

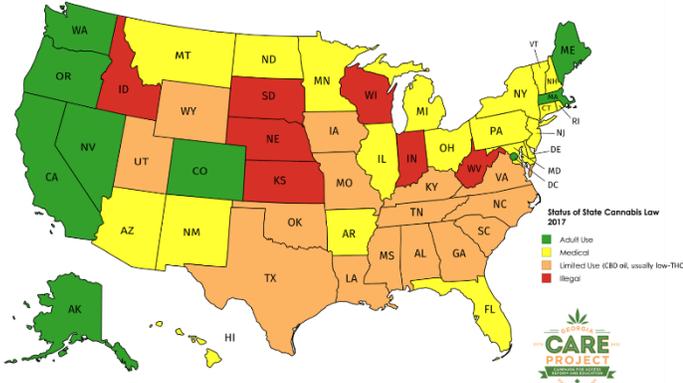
# Legalized Marijuana and the Opioid Crisis: Implications for Dental Hygiene Practice

Some info adapted from US Overdose Crisis by Wilson Compton, M.D., & Dimension of DH CE: The Opioid Crisis by Lisa Bilich, RDH

## Cannabis Effects in the Brain

- **Amygdala** - ↑ anxiety/panic attacks, reduced traumatic memories, ↓ hostility
- **Brain stem** - anti-nausea, ↓ BP; drowsiness, ↓ pain and tremor
- **Cerebellum** - ↓ coordination
- **Cerebral cortex** - altered consciousness, memory impairment, distorted perceptions, hallucination
- **Hippocampus** - impaired memory function
- **Hypothalamus** - ↑ appetite

Status of State Cannabis Laws in 2017



## Oregon Marijuana Law

- OLCC regulated
- Federally = Schedule 1
- Banking issues unresolved = cash industry
- Cities and Counties may opt out of licensing
- As of 9/18/17: 74 cities & 16 counties opted out

	Cities	Counties	Total
No Voter Referral	74	16	90
2018 Voter Referral	4	0	4
<b>Total</b>	<b>78</b>	<b>16</b>	<b>94</b>

### DISCREET MARIJUANA PRODUCTS FOR DABBING AND VAPORIZING



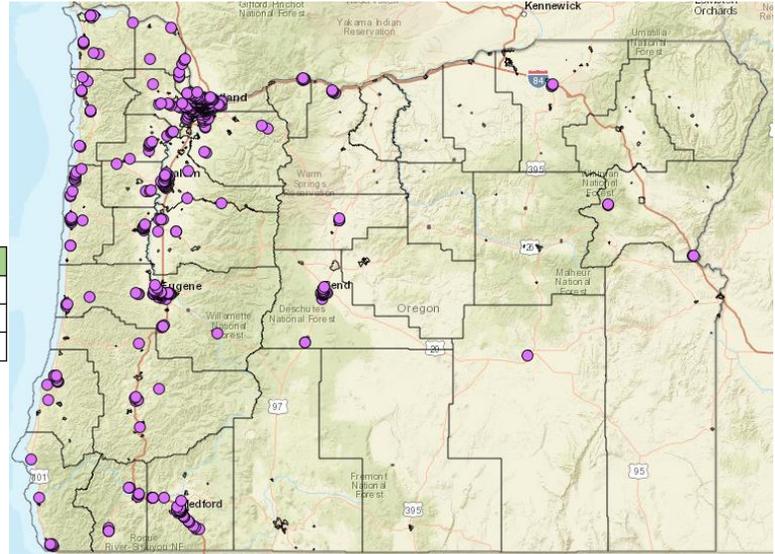
### 300+ TYPES OF EDIBLES



### MARIJUANA HASH & CONCENTRATES



## Oregon Cannabis Dispensaries & Manufacturing Locations



## Marijuana Dental Implications

- JAMA study followed 1027 routine recreational cannabis users over 20 years
- Cannabis use = poor periodontal health, even after controlling for tobacco pack-years, childhood health

and SES, brushing and flossing, and alcohol dependence.

- Periodontal measurements for combined attachment loss obtained using half-mouth design at age 26 and full-mouth at age 38.

Table 2. Associations Between Tobacco and Cannabis Use From Ages 18 to 38 Years and Health at Age 38 Years

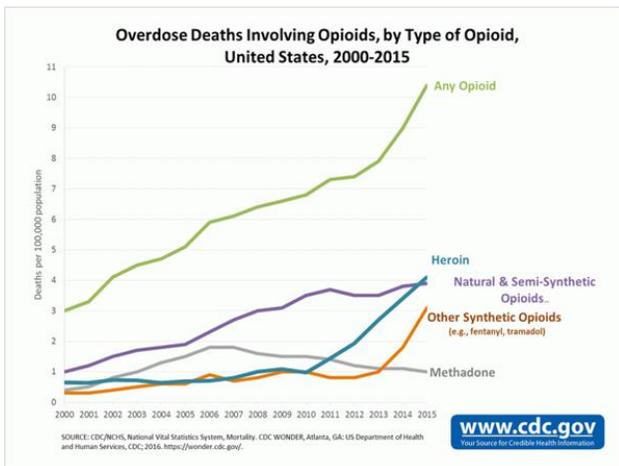
	% or Mean as a Function of Use, Adjusted for Sex <sup>a</sup>					Statistical Tests <sup>b</sup>	
	Never Used Tobacco Daily/Never Used Cannabis	<5 y/No Diagnosis	5 to <10 y/1 Diagnosis	10 to <15 y/2 Diagnoses	≥15 y/≥3 Diagnoses	Model 1, Bivariate <sup>c</sup>	P Value
Periodontal Health, Mean Attachment Loss Across Sites, mm							
Pack-years	1.37	1.44	1.63	1.79	2.32	0.50 (0.45 to 0.56)	<.001
Joint-years	1.41	1.57	2.08	2.21	2.51	0.33 (0.26 to 0.39)	<.001
Cannabis dependence	1.41	1.57	1.75	2.06	2.58	0.33 (0.27 to 0.39)	<.001

- A limited number of studies reported cannabis associated gingival enlargement similar to phenytoin-induced gingival enlargement.
- Journal of Periodontology study concluded that cannabis use is associated with deeper probing depths, more attachment loss, and higher odds of having severe periodontitis.

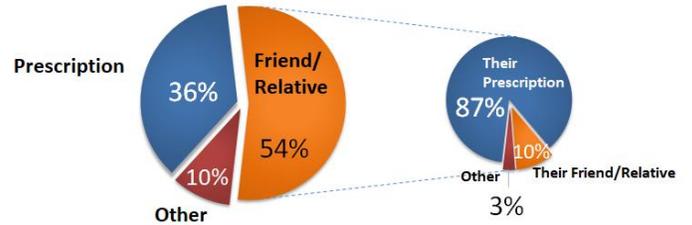
### Let's Talk About Opioids...

#### Sobering Opioid Facts

- Opioid overdoses = leading cause of death under 50
- Teenage overdoses increased 20% in 2015, most related to opioids
- Following a 10-day supply of opioids, 1 in 5 (20%) may become long term users
- 90 Americans die every day from an opioid overdose
- 80% of the global opioid supply is consumed in the U.S.
- ~80% of heroin users reported misusing Rx opioids first

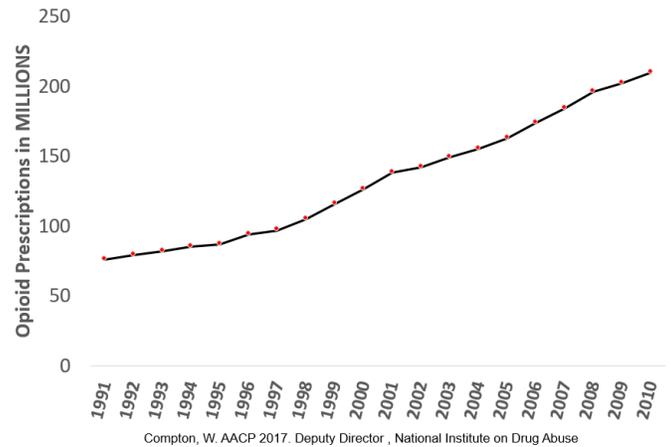


#### Source where pain relievers obtained for most recent misuse



Source: SAMHSA, 2015 National Survey on Drug Use and Health.

#### Opioid Crisis Driven by Increased Prescribing



#### What Can Dental Hygienists Do?

- You are well situated to broach the subject
- You review medication use & can screen for abuse
- You can build trust and rapport over time
- You see them regularly enough to notice changes
- You may be the ONLY medical contact they have
- You have a “captive audience”
- Identify and Help Your Patients
- Screen for opioid misuse
- Offer resources for treatment
- Provide effective oral health care to this population
- Conduct thorough medical/social history
- **Ask** if it is ok to talk about opiate misuse
- **Advise** the patient if he or she may be at risk
- **Assess** the patient's readiness to quit
- **Assist** and **Arrange** are covered by referring the patient to their PCP for help in accessing drug treatment.

## Signs and Symptoms of Opioid Misuse

Systemic	Oral
<ul style="list-style-type: none"> <li>• Drowsiness/Sedation</li> <li>• Constricted Pupils</li> <li>• Depressed Respiration</li> <li>• Anorexia</li> <li>• Constipation</li> <li>• Decreased Pain Perception</li> <li>• Increase Risk of Orthostatic Hypotension</li> </ul>	<ul style="list-style-type: none"> <li>• Xerostomia</li> <li>• Bruxism</li> <li>• High Levels of Plaque and Calculus</li> </ul>

### Benefits of a Public Health Emergency

- FEMA money available to states
- Public health workers redeployed
- Increased access to med-assisted treatments
- Medicaid = more treatment
- Congress = appropriate money
- States = request aid

### Opioid Crisis Big Picture Priorities

- Require and expand prescriber education
- Develop and implement prescriber guidelines
- Expand availability and distribution of treatments for overdoses (i.e. naloxone)
- Expand access to treatment and recovery services
- Strengthen public health surveillance
- Support cutting edge research

### Treatment Options

- Medication-assisted treatment: best when combined with behavioral therapies.
- Methadone: dispensed at specialized clinics, has many oral health complications.
- Buprenorphine: dispensed at pharmacies, prescribed by specially trained physicians
- Naltrexone: prescribed by any physician, may require a monthly injection at office

### What Can Dental Hygienists Do? - Treatment

## Medications for Treatment of Opiate Withdrawal

Drug	Drug Class	Route	Oral Implications
Methadone	Opioid	Oral Tablet or Syrup	-High risk of caries from xerostomia, apoptosis of normal flora, sugar cravings -Potential for "meth mouth" destruction -Can mask pain and delay treatment of oral issues
Buprenorphine	Partial Opioid Antagonist	Oral tablet Patch	Decreased respiration
Naltrexone	Opioid Antagonist	Oral & Injection	None

### Treating Opioid Overdoses

Oregon Pharmacists Can Now Prescribe Naloxone which blocks the effects of an overdose from opioids.

- 1 – Pt wants naloxone, contacts pharmacy for availability
- 2 – They read a 7-pg training document
- 3 – Reads and signs the final page
- 4 – RPh may dispense without MD Rx

### What Can Dental Hygienists Do? – Oral Health

#### Treatment Plan for Patients with Opioid Misuse

Behavioral Issues	Treatment
<ul style="list-style-type: none"> <li>• Address fear and stigma</li> <li>• Assess ability for consent</li> <li>• Set realistic treatment goals</li> <li>• Support patient during treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Fluoride</li> <li>• Mouth guard</li> <li>• Prevention Therapies</li> <li>• Nutritional Counseling</li> <li>• NSAIDS for pain, avoid opiates</li> </ul>
Precautions	
<ul style="list-style-type: none"> <li>• Orthostatic hypotension</li> <li>• Perception of pain decreased</li> <li>• Consult physician before using vasoconstrictors</li> <li>• May need a higher dose of local anesthetic</li> </ul>	

Thank You! ☐

Contact information:

Susan Stein, DHEd, MS, BSPharm  
Susan M. Stein Consulting, LLC  
sue@suesteinconsulting.com

Jeff Fortner, PharmD  
Pacific University  
Associate Professor, School of Pharmacy  
jfortner@pacificu.edu

### References Accessed 9-2017

- Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The changing face of heroin use in the United States: a retrospective analysis of the past 50 years. *JAMA Psychiatry*. 2014;71(7):821-826.

- Drug Deaths in America Are Rising Faster Than Ever <https://www.nytimes.com/interactive/2017/06/05/upshot/opioid-epidemic-drug-overdose-deaths-are-rising-faster-than-ever.html>
- Drug Overdose Deaths Among Adolescents Aged 15–19 in the United States: 1999–2015 <https://www.cdc.gov/nchs/products/databriefs/db282.htm>
- Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015 [https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm#F1\\_up](https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm#F1_up)
- Prescription Opioid Use Among U.S. Adults: Our Brave New World <http://annals.org/aim/article/2646633/prescription-opioid-use-among-u-s-adults-our-brave-new>
- Underground labs in China are devising potent new opiates faster than authorities can respond <https://www.sciencemag.org/news/2017/03/underground-labs-china-are-devising-potent-new-opiates-faster-authorities-can-respond>
- The Opioid Crisis, Lisa Bilich, RDH, MS, CHSE: [http://www.dimensionsofdentalhygiene.com/2017/04/April/Features/The\\_Opioid\\_Crisis.aspx](http://www.dimensionsofdentalhygiene.com/2017/04/April/Features/The_Opioid_Crisis.aspx)
- Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use: [https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm#F1\\_up](https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm#F1_up)
- Fast Facts on Opioid Crisis: <http://www.cnn.com/2017/09/18/health/opioid-crisis-fast-facts/index.html>
- What Could Happen If Trump Formally Declares Opioids A National Emergency <http://www.npr.org/sections/health-shots/2017/08/11/542767898/president-trump-to-declare-national-opioid-emergency>
- CVS Health Responds to Nation’s Opioid Crisis <https://cvshealth.com/thought-leadership/cvs-health-enterprise-response-opioid-epidemic/cvs-health-responds-to-nations-opioid-crisis>
- Meier MH, Caspi A, Cerdá M, Hancox RJ, Harrington H, Houts R, Poulton R, Ramrakha S, Thomson WM, Moffitt TE. Associations Between Cannabis Use and Physical Health Problems in Early MidlifeA Longitudinal Comparison of Persistent Cannabis vs Tobacco Users. JAMA Psychiatry. 2016;73(7):731–740. doi:10.1001/jamapsychiatry.2016.0637
- Journal of Periodontology March 2017, Vol. 88, No. 3, Pages 273-280 <https://doi.org/10.1902/jop.2016.160370>
- 7 Scientific Effects of Marijuana That Experts Want to Study <http://time.com/4448757/7-scientific-effects-of-marijuana-that-experts-want-to-study/>
- Bachhuber MA, Saloner B, Cunningham CO, Barry CL. Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999–2010. JAMA Intern Med. 2014;174(10):1668–1673. doi:10.1001/jamainternmed.2014.4005
- Specific Populations and Prescription Drug Misuse and Abuse <https://www.samhsa.gov/prescription-drug-misuse-abuse/specific-populations>
- Heroin <https://www.drugabuse.gov/publications/drugfacts/heroin>
- Behavioral Health Barometer OREGON, 2015 <https://store.samhsa.gov/shin/content//SMA16-BARO-2015/SMA16-BARO-2015-OR.pdf>
- What’s Legal Oregon <http://whatslegaloregon.com/>
- Global Medical Cannabis Landscape <http://liftcentre.ca/global-medical-cannabis-landscape/>
- The Truth About Your Painkillers: 6 Biggest Myths Debunked <https://health.clevelandclinic.org/2016/04/6-myths-about-painkillers/>
- 5 damaging myths about addiction <http://www.cnn.com/2012/09/13/health/jaffe-addiction-myths/index.html>
- Marijuana as a Gateway Drug: The Myth That Will Not Die <http://healthland.time.com/2010/10/29/marijuana-as-a-gateway-drug-the-myth-that-will-not-die/>