per day: *	Morphine equivalents:
Codeine	0	
Fentanyl transdermal (in mcg/hr)	0	
Hydrocodone	0	
Hydromorphone	0	
Methadone	0	
Morphine	0	
Oxycodone	0	
Oxymorphone	0	
Tapentadol	0	
Tramadol	0	
TOTAL daily morphine equivalent dose (MED) = 0		
*NOTE: All doses expressed in mg per day with excep	ption of fentanyl transdermal,	which is expressed in mcg per hour  Calculate Print Reset
CAUTION: This calculator should NOT be used to are only approximations and do not account for genetic		verting a patient from one opioid to another. This is especially important for fentanyl and methadone conversions. Equianalgesic dose ratios lerance, and pharmacokinetics.
This opioid dose calculator was developed by the Was please refer to the guideline at: <u>AMDG - Opioid Dosin</u>		al Directors' Group to be used in conjunction with the Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. For more info,
For technical questions or comments, please contact:	AMDG IT Support	
Version 1.91 - © Agency Medical Directors' Group. A	all Rights Reserved. 2007-201	14

http://agencymeddirectors.wa.gov/mobile.html

### Examples of 120MED



Fentanyl 50ucgh/hr
Buprenorphine 4mg
*Methadone 40mg
Hydromorphone 30mg
Oxycodone/Oxycontin 80mg
Oxymorphone 40mg
Morphine 120mg
Codeine 800mg

### MED > 90 Consider Rx'ing Nasal Naloxone



- 1. SB 384 legalized for lay administration in 2013.
- 2. Stock in your pharmacies.
- 3. Some patients must pay out of pocket (\$35.00 -\$75.00.)

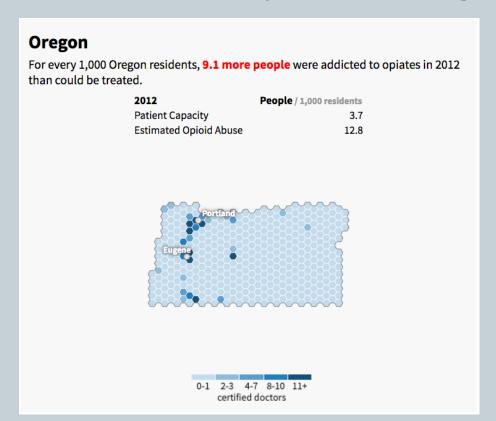


http://www.amphastar.com/assets/naloxone.pdf

# Consider a Data-2000 Waiver to Prescribe Buprenorphine



#### 17K MD/DO in OR but only 400 with Wavier [2%]



http://projects.huffingtonpost.com/dying-to-be-free-heroin-treatment/opioid-abuse-outpace-treatment-capacity

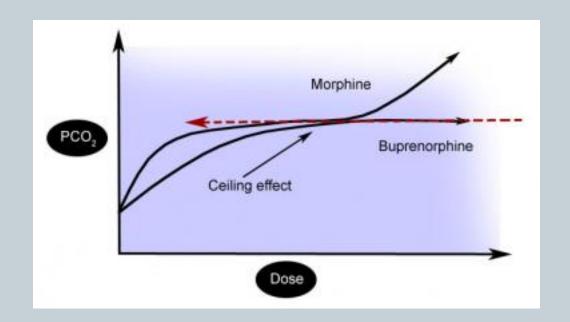
### Buprenorphine

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- 1. A schedule III drug, partial mu agonist
- 2. FDA approved for both pain Butrans/Belbuca and addiction Suboxone/Subutex.
- 3. Ceiling effect for respiratory suppression.

### Buprenorphine's Ceiling Effect for Respiratory Suppression





### Buprenorphine & Overdose Deaths

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Opioid	No.	Death rate per 100 kg MME	RR	(95% CI)
All deaths	110.	Death rate per 100 kg Pinic	KK	(35 % 61)
All deaths				
Buprenorphine	20	0.8	0.02	(0.01-0.04)
Fentanyl	364	7.7	0.28	(0.25-0.32)
Hydrocodone	550	14.3	0.42	(0.38-0.47)
Hydromorphone	74	9.1	0.27	(0.21-0.34)
Morphine	824	20.2	0.64	(0.58-0.70)
Oxycodone	1,097	8.7	0.26	(0.24-0.28)
Methadone	1,034	33.6	1.00	referent
Total*	3,294	10.4		
Single-drug deaths	•	·		
Buprenorphine	2	0.1	0.01	(0.00-0.03)
Fentanyl	99	2.1	0.26	(0.21-0.33)
Hydrocodone	42	1.1	0.11	(0.08-0.16)
Hydromorphone	4	0.5	0.05	(0.02-0.14)
Morphine	153	3.8	0.41	(0.34-0.50)
Oxycodone	150	1.2	0.12	(0.10-0.15)
Methadone	298	9.7	1.00	referent
Total	748	2.4		

Abbreviations: MME = morphine milligram equivalent; RR = rate ratio; CI = confidence interval.

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6126a5.htm

<sup>\*</sup> Counts for each opioid might not sum to the total shown for all deaths because some deaths involved more than one opioid.

### Buprenorphine Substitution for High Dose Opioids

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Pain Med. 2014 Dec;15(12):2087-94. doi: 10.1111/pme.12520. Epub 2014 Sep 12.

Conversion from high-dose full-opioid agonists to sublingual buprenorphine reduces pain scores and improves quality of life for chronic pain patients.

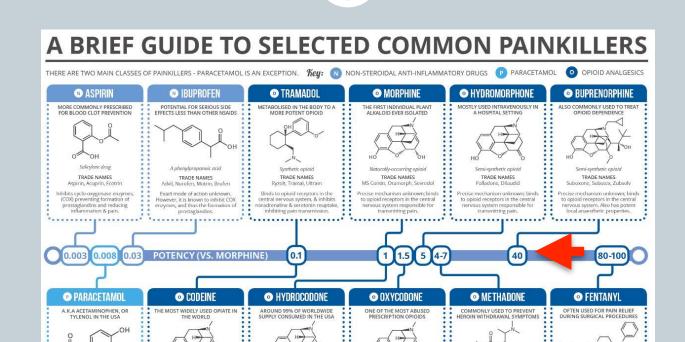
Daitch D<sup>1</sup>, Daitch J, Novinson D, Frey M, Mitnick C, Pergolizzi J Jr.

Author information

CONCLUSION: Average pain scores decreased from 7.2 to 3.5, and quality of life scores increased from 6.1 to 7.1 for 35 patients converted from high-dose full-opioid agonists to SL buprenorphine therapy for more than 60 days. Clinicians should consider buprenorphine SL conversion for all patients on high-dose opioids, particularly patients with severe pain (7-10) unrelieved by their current opioid regimen or patients for whom the clinician does not feel comfortable prescribing high-dose opioids.

http://www.ncbi.nlm.nih.gov/pubmed/25220043

### Buprenorphine Is A Powerful Analgesic



http://www.compoundchem.com/2014/09/25/painkillers/

Note: Potency values are for oral administration. Numeric measures of potency are variable; the figures given are merely general approximations, and can be affected by a number of factors

TRADE NAMES

Roxicodone, OxyContin, Oxecta

Precise mode of action unknown:

binds to opioid receptors in the

central nervous system responsible

TRADE NAMES

Vicodin (with paracetamol)

binds to opioid receptors in the

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TRADE NAMES

binds to opioid receptors in the central nervous system responsible

for transmitting pain

TRADE NAMES

Actiq, Durogesic, Abstral

binds to opioid receptors in the

TRADE NAMES

Acetaminophen, Tylenol, Panadol

Mode of action not well understood:

manner to aspirin, but also have

TRADE NAMES

Co-codamol (with paracetamol)

binds to opioid receptors in the

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# **Sample Cases**

### Case 1: Teresa

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75y/o retiree with diffuse OA. Lives alone in Seaside. Uses Oxycodone-APAP 10/325, five per day (MED 70). No h/o aberrant behavior or addiction.



## Case 1: Teresa

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Teresa reports that the medications give her comfort. She was started on her current dose years ago.

Recommendations:
Continue as prescribed.



### Case 2: Cleatus





68y/o retired logger with failed back surgery syndrome. Lives with spouse Rx'd Methadone 10mg (MED~120). No h/o addiction or aberrant behaviors.

### Case 2: Cleatus





#### **Recommendations:**

Call Cleatus & his spouse in.
Explain that his dose and
medication are both unsafe and
will need to change.

a. Prescribe nasal naloxone & train spouse in assembly and use.

b. Offer a conversion to Morphine Sulfate ER 75mg QD (30,15,30) at his next refill.

http://www.slideshare.net/101N/opioid-withdrawal-attenuation-cocktail

### Case 3: Jane

42

55y/o woman with FMS. Lives alone in Tillamook. Uses OxyContin 30mg PO BID (MED 80), and alprazolam 0.5mg po QID. No h/o aberrant behavior or addiction.



## Benzodiazepine Alternatives



#### MODIFIED FROM TIP 54 SAMHSA: BENZODIAZEPINE ALTERNATIVES

#### Alternatives to Benzodiazepines for Sleep

- 1. Trazodone: 50mg 100mg po QHS
- 2. Mirtazapine: 15mg po QHS
- 3. Amitriptyline: 10mg po QHS
- Nortriptyline: 25mg po QHS
   Trimipramine 25mg po OHS
- 5. Trimpramme 25mg po QHS
- 6. Doxepin: 10mg 25mg po QHS
- 7. Cyclobenzaprine: 10mg po QHS
- 8. Benadryl: 50mg po QHS
- 9. Melatonin: 5mg po QHS
- 10. Hydroxyzine: 25-50mg po QHS
- 11. Tizanidine: 4mg po QHS

#### Alternatives to Benzodiazepines for Anxiety

- 1. Citalopram: 20mg po QD
- 2. Pregabalin: Escalating dose over 8wks to 450mg po QD.
- 3. Gabapentin: Escalating dose over 8wks to 2700mg po QD.
- 4. Lamotrigine: (PTSD) Escalating dose over 8wks to 500mg po QD
- 5. Buspirone: 7.5mg po BID increase by 5mg Q 3D, to 15mg po BID. Maximum daily dose 60mg.
- 6. Clonidine 0.1mg po can repeat x 1 (Caution with BP)
- 7. Hydroxyzine: 25-50mg po
- 8. Sertraline: 25mg QD escalating to 50po QD after 1wk

#### Alternatives to Benzodiazepines for Panic Attacks

Acute: Clonidine 0.1mg po can repeat x 1 (Caution with BP)

Acute: Propranolol 10mg can repeat x 1 (Caution with BP)

Acute: Atenolol 25mg po x 1 (Caution with BP)

Valproic Acid: 500mg to 2000mg Escalating dose over 8wks.

#### Prophylaxis for Panic Attacks

Propranolol 10mg po TID. (Caution with BP)

Atenolol 25mg po BID (Caution with BP)

http://www.slideshare.net/101N/alternatives-to-benzodiazepines-60701295

### Case 3: Jane



#### **Recommendations:**

Call Jane in to clinic.

Explain that the combination of alprazolam and Oxycodone is unsafe.

- a. Offer a conversion to clonazapam 2mg BID.
- b. Taper clonazepam by .5
- -1mg/mo over 4-8mo.
- c. Offer non-benzodiazepine alternatives for anxiety/sleep/panic attacks.



www.slideshare.net/101N/alternatives-to-benzodiazepines-60678319

## Case 4: Luc





49y/o married restaurant owner with chronic migraine. Prescribed Oxycodone 5mg BID, 30/mo over many years. No h/o addiction or aberrant behavior. Recent review of the PDMP with at a f/u visit reveals visits to 6 other prescribers over the past 3mo for opioids. Patient acknowledges that he is overusing pain medication and wants your help in getting off opioids entirely.

## Case 4: Luc





#### **Recommendations:**

Use your data-2000 waiver to offer Luc treatment of opioid use disorder. Stop opioids.

- a. Offer conversion to buprenorphine (Suboxone/Subutex) with a planned 3mo taper off. (8mg QD, 4mgQD, 4mg QOD)
- b. Offer an addiction counseling referral.
- c. Continue to see frequently for followups with both urine or saliva drug screens and frequent checks of the PDMP to ensure adherence.

## Resources

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#### **Alternatives to Benzodiazepines:**

http://www.slideshare.net/101N/alternatives-to-benzodiazepines-60701295

### **Oregon Prescription Drug Monitoring Signup:**

http://www.orpdmp.com/health-care-provider/

### Free Buprenorphine X-Wavier Courses:

Friday 4/29 Portland, OR & Thursday 5/19 Medford, OR, To register contact Marie Payment: payment@ohsu.edu

#### **Nasal Naloxone:**

http://www.amphastar.com/assets/naloxone.pdf http://www.narcannasalspray.com/nns-4-mg-dose/how-to-use-nns/

### Resources



### **Oregon Drug & Alcohol Services by County:**

https://www.oregon.gov/oha/amh/publications/provider-directory.pdf

### **Oregon Pain Guidance May Conference:**

http://cmetracker.net/ASANTE/doSelectForm

#### Withdrawal Attenuation Cocktail:

http://www.slideshare.net/101N/opioid-withdrawal-attenuation-cocktail

### **DMS-V Opioid Use Disorder Criteria**

http://www.slideshare.net/101N/dmsv-opioid-use-disorder-criteria

# Special Thanks To

Lisa Millet, MSH Injury & Violence Prevention Section Manager Mathew Laidler, Lead Research Analyst, IVPP Joshua Van Otterloo, Research Analyst, PDMP