

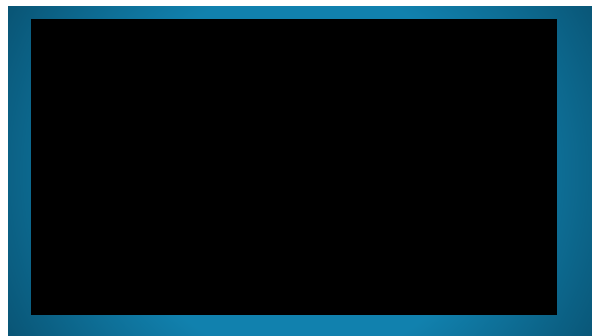
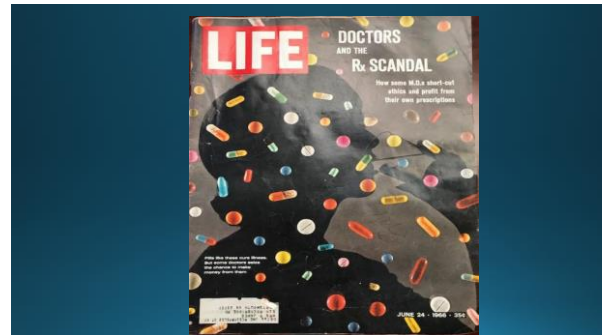
The Opioid Epidemic
How Did We Get There And Why Do We Have To Change

Richmond Chapter




Employee Benefits Professionals

A.Omar Abubaker, D.M.D., Ph. D., Professor and Chair,
 Department of Oral and Maxillofacial Surgery
 Virginia Commonwealth University, Richmond Virginia



Disclosure

(who am I and who I am not...)

- I serve a "consultant/speaker" to PACIRA Pharmaceutical, inc. (a manufacturer of long acting long anesthetics)..
- I am not an expert on the subject matter but the subject matter is **PERSONAL**
- **Father, Teacher, Clinician Stories to tell**

Educational Objectives

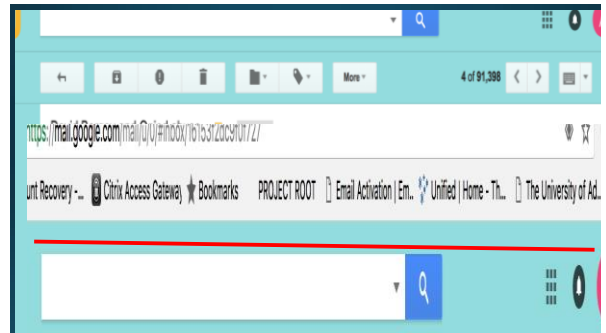
At the end of the course, attendees should be able to:

- Follow the journey to the current opioid epidemic in the US
- Review the current understanding of Addiction / Substance Use Disorder (SUD) and extent of the disease's burden
- Explain the intent of the new national regulations on prescribing opioid

The Narrative

- There has been enough harm in this country from opioids and other addictions that a change will have to happen in the way we think about Opioids for acute pain and about addiction in general.

Why Do We Have To Change?



People change
for two main
reasons: Their
minds have
open or their
hearts have
been broken.

Quoteistan.com



The Reasons We Have to Change

1. The journey to the current opioid epidemic is more cynical than you think
2. The harm of opioid epidemic is worse than you think.
3. The public Sentiment is stronger than you think
4. Addiction is not what you think
5. Opioids analgesics are not as safe as you think.
6. Doctors role in the epidemic is greater than you think
7. Non-opioids analgesics are better than you think.
8. The role of compassion in combating addiction is more important than you think

THE OPIOID EPIDEMIC

The great American relapse

An old sickness has returned to haunt a new generation

How Did We Get Here?



The Road To The Current Opioid Epidemic

A confluence of several events and circumstances:
We all are parts of these events and blunders.....



The Forgotten History of Drug Epidemics

- Early opioid Epidemic in the mid- to late-19th century following the Civil War -liberal prescribing by physicians to veterans (by 1900, 1 in 200 in the US were addicted).
- Crack Cocaine Epidemic, 1980's
- Methamphetamine Epidemic 1994 -2004
- Current opioid epidemic

Inadequate Medical Education and Training on Pain Management and Addiction

- Inadequate curricula in medical education on pain management, opioid prescribing, and on screening for high risk patients lead to inability of physicians to safely treat pain or addiction as well as to lack of understanding/accepting of addiction as a brain disease by Doctors and nurses

Inadequate Addiction Workforce And Resources

- Insufficient treatment services to meet demand to treatment of addiction:
 - less than 1% of MD's identify themselves as addiction medicine specialists
 - 95% of funds goes toward treating the medical consequences of addiction, and only 2 % goes toward addiction prevention and treatment

Lack of National Prevention Strategies

- Lack of national prevention strategies focusing on specific illicit drugs for vulnerable populations (adolescents, college age youth, pregnant women, and others)

Inadequate Evidence –Base Use of OPIOIDS

A five-sentence letter to a editor in 1980 claiming that opioid narcotics are safe to use universally for chronic pain

1980: The Letter to the editor



N Engl J Med. 1980 Jan 10;302(2):123.

ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current file to determine the incidence of narcotic addiction in 39,346 hospitalized medical patients who were monitored continuously. Although there were 12,862 patients who received at least one narcotic preparation, there were only four cases of reasonably well-documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs displayed were meperidine in two patients, Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JAMES PORTER
Brannett, John, M.D.
Boston Collaborative Drug
Surveillance Program
Waltham, MA 02154
Boston University Medical Center

1. Jick H, Mortimer GS, Shapiro S, Lewis GP, Siskind V, Shost D. Complications drug surveillance. JAMA. 1976;233:441-446.
2. Miller RR, Jick H. Clinical effects of meperidine in hospitalized medical patients. J Clin Pharmacol. 1976;16:180A.

1980: The Letter to the editor

- The letter was cited inaccurately and uncritically over 608, grossly misrepresented the letter's findings and was used as evidence that addiction was rare in patients treated with opioids

Release Of MS Contin and The "Relaxed" Use Of Opioids Analgesics

- 1984 Purdue released MS Contin, a time-release morphine, marketed for cancer patients followed by advocating the use of opiates for variety of pain (non-malignant pain patients)

1996: The Marketing Of Oxycontin As Non-addictive Analgesic



Annual Sales of Oxycontin reached over \$1 billion

To resolve criminal and civil charges related to the drug's "misbranding," the parent company, Purdue Pharma, agreed to pay some of the largest amounts in history.

By HARRY REIDER MAY 16, 2007

Also, in a recent settlement, Purdue Pharma agreed to pay some of the largest amounts in history.



OxyContin, a time-release morphine, marketed for cancer patients followed by advocating the use of opiates for variety of pain (non-malignant pain patients).

including its sales to the largest of \$34.5 billion.

relief of serious

1998-99: VA Hospital and JCAHO adopted Pain as the fifth vital Sign

1996

In his presidential address, James Campbell of the American Pain Society introduced the phrase, "Pain as the 5th Vital Sign." He emphasized the importance of including pain as part of the four traditional vital signs.

1999

The Veterans' Health Administration initiated the measurement and documentation in the electronic medical record of patients' self-report of pain. The initiative called "Pain as the 5th Vital Sign" required use of a Numeric Rating Scale (NRS) for all clinical encounters.

1. body temperature
2. blood pressure
3. heart rate
4. respiratory rate

Pain as the 5th vital Sign

Advocacy By Patients And Professional Societies To Treat Pain With Opioids

Doctor Found Liable in Suit Over Pain

million.

June 15, 2001 | MARIA L. La GANGA and TERENCE MONSIEY / TIMES STAFF WRITERS

Email Share G+ Tweet Recommend 1

SAN FRANCISCO — In a decision that could improve how seriously ill Americans are treated for pain, an Alameda County jury ruled that a physician was guilty of elder abuse for failing to give a dying man sufficient medication to relieve his suffering.

Failure of Federal Regulators

- Pharmaceutical industry lobbyists paid **more than a million dollars** to key members of Congress election campaigns to influence the DEA and the Justice Department to agree to a more industry-friendly law, undermining efforts to stanch the flow of pain pills.... **The Washington Post and "60 Minutes."*

Purdue Pharma and JCAHO: 2000-2002

- Purdue Pharma company entered into an agreement with JCAHO to fund and distribute over 20,000 pain-related educational videos and programs throughout the country to educate physicians and staff on how to comply with JCAHO's pain standards and to how discuss and manage postoperative pain treatment

2000": Pill Mills

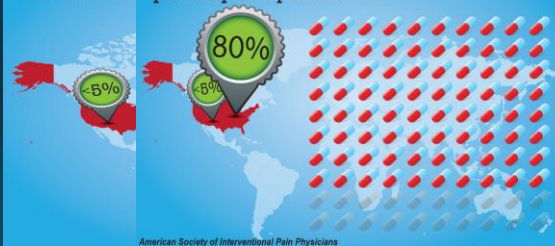
Billionaire drug company founder charged with bribing doctors to prescribe



Richmond-area doctor sentenced to 30 Years for running 'pill mill'



The United States And yet, we consume 80% of the world's of the world's prescription painkillers.



American Society of Interventional Pain Physicians

Abundance of Prescription Opioids



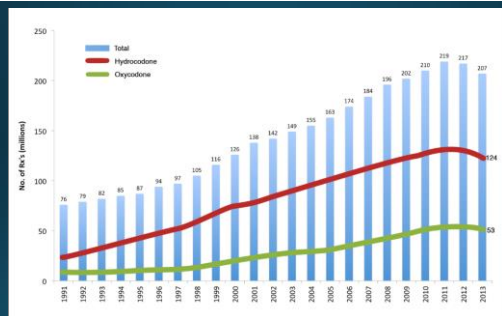
24% of American high school students are taking **prescription pills** for recreational purposes

The Partnership for Drug-Free Kids, 2012

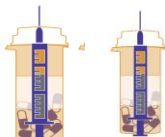
Two-thirds of teens who abused pain relievers in the past year say they got them from family and friends.



This includes getting them in their own homes from medicine cabinets and the kitchen counter. Grandparents' homes are especially vulnerable.



4 out

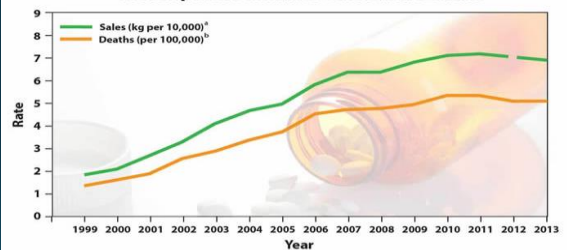


Previously M

94% of people in treatment for opioid addiction said they chose to use heroin because prescription opioids were "far more expensive and harder to obtain."

Source: Cicciocioppo R, Di Ciano M, Di Ciano P. The changing face of heroin use in the United States: a retrospective analysis of the past 50 years. *JAMA Psychiatry*. 2014;171(10):1193-1202.

Prescription Painkiller Sales and Deaths



Sources:
^aAutomated Reports and Consolidated Orders System (ARCOS) of the Drug Enforcement Administration (DEA). 2012 data not available.
^bCenters for Disease Control and Prevention, National Vital Statistics System mortality data. (2013) Available from URL: <http://www.cdc.gov/nchs/data/deaths.htm>.

The Need for a Change

The Harm from Opioid epidemic: The Casualties

Casualties of Drug Overdose in the US in Perspectives

Every day: 143 casualties



Every three weeks : 3000 casualties



"With approximately 143 Americans dying every day from drug overdose, every three weeks America is enduring a death toll equal to September 11th." *Report of the President's Commission on Opioid Epidemic, July 2017*

Drug Deaths in America Are Rising Faster Than Ever

By JENN KATE JUNE 1, 2017

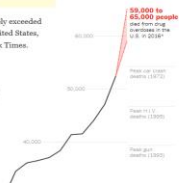
New data compiled from hundreds of health agencies reveals the extent of the drug overdose epidemic last year.

UPDATE: The first governmental account of nationwide drug deaths shows roughly 64,000 people died from drug overdoses in 2016.

AKRON, Ohio — Drug overdose deaths in 2016 most likely exceeded 59,000, the largest annual jump ever recorded in the United States, according to preliminary data compiled by The New York Times.

The death count is the latest consequence of an escalating public health crisis: opioid addiction, now made more deadly by an influx of illicitly manufactured fentanyl and similar drugs. Drug overdoses are now the leading cause of death among Americans under 50.

Although the data is preliminary, the Times's best estimate is that deaths rose 19 percent over the 54,404 recorded in 2015. And all evidence suggests the problem has continued to worsen in 2017.



JAMA Network Open

Original Investigation | Substance Use and Addiction

The Burden of Opioid-Related Mortality in the United States

Tara Gomes, PhD, Mina Tadrous, PharmD, PhD, Muhammad M. Mandari, PharmD, MA, MPH, J. Michael Paterson, MSc, David N. Jaurink, MD, PhD

Opioid epidemic is deadlier than the Vietnam War in '68, study says

By Kelly Davidson

Proportion of All U.S. Deaths in Different Age Groups Attributable to Opioids in 2016

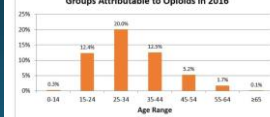
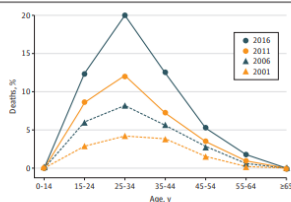


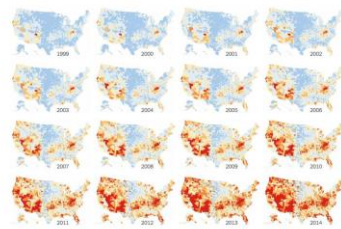
Figure. Proportion of Deaths Related to Opioid Use by Age Group in 2001, 2006, 2011, and 2016



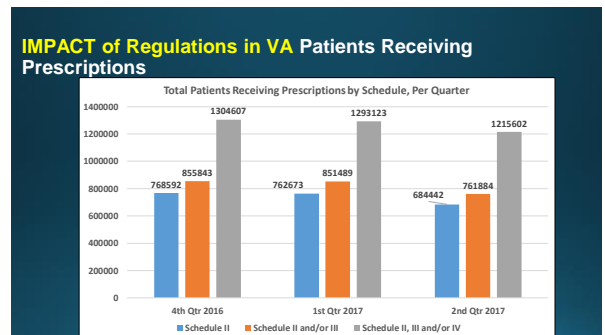
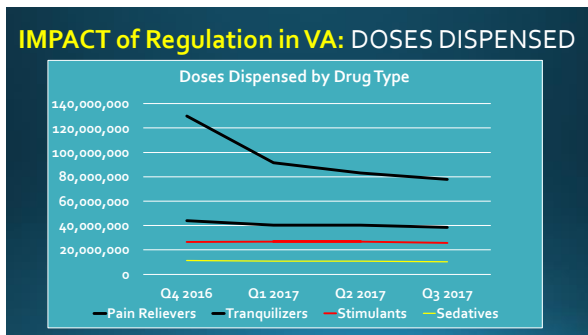
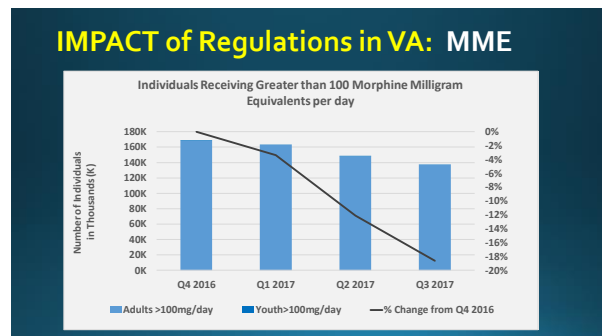
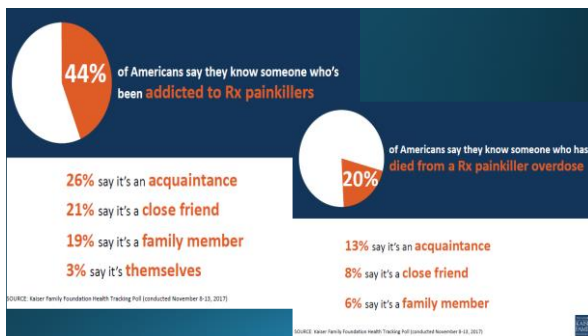
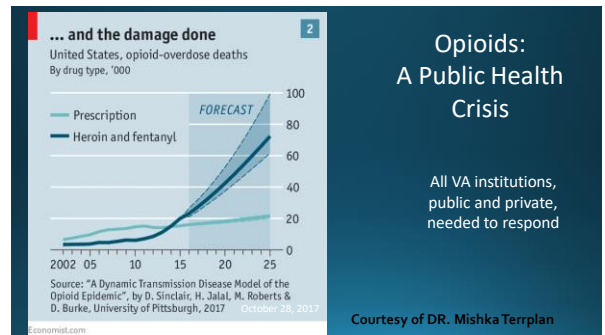
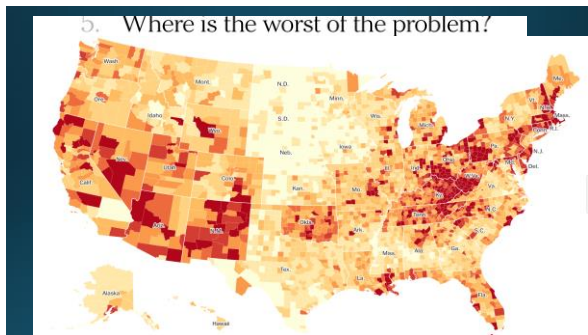
JAMA Network Open. 2018;1(2):e180217. doi:10.1001/jamanetworkopen.2018.0217

The Numbers

Our reporters have been deciphering and providing context to masses of data about the many and varied ways opioids are affecting Americans.



How overdose deaths rippled across the United States



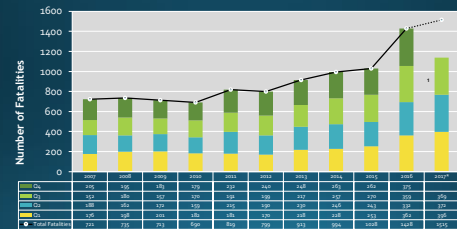


Report: Opioid overdose deaths continue to rise in Virginia in 2017

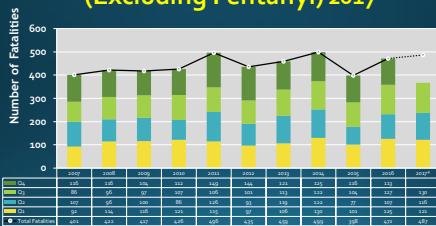


Joseph Loomery

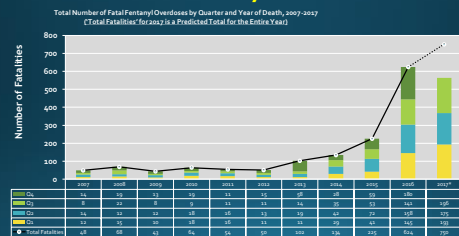
Fatalities of All drugs-2017



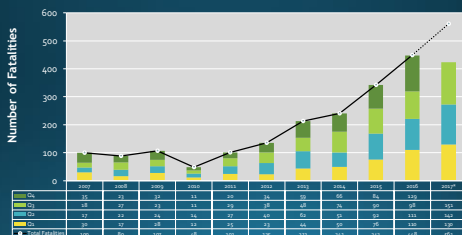
Virginia Fatalities of Prescription opioids (Excluding Fentanyl) 2017



Virginia Fatalities of Fentanyl 2017

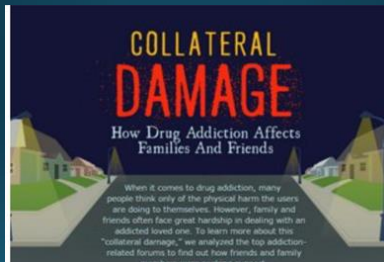


Virginia Fatalities of Heroin 2017



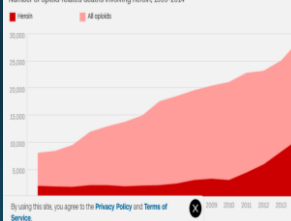
The Need for a Change
The Harm:
The Proxy Casualties, the families

The Families....

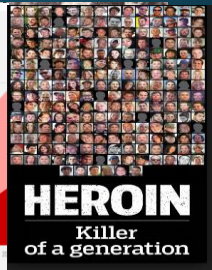


"Most people view the world from a distance but the world changes when you up and close"

How heroin drives opioid overdose deaths
Number of opioid related deaths involving heroin, 2009-2014



From A Distance



From a Up-close

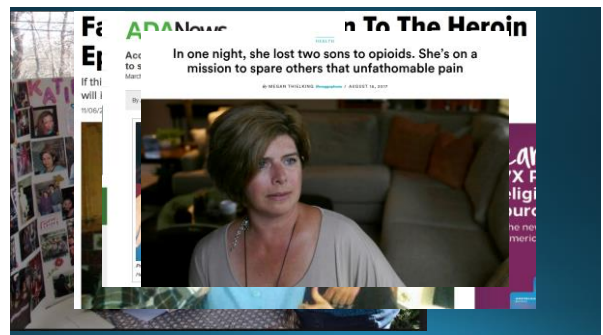
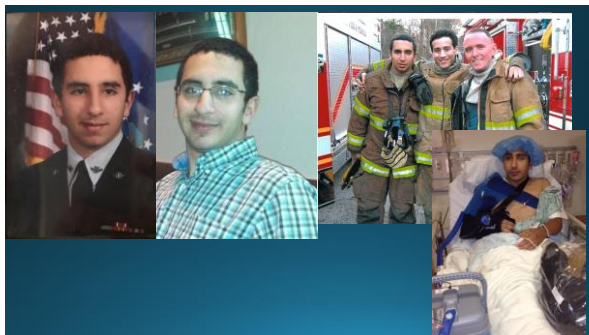
Face of Opioid and Addiction

From A Distance

- Statistics
- Graphs
- Addicts
- "Junkies"
- Alcoholics
- Drug seekers
- ?!!!!

From Close

- Sons
- Daughters
- Fathers
- Mothers
- Sisters
- Brothers
- Vivid Memories and fading hopes



A Parent's Perspective on the Loss, In "Words"

"When your kids' dying from brain cancer or leukemia, the whole community shows up, and they bring casseroles, they pray for you and they send you cards. When your kid's on heroin, you don't hear from anybody, until they die. Then everybody comes and they don't know what to say."



The Need for a Change Public Sentiment

Is the Public Ready for a Changed Approach to Pain Management?

"... in this country, public sentiment is everything. With it, nothing can fail; against it, nothing can succeed."

Whoever molds public sentiment goes deeper than he who enacts statutes, or pronounces judicial decisions."

- President Abraham Lincoln

"My daughter went to [redacted] to have her teeth removed. I received all of the prescriptions at the appointment prior to the surgery. One of the prescriptions was for 49 prescription pain killers. When I took my daughter for the surgery I questioned the nurse about the amount of pain killers prescribed. I told her that I thought it was surprising because of the national health crisis of heroin addiction and overdose. I pointed out that the majority of heroin addicts start with prescription pain killers. The nurse was very nasty and said that they believe in keeping their patients comfortable and that I was not obligated to fill the prescription."

The reaction of the nurse has bothered me since that day. I wish in hindsight that I had talked to [redacted] directly but surely [redacted] must know how many pain pills [redacted] prescribes for wisdom teeth removal surgery. It is my hope in writing to you that you could talk with [redacted] and educate [redacted] on the very real dangers of overprescribing prescription pain pills."

"

"A mother's story"

- "Dr. Abubaker: My name is ???and I just read your article in the Boston Globe about educating dentists and dental students in the use of opioids after dental procedure
- My husband and I are living with the same excruciating pain having lost our 27 year old son a year ago to a fatal overdose (heroin and fentanyl). **Liam's first experience with opioids was after having 2 wisdom teeth extracted in 2005. Both he and my daughter (who had all 4 extracted) were given 30 Percocet tablets. He took several over just a few days, and felt great. "**

"A mother's story"

- "He did not start abusing Percocet until 10 years later, when he got 2 tablets off the street, remembering how good he felt, to self treat a knee injury. This was the beginning of the downward spiral of addiction. Since that time, I have tried to warn friends about the dangers of opioid use (for adolescents especially) after routine wisdom tooth extractions....

"A mother's story"

- "My daughter used icepacks and Tylenol and was absolutely fine. If it would be helpful, add my son's story to your lectures. It would help me, knowing that perhaps other parents' children will not be introduced to opioids in this way. Thank you so much for the work you are doing. Sincerely;" Susan Cunningham

Ask your oral surgeon to stop prescribing oxycodone for teen wisdom teeth removal

f 100 t 6 G+ 2 in 17 v 60 < 258

And parents please stop asking for it.

Seven percent of patients prescribed narcotic or opioid analgesics will become addicted.* Some statistics put it as high as 10%. Still others will abuse it or sell it. Do you want that to be your kid?

If you've never had an opiate, percocet, oxycodone or vicodin, you shouldn't risk it either.

One pill can trigger an addiction

Opiate Addiction is up
3,203 %
from 2002-2014
Ask oral surgeons to stop prescribing
oxycodone & other opiates for
wisdom teeth removal

The Need for a Change Addiction is not what you think



ADDICTION IS A DISEASE

- The American Medical Association
- The American Society of Addiction Medicine
- American Dental Association

ADDICTION

- Addiction is **chronic disease** of brain systems of **reward, motivation, memory, judgment, and related circuitry** occurs over time from chronically high levels of exposure to an addictive stimulus.
- There are **genetic** predispositions, **environmental** factors, sociology, **organ (brain) susceptibilities** that factor into the development and course of this disease.

Addiction: Examples of Substances and Behavioral Addictions

- Alcohol, amphetamine, cocaine, nicotine, opiate, food, gambling addiction, and sexual
- Gambling is the only behavioral addiction recognized as addiction

REWARD DEFICIENCY

- Prolonged drug use causes the dopamine neurons in the reward pathway to cease functioning.
- This state of dopamine deficiency causes the user to experience chronic feelings of anxiety, depression and an inability to just feel good.
- The person can only feel normal when under the influence of the drug.

Addiction

- Affects 40 millions people in the US
- Another 80.4 millions Americans are at high risk of being addicted,
- More than the heart disease (27 million), diabetes (26 million), or cancer (19 million) and



MEDICAL

- Teenage pregnancy
- HIV/AIDS
- Hep C
- Other STD

SOCIAL

- Homelessness
- Domestic Violence
- Divorce
- Child abuse

CRIMINAL JUSTICE

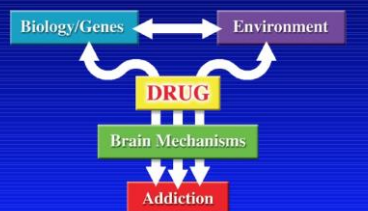
- Physical fights
- Crime
- Homicide
- Suicide

ECONOMIC

Cost of Addiction in the US

- About 570,000 people die annually in the U.S. due to drug use.
- \$700 billion a year in increased health care costs, crime, and lost productivity.
 - Greater than the cost of diabetes and all forms of cancer combined

Addiction Involves Multiple Factors



NIDA

Risk Factors for Addiction: Genetic

FULL TEXT ARTICLE
Opioid and Pain Genomics By Pharmacogenetic Testing: A Pilot Study
S.U. Stracke, A. McCormick, D.W. Fain, B.L. Fergusson, S. Stewart and R.G. Burton
Journal of Oral and Maxillofacial Surgery, 2017; 75(10-11), Pages e362-e363, Copyright © 2017

- Addiction arises, and the associated compulsive behavior intensifies or attenuates, with the overexpression of Δ FosB gene in the D1-type medium spiny neurons of the nucleus accumbens.

Genes Associated with Pain Medications and Propensity for Drug Abuse

- Cytochrome P450 (CYP2D6):** Converts codeine to morphine
- Brain-Derived Neurotrophic Factor (BDNF):** Altered genotype associated with increased propensity for drug abuse
- DRD2 variant 1 and 2:** Associated with addictive behaviors and propensity for drug abuse
- OPMR1:** Mu receptors mediates analgesic and euphoric effects of opiates

Risk Factors for Addiction: Age

- In adolescence, the incentive-rewards systems in the brain mature well **BEFORE** the cognitive control center and consequentially grants the incentive-rewards systems a disproportionate amount of power in the behavioral decision making process.
- Overestimate the Rewards and Underestimate the Risks**


Risk Factors for Addiction: Age

- Adolescents are increasingly likely to act on their impulses and engage in risky, potentially addicting behavior before considering the consequences leading to more likely to **INITIATE** and **MAINTAIN** drug use, and once addicted are more **RESISTANT TO TREATMENT** and **MORE LIABLE TO RELAPSE**

Environmental Risk Factors for Addiction

- Repeated exposure to an addictive stimulus – is the core pathology that drives the development and maintenance of an addiction.

The Role of Doctors in the opioid Epidemic is greater than you think :
The Facts



"The prescription overdose epidemic is doctor-driven. It can be reversed in part by doctor's actions. **Prescription opioid overdose deaths can be prevented by improving prescribing practices.** We can protect people from becoming addicted to opioids and clinicians are key to helping to reverse the epidemic."

Thomas R. Frieden, MD, MPH
Director of the CDC (Centers for Disease Control and Prevention)

Prescribing Patterns

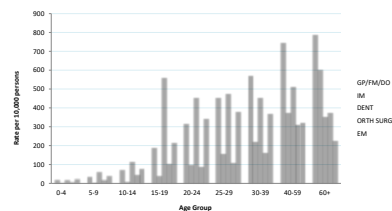
- Family physicians are the no 1 prescribers of immediate release
- 2% to 8% of all opioids prescribed by dentists
- 20% of adults shared prescribed opioid medication with another person
- 82 % of parents were not told what to do with leftover medication

Prescribing Patterns

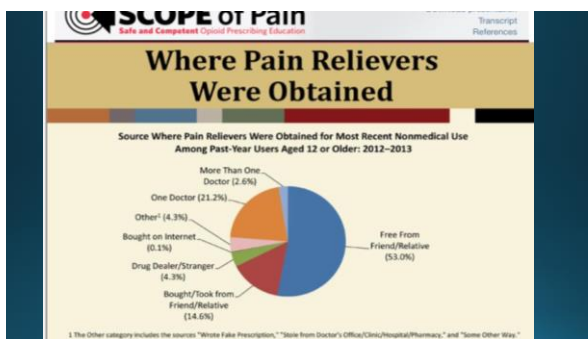
- 90 % of those who become addicted started using drugs and alcohol before the age of 18
- Dental surgery is the first time many young adults are exposed to opioid-containing drugs
- Most oral surgeons prescribe an average of 20 opioid pills after tooth extraction
- The majority of filled prescription were by 14-17 years patients followed by ages 18-24 years

Dentists and Emergency Medicine Physicians were the main prescribers for patients 5-29 years of age

5.5 million prescriptions were prescribed to children and teens (19 years and under) in 2009



Source: IMS Vector @One National, TPT 06-30-10 Opioids Rate 2009



Opioid Prescription Medications are Not As Safe As You Think: The Facts

The CDC on Use of Opioids for Acute Pain

- Using opioids to treat acute pain can lead to long-term use.
- Long-term use of opioids use increases based on the length of the initial prescription
- The likelihood of long-term use **increases sharply after the third and fifth days** of taking a prescription, and spikes again after the 31st day.
- Long-term use also increases with a second prescription or refill, and an initial 10- or 30-day supply.

The CDC on Prescribing Opioids for Acute Pain: How Much Is Enough? (March 2016)

- **Three days or less will often be sufficient and more than seven days will rarely be needed**

Duration of Opioid Use is a Predictor of Misuse

- 37.6 million commercially insured 2008-2016
- 1 million opioid naïve patients undergoing surgery
- Composite outcome dependence, abuse or overdose
- Total duration of opioid use was the strongest predictor of misuse, **with each refill and additional week of opioid use associated with an adjusted increase in the rate of misuse of 44.0%**

Source: Brat et al. BMJ 2018;360:j5790

Non Opioid Prescription Medications Are Better Than You Think: The Facts

Discussion Of The Postoperative Pain

- Pre- and Postoperative discussion of pain
 - Goals of pain control and prescriber-patient pain control goal
 - Modalities of pain control
 - The risks and possible side effects of prescribed medications, including risks of addiction and overdose
 - Guidance towards disposal of the unused opioids medications

Benefits and harms associated with analgesic medications used in the management of acute dental pain

An overview of systematic reviews

Paul A. Moore, DMD, PhD, MPH, , Kathleen M. Ziegler, PharmD, Ruth D. Lipman, PhD, Anita Aminoshariae, DDS, MS, Alonso Carrasco-Labra, DDS, MSc, Angelo Mariotti, DDS, PhD



highest proportion of adult patients who experienced maximum pain relief. Diflunisal, acetaminophen, and oxycodone were found to have the longest duration of action in adult patients. Medication and medication combinations that included opioids were among those associated most frequently with acute adverse events in both child and adult-aged patient populations.

IBUPROFEN-ACETAMINOPHEN COMBINATIONS

- Ibuprofen-APAP combination provide analgesia greater than either of the drugs alone and often equivalent to those of commonly prescribed opioid combination formulations.
- Establish optimal dosages of nonopioids around the clock followed by the addition of incremental doses of opioids as needed for rescue.
-

Practice	Narcotics prescribed			Total		%
	Average of NbrPills	# Patients		Patients seen	Narcotics	
	2017	13.31	13	2017	1640	0.79%
	2018	9.52	84	2018	519	16.18%
Pediatric Dentistry		12.86	14	Pediatric	57156	0.02%
	2013	15.00	2	2013	11683	0.02%
				2014	10474	0.00%
	2015	14.67	3	2015	10371	0.03%
	2016	11.78	9	2016	10217	0.09%
				2017	10089	0.00%
				2018	4322	0.00%
VCU Oral and Maxillofacial	17.31	26043	VCU Oral	57841	45.03%	

The Role Of Compassion Is More Important Than You Think: The Facts

Compassion in Recovery



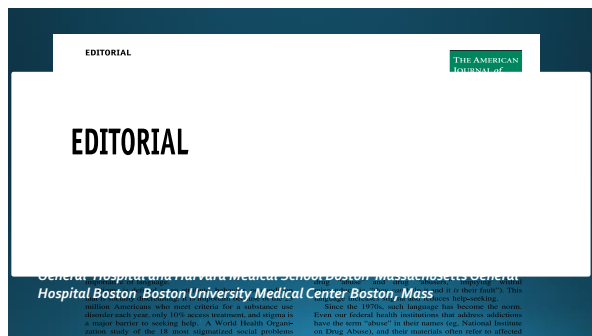
addiction.com

Lack Of Education of Addiction Among Physicians and Health Care Workers



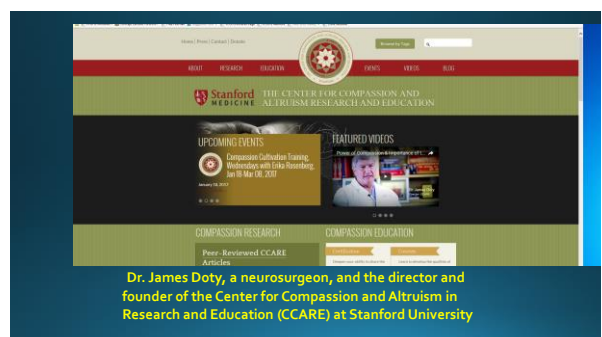
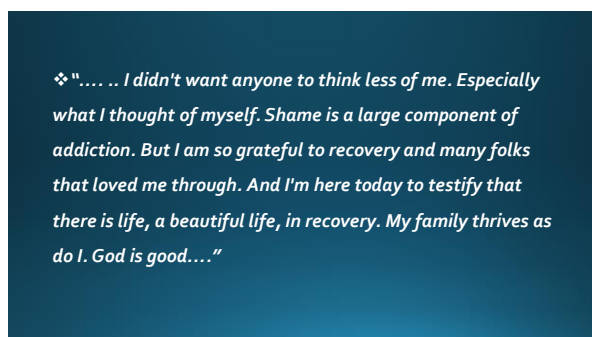
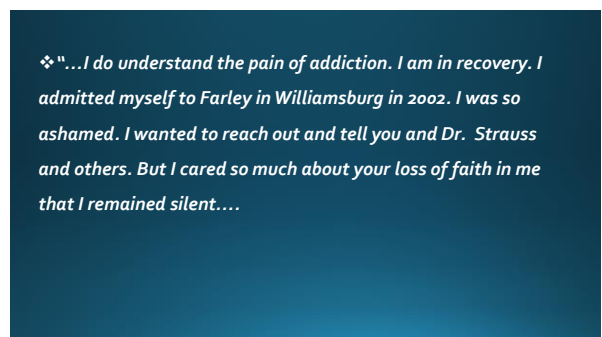
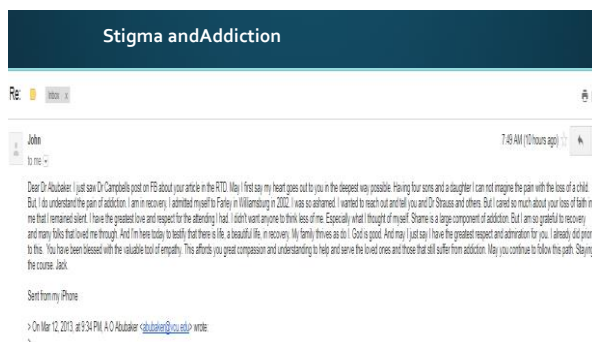
Addiction and Stigma

- According to WHO, drug addiction was ranked number 1 and alcohol addiction ranked number 4 of 18 most stigmatized social problems including criminal behavior
- Family, friends and the general public can carry negative feelings about drug use or behavior.
- Many may even use derogatory terms such as "junkie," "alcoholic," or "crackhead."
- These thoughts, feelings, and labels can create and perpetuate stigma.....

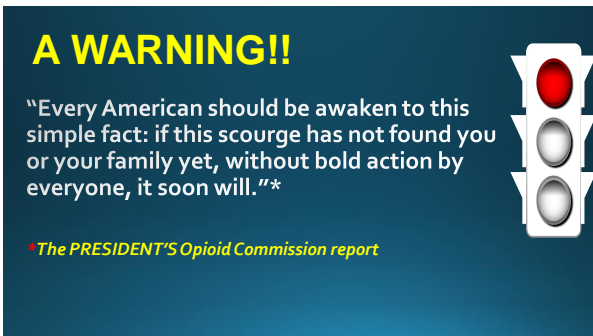


Addiction and Stigma

- The view that addiction as a moral failing rather than a disease leads to addiction stigma, by the public and by health care providers.
- This stigma adversely impacted those affected from seeking and receiving the necessary treatment.
- **COMPASSION** will allow for acceptance of those affected as patients and care for them accordingly



"I always tell people that while science and technology have probably saved millions of lives, the fact of the matter is that kindness and compassion have probably saved more," James Doty, MD



Parents, Educators, Clinicians And Citizens Responsibilities

- This issue is an American issue.....and to fix it is an American duty, dentists, parents and citizens alike
- After September 11th, our President and our nation banded together to use every tool at our disposal to prevent any further American deaths.
- We must act boldly to stop this epidemic: We need to take bold steps and we can not afford to wait ...



**Always Stay in Your
Clinician Role**



NOT



Thank you