The Oxycontin Express

- http://s01.savefrom.net/media/884067159/85b5d688fcf46dceb3ef6a4415e4a2c/The+Oxycontin+Express.flv, http://en.savefrom.net/

Proper Pharmacologic Prescribing and Disposal for Dental practitioners, *The RX opioid epidemic*

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Prevalence

- A recent analysis from Blue Cross Blue Shield confirmed that the rate of opioid addiction has increased by 493% from 2010 to 2016; while the number of individuals on medication-assisted treatment to manage their addiction has only increased 65% during that time period.
- the approximately 142 deaths a day from drug overdose in the United States.”

Prevalence

- The CDC reported that one in four people who use opioids become addicted to them, and that addiction can raise the risk for a fatal overdose. Approximately 33,000 Americans died of opioid overdoses in 2015, according to the CDC (www.cdc.gov/drugoverdose

Prevalence

- In 2010, approximately 16 million Americans reported using a prescription drug for nonmedical reasons in the past year; 7 million in the past month.
- National Institute on Drug Abuse: 2011

Prevalence
Prevalence
• Centers for Disease Control and Prevention shows opioids were involved in 28,648 deaths in 2014, meaning more Americans are dying from drug overdoses than in motor vehicle crashes each year.
• A recent poll from the Kaiser Family Foundation found that an astonishing 44 percent of Americans say they personally know someone who has been addicted to prescription pain medication.

Prevalence
In 2009, 2.2 million persons aged twelve or older used pain relievers non-medically for the first time; that averages to over 6,000 new users per day.

Prevalence
• Greatest in high-income nations, including the US, UK and Australia, where it was 20 times greater than in least affected countries.
• Disease burden were highest in men aged 20 to 29 years. Over two thirds were male.
• 2012—Prescription drug abuse appears to be having a disproportionate impact on young people, women, whites, and those living in rural areas. DHMH.Maryland.gov

OVER-PRESCRIBING
• In a study carried out at the University of Pennsylvania, 79 patients who’d had outpatient dental surgery were given prescriptions for an average of 28 opioid pills.
• after 3 weeks — the study endpoint — patients had an average of 15 pills left over, or a total of more than 1,000 unused pills.

OVER-PRESCRIBING
• Suggests that nationwide millions of prescribed opioid pills are going unused, and may ultimately become available for others to abuse them.
• The researchers recommend reducing the quantity of opioids prescribed after surgery,
• As well as making it easier for patients to dispose of unused pills by, for example, providing disposal kiosks in pharmacies.
• Virginia - Strengthened the state Prescription Monitoring Program by requiring more rigorous reporting and monitoring, and equipped law enforcement officers and first responders with ready access to overdose-reversal drugs to save lives.

• But there is no funding attached to these measures that would expand the resources necessary to fight this epidemic.
• The president’s fiscal year 2017 budget proposes $1.1 billion in funding to ensure treatment for opioid use disorder.

• President’s budget includes funding to build on current federal efforts to expand state-level prescription drug overdose prevention strategies.
• Recommended to increase the availability of medication-assisted treatment programs and the overdose-reversal drug naloxone, and support targeted enforcement activities.

The Silent High
• [http://s01.savefrom.net/media/880781123/85b5d688cf46dceb3ef6a4415e4a2c/The+Silent+High+Prescription+Drug+Abuse.flv](http://s01.savefrom.net/media/880781123/85b5d688cf46dceb3ef6a4415e4a2c/The+Silent+High+Prescription+Drug+Abuse.flv), [http://en.savefrom.net/](http://en.savefrom.net/)

Vermont
• Population 625,000
**Vermont**

**The heroin increase is an offshoot of the opioid epidemic**

- 3 out of 4 people who used heroin in the past year misused opioids first
- 7 out of 10 people who used heroin in the past year also misused opioids in the past year

**Vermont**

**New England Drug Overdose Deaths by State and Year**

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**Vermont**

**DEPARTMENT OF HEALTH**

- people reaching at least one ox for structural: 1,482
- normed ox pain reliever users: 235
- people reaching at least one MAT service for OUD: 113
- needle exchange members: 64
- DWS overdose calls: 18
- community opioid recoveries: 5
- emergency department visits for opioids: 3

**Vermont**

**New England Drug Overdose Deaths by State and Year**

Drug Overdose Deaths per 100,000 by State:

- Connecticut: 41
- Maine: 61
- Rhode Island: 50
- New Hampshire: 69
- Rhode Island: 61
- New Hampshire: 76
In 2015, 68 of 75 ORAF individuals had controlled substance prescription histories of 85% or higher. Of these 68, 81% received high dose (≥90 MME) analgesics in the period before their deaths. ORAF’s with an opioid prescription in the year prior to fatality received an average of 261 days supply in that year.

% of ORAF with > 90 MME Opioid Rx by Time Elapsed Before Death

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Vermont

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Vermont Regulations

This rule provides legal requirements for the appropriate use of opioids in treating pain in order to minimize opportunities for misuse, abuse, and diversion, and optimize prevention of addiction and overdose. The prescription limits for acute pain only apply to the first prescription written for a given course of treatment, and do not apply to renewals or refills.

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Vermont

Action often starts with a prescription to ease the pain of injuries or medical procedures. Eric LaPierre, a 38-year-old Milton carpenter, hurt himself playing as a teenager and quickly became hooked on prescription painkillers, thing off a lifelong struggle with addiction. He overdosed on fentanyl in 2018, just a few months after he married his longtime girlfriend. They were trying to build a house together.

"I was going to have a baby," his wife, Shannon Down, said. "I knew it was a battle, but he worked every day to stay good. He red more out of life than that."

A startling number of opiate victims died just after they had gotten clean — as

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Vermont

"OTP" means an Opioid Treatment Program as defined and regulated by federal regulation.

In Vermont, OTP’s are sometimes referred to as “Hubs.”
Comparing some state regulations

**Maryland Regulations**

- To articulate and inform licensees about COMAR 10.44.22 (Maryland Dental regulation on Continuing Education)
- COMAR 10.44.22.04: “A dentist seeking renewal shall complete a 2 hr. Board - approved course on proper prescribing and disposal of prescription drugs”

**Maryland Objectives**

- Identify best practices for appropriate handling and disposal of medications and controlled substances.
- Educate licensees regarding protection of prescription pads
- Review PDMP

**Maryland Prescription Drug Monitoring Program**

The Prescription Drug Monitoring Program (PDMP) has been established by the Maryland Department of Health and Mental Hygiene (DHMH), Alcohol and Drug Abuse Administration (ADAA) to support healthcare providers and their patients in the safe and effective use of prescription drugs.

The PDMP collects and securely stores information on drugs that contain controlled substances and are dispensed to patients in Maryland. Drug dispensers, including pharmacies and healthcare practitioners, electronically report the information that is stored in the PDMP database.

Access to prescription data is made available at no-cost to physicians, nurse practitioners, pharmacists and others that provide pharmaceutical care to their patients. By law, healthcare providers may only access information on patients under their care. Use of prescription information improves providers’ ability to manage the benefits and risks of controlled substance medications and identify potentially harmful drug interactions.
### PDMP Maryland

- Did you know the CRISP Query Portal is accessed nearly 46,000 times per week to help health care providers with the delivery of appropriate care to patients in Maryland and the District of Columbia?

### MARYLAND

- Population 6 million
- Between 2007 and 2012, over 40% of all alcohol- and drug-related overdose deaths in the State involved one or more prescription opioids.
- Between 2008 and 2012, admissions to State-supported substance use disorder treatment programs related to any prescription drug increased 110%.
- Prescription opioid-related and benzodiazepine-related treatment admissions increased by 116% and 138%, respectively.

### VIRGINIA STATISTICS

- In Appalachia and across the country, opioid addiction is a fast-growing problem that disproportionately affects rural communities.
- 980 people in Virginia (population 8.4 million) alone died of drug overdoses in 2014.

### Commonly Abused Prescription Drugs

- **CNS Depressants:**
  - A class of drugs that slow CNS function (also called sedatives and tranquilizers), some of which are used to treat anxiety and sleep disorders;
  - barbiturates and benzodiazepines.

### Benzodiazepines

- A type of CNS depressant prescribed to relieve anxiety and sleep problems.
- Diazepam (Valium), Lorazepam (ativan) Triazolam (halcion), Librium, Clonazepam (xanax)
- Candy, downers, sleeping pills, tranks

### Barbiturates

- CNS depressant prescribed to promote sleep (usually in surgical procedures)
  - Amytal, Nembutal, Seconal, Phenobarbital
- barbs, reds, red birds, phennies, tooies, yellows, yellow jackets
Sleep medications

- Ambien (zolpidem),
- Sonata (zaleplon)
- Lunesta (eszopiclone);
- forget-me pill, Mexican

Opoids

- A compound or drug that binds to receptors in the brain involved in the control of pain and other functions
- Opoid Intoxication Effects -
  - Pain relief, euphoria, drowsiness, sedation, weakness, dizziness, nausea, impaired coordination, confusion, dry mouth, itching, sweating, clammy skin, constipation

Opoids

- Potential Health Consequences - slowed or arrested breathing, lowered pulse and blood pressure, tolerance, addiction, unconsciousness, coma
- Death; risk of death increased when combined with alcohol or other CNS depressants
- Empirin with Codeine, Fiorinal with Codeine, Robitussin A-C, Tylenol with Codeine; Captain Cody, Cody, schoolboy; (with glutethimide: doors & fours, loads, pancakes and syrup)

M and M

- Safety Announcement[8-15-2012] The U.S. Food and Drug Administration (FDA) is reviewing reports of children who developed serious adverse effects or died after taking codeine for pain relief after tonsillectomy and/or adenoidectomy for obstructive sleep apnea syndrome.

Facts about codeine

- Conversion to morphine in the liver by the enzyme cytochrome P450 2D6 (CYP2D6). Some people have DNA variations that make this enzyme more active
- Average 1 to 7 people per 100, but the incidence can be much higher in certain ethnic groups, the FDA cautions.
- African/Ethiopian populations, this ultrarapid metabolism was found in 35 of 122 people tested, giving a rate of 29%.
John, then 47, went to Dr. x in March 2007 to have nearly a dozen teeth extracted and replaced with dental implants. Prior to the procedure, he was given 2 mg of Halcion (triazolam). According to legal documents he did not respond well to the drug and had to be restrained in order for Dr. x to complete the dental work.

The lawsuit against Dr. x alleged that the dentist wasn't sufficiently trained to handle the complications that can arise with sedation, and that she allegedly oversedated the patient and delayed calling paramedics. In addition, the suit asserted that John was not a good candidate for oral sedation because of underlying medical problems, including obesity, diabetes, and colon cancer.

Following the procedure, he was given the reversal agent, Romazicon (flumazenil), but went into cardiac arrest while still in Dr. x office. He was taken to the hospital but was pronounced brain-dead a short while later and died the next day.

Stimulants
• Amphetamines
  – Biphetamine, Dextedrine, Adderall
  – Bennies, black beauties, crosses, hearts, speed, uppers
• Methylphenidate
  – Concerta, Ritalin
  – JIF, MPH, R-ball, Skippy, Vitamin R

Stimulants
• Intoxication Effects - Feelings of exhilaration, increased energy, mental alertness
• Potential Health Consequences –
  • increased heart rate, blood pressure, and metabolism, reduced appetite, weight loss, nervousness, insomnia, seizures, heart attack, stroke

Amphetamines
• Rapid breathing, tremor, loss of coordination, irritability, anxiousness, restlessness/delirium, panic, paranoia, hallucinations, impulsive behavior, aggressiveness, tolerance, addiction
• Methylphenidate - increase or decrease in blood pressure, digestive problems, loss of appetite, weight loss
Dextromethorphan

- Found in some cough and cold medicines;
- Robotripping, Robo, Triple C
- Intoxication Effects - Euphoria, slurred speech
- Potential Health Consequences - increased heart rate and blood pressure, dizziness, nausea, vomiting, confusion, paranoia, distorted visual perceptions, impaired motor function

Non-prescription drugs abused

- Heroin
- Methamphetamine
- Marijuana
- Xylazine
- Bath salts
- Cough syrup

Bath Salts

- [Link](http://r6-sn-ab5e6nsd.c.youtube.com/videoplayback?ip=71.61.84.216&key=yt1&cp=U0hWTldOU19ISkNONI9PSfEOjVXNUsRnlZTWI4&itag=5&source=youtube&fexp=939906)

Heroin

- Most commonly abused illicit opiate in US
- Neuropathologic changes
  - Parkinson symptoms, movement disorders

Methamphetamine

- Most widely abused drug recognized in dental literature
- Meth mouth - buccal smooth surface and interprox caries
- Increased parafunction
- Xerostomia: increased consumption of carbonated beverages, poor oral hygiene

The Faces of Crystal Meth

- [Link](http://s03.savefrom.net/media/884614540/85b5d688cfc46dceb3efd6a4415e4a2c/The+Effects+Of+Crystal+Meth.flv)
- [Link](http://en.savefrom.net/)
Medical Marijuana

- Colorado
- 23 states and DC allow medical marijuana
- May provide benefit in painful conditions, seizures, reducing inflammation
- Mostly studied in synthetic form

MARIJUANA

- Between 2001 and 2009
  - 5000 users of MM
- Between 2014 and present
  - 271K Applications for medical use
  - 115K registered users

FORMS OF MARIJUANA

- Buds
- Hash oils lotions
- Sodas
- Infused candy
- Pizza sauces
- THC content 5-90 percent with no controls

MARIJUANA STATISTICS

2011-2013

- 57 percent increase in ED visits
- 82 percent in hospitalizations
- Accidental ingestion in children
  - 268 percent in in exposures to children 0-5yrs
- Documented addictive potential

CONCLUSIONS: MARIJUANA

- Need larger, longer controlled studies
- “We need to stop flying the plane while we are building it. Science should determine a medication not public opinion”
  - Ken Finn – CO springs rehab.

Marijuana

- Oral manifestations-
- Poor OH, caries, xerostomia, inflammation
- Skin cancers - related to increased risk of HIV
- Tachycardia, peripheral vasodilation
- Illegal forms of marijuana: k2, spice
- Heavy use
  - d/c use 1 week prior to avoid tachycardia and vasodilation
Cocaine

- Local anesthetic
- Dilated pupils, jittery, irritability, tremors inc blood pressure, talkative
- Avoid local with epinephrine

Bridging

- Use of other prescription medications to minimize physiologic withdrawal until individuals can obtain their next "chemical high" with their drug of choice.
- Traditionally, the term "bridging" has been used in medication-assisted addiction treatment centers while stabilizing patients.
- Methadone, Buprenorphine, Tramodol, Gabapentin

Prescription drug abuse

- Use of a medication without a prescription
- In a way other than as prescribed
- For the experience or feelings elicited.

Prescription drug abuse

- Prescription medications, such as those used to treat pain, attention deficit disorders, and anxiety, are being abused at a rate second only to marijuana among illicit drug users.

Prescription drug abuse

Maladaptive pattern of substance abuse that leads to clinically significant impairment or distress.

- One or more clinical manifestations have to occur within a 12 month period to be considered abuse.
- Recurrent use leading to failure to fulfill major obligations at work school or home

Prescription drug abuse

- Recurrent use even when it is physically hazardous
- Recurrent substance related legal problems
- Continued use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the abuse substance.
Addiction
• A chronic, relapsing disease characterized by compulsive drug seeking and use, despite serious adverse consequences, and by long-lasting changes in the brain.

Physical dependence
• An adaptive physiological state that occurs with regular drug use and results in a withdrawal syndrome when drug use is stopped
• Often occurs with tolerance. Physical dependence can happen with chronic—even appropriate—use of many medications, and by itself does not constitute addiction.

Tolerance
• A condition in which higher doses of a drug are required to produce the same effect achieved during initial use; often associated with physical dependence.

Tolerance
• A condition in which higher doses of a drug are required to produce the same effect achieved during initial use; often associated with physical dependence.

Receptors
• Agonist: A chemical entity that binds to a receptor and activates it, mimicking the action of the natural (or abused) substance that binds there.
• Antagonist: A chemical entity that binds to a receptor and blocks its activation. Antagonists prevent the natural (or abused) substance from activating its receptor.

Respiratory depression
• Slowing of respiration (breathing) that results in the reduced availability of oxygen to vital organs.
Pain management strategies to limit narcotic use

- Long acting local anesthetic
  - Bupivicaine
- Repeat local anesthetic at end of procedure
- NSAIDS preop
- Combination NSAIDS and Acetaminophen

Local anesthesia M&M #8

- A 36-pound (16.4 kg), 4-year, 1-month-old male patient presented to a dental clinic for extensive restorative treatment involving 3 quadrants of decay.
- The patient’s medical history included obstructive sleep apnea, and he was reported as being congested on the day he presented for dental treatment.
- The patient was placed in a papoose board and was administered 3 cartridges of 2% lidocaine (108 mg, 6.6 mg/kg) within 3 minutes.

M and M, #8

- The patient appeared to fall asleep. Within 15 minutes of beginning treatment, the dental assistant noticed that the patient’s tongue was purple. He was unwrapped from the papoose.

M and M, #8

- The patient’s vital signs were checked and there was no detectable pulse or breathing. CPR was started and the paramedics were called.
- Paramedics arrived within 4 minutes of the call and assumed the resuscitative efforts.
- The patient was intubated, after which a volume of thick, mucous filled fluid was suctioned from his airway.
- When the paramedics’ efforts to resuscitate the child were.....

Oral premed, M and M

- Case 10. A 7-year-old male patient was to be treated in a dental clinic for extractions. In preparation for the procedure, the treating dentist called into the local pharmacy a prescription for an oral sedative (type of sedative and dosage unknown).
- Following the instructions that the parent received with the prescription, 3 tablespoons of elixir were administered at home 1 hour prior to the dental appointment.

Oral premed, M and M #10

- When the patient arrived at the dental clinic, he was breathing but in a very sedated state. His vital signs were monitored, O2 was administered, and the paramedics were called.
- No dental treatment was performed, paramedics transported the patient to the local hospital where he was kept for overnight observation.
- He was discharged the next day without complications and attended school.
Oral premed, M and M, #10

- It should be noted that in this case, the treating dentist claimed that the ordered prescription was for an at-home administration of 3 teaspoons of oral sedative rather than the 3 tablespoons that were given.

Choosing an analgesic

- Quality of pain
  - Dull, sharp, neuropathic
- Quantity of pain
  - Mild, mod, severe
- Locus of action
  - Central, local

Aspirin

- Inhibition of prostaglandin synthesis
- Advantages
  - Analgesic, antipyretic, anticoagulant, anti-inflammatory
- Disadvantages
  - Uric acid (exacerbates gout), salicylism, allergy, caustic
- Contraindications
  - Allergy, asthma, gastritis, gout-probenecid, anticoagulants, pregnancy

Acetaminophen

- CNS action, some peripheral
- Analgesic, antipyretic
- Does not have
  - Gastritis, anti-platelet effects
  - Anti-inflammatory effects
- Acetaminophen reduced to 2.5 gms /day for >2 drinks /day

Nonsteroidal anti-inflammatory drugs

- Inhibits cyclooxygenase-1 and/or COX 2
- Combined COX-1 and COX-2
  - Ibuprofen; max dose 3200mg/day
  - Naproxen (Naprosyn)
  - Naproxen sodium (Anaprox DS)
    - Better absorption

NSAIDS

- COX-2 inhibitors
  - No greater efficacy than ibuprofen
  - Minimal gastric irritation
  - Celecoxib (Celebrex)
    - No effect on platelet aggregation
    - 100-200mg/day
    - Acute/chronic pain
      - Acute - 400mg start, 200mg/24hrs
NSAIDS

• Contraindications
  – Allergic response to NSAIDS/ASA
  – Gastritis
  – Blood thinners
  – Asthma
  – pregnancy

Nsaid and Aspirin

NARCOTICS

• Acts on CNS to depress areas of brain and spinal cord involved in perception of pain.
• Side effects
  – Dizziness, lightheadedness, sedation
  – Nausea, vomiting
  – Constipation, urinary retention
  – xerostomia

NARCOTICS

• Acetaminophen with codeine
  – #1 - 8mg
  – #2 - 15mg
  – #3 - 30mg
  – #4 - 60mg
• Synthetic codeine
  – Hydrocodone, oxycodone

TRAMADOL (ULTRAM)

• Not a controlled substance but with addiction potential
• Equal to ibuprofen in pain relief

Lyrica (Pregabalin)

• Neuropathic pain
  – Fibromyalgia
  – Postherpetic neuralgia
  – Peripheral diabetic neuropathy

Patients who use immediate release aspirin (not enteric-coated aspirin) must take a single dose of ibuprofen 400 mg should be started at 2-3 hours after aspirin ingestion. Recommendations about the timing of ibuprofen 400 mg in patients taking enteric-coated low dose aspirin could not be made. The study however showed that the antiplatelet effect of enteric-coated low dose aspirin was attenuated when ibuprofen 400 mg was dosed 2-3, and 12 hours after aspirin. With occasional use of ibuprofen, there was likely to be a minimal risk from any attenuation of the antiplatelet effect of low-dose aspirin, because of a long-lasting effect of aspirin on platelets. At this time, there was no clear data regarding the potential effect of chronic ibuprofen dosing greater than 40 mg on the antiplatelet effect of aspirin. Acetaminophen appeared to not interfere with the antiplatelet effect of low-dose aspirin. Other over-the-counter (OTC) NSAIDS i.e. naproxen sodium should be viewed as having the potential to interfere with the antiplatelet effect of low-dose aspirin until proven otherwise.
Drug Seeking behavior
- Patients visit multiple health care providers with the same problem seek multiple prescriptions
- Detection through DEA database, pharmacies, insurance companies
- Only a specific medication will work for them

Indicators of drug abuse
- Personality changes - hyperactivity, irritability
- Malnourished
- Missed appointments
- Poor compliance
- Skin lesions
- Poor response to preventative tx

Warning signs of drug seekers
- Name the drug
- Want the Rx phoned in
- After hours
- Out of towners
- Unusual behavior

Patient Excuse Email
- Hello
- Patient CS said she went to ER for vomiting (dx-cyclic vomiting syndrome) and her pain pills fell out in the ambulance. She is crying and wants more Hydrocodone. I told her I would send you a message. Her number is 443-xxx-xxxx. Her pharmacy is Baltimore Highlands 410-xxx-xxx.

Strategies
- Thorough exam
- Document
- Photo ID
- Confirm telephone and address
- Prescribe limited amounts
- NSAIDs when possible

Legal implications
- Pled guilty in U.S. District Court, Eastern District of Michigan, to one count of Conspiracy to Possess with Intent to Distribute Oxycodone.
- Outside the scope of his legitimate practice of medicine, Dr. X possessed with the intent to sell over 2,400 OxyContin tablets.
- Sentenced to 36 months incarceration, followed by 36 months supervised release.
- Also ordered to pay a $50,000 fine.
Legal implications

- Jury Conviction, illegal distribution of a controlled substance.
- Guilty on 176 counts of illegal distribution of alprazolam, diazepam, and hydrocodone.
- Expert witness described the prescribing of 1,729,845 dosage units of controlled pharmaceuticals over a two-year period in a medical practice as "incomprehensible."
- Sixteen months in federal prison followed by 2 years supervised release and ordered to pay a fine of $75,000 and an assessment of $17,600.

Drugs abused by dentists

- Valium
- Alcohol
- Tylenol#3, Hydrocodone
- Nitrous Oxide

The Dentist Well Being Committee

- Purpose
  - Assists dentists with problems of stress, alcohol and drug abuse, depression
  - Confidential and Non-disciplinary
- Advocacy
  - Licensure issues
- Contact
  - 410-328-8549
  - 1-888-233-9044
  - www.dentistwellbeing.com

Mechanisms/Receptors

- Dopamine: neurotransmitter, found in regions of the brain that regulate movement, emotion, motivation, and pleasure.
- Norepinephrine: A neurotransmitter in the brain and the peripheral (sympathetic) nervous system; and a hormone released by the adrenal glands
  - Involved in attention, responses to stress, and it regulates smooth muscle contraction, heart rate, and blood pressure.

Prevention

- Screening for prescription drug abuse can be incorporated into routine medical visits.
- Doctors should also take note of rapid increases in the amount of medication needed or frequent, unscheduled refill requests.

Prevention

- Preventing or stopping prescription drug abuse is an important part of patient care.
- However, healthcare providers should not avoid prescribing stimulants, CNS depressants, or opioid pain relievers if needed.
Prevention

- Dentists who are practicing in good faith and who use professional judgement regarding the prescription of opioids for the treatment of pain should not be held responsible for the willful and deceptive behavior of patients who successfully obtain opioids for non-dental purposes.
- Denisco RC, Kenna GA, O'Neil MG et al. Prevention of prescription opioid abuse: The role of the dentist, JADA 2011; 142(7):800-809

Prevention

- The new labeling states that reformulated OxyContin is imbued with physical and chemical properties that are expected to make abuse via injection difficult and to reduce abuse via the intranasal route (snorting), according to a press release from the FDA announcing the approval.

Prevention

- The agency added that given that the original version’s higher risk for some forms of abuse and misuse. FDA has determined that the benefits of original OxyContin no longer outweigh its risks.
- Original OxyContin was withdrawn from sale for reasons of safety or effectiveness.
- OxyContin was approved by FDA in its original form in 1995. The original formulation went off patent on April 16.

Treatment

- Detoxification: A process in which the body rids itself of a drug.
- During this period, withdrawal symptoms can emerge that may require medical treatment.
- Withdrawal: Symptoms that occur after chronic use of a drug is reduced abruptly or stopped. This is often the first step in drug abuse treatment.

Behavioral treatment

- Individual counseling
- Group or family counseling
- Contingency management
- Cognitive behavioral therapies
- Improve personal relationships and ability to function at work and in the community.

Treatment

- Behavioral treatments help patients stop drug use by teaching them strategies to function without drugs, deal with cravings, avoid drugs and situations that could lead to drug use, and handle a relapse should it occur.
Pharmacological treatment

• Opioid addiction
• Counter the effects of the drug on the brain and behavior, and can be used to relieve withdrawal symptoms, help overcome drug cravings, or treat an overdose.
• Behavioral or pharmacological approach alone may be sufficient for treating some patients, research shows that a combined approach may be best.

Naloxone

• Dr. Fudin presented at the ASHP 2016 Meeting (5b-3310)
• 93 pharmacies participating in their survey, 66 (71%) did not stock naloxone, despite the majority having a collaborative practice agreement to prescribe the drug (goo.gl/qE4b9H).

Naloxone

• “Almost no pharmacies have naloxone on their shelves.
• The reason: They are not getting prescriptions from doctors,” he said, suggesting that the rising cost of the drug has worsened the situation (N Engl J Med 2016;375:2213-2215)

Pharmacological treatment

• Naltrexone is an antagonist medication that prevents opioids from activating their receptors. It is used to treat overdose and addiction.

Pharmacologic treatment

• The injectable long-acting form of naltrexone (Vivitrol), originally approved for treating alcoholism, has also received FDA approval to treat opioid addiction
• Because its effects last for weeks, Vivitrol is ideal for patients who do not have ready access to healthcare or who struggle with taking their medications regularly.

Naloxone

• app assigns a validated percentage risk for opioid-induced respiratory depression based on a yes/no questionnaire (www.remitigate.com/ naloxotel). Similarly, the free Risk Index for Overdose or Serious Opioid-Induced Respiratory Depression (or RIOSORD) tool calculates the percentage likelihood that a patient could have an overdose, and offers guidance on whether to coprescribe naloxone
Naloxone

- A study published last year concluding that prescribing naloxone to all patients on chronic opioid therapy might be a useful strategy (Subst Abus 2016;37:591-596).
- 164 patients in the study received education on the risks for opioid overdose and were given naloxone rescue kits. No patient experienced an overdose during the one-year study.

Pharmacologic treatment

- Methadone is a synthetic opioid agonist that eliminates withdrawal symptoms and relieves drug cravings by acting on the same brain targets as other opioids like heroin, morphine, and opioid pain medications.
- It has been used successfully for more than 40 years to treat heroin addiction, but must be dispensed through opioid treatment programs.

Pharmacologic treatment

- Buprenorphine is a partial opioid agonist (i.e., it has agonist and antagonist properties), which can be prescribed by certified physicians in an office setting.
- Like methadone, it can reduce cravings and is well tolerated by patients.

Treatment for Barb/BDZ addiction

- Do NOT attempt to stop taking them on your own. Withdrawal symptoms from these drugs can be potentially life-threatening.
- Research on treating barbiturate and benzodiazepine addiction is sparse; however, addicted patients should undergo medically supervised detoxification because the dosage they take should be gradually tapered
- Enhanced effect of BDZ and Opioids

Chronic Pain

- Risks involved with long-term treatment, such as the development of drug tolerance, hyperalgesia (increased pain sensitivity), and addiction.
- Patients may even be reluctant to take an opioid medication prescribed to them for fear of becoming addicted.

Chronic pain

- Estimates of addiction among chronic pain patients vary widely
- from about 3 percent to 40 percent.
- This variability is the result of differences in treatment duration, insufficient research on long-term outcomes, and disparate study populations and measures used to assess abuse or addiction.
Chronic Pain

• To mitigate addiction risk, physicians should screen patients for potential risk factors.
• Personal or family history of drug abuse or mental illness.
• Monitoring patients for signs of abuse.
• Early or frequent requests for prescription pain medication refills.

Disposal

• Most drugs can be thrown in the household trash, but consumers should take certain precautions before tossing them out, according to the Food and Drug Admin
• A few drugs should be flushed down the toilet.
• community-based take-back programs offer another safe disposal alternative

Disposal

• Household trash, but first:
• Take them out of their original containers and mix them with an undesirable substance, such as used coffee grounds or kitty litter.
• Put them in a sealable bag, empty can, or other container to prevent the medication from leaking or breaking out of a garbage bag.
• Scratch out all identifying information on the prescription label to make it unreadable.

Disposal

Narcotic pain relievers and other controlled substances carry instructions for flushing to reduce the danger of unintentional use or overdose and illegal abuse.

Disposal

• Dispose of out-of-date, damaged, or otherwise unusable or unwanted controlled substances, by transferring them to a registrant who is authorized to receive such materials.
• These registrants are referred to as “Reverse Distributors.” The practitioner should contact the local DEA field office for a list of authorized Reverse Distributors.

Disposal

• Schedule I and II controlled substances should be transferred via the DEA Form 222, while Schedule III–V compounds may be transferred via invoice. The practitioner should maintain copies of the records documenting the transfer and disposal of controlled substances for a period of two years.
Take Back Events

- On April 27, (2014) 742,497 pounds (371 tons) of prescription medications were collected from members of the public at more than 5,829 locations.
- DEA’s previous five Take-Back events, more than 2.8 million pounds (1,409 tons) of prescription medications have been removed from circulation.

And again

- According to the 2011 Substance Abuse and Mental Health Services Administration’s National Survey on Drug Use and Health (NSDUH),
- TWICE AS MANY AMERICANS REGULARLY ABUSED PRESCRIPTION DRUGS THAN THE NUMBER OF THOSE WHO REGULARLY USED COCAINE, HALLUCINOGENS, HEROIN, AND INHALANTS COMBINED.

Electronic Prescriptions

- 46% sent electronic prescriptions in 2012
- 28% of hand written rxs don’t get to pharmacy
- 11% of all Rx’s are for pain meds

Electronic Prescription Advantages

- Automatic check on Rx by software
- Insurance eligibility
- Renewals are ok
- Gives interactions and precautions
- Financial incentive by government

Electronic Prescriptions

- Ok for schedules 2, 3, 4, 5
- Most major pharmacies
- Identity proofing for prescription writer – Card, phone, fingerprint etc.
Prescriptions

- Definition
  - A written or verbal order from a qualified medical practitioner to the pharmacist or laboratory for a medication or medical procedure.

Accessibility

- Prescription pads, prescription writing programs, electronic prescribing information must be in a secure location not accessible to the public or staff.

Form of written prescription

- Superscription: patients name and address and age and date
  - Must be filled within 120 days from date of issue
- Inscription: name of drug, dosage form and amount
  - Write amount and number, i.e. 5, five
  - Use leading zero for less than 1, i.e. 0.5mg
  - Do not use a trailing zero for whole numbers, i.e. 1.0

Signature-sig-directions

- How to take the medication, how often, and why.
- Refills; specify written number or none
- Generic vs. non-generic

DEA number

- Protect your DEA and identifier numbers
  - Don’t preprint on prescription
- If evidence of tampering
  - Local police
  - MSBDE 410 402 8538
  - DEA 410 962 7580
  - Maryland division of drug control

Protection

- Must see patient before prescribing
Controlled substances

- Schedule I: Highest risk of abuse/addiction
  - heroin, LSD, marijuana, mescaline, ecstasy:
  - no medical purpose in US, Research only
- Schedule II: next highest risk of abuse/addiction
  - morphine, meperidine, oxycodone, fentanyl, hydromorphone,amphetamine, barbiturates.
  - Prescribers signature, no refills, no telephone Rx except for emergencies / follow called in Rx with written form.

Controlled substances

- Schedule III: next highest risk abuse/addiction
  - Codeine/hydrocodone and acetaminophen mixtures, weaker stimulants, chloral hydrate
  - May be telephoned, no more than 5 refills in less than 6 mo.
- Schedule IV:
  - benzodiazepines, propoxyphene, pentazocine
  - May be telephoned, no more than 5 refills in less than 6 mo.
  - Can NOT Rx for yourself

Controlled substances

- Schedule V:
  - some codeine containing cough syrups, pregabalin (lyrica)
  - May be OTC in some states

Requirements for prescriptions written for controlled substances

- Name and address of prescriber
- Name and address of patient
- DEA number
- Date of prescription
- Written in pen

Questions

- Can I write a Rx for a controlled substance for
  - Myself?
- Can I write a Rx for BCP for a family member?
- Can I write a Rx for a non-controlled substance for myself?

Thank you

- Have great day!
- Be safe
PBS New Hour

• http://s01.savefrom.net/media/884565610/85b5d688cfc46dceb3ef6a4415e4a2c/PBS+NewsHour+Excerpt+Prescription+Drug+Abuse+aired+5-3-13.flv, http://en.savefrom.net/