QUARTERLY NEWSLETTER OF THE CALIFORNIA SOCIETY OF ADDICTION MEDICINE

# Skyrocketing E-cigarette Use: Risk and Benefits Data Still Scant

By Cathy McDonald, MD, MPH

lectronic cigarettes, or e-cigarettes, are devices that allow users to inhale a vapor containing nicotine, and sales of their many different brands were forecast to exceed \$1 billion in the U.S. during 2013. The e-cigarette usually comes in three parts: the battery, the atomizer, and the cartridge. The battery corresponds to the part of the traditional cigarette that contains the tobacco. The atomizer lies between the battery and the cartridge, which is made to look like the filter of a cigarette and contains absorbent material called polyfill fibers soaked in e-juice, a nicotine solution. When a smoker draws an inhalation on the cartridge, the e-juice reacts with the heat produced in the atomizer



powered by the battery, and produces steam. This enters the "smoker's" mouth as a vapor that is usually exhaled appearing as "smoke." Those who use e-cigarettes often call this "vaping" rather than "smoking." Many e-cigarettes also have a light at the end of the battery that "smolders", mimicking the tip of a lit

cigarette. The technology of e-cigarettes is adapting and changing. Reusable e-cigarettes come with a charger similar to a cell phone charger. Many of the newer e-cigarettes have "cartomizers" that combine cartridge and atomizer and some have cartridge tanks that can be refilled with nicotine solutions of various strengths and flavors. In addition to the reusable e-cigarettes there are also those made for single use.

#### **Safety and Regulation**

Similar to the combustion of hundreds of compounds in conventional cigarettes, there are a number of chemicals vaporized in an e-cigarette that have unknown risks to the user. Currently, there is no adequate scientific evidence establishing the safety of e-cigarettes. No brand of e-cigarettes has been submitted to the FDA for evaluation and approval, and there are no FDA guidelines for their use [1]. E-cigarette use is limited in Australia, Canada, New Jersey, and North Dakota. It is illegal to sell them to minors in California and their use is currently banned on all UC campuses as part of the recently enacted tobacco-free policies. Their

# **Editor's Message**

BY C.Y. ANGIE CHEN, MD, FACP



ANGIE CHEN, MD, FACP

From legalization of recreational marijuana in Colorado and Washington, to the e-cigarette debate and Philip Seymour Hoffman's tragic overdose, the subject of addiction is getting more than average airplay these days.

I've had some parents and patients tell me they hope Philip Seymour Hoffman's tragedy will help de-stigmatize addiction and bring forth greater awareness and funding for treatment. However, a colleague confessed he thought Hoffman was just another Hollywood junkie following an inevitable trajectory that his predecessors such as Heath Ledger had already traversed. Many did not know that Hoffman had been in recovery. For more than two decades he walked the walk and was aware that he had been granted a reprieve in recovery. It will take more than the death of yet another Hollywood star to wake us up; perhaps another death of a prominent Senator's child? Not even a President's wife, child or sibling has adequately brought forth cultural acceptance of addiction as a medical problem in our society, or elicited necessary funding to provide longitudinal care for those who suffer from substance use disorders.

What has surfaced from Hoffman's death is a greater cry for opioid agonist therapy, including heroin replacement therapy, along with greater access to naloxone. One article in *The New York Times* (NYT) implied that Hoffman's death might have been preventable along with so many overdose cases, only if we had naloxone available in addition to more widespread access to methadone and buprenorphine. Hoffman was purported to be found with clonidine

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## New State Law Effective January 1, 2014:

# **Improving Availability of Naloxone and Saving Lives**

California physicians can now issue standing orders for the distribution of naloxone, an opioid antagonist, to a person at risk of life-threatening opioid-related excessive sedation or to a family member, friend, or other person in a position to assist the person at risk, without being subjected to professional review, liability, or criminal prosecution for issuing the prescription or order. The new law, co-sponsored by CSAM and the Harm Reduction Coalition (HRC), is intended to increase access to naloxone and reduce deaths related to opioid use.

Drug overdoses are the leading cause of accidental death in the United States, surpassing motor vehicle crash deaths.

AB 635, authored by Assemblymember Tom Ammiano is an expansion of previous naloxone-related legislation in California.

#### The law:

- Provides protection to licensed health care professionals statewide from civil and criminal liability when, if acting with reasonable care, they prescribe, dispense, or oversee the distribution of a standing order of naloxone via a standard medical practice, drug treatment program, or harm reduction program.
- Permits individuals to possess and administer naloxone in an emergency and protect these individuals from civil or criminal prosecution.
- Clarifies that licensed prescribers are encouraged to prescribe naloxone to individual patients on chronic opioid pain medications in order to address the prescription drug overdose epidemic.

Naloxone (also known as Narcan®), reverses an opioid overdose from drugs like heroin, oxycodone, morphine, or methadone by restoring an overdosing person's breathing and heart rate. Kits are available for administration as a nasal spray and IM injection.

The safety and benefit of peer-adminstered naloxone has been studied at various sites in the US and abroad. The Drug Overdose Prevention and Education Project (DOPE) in San Francisco, a program of the Harm Reduction Coalition, has provided over 3,600 take-home naloxone prescriptions since 2003 in collaboration with the San Francisco Department of Public Health (SFDPH), with over 1,000 lives saved. In addition, clinicians at



SFDPH clinics started co-prescribing naloxone with prescription opioids this year to their patients. According to a Centers for Disease Control report, overdose prevention programs distributing naloxone in the U.S. have trained over 50,000 laypersons to revive someone during an overdose to date, resulting in over 10,000 overdose reversals using naloxone.

"Drug overdoses are the leading cause of accidental death in the United States, surpassing motor vehicle crash deaths."

#### What this means for prescribers

If you have prescribing privileges in California, you can prescribe naloxone to someone who is an opioid user (prescription or illicit), or to their caregiver, partner, family member, or friend (3rd party prescriptions) without ever meeting the intended recipient. For more information on prescribing naloxone, please see www.prescribetoprevent.org.

You can also issue a standing order for the dispensing of naloxone by health care workers, including nurses, addiction therapists, outreach workers or case managers providing they educate the recipient on safe use. For more on standing orders, see: http://harmreduction.org/issues/overdose-prevention/tools-best-practices/manuals-best-practice/

# CSAM Participates in Meeting on AB 635 Implementation

On December 20, 2013, CSAM participated in a meeting with Lark Park, Deputy Legislative Secretary, Office of Governor Jerry Brown, and Trooper Sanders, advisor to the Clinton Foundation's Health Matters Initiative, to discuss issues relating to implementation of AB 635 (increased access to naloxone) and related prescription drug abuse prevention / intervention efforts.

The meeting brought together key parties to offer their insights about how implementation will work in formal health care systems, access and supply, as well as related grassroots efforts. In attendance were representatives of academic institutions, treatment providers, needle exchange programs, methadone providers, state consumer affairs and health departments, and the Medical and Pharmacy Boards. Representing CSAM at this meeting were Jeffery Wilkins, MD, David Kan, MD, Jean Marsters, MD, and Kerry Parker, CAE.

Mr. Sanders briefed the group on Clinton Foundation's goals and asked the group to describe how things look now "on the ground" in California and what the ideal picture would look like in the future if implementation proved successful.

There was a discussion about how the Clinton Foundation could help coordinate implementation efforts of the new law by identifying "champion" organizations that could positively impact this endeavor. In addition, it could help develop strategies, improve access at pharmacies, gather funding support, help fund experts in key areas to offer legal or systems advice etc. Various aspects of a potential game plan that were discussed included:

- Pilot testing various approaches
- Encouraging existing systems (law enforcement and the California VA) who are able to participate in a rapid

- roll-out to take steps such as carry naloxone and help needle exchange programs to find funding to distribute naloxone
- Working with partner organizations
- Targeting clinic-based prescribers for education
- Using social media and a public health campaign to raise awareness
- Working with organizations of health care providers to deliver education
- Seeking ways to increase accessibility (economics, cost, distribution)
- Supporting services that exist now with small grants, etc.;
- Working to expedite access to counties with longer first responder response times. ■



JEAN MARSTERS, MD, CHAIR OF CSAM'S COMMITTEE ON EDUCATION,
TROOPER SANDERS OF THE CLINTON FOUNDATION, AND DAVID KAN, MD,
CHAIR OF CSAM'S COMMITTEE ON THE TREATMENT OF
OPIOID DEPENDENCE AT A MEETING IN SACRAMENTO TO ADDRESS THE
IMPLEMENTATION OF NEWLY PASSED LEGISLATION TO INCREASE AVAILABILITY
AND USE OF NALOXONE FOR THE PREVENTION OF OVERDOSE

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### CSAM Webinar: Thursday, March 27, at noon

## **Naloxone: A New Tool in California for Saving Lives**

On January 1, the Overdose Treatment Act, became law in California. It allows laypeople to possess and administer prescription naloxone to someone in urgent need who is experiencing life-threatening respiratory depression from excessive opiate use. Doctors may provide the prescription to the intended patient, a friend, family member, health care worker, or to a member of the community at large without even having met the intended recipient. Both the doctor and the lay person receive legal protection.

Naloxone is a nonscheduled (i.e., non-addictive), safe, inexpensive prescription medication which is becoming available in pharmacies throughout the state in nasal spray and injectable forms. To learn how to use it safely requires minimal instruction.

This free webinar is designed for California physicians as a focused, clinical introduction to this important tool. It is necessary to preregister for the webinar which can be done on the CSAM website. Please share this information with your colleagues. For those who are unable to participate in the live activity its full content will remain accessible.

SPEAKERS/CONTRIBUTORS: **Phillip Coffin, MD**, Director of Substance Use Research, San Francisco Department of Public Health. **Eliza Wheeler, MA/MS**, Project Manger, Drug Overdose Prevention and Education Project (DOPE), Harm Reduction Coalition, San Francisco

Credit: One AMA/PRA Category 1 Credit

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## **CSAM Awards**

#### 2013 Vernelle Fox Award: George Koob, MD

For achievement in research and education in the field of addiction; in recognition of his dedication to advancing the science and treatment of the disease of addiction as one of world's leading authorities on the neurobiology of drug addiction; and in appreciation of the inspiration he provides as a national and international educator—able to translate science into enthusiasm and hope for addiction treatment.



GEORGE KOOB, PhD (LEFT) WITH CSAM PRESIDENT JEFFERY WILKINS, MD RECEIVES THE 2013 VERNELLE FOX AWARD

#### **Community Service Award: Lawrence Neinstein, MD**

In recognition of his leadership in the field of adolescent medicine, represented by his presidency of the Society for Adolescent Health and Medicine and his ongoing role as editor of the Adolescent Health Care series; his continued leadership of USC's Engemann Student Health Center—that



LAWRENCE NEINSTEIN, MD (LEFT) AND MICHELE KIPKE, PHD (RIGHT) RECEIVE THE COMMUNITY SERVICE AWARD FROM CSAM PRESIDENT JEFFERY WILKINS, MD

every year touches the lives of so many students who will go on to improve the future for our society; and the wisdom and academic contributions he imparts in his recent publication "The New Adolescents: An Analysis of Health Conditions, Behaviors, Risks, and Access to Services in the United States compared to California, Among Adolescents (12–17), Emerging Young Adults (18–25) and Young Adults," which provides public and professional awareness of the risks for substance abuse, mental and physical health challenges, accidental death, and homicide in the large population of emerging youth.

#### **Community Service Award: Michele Kipke, PhD**

For her extensive community study and publications addressing topics that examine individual, familial, peer, and social network influences on adolescent involvement in risky behaviors; in recognition of the alliances she has forged with non-profits and community health care agencies throughout Los Angeles County to define the best ways to serve Los Angeles youth; and in appreciation of unrelenting determination to educate the community about the disease of addiction.

## **Welcome New CSAM Members**

Akindele Kolade, MD, Walnut Creek

Belis Aladag, MD, MPH, Santa Monica Stefan Arnon, MD, San Francisco Faried Banimahd, MD, Costa Mesa Gabriel J. Belsky, DO, Sacramento Sorin Buga, MD, Duarte Cynthia Chatterjee, MD, Palo Alto Tuhin Chaudhury, MD, Modesto Sheldon K. Cho, MD, Los Angeles Jeffrey DeVido, MD, San Rafael Brian Falls, MD, Sacramento Ray R. Glendrange, MD, Riverside Aaron Greenblatt, MD, Santa Rosa Anthony Isenalumhe, Jr., MD, Redwood City

Albert Lai, MD, Placentia
Victor Li, MD, Capitola
Paul Little, MD, San Marcos
Glenn P. Matney, MD, Victorville
Thomas W. Meeks, MD, San Diego
Michael M. Mirbaba, MD, PhD,
Los Angeles
Lennart Moller, MD, San Francisco
Ali Nassiri, DO, South Pasadena
Okechukwu Nwangburuka, MD, Elk Grove
Neil E. Paterson, MD, PhD, Los Angeles
William Joel Paule, MD, Ventura
Bernadette Pendergraph, MD, Harbor City

Michelle Rowe, DO, French Camp
Krista Roybal, MD, La Jolla
Wesley Ryan, MD, North Hills
Robert Rymowicz, MD, Pomona
Sean Sassano-Higgins, MD, Los Angeles
Payam Sazegar, MD, San Francisco
David Sherman, MD, Los Angeles
Michael H. Taylor, MD, Sacramento
Lauren Walton, MD, Norwalk
Erik Washburn, MD, Marina
Jonathan J. Whitfield, MD, Lake View Terrace
Martha J. Wunsch, MD, Oakland
Alex Zaphiris, MD, San Francisco

Faraz Oureshi, MD, Sherman Oaks

# **President's Message:**

## CSAM Has Many Opportunities to Lead and Affect Change

By Itai Danovitch, MD, CSAM President



Itai Danovitch ,  $\ensuremath{\mathsf{MD}}$ 

his is an uncertain, yet exciting time to be in the field of medicine—especially addiction medicine—with the Affordable Care Act promising to enhance access and coverage for those with mental health and substance use disorders. Whether or not the Affordable Care Act will make good on its promise, the focus

on cost reduction has already shifted the way we value and deliver health care. From a population health perspective we know that a long-term, chronic disease care model is not only cost effective but produces best clinical outcomes. It will be interesting to see if those who hold the purse-strings will have the foresight and wisdom to support that which has worked for CHF, COPD, and diabetes care, and translate that for addiction treatment. Regardless of the disruptions and changes we may soon be facing in our practices, those in the addictions field have weathered so many tumults over the past two decades that we are in the ironic position of having little to lose and much to gain; we have had the resilience to continue practicing no matter what the economic, political, and cultural landscape might be.

### **Questions for CSAM Members**

- 1. What trends are you observing in your practice or in the field that present as major issues CSAM should be aware of?
- 2. What are the primary challenges that your patients face?
- 3. What issues associated with the implementation of the Affordable Care Act (ACA/Obamacare) are you seeing in your practice or in the field that CSAM should be aware of? Are there other political factors that CSAM should be aware of?
- 4. What do addiction physicians seek from their professional associations? What drives membership involvement in one association versus another?
- 5. What are CSAM's strengths as an organization?
- 6. What are CSAM's weaknesses as an organization?
- 7. What opportunities do you observe for CSAM as an organization?
- 8. What is happening in the environment in which you practice that an association like CSAM could impact or make a difference?
- 9. What threats do you observe to CSAM? What issues, entities, technologies, etc., could potentially destabilize the organization if not responded to?

As an organization committed to representing all physicians practicing addiction medicine,

- Maintain a vibrant organization that is responsive to the needs of its highly specialized membership
- Advance physician well-being and repair the California physician diversion system
- Expose unethical insurance practices that restrict access to care
- Determine what constitutes "essential health benefits" in the field of addiction
- Adopt evidence-based standards for addiction services
- Challenge insurance companies who seek to minimize provision of substance abuse benefits
- Counter stigma
- Create novel educational techniques for delivering outstanding continuing medical education
- Support the efforts of CSAM members in their maintenance of certification
- Advocate for policies that impact our members and their patients
- Inform the public about the science of addiction and effectiveness of treatment
- Cultivate leadership by supporting leadership involvement and training opportunities for CSAM members
- Train the next generation of physicians in addiction medicine
- Promote addiction medicine's effort to become a boardrecognized specialty.

Where can CSAM be most effective? Which issues are most compelling for CSAM's members?

Sometimes the answers to these questions are obvious. Other times, not. Answering them requires having a clear sense of purpose, as well as an explicit strategy that outlines steps to achieve our goals.

This year, at our annual Executive Council meeting, we conducted a strategic planning retreat, during which we undertook to answer these questions. In preparation, we interviewed a randomly selected sample of members. The questions we posed to our members are listed to the left. As we work to clarify and reaffirm CSAM's priorities, we want to accurately reflect the concerns of our members. Whether or not you directly participated in the survey, we invite you to contribute your feedback by emailing us at csam@csam-asam.org.

We expect to have a summary from this strategic planning process ready to share with you by the next newsletter, and look forward to continuing to evolve as we strive to meet the needs of our patients, members, and the field of addiction medicine.

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# Mobile App Review: eOpioid™

By Mario San Bartolome, MD



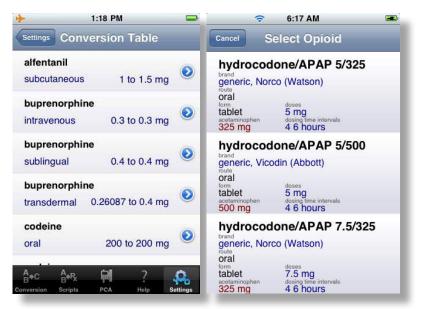
MARIO SAN BARTOLOME, MD

onverting between opioids can be almost as artistic as it is scientific. As addiction medicine specialists there are many times when having a handy tool to convert between opioids would be useful. Whether you are treating someone with chronic pain on high opioid doses

and rotating their medications or if you simply want to get a sense of equivalencies between different opioid drugs, the eOpioid™ app from Sentientware.com may be of use to you in your practice.

The concept of equianalgesic dosing is complex because there is no single agreed upon conversion. In fact, entire books have been written on the topic. Despite this fact, eOpioid<sup>™</sup> does a good job of offering ranges of possible values; the conversion factors are available to view and customize in the app settings, and detailed references are provided in the app's Help menu. This application not only calculates mg/mcg equivalents, but it also takes into consideration the available form (IV/SL/ PO) and the dose available. With this information, it can also display the information with the time interval you choose, such as "Morphine ER 30 mg tablet, 1 orally g 8 hours". Another useful aspect of this tool is that you can add several opioids at once. Many people take multiple types of opioids, such as long-acting Oxycontin with short-acting hydrocodone-APAP for breakthrough. You simply add all of the opioids and dose over 24 hours and eOpioid™ can suggest an equivalent choice based on the drug(s) you choose, interval you desire, and percent of equianalgesia (you might want to start off at 50% of calculated equivalency for safety). This aspect of the app lends itself to producing taper schedules when you are taking someone off opioids. And YES, it includes sublingual buprenorphine and oral methadone. Other tools built into eOpioid™ include calculations associated with PCAs (Patient-Controlled Analgesia devices) and it boasts a robust built-in manual that explains its functions.

The user interface is clean with three main functions at the bottom of the screen: "Conversions," "Scripts," and "PCA." The "Scripts" button calculates the mg/mcg for the new, replacement opioid of interest and searches its database for the replacement opioid's available siz-



es of tablets or patches and available dosing time intervals. With that information, it will output a more useful form, displayed in a format you would use on a prescription such as: Morphine ER 30 mg tablet, 1 orally q 8 hours, rather than stating "morphine 90 mg." For the newbie to opioid conversions I suggest reading their primer on opioid conversions. Though the interface is simple, it may be confusing for some and does require spending the time to get to know the layout and features. It is unfortunate that there are no video tutorials, searchable by FAQs or common functions, showing how to use eOpioid. The last time that this app was updated was May 6, 2010 and although the developer's blog states that there will be an update, none has surfaced since its last updated blog post on June 3, 2011. The app is only available for iOS, in English, and is compatible only with the iPhone, iPad, and iPod touch. Sorry Androiders.

In conclusion, eOpioid™ is a powerful opioid conversion tool for addiction medicine, primary care, hospitalist, emergency medicine, pain management, and anesthesiology specialists in their day-to-day caring for patients. It has a clean interface, and is simple to use for someone with basic knowledge of opioids. The app can help you create opioid tapers, assist in opioid rotations, and get a sense of the opioid load that a patient takes daily when considering transitioning to buprenorphine or methadone. It would be great if the app had a video tutorial and were compatible with the Android operating system. The price is \$4.99, a little pricier than what we are used to for a basic app and there have been no updates since 2010. Overall, however, pros outweigh the cons when considering the utility of the eOpioid™ app. It is a convenient tool to have in your mobile device. You might want to also check out its sister-app eBenzo—move over Angry Birds! ■

## CSAM Consulting & Connecting Regional Groups:

# "Triple C Groups"— A New Way for Our Members to Connect

By Sharone Abramowitz, MD



SHARONE ABRAMOWITZ, N

ver three years ago, when I was preparing for the ABAM boards, I realized that in my neighborhood, the East Bay of Northern California, there were several experienced Addiction Medicine physicians who could support my learning. I wanted a forum to exchange practice experience and obtain clinical pearls from their years of expertise. After disclosing this desire to my colleague, Susan Ferguson, MD, she readily agreed to help me set up a pot-

luck meeting at my home for the first East Bay Addiction Medicine Group. Since then our group has grown to 10 strong, including Marin County colleagues, and meets every quarter at Dr. Judy Martin's home in Berkeley. We are also an interdisciplinary group, nearly evenly divided between psychiatrists, internists, and family medicine physicians; and, because each of us works in different settings—either private practice, residential treatment, academia or public clinics—we bring fresh perspectives to our lively discussions.

Our case-based meetings revolve around a theme and we circulate by email a relevant article or two beforehand. Recent themes have included a benzodiazepine abuse and taper case, and another was about a COPD patient with chronic pain who was still smoking. In a warm and inviting atmosphere, the discussions are often passionate—routinely beginning from the moment we arrive and barely ending when it's time to leave. Each participant can earn two hours of CSAM CME credit by considering specifically how we plan to improve our practice based on what we learned from each other. More importantly, we are nurturing collegial relationships with one another, and therefore more likely to call on each other for professional guidance, moral support, and even referrals. We are also gaining a deeper personal connection to CSAM and its mission.

Because of our group's highly positive experience, CSAM's executive council has asked me, as your Member-at-Large representative, to help lead an effort to spread this model into other regions throughout California. Judy Martin, MD, CSAM Past President, and I will be creating a tool kit for those of you who want to create your own CSAM Consulting and Connecting or Triple C Group in your area. This will eventually be available on the CSAM website. At our upcoming Addiction Medicine Review Course this September 2014 we will have a lunch event for attendees to connect with others from your local areas. We hope these new connections will inspire many of you to create your own groups. Members of our East Bay group will be more than happy to mentor any of you in this effort.

CSAM wants to promote on-going education for Addiction Medicine physicians that extends beyond our annual meetings. We want to create a supportive community for our members both professionally and personally. Our work is challenging and can be isolating. We hope that if we spread the seeds of this new model for learning and collegial support, we will achieve these goals.

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drabramowitz@gmail.com Alameda County Medical Center, UCSF

#### Anthony Albanese, MD

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# Committee on the Treatment of Opioid Dependence

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#### **Committee on Public Policy**

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#### Steven Eickelberg, MD

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## CSAM News Op-Ed

# Marijuana Regulation Initiatives and Responsible Medical Advocacy

TIMMEN CERMAK, MD & PETER BANYS, MD, MSc

n late 2013, Colorado and Washington States passed the first voter initiatives in the U.S. legalizing non-medical use of cannabis in addition to their pre-existing medical marijuana systems. Twenty states and D.C. have previously authorized medical marijuana. The U.S. Department of Justice is not interfering, and is, in fact, facilitating banking procedures for legally transferring the large sums of money generated.

This November 2014, Oregon, and possibly California, may find similar initiatives on the ballot; and national and state polls show majority (~60%) support for "Regulate & Tax" proposals. Depending on west coast results, likely states to follow suit include Alaska, Hawaii, Arizona, Vermont, and Rhode Island. Polling shows that 55–65% of Californians support marijuana legalization if there is strong regulation. President Obama's recent comment that marijuana is not "more dangerous than alcohol" will probably increase levels of support for regulation. Until being unexpectedly withdrawn mid-February, The Control, Regulate and Tax Marijuana Act seemed like a sure bet to be put in front of California voters this November. It is now likely to serve as the basic framework for a better-funded initiative in 2016.

Of the four initiatives designed to legalize the recreational use of marijuana by adults in California which were submitted to the Legislative Analyst's Office for the November 2014 ballot [1], the initiative to watch had been The Control, Regulate and Tax Marijuana Act, funded by the estate of Peter Lewis, former CEO of Progressive Insurance. It was drafted in conjunction with the Drug Policy Alliance, the ACLU, and other proponents [2]. The other three will probably be insufficiently funded to collect the signatures needed to make it onto the ballot. California now has additional time to study Colorado and Washington's experience and to improve draft language.

We proposed to the proponents that youth are the age group most vulnerable to being harmed by marijuana use; that prevention and treatment are superior to punishment and incarceration as public health policy; and, that revenue must be explicitly sequestered for youth interventions. The history of alcohol taxation has shown us that if we do not start with a revenue allocation framework that pays for drug-related harms done to individuals and society, we will be unable to change the framework to capture revenue later on.

Research finds that about nine percent of adult onset cannabis users become addicted, but the risk is nearly double for those who smoke regularly in their teens. Moreover, the biochemical effects of cannabis are more profoundly felt in youth, because cannabis affects cognitive function, memory, school performance, as well as neurological and psychological maturation. Although it is only a minority of youth who use

marijuana regularly enough to suffer psychological, educational, social or physical harm, the damage can derail normal learning enough to have lifelong negative consequences. It is for this reason that we advocate focusing the projected (but still limited) state tax revenues from cannabis sales on (1) youth, (2) school retention, and (3) learning and clinical assessments (detailed below).

The language in the currently drafted initiative contains some of what we recommended. Had it gone to ballot and passed, 55% of the "several hundred millions" of dollars available (after regulatory expenses were deducted) would have been appropriated for after-school enrichment programs, and 30% would have been appropriated to the Department of Health Care Services for Prevention and Treatment [3]. All revenue distributions would have remained under the control of the legislature to appropriate in accordance with the initiative's overly-broad stated intentions.

However, we did not succeed in having the proponents name Student Assistance Programs (SAPs) as an identified mechanism for early intervention and school retention. We also did not get an oversight panel to guide legislators toward the most effective and evidence-based interventions. As a result, passage of the initiative would have created a "gold rush" for special interest groups to line up for the new revenue. Unfortunately, politics is likely to trump evidence and data, as it has for over four decades in the War on Drugs.

What if the most populous state in the Union had woken up on November 5th to a new law permitting the recreational use of marijuana by individuals 21 years and older? What would have been CSAM's responsibilities as public health experts in this new landscape, following a tectonic shift away from failed criminal justice strategies?

Together with other medical specialists and stakeholders, we need to prepare for this eventuality in 2016 by crafting legislative advocacy in four areas:

- 1. Expert Oversight Panel
- 2. Student Assistance Programs
- 3. Clinical Assessments
- 4. Juvenile Justice Revisions

#### **Expert Oversight Panel**

We have an opportunity to create marijuana policy in California that breaks from a criminal justice perspective in favor of a more realistic, socially just and effective public health approach. One lesson from Prop 36 (Treatment Rather than Incarceration, 2000) was the need for an oversight commission, but this was not

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included in the DPA's marijuana ballot initiative. Members of an oversight panel will be necessary to guide the development of programs and should include initiative proponents; physicians from addiction medicine, pediatrics, child and adolescent psychiatry, and public health officials; school leaders and teachers; learning disorder experts; parent group representatives; juvenile court judges and law enforcement. The effectiveness of programs authorized by the legislature must be documented in bi-annual public reports issued by the oversight panel, with legislative recommendations on how to use University of California outcomes research and public health department data for program improvement.

#### **Student Assistance Programs (SAPs)**

School retention and school performance are better intervention targets than generic after-school programs. The minority of children who fall off the academic rails need learning assessments and perhaps clinical assessments as well. SAPs are modeled after Employee Assistance Programs (EAPs) in adult workplaces. SAP staff remains independent from school personnel. Schools identify and refer learning or behavior problems possibly related to marijuana, alcohol, or other drug use; but, they should not be authorized to perform toxicology testing as a form of case finding. Schools notify parents of identified problems and encourage them to permit their son or daughter to participate in a SAP. Youth are offered privacy and confidentiality protections between SAP counseling and the school.

Participants in SAPs have been shown to have a 37% reduction in alcohol and other drug use. SAP programs should receive funding from both education and prevention / treatment accounts established to distribute tax revenues to provide counseling to students and families; specialized educational assessments, cognitive testing, and learning remediation services; and confidentially maintained toxicology monitoring.

#### **Clinical Assessments**

A minority of youthful users of marijuana progress from exploratory to daily use and bona fide marijuana dependence. This population requires access to professional addiction services. The revenue from regulation should provide a secondary copay system to partially fund such services and any needed medications for dual-diagnosis patients, after family insurance, Medi-Cal, the Affordable Care Act and other coverage have paid their share or have been exhausted. The focus of the treatment component is to provide access to licensed professional care for the most afflicted young users.

#### **Juvenile Justice Revisions**

For young people, marijuana is and will always remain illegal. The irony of legalization is that the most at-risk subgroup of the population is precisely the one for whom criminalization harms remain intact. Community arrests for youth possession or public use of marijuana are currently identified by police and managed by the juvenile justice system. We do not wish to see the harms associated with criminal arrests exceed those of the drug itself.

However, we are not clear about what changes need to be

made in our juvenile and young adult justice and probation systems. Perhaps, brief, mandated educational programs similar to traffic school for first and second offenders with required community service and suspension of driving privileges for multiple offenders is one approach. Family counseling, professional evaluations, and outpatient treatment should be offered when appropriate. Our focus should be the elimination of arrest records and punitive sanctions for mere possession and use in order to protect personal dignity, future employability, and access to future federal education loans. When treatment is necessary, it should always be provided instead of punishment. When treatment is not yet indicated, then mandated education is more likely to have a positive impact than criminal punishments. Sale and distribution by under-age individuals would, of course, remain criminal offenses.

#### **Conclusions**

The impact of "Regulate & Tax" will depend entirely on how well-crafted the initiative in 2016 will be and how wisely it is implemented by the legislature. Adolescents in California already have nearly unlimited access to marijuana, but they have virtually no access to a system of early school intervention and clinical treatment to meet the needs of the minority of them in trouble. Will vast amounts of money be wasted on propaganda messages that adolescents will continue to ignore? (Already more high school seniors smoke pot than smoke cigarettes.) Will monies earmarked for school enrichment pay for artificial turf football fields? Will any and all school-related activities be conveniently conceptualized as forms of prevention?

Now that the most substantial initiative has been delayed, CSAM has time to be proactive in advocating for a medically effective framework of marijuana regulation, if that is what the voters choose in 2016. Since this is no longer about medical marijuana, proponents do not care as much about the opinions of organized medicine. We recommend that CSAM collaborate early with other medical specialty organizations in California and with educator and parent groups to prepare a consortium framework for medically responsible allocation of marijuana tax revenues and an expert oversight/advisory panel. "Wait and see" until after the initiative is written and passed will be too late for legislative impact. Only a well-assembled consortium of stakeholders with political impact and realistically written implementation guidelines are likely to have sufficient leverage upon revising the initiative and the legislature during the subsequent revenue "gold rush."

Whether you personally support or oppose legalization, there will be an inevitable shift in cannabis laws and culture in the western states. The landscape is changing because of public fatigue with criminalizing a soft drug. We recommend an early evidence-based response to reality rather than denial.

This is our considered opinion about our ethical obligations as clinical experts in cannabis use and misuse. As a CSAM member, what is yours? Please communicate your views about cannabis reform to CSAM leadership and to CSAM News.

Send your comments on cannabis reform to csam@csam-asam.org.

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## Skyrocketing E-cigarette Use

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use is restricted where smoking is not allowed in certain counties and cities in California as well as in New York City, Los Angeles, and Chicago.

The main safety concerns stem from lack of quality control of the various branded e-cigarette devices and uncertainties about short- and long-term effects [2]. There is significant variability in nicotine levels found in refill cartridges and solutions, which poses a risk of overdose and exposure to potentially toxic components and impurities that might be present in e-cigarettes [3,4,5]. Refilling from a bottle of e-juice often necessitates handling 30 cc of flavored 24 mg nicotine solution. This equals 720 mg of nicotine in a small bottle without a childproof cap, when the lethal dose of nicotine is 30-60 mg for adults and 10 mg for children. There is also a lack of consistent and effective nicotine vaporization among different e-cigarette brands [6, 2]. The latest concern, published in a March 2013 Public Library of Science article, is that metal and silicon particles have been found in the cartomizer fluid and aerosol from e-cigarettes with cartomizers [7].

#### **Marketing of E-cigarettes**

As e-cigarettes have penetrated the market of smokers, the tobacco industry has joined on. Lorillard, makers of Newport, purchased a popular e-cigarette, Blu, in April 2012 and is using the latest marketing strategies to promote this brand. Blu e-cigarettes are sold on the internet with a simple request for you to select if you are over or under 18 years of age. If you select over, you can proceed with the order. If you select under, you exit the site (an unenforced, useless screen to exclude minors.) Then as you select from a series of flavors including liquor flavors such as Peach Schnapps and Piña Colada, you are offered the chance to "like" them on Facebook spreading the word through social networks. Your pack is set up so that it will vibrate if you are either within 50 feet of a Blu user—so you can connect—and/or of a supplier where you can stock up on cartridges. By 2014 all major cigarette manufacturers and some cigar manufacturers will be selling at least one e-cigarette product.

#### **Smoking Cessation vs. Smoking Substitute or Dual Use**

The courts have ruled that the e-cigarette is a tobacco product and not a smoking cessation device and therefore the FDA cannot regulate e-cigarettes as such. Instead, the FDA can regulate e-cigarettes as a tobacco product yet no regulations have been issued to date [8].

E-cigarette proponents argue that if people replaced conventional cigarettes with e-cigarettes there would be substantial benefit to public health (Cahn Z, Siegel M., 2010) [9]. Published research supporting this claim is sparse.

In a study of 40 individuals using e-cigarettes, Polosa showed that 22.5% had sustained conventional cigarette abstinence at 6 months; however two-thirds of these were still smok-

ing e-cigarettes [10]. Caponette et al. 2013 compared three groups, one receiving 7.2 mg of nicotine in their cartridges; a second group receiving 7.2 mg for 6 weeks followed by 5.4 mg, and a third group receiving no nicotine in their cartridges. In this study 10.7% of the participants from all groups combined reported complete abstinence from conventional cigarettes at 12 weeks and 8.7% at 24 weeks [11]. Both the Caponette and Polosa studies report reductions in cigarette smoking for many participants.

Adkinson [2013] found 85% of users reporting that they were using e-cigarettes to help them guit but only 11% had actually quit at follow-up [12]. In Vickerman's study of quitline users, 2,758 were studied at baseline and at seven months. Those who used e-cigarettes to help them quit were less likely to quit at 30 days than those who had never used e-cigarettes, 21.7% vs. 31.3%; and those who used e-cigarettes to reduce tobacco use were also less likely to quit than those who did not use e-cigarettes, 16.6% vs. 31.3% [13]. Bullen et al. performed a randomized control trial of NRT and e-cig use. There was no statistical difference in quit rates at 6 months between e-cig users (16 mg nicotine) 7.3% and NRT users (21 mg patch) 5.8%. The authors concluded that e-cigs were similar to nicotine patches in efficacy [14]. This study never met the participants and mailed the e-cigarette directly to participants but mailed the patch users vouchers that had to be filled at a pharmacy introducing a significant confounding variable. Of those in the e-cigarette group who had stopped smoking cigarettes at 6 months, 38% continued to use the e-cigarette. Of those who continued to smoke cigarettes, 29% reported continuing to use the e-cigarette.

Frequently when people use e-cigarettes to quit smoking they end up as dual users continuing to use both conventional cigarettes along with e-cigarettes. Because e-cigarette users engage in the same hand to mouth motion and produce exhalation of "vapor," smoking behaviors are reinforced; unlike breaking these behaviors when using one of the seven FDA approved tobacco treatment medications to quit [15]. The continuation of smoking low or intermediate numbers of conventional cigarettes has been shown to be associated with many medical problems, cardiovascular disease, lung, gastric and esophageal cancer (Schane, Ling and Glantz, 2010) [16]. Continued low rates of smoking also position the user for relapse.

Existing public health service guidelines recommend evidence-based tobacco dependence treatment medications, in addition to counseling. These medications were known to be safe and effective prior to mass distribution, and over time have shown that when combined with counseling result in quit rates of 20–45% at 6 months [15, 17, 18]. E-cigarettes on the other hand, have not proven to be a safe and effective method of quitting, but may demonstrate a role in tobacco harm reduction.

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#### **E-Cigarette Use Among Youth**

Findings reported in the September 5, 2013 CDC's Morbidity and Mortality Weekly Report (MMWR) from the National Youth Tobacco Survey reveal that use of e-cigarettes by middle and high school youths dramatically increased from 4.7% used in 2010 to 10% in 2011. Seventy-six percent of the students who used e-cigs in the last 30 days also smoked conventional cigarettes, and 20% of middle school students who had ever tried an e-cig had never used conventional cigarettes prior [19]. These findings not only mirror the growth of e-cigarette use in the general population, which is spreading dramatically with unknown long-term health effects, but also suggest rapid spread among teens and the possibility of developing nicotine addiction from e-cigarettes, with e-cigarettes becoming a potential gateway for later conventional cigarette smoking. This new avenue for becoming addicted to nicotine is concerning because adolescents are more sensitive to nicotine than adults and experience unique consequences due to the fact that the prefrontal cortex has not fully developed. Early exposure to nicotine in adolescence may interfere with brain maturation and have long-term effects on cognition, mental health, and personality [20].

Currently, the hundreds of varied forms of e-cigarettes marketed are completely unregulated, inadequately tested for safety, impacting smoking initiation by youth and challenging the social norm of no smoking in public places. The current e-cigarette advertising blitz and the impact on de-normalization of smoking are very concerning from the standpoint of primary prevention not only amongst youths but the population at large.

#### Tell the FDA what you think about e-cigarette regulation

The FDA has the authority to regulate e-cigarettes as a tobacco product. You have the opportunity to post a comment to tell the FDA what you think it should do about non-cigarette tobacco products including e-cigarettes and hookah.

The Public Health Law Center has filed a citizen petition to the FDA requesting that the FDA tobacco products section regulate non-cigarette tobacco products including hookah and ecigs. You can review this petition and post a comment expressing your opinion by going to the site below. Comments need to be posted as soon as possible: http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fs-tell-FDA-regulate-all-tob-prods-2013.pdf

Acknowledgement: This article draws heavily from Alameda County Behavioral Health Care Service's January 31, 2013 Informational Document Regarding Electronic Cigarettes which can be found at: http://www.acbhcs.org/tobacco/docs/2013/Electronic Cigarettes statement.pdf

References available on csam-asam.org.

### Editor's Note

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and Suboxone amongst his medications, a sign that someone was apparently trying to help him get clean with agonist therapy, but this did not stop him from using anyway. He was also found dead with the needle still in his arm, indicating instantaneous death. Alone in his apartment, naloxone probably would not have helped that fateful morning; however, in many instances it can mean prevention of a potentially lethal event—buying enough time to get emergency care. This issue contains an update on CSAM's efforts to increase the availability of naloxone and educate physicians in how to provide it to your patients, including through a live, free webinar on March 27 that will be posted on the CSAM website.

Perhaps the most addictive substance, next to heroin, is tobacco in terms of dependence and tolerance. How many patients have asked your thoughts on "vaping" instead of smoking conventional cigarettes? The NYT had two articles in December 2013 arguing the case for e-cigarettes, propounding harm reduction by stating most who "vape" do not necessarily go on to smoke conventional cigarettes. Currently, we have sparse data in terms of harms and benefits of e-cigarettes, and while we study this, the FDA has yet to regulate a product that is accessible to adolescents. Also in this issue is an article on e-cigarettes by Cathy McDonald, MD, MPH that provides a link to where you can weigh in with the FDA on your thoughts and to petition for the regulation of e-cigarettes.

Speaking of adolescents, with the recent legalization of recreational cannabis use in Colorado and Washington, it will be important to see how these states handle the protection, education, and treatment of youths who now have the most liberal exposure, to the substance since the various criminalization and regulatory acts of the 1900s. It will probably just be a matter of time before California follows suit with its own taxation and regulation initiatives that allow for the recreational use of marijuana. Our practices have already changed with the rising tide of medical marijuana. It has been a constant struggle to request complete abstinence in our recovery population as harm reduction has gained traction; for instance, many have given up mandating abstinence from marijuana as a contingency for continued Suboxone therapy, and others accept occasional cannabis use so long as patients are not drinking alcohol. We know harm reduction saves lives, but we also see that long-term exposure to any substance such as cannabis, especially among adolescents, robs many of their full cognitive potential, regardless of the debatable health consequences. In this issue of CSAM News, there is an opinion piece written by Drs. Banys and Cermak, both CSAM past-presidents, on the moving target of marijuana legalization efforts.

We welcome feedback from readers. It is an exciting time to be in the field of addiction medicine, with many changes in the future that will require us to stay informed and open to the possibilities of making a difference, one life at a time.

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