



# The Addictions Newsletter

The American Psychological Association, Division 50

[www.addictionpsychology.org](http://www.addictionpsychology.org)

SUMMER 2014

## Contents

### STANDING COLUMNS

President's Column.....	1
Editor's Corner.....	3
Advocate's Alcove .....	3
New Member Spotlight .....	5
Student and Trainee Perspectives ....	6

### RECURRING COLUMNS

Election Results Are In! .....	7
<i>Psychology of Addictive Behaviors</i> News.....	7
APA Annual Convention 2014 .....	8

### ARTICLES

#### Topic: E-cigarettes: Friend or Foe?

E-cigarettes: An Innovation That Can Obsolete Cigarettes .....	12
Electronic Cigarettes: Friend or Foe?.....	13
The Treatment Effects of Cigarettes and Nicotine on Schizophrenic Sufferers.....	15
Harm Reduction for Vulnerable Populations.....	17
E-cigarettes: More Frenemy than Enemy .....	19

#### Other Articles

Chronic Medical Disease Diagnosis Increases Likelihood of Seeking Alcohol Abuse Treatment.....	21
Mid to Late Life Use, Abuse, and Dependence on Alcohol.....	26

ABSTRACTS .....	28
-----------------	----

ANNOUNCEMENTS .....	31
---------------------	----

### CELEBRATING ACHIEVEMENTS IN ADDICTION

.....	32
-------	----

### SOAP AND APA NEWS

SoAP Member Services .....	2
Renew Now!.....	34

### BACK COVER

SoAP Leadership.....	33
SoAP Executive Officers.....	34

## President's Column

**"The best way to predict your future is to create it"**

—Abraham Lincoln

**John F. Kelly**

It's hard to believe that I'm already writing my final column for TAN as your SoAP President. It's been an immensely rewarding task steering the SoAP ship for the past twelve months. I've learned a lot and I have appreciated the opportunity enormously. The future, for sure, is always uncertain, but as Abraham Lincoln implies, as an organization we are likely to be better off being proactive rather than reactive. Perhaps the biggest challenges we've faced during the past twelve months have been trying to regain our Certificate of Proficiency in the Treatment of Psychoactive Substance Use Disorders and ensuring the success of our mid-year conference, the Collaborative Perspectives on Addiction (CPA).

As you are probably aware, through consistent and concerted efforts, letters, phone calls, and in-person meetings by several of us in our Division we were able to get the Certificate reinstated. This was a very satisfying accomplishment, but the joy is short-lived, since the reality is that it returned something that we felt already belonged to us. The challenge now lies in sustaining it and ensuring that we keep it active and playing an even more significant role than it has done

in the past. One important reason why we will need to increase its visibility is that healthcare reforms (e.g., greater enforcement of the parity law and expansion of coverage for millions of previously uninsured Americans) mean the demand for well-trained addiction specialists will be greater than ever.



John F. Kelly

Somewhat surprising was that when we had the Certificate in place, not many of us in SoAP or other psychologists decided to obtain or maintain it, and little attention was paid to it even among our own members. In the six years from 2005 through 2010, for example, only 48 psychologists obtained the Certificate—an average of 8 per year. Now we have it reinstated, it will behoove our Society to establish the reasons why this was the case and why now it will be different. For instance, many states do not recognize the Certificate as an acceptable and legitimate credential, not because it is below par compared to other credentials, but simply because most have never heard of it and don't know anything about it. To exert more leverage and increase status of our Certificate, I believe our Society needs to take a more committed stance to ensuring its growth and prominence. To achieve this goal, I have asked the Board to approve a new standing "Credentialing Oversight Committee"

to provide closer ongoing monitoring of the Certificate, its relation to addiction practice standards in the field, as well as progress toward establishing an American Board of Professional Psychology (ABPP) in addiction (see below). As part of this Committee's responsibilities, it will be necessary to increase and maintain visibility of the Certificate and communicate its value to other psychologists, especially the APA Divisions who were supportive of us in our attempts to regain the Certificate (Divisions 12, 28, 31, 56).

Another broader question we need to consider is whether we wish to continue to be recognized as a "proficiency" and continue with our Certificate, or whether we want addiction to be recognized as a "specialty." We cannot be designated as both. If we opt for the latter, it would enable us to obtain an American Board of Professional Psychology ("ABPP") certification in Addiction and enable psychologists to become "Board Certified in Addiction Psychology." I believe our field and profession is deserving of the added credibility and status that "Board Certification" confers. The sleep disorders field has been able to obtain specialty status and an ABPP. Given the far greater public health and safety burden caused by addiction, we in addiction psychology should be able to obtain specialty status and an ABPP. Under the auspices of APA, however, we cannot do both. This is a pity, as it would be optimal to have degrees of specialization (e.g., minimum standard provided by the Certificate; higher specialization via ABPP) available to those that wish to gain them. I am in favor of addiction being recognized as a specialty and in us pursuing the ABPP. It will cost us several thousand dollars and 2-3 years to achieve, but I believe it will be worth it and doing so fits well with our mission.

Notable too this year has been the increased success of our Collaborative Perspectives on Addiction (CPA) Conference, held once again in Atlanta, GA, in February/March. It was gratifying to see the increase in attendance and so many students, post-docs, and early career psychologists

present and presenting, along with such high quality keynote speakers, workshops, and symposia. We have gained valuable experience in doing these two consecutive conferences and have gathered considerable momentum. We want to capitalize on these gains. As most conference organizers know, it is important to take, and commit to, a longer-term view and plan (e.g., 3-5 years) in order to realize greater strategic efficiencies and ultimate impact. Consequently, I have asked the Board to consider a longer-term commitment to the CPA (e.g., 3-5 years) that will lead us to greater efficiencies and help build greater momentum as we invest more of ourselves into the process. I see this step as an important commitment that fits squarely with our broad mission in research, education, and practice, and represents appropriate use of our financial and human resources.

As we move forward in these areas, we will need to be proactive and decide as a Society what we wish our future to look like. The sale to APA of our journal, *Psychology of Addictive Behaviors*, brought in considerable capital with an agreement for a continued annual dividend, but this income will end several years hence. Consequently, we will need to diversify our revenue streams. One potential possibility for alternative revenue could be through strengthening and expanding our CPA conference. Our Society may have to consider opting for greater independence from APA to do so, and deciding to expand our educational reach beyond psychologists to other professions and offer CEUs to include other professions such as frontline addiction counselors and social workers who conduct the majority of the direct addiction service provision in the United States. This expansion would take a shift in, and broadening of, the CPA emphasis to include a greater array of attractive practical elements for enhancing clinical and recovery support services. I believe this approach could be a way to expose more clinicians to high quality, cutting edge, clinical and translational research, and also for clinicians to interface with researchers and highlight and sensitize researchers

to the complexity of clinical realities. We will need to think differently and be creative.

To end, I wish to thank the Society of Addiction Psychology for the privilege of serving as your President. It has been a great honor for me to do so. I am grateful for the support of the membership, the Executive Committee, and the volunteers that allow SoAP to function. I look forward to assisting our incoming President Alan Budney during his term. We have an outstanding curriculum for the APA conference in August and I hope to see many of you in Washington, DC

### SOAP MEMBER SERVICES

Join SoAP: [www.apa.org/divapp](http://www.apa.org/divapp)

Renew SoAP: APA Members, Associates, and Fellows may renew via [www.apa.org/membership/renew.aspx](http://www.apa.org/membership/renew.aspx) and Professional Affiliates (professionals with no membership in APA) and Student Affiliates may renew at [www.apa.org/divapp](http://www.apa.org/divapp).

Website: [www.addictionpsychology.org](http://www.addictionpsychology.org)

Listsers: To join the discussion listserv (discussion among members), contact Robert Leeman at [robert.leeman@yale.edu](mailto:robert.leeman@yale.edu). All members (and all new members) have been added to the announcement listserv, [div50announce@lists.apa.org](mailto:div50announce@lists.apa.org) (for division news).

Journal: You can access the division journal, *Psychology of Addictive Behaviors*, online at [www.apa.org](http://www.apa.org) via your myAPA profile (even if you don't belong to APA). Log in with your user ID or email and password.

Newsletter: *The Addictions Newsletter* is sent out on the listservs and is available on the website.

For help with membership issues, contact the administrative office at [division@apa.org](mailto:division@apa.org) or 202-336-6013.

# Editor's Corner

## Bettina B. Hoepfner

Welcome to the Summer 2014 issue of TAN! In this issue, we are taking a critical look at e-cigarettes. Lately, and particularly in recent months, e-cigs seem to be coming up more and more in discussions among addiction researchers and clinicians—at least, wherever I go, the topic of e-cigs seems to follow me. Admittedly, that may well be a case of selective attention on my part (who was it again who said “you are where your attention is”?), but with e-cigarettes projected to surpass traditional cigarette sales by 2047 (Robehmed, 2013), e-cigs are hard to miss. My research assistants ask me if it's ok if participants in our smoking cessation study smoke e-cigs, participants ask if they can use e-cigs on the hospital campus, and colleagues and I wonder: What should we tell them? Are e-cigs good? Are they bad? Clearly they are here to stay - something I did not anticipate when my brother Christian first emailed me a link about them several years ago. Really, I thought, who'd want to use those? Apparently, a lot more people than my skepticism allowed for. And thus, we as addiction researchers and



Bettina B. Hoepfner

clinicians clearly are in need of some answers about this not-so-new phenomenon. Excitingly, several authors—both seasoned tobacco researchers and early career folks—graciously responded to the call for articles on e-cigs, so as to better inform us as we ponder the question: “E-cigarettes: Friend or foe?”

In the next issue of TAN, we'll be taking a look at mindfulness. This topic is brought to us by TAN's first official graduate student mentee, Hillary Howrey, who is a clinical psychology doctoral candidate at Nova Southeastern University. Welcome to TAN, Hillary! TAN (and I!) have already

benefitted greatly through Hillary's thoughtful comments, careful reviews, and creative ideas. She suggested—and I loved the idea—that we take a look at mindfulness approaches to addiction treatment. Things we'd love to hear about include examples of specific applications of mindfulness, impressions and experiences by patients and clinicians, level of exposure and training in mindfulness approaches experienced by trainees, and examinations of the evidence-base for mindfulness approaches. Thus, I hereby invite you all to submit an

article on “Applications of Mindfulness in Addiction Treatment” for the next issue of TAN (submissions due on October 1, 2014). As always, keep in mind that articles are short (1,200 word limit), fairly informal, and take many shapes (e.g., opinion pieces, descriptions of pilot or small studies, short reviews)—all factors, hopefully, that will make it easy for you to share your thoughts.

As to the news updates in this issue of TAN: We've got election results for you—congratulations to the incoming officers! There is also happy news regarding the certificate of proficiency you've heard so much about, the Division 50 APA Convention program is ready for your perusal, and we've added a new section to the TAN announcements, called “Celebrating Achievements in Addiction.” Please consider submitting your own or your colleagues' achievements for this section: Each of these achievements is a win for the field, and it's always good to celebrate and cherish the good things in life.

With that thought, and summery weather out there, I wish you happy reading!

## Reference

Robehmed, N. (2013). E-cigarette sales surpass \$1 billion as big tobacco moves in. Retrieved June 3, 2014, from *Forbes, Inc.* <http://www.forbes.com/sites/ψ>

# Advocate's Alcove

## Nancy A. Piotrowski

*Division 50 Federal Advocacy Coordinator*

The American Psychological Association Practice Organization (APAPO) held its 2014 State Leadership Convention on March 8-11 in Washington, DC. I attended in my role as the Division 50 Federal Advocacy Coordinator, or Division FAC as they call us at the meeting. Again, our division is able to have a FAC at this meeting because at least 50% of our members pay a clinical assessment

along with American Psychological Association (APA) membership dues. The meeting always features attendee representatives from all the clinical divisions, states, and territories and is an opportunity to share information about current policy and legislative matters affecting our varied states, divisions, and territories. Additionally, it provides an opportunity to have APA and APAPO staff update attendees on pressing matters in Congress. This is my promised report to you on the meeting, along with some other advocacy-related

tidbits for summer reading!

Dr. David Barlow kicked off the meeting, discussing how his evidence-based work ([www.apapracticecentral.org/advocacy/state/leadership/interventions.pdf](http://www.apapracticecentral.org/advocacy/state/leadership/interventions.pdf)) had influenced policy abroad, helping to pave the way for psychotherapeutic treatments to be a frontline approach to treating anxiety and related problems, rather than taking a back seat to psychopharmacological agents. APA presented its annual *Psychologically*



*Healthy Workplace Awards*, highlighting model and innovative practices of its awardees, described in a related article ([www.apaexcellence.org/resources/goodcompany/newsletter/article/514](http://www.apaexcellence.org/resources/goodcompany/newsletter/article/514)). Any business is eligible for nomination. You are encouraged to read up on this program if you think you may know of a suitable business in your locale deserving recognition. This is also a nice program to let your legislators know about so that they also can use it to recognize innovative businesses. It provides a nice entry point to introducing yourself to them and how psychology is valuable not only in healthcare, but in business. Your state psychological association can work with them and you to advance a nomination.

Legislative matters discussed at the meeting were very much a repeat of recent years. For more information on these issues, you may read about them at the APA Practice Central link ([www.apapracticentral.org/advocacy/index.aspx](http://www.apapracticentral.org/advocacy/index.aspx)) related to advocacy. In sum, though, there were four primary issues. First, Medicare payments are still suffering from the existing sustainable growth rate calculations and all stakeholder groups are tired of short-term fixes and want a long-term solution. Second, there is still a need to make psychologists eligible for HITECH Act Incentives so that the mental health records are as accessible, in electronic form, subject to their usual protections, of course, as physical health records. This helps to ensure well-rounded integrated care. Third, there is still a need to get psychologists included in the Medicare definition of physician so that they can fully work in their scope of practice without unnecessary supervision, just like all other independent doctoral level providers currently included in the definition, but who do not have a doctor of medicine degree. The fourth issue related to educating the public and policymakers on the value of psychology to overall health and productivity. Focused briefings with state leaders and APAPO staff helped attendees learn more about specific legislation related to these matters. Other meetings at the convention focused on the need of our profession to explore partnering

opportunities with other professionals. Because changes in healthcare laws are demanding integrated care, there is a need to look at other models of treatment, beyond private practice or stand along specialty services ([www.apapracticentral.org/advocacy/state/leadership/alternative-practice-models.pdf](http://www.apapracticentral.org/advocacy/state/leadership/alternative-practice-models.pdf)). Co-location was a popular model discussed. There was also some time spent on telepsychology (the preferred term for psychologists to use, rather than telehealth). Presenters also addressed new APA guidelines on telepsychology, with a focus on ethical considerations ([www.apapracticentral.org/advocacy/state/leadership/telepsychology.pdf](http://www.apapracticentral.org/advocacy/state/leadership/telepsychology.pdf)). These materials are very worthwhile for everyone to examine. You may also view other presentations from the meeting online ([www.apapracticentral.org/advocacy/state/leadership/slc-handouts.aspx](http://www.apapracticentral.org/advocacy/state/leadership/slc-handouts.aspx)).


And finally yet importantly, I used the meeting as an opportunity to network with state, division, territory, and APA leaders to help spread the word about our need to get the Certificate of Proficiency for the Psychological Treatment of Alcohol and Other Drug Use Problems back into place. This went very well and we were able to enlist the help of many, including some of our students, to underscore the reinstatement of the Certificate. Moreover, as you know, positive things have happened!

Speaking of students, our committee of student volunteers ( $N = 10+$ ) interested in advocacy has completed its first six months of meetings. We spent several meetings focused on what advocacy means inside and outside of APA, as well as strategies and opportunities for advocating and learning about advocacy. We also have had very

gracious presenters join our calls to talk about advocacy and policy matters. Thanks to Drs. Keith Humphreys, Deborah Haskin, LeOndra Clark, and Dan Dodgen for sharing their knowledge and experience related to national drug policy, advocating on scientific matters related to DSM-5, state level licensing and policy matters affecting mental health, and national level policy related to health and human services. This activity is part of an effort to address a longer-term goal to have active advocates for addiction psychology in all of the states and territories. Such a network will provide a mechanism where, when pressing issues related to addiction

arise, we are ready to act. This includes being able to pass information to APA and APAPO, as well as to activate our network of connections to speak out where it would be useful. If this is of interest to you or your students please be in touch with me ([napiotrowski@yahoo.com](mailto:napiotrowski@yahoo.com)). This is not a “do it and done” task, but one that is ongoing! Also, if you have a suggestion for a speaker for our students, please let me know.

### Resource Information

- Alternative practice models [www.apapracticentral.org/advocacy/state/leadership/alternative-practice-models.pdf](http://www.apapracticentral.org/advocacy/state/leadership/alternative-practice-models.pdf)
- All SLC meeting materials [www.apapracticentral.org/advocacy/state/leadership/slc-handouts.aspx](http://www.apapracticentral.org/advocacy/state/leadership/slc-handouts.aspx)
- Barlow, D. H. [www.apapracticentral.org/advocacy/state/leadership/interventions.pdf](http://www.apapracticentral.org/advocacy/state/leadership/interventions.pdf)
- Legislative matters of interest [www.apapracticentral.org/advocacy/index.aspx](http://www.apapracticentral.org/advocacy/index.aspx)
- Psychologically Healthy Workplace Awards [www.apaexcellence.org/resources/goodcompany/newsletter/article/514](http://www.apaexcellence.org/resources/goodcompany/newsletter/article/514)
- Telepsychology [www.apapracticentral.org/advocacy/state/leadership/telepsychology.pdf](http://www.apapracticentral.org/advocacy/state/leadership/telepsychology.pdf) 



Nancy A. Piotrowski

# New Member Spotlight: Diane Logan

Allison K. Labbe  
*Early Career Representative*

Please welcome a new member to SoAP, Diane Logan. Diane is currently a post-doctoral research fellow on a T32 NIAAA training grant at the Center for Alcohol and Addiction Studies (CAAS) at Brown University in Providence, RI. She also volunteers as a postdoctoral clinician at the Providence VA. She received her PhD in Clinical Psychology from the University of Washington (UW) in Seattle.

## *How did you get interested in addiction psychology?*

My targeted interest began in an undergraduate research course, where instructor enthusiasm and brilliance combined with pop culture references (later identified as social norms) to create a perfect storm of inspiration. I was fortunate as an undergraduate to be a peer facilitator on a multi-site NIAAA-funded R01, and was connected with Dr. Marlatt's lab at UW. Almost a decade later, my interest continues to be fueled by the strength and success of clients as well as the intelligence and collegiality of colleagues in the field.

## *What are your research interests?*

My background has focused on alcohol use in mandated college students (those sanctioned to receive clinical services following violation of a campus alcohol policy). My dissertation evolved from my early clinical experiences as the Alcohol and Drug Education Coordinator at UW, and examined intervention effects and intervening variables (e.g., defensiveness, incident reactions, readiness to change) on mandated student drinking outcomes. My internship training sparked my passion for working with veterans and I am currently proposing a grant to evaluate brief interventions for returning veteran students.



*Diane Logan*

## *That sounds like a very interesting study. Can you tell me a little more about it?*

Absolutely! We are proposing a brief personalized normative feedback intervention targeting reductions in risky drinking and increasing connection to further services (including substance use, mental health, and/or academic preparation). Prevalence estimates suggest our target population of pre-enrolled or newly enrolled returning veteran students have significant barriers due to substance use and mental health concerns, and are often unable, unwilling, or simply unaware of existing services. We're hoping to bridge that gap and facilitate services for those who have served us.

## *What are your clinical interests?*

My clinical interests include targeting a variety of addictive and mental health disorders with various interventions ranging from 1-2 session brief motivational interventions to longer-term dynamic and/or behavioral interventions. I also particularly enjoy working with young adults, including college students and returning veterans. Finally, perhaps driven by my early experiences with mandated students, I

particularly enjoy working with clients who others may describe as defensive, skeptical, or resistant.

## *What are your educational/training interests?*

I teach at a variety of levels, including a DSM-5 class and upcoming Research Methods for graduate students in a counseling program, a brief summer course on the Psychology of Good and Evil for college-bound high school students, and webinars and formal trainings on implementing evidence-based substance use interventions for peers and professionals in various settings. Dissemination is an important piece of what I do, and I welcome opportunities to introduce critical thinking, highlight diversity and ethical challenges in our field, and provide practical skills for new and seasoned professionals alike.

## *What motivated you to join the Society of Addiction Psychology (Division 50)?*

My advisor told me to. I wish I had a more expansive answer, but really I was lucky enough to have Dr. Marlatt as an advisor who recognized the value to SoAP and recommended his students get involved early and often in a Division that facilitates collaboration of research, clinical, and educational efforts by colleagues at diverse career levels.

## *How can SoAP aid with your career goals and interests?*

SoAP has facilitated my professional development through circulating relevant information through the listserv, and hosting unique conferences and gatherings to allow for collaboration and networking. I hope that SoAP will continue to meet members where they are, including students and early career professionals, through opportunities like this.

***Are there any programs or initiatives you would like to see SoAP address?***

It would be great to provide a balanced and empirical-based discussion on some of the broad policy changes (e.g., drug decriminalization/legalization; efforts to reduce stigma associated with substance use labeling).

***Finally, is there any other information that you would like to share about yourself with other SoAP members?***

In addition to being a researcher, clinician, and teacher, I am also a mom of two toddlers. My success in the field is in part due to the support and encouragement I've received from my

colleagues at UW and Brown. I love this field because of the people in it, and I encourage you to continue to reach out to colleagues and offer support and advice. And, if anyone has had success adapting motivational interventions for a toddler population, please contact me immediately!ψ

## Student and Trainee Perspectives

**Lauren A. Hoffman, MS**  
*University of Florida*  
*Student Representative*

**David Eddie, MS**  
*Rutgers University*  
*Student Representative*

The APA Annual Convention is approaching and promises to be another great event. This year's conference has much to offer Division 50 student members, including captivating symposia, informative poster sessions, and invaluable networking opportunities.

Student members are encouraged to take advantage of several events. First, be sure to attend the joint NIDA/ NIAAA Early Career Investigators Poster Session and Social Hour on Friday, August 8<sup>th</sup> from 4:00 to 5:50 pm and the Division 50 Poster Sessions on Addictive Behaviors on Friday, August 8<sup>th</sup> from 9:00 to 9:50 am and Saturday, August 9<sup>th</sup> from 11:00 to 11:50 am. The poster sessions are great networking opportunities, where students can meet established researchers with similar scientific interests. Food will be provided at select events! So stop by and check out the work your fellow students are engaged in!

In addition, get to know your fellow SoAP members by attending the Division 50 Board and Committee Reception on Thursday, August 7<sup>th</sup> from 3:00 to 4:50 pm. This event offers a unique opportunity for student affiliates. Interact with and pay tribute to individuals who have served on SoAP committees throughout the years. I encourage all Division 50 student members to take advantage of this special invitation, as numerous senior members will be present. While attending, be sure to stop by the Division 50 booth. Here, graduate students will find important information regarding available student mentee positions on all SoAP committees.

Attend the Grant Writing Workshop, run by Harold Perl, on Thursday, August 7<sup>th</sup> from 12:00 to 1:50 pm. Also, don't miss the NIDA symposium entitled 'The Evolving Role of Behavior in Science at the National Institute on Drug Abuse' (Saturday, August 9<sup>th</sup>, 12:00 - 1:50 pm). For more information on conference symposia and events relevant to Division 50's interests, see the report by the convention program chair, Kristina Jackson, for further details.

Additionally, APAGS will be hosting a number of student-dedicated workshops and social events devoted to specific career tracks. Themes include graduate school, internship, clinical

practice, and academia. Workshop topics range from statistical analysis to licensure and those in the clinical field will not want to miss the "Meet and Greet with Internship Training Directors" at the Convention Center on Saturday, August 9<sup>th</sup> (1:00 - 1:50 pm). Here, students will have the chance to inquire about competitive candidate qualifications. For more information on APAGS hosted events, access the official APA Convention website and navigate to "Programming."

***Call for New Student Representative to the Executive Committee***

SoAP student members, Division 50 is seeking a new student representative to serve on the Executive Committee. This position is a two-year commitment and a wonderful opportunity for those interested in becoming more involved with the division and its associated events/policies. Duties include monthly conference calls with the Executive Board, contribution to the division's quarterly newsletter, and management of various SoAP committees. If interested, please send your CV and a brief letter of intent outlining the reasons you would like to serve on the committee to lahoffman@ufl.edu. Applications are due by June 19<sup>th</sup>, 2014.ψ



# Election Results Are In!

**Amy Rubin and William Zywiak**  
*SoAP Nominations and Elections Committee*

Thank you to everyone who voted during the Division election in May! One hundred ninety two ballots were cast. The candidates **Sherry McKee**, **Joel Grube**, **Ray Hanbury** and **James Bray** contributed considerable time and effort to describe their experience and their visions for the future of the Division. We thank all of them for their efforts, and for all of their work for the Division and for APA over the years.

*Congratulations* to Sherry McKee! She is our new President-Elect. As President-Elect she will shadow Alan Budney, our President as of August 2014. Sherry will begin her term as President at the end of the Business Meeting at the 2015 APA Convention in Toronto. *Congratulations* to our newly elected Member-at-Large (Public Interest), Joel Grube. And *congratulations* to James Bray, who has



Sherry A. McKee



Joel Grube



James Bray

been elected to serve as our second Council Representative, starting in December 2014. He will serve a three-year term.

We would also like to thank the following current officers for their service to SoAP: Past President Sara Jo Nixon, and President John Kelly. John Kelly will serve as Past President starting in August. We would like to thank Joel Grube for his service as Membership Chair, and welcome Bruce Liese as the new Chair.

Finally, we would like to thank William Zywiak for serving on the Nominations and Elections Committee this past

year, and for serving as Chair of the Committee for the previous six years. His dedication to the interests of the Society of Addiction Psychology is admirable.

As this election season comes to a close, please consider volunteering to run for office, or to help me on the Nominations and Elections Committee. You may reach me at [rubina@bu.edu](mailto:rubina@bu.edu). I would be happy to talk with any SoAP member who is thinking of volunteering for our Division, and is not sure how best to match their interest with Division needs.

Have a great summer!ψ

## Psychology of Addictive Behaviors News

**Nancy Petry**  
*Editor-in-Chief,  
Psychology of Addictive Behaviors*

I want to thank all who responded and volunteered to serve as reviewers and principal reviewers for our Division 50 journal, *Psychology of Addictive Behaviors* (PAB). If anyone missed the call earlier this year, I would be glad to add you to our list of active reviewers. If you are interested in serving as an occasional or regular reviewer, please send me an email ([npetry@uchc.edu](mailto:npetry@uchc.edu)) along with your primary areas of research. I'll be happy to add you to the list of reviewers.



Nancy Petry

I also want to take this opportunity to tell you how the journal is faring. Between January 1, 2014 and April 30, 2014, 138 new papers were submitted to PAB. We remain on target in terms of the projected acceptance rate. Of 108 papers for which reviews were completed by the end of April, 30.6% were invited back for a minor or major revision. This percentage is in line with the historical acceptance rate in the journal over the past few years. Although only a few revised papers have yet come back for re-review since 2014, 100% of them so far have gone on

to receive a decision of accepted for publication.

Moreover, the decision time has been exceptional. The overall mean lag time from date of submission to date of decision has been under 30 days. This extremely rapid turn-around time on manuscripts is a reflection of our editorial team's firm commitment to ensure timely reviews to authors. It is also a reflection of Division 50 members' willingness to review papers and to do so in a timely manner.

So thank you all for your service to the journal. I hope you will continue to assist the journal, not only by reviewing papers, but also submitting your best work to it. Together, we can make PAB one of the top outlets for addictions research.ψ



## APA Annual Convention 2014: Washington, DC, August 7<sup>th</sup>-10<sup>th</sup>

Visit the historic Georgetown neighborhood while in Washington, DC.

**Kristina Jackson**  
SoAP 2014 Program Chair

Join us for this year's APA Convention in Washington, DC! We have a very full program, with twelve symposia as well as a grant-writing workshop and a roundtable discussion, social hours, and poster sessions! Several of the presentations are focused on this year's theme of implementation science and the practice of addiction psychology, but we feature a wide array of other topics in the prevention, treatment, and public health implications of substance use. As in previous years, we have developed our program in close collaboration with Division 28 (Psychopharmacology and Substance Abuse). They too have an outstanding program planned, as do many other divisions who will be sponsoring events that will be directly relevant to SoAP members. Be sure to check out Division 28's events and the many convention events that are co-listed by Division 50 in the APA Program.


We have three poster sessions to tell you about! Division 50 is hosting a poster session on Friday morning from 9-10am and another on Saturday

from 11am-12pm in conjunction with Division 28's poster session. These poster sessions are a great way to hear about the ongoing research of premier addictions groups, not to mention identifying future students, interns, and post-docs for your own research efforts. In addition, once again we are holding an *Early Career Investigators Poster Session and Social Hour*, scheduled on Friday from 4-6pm. It is held in collaboration with Division 28 and the National Institutes on Alcohol Abuse and Alcoholism (NIAAA) and Drug Abuse (NIDA). The goal is to showcase the work of rising stars in the addictions field and to provide unique networking opportunities for our early career investigators with researchers and clinicians in the field. We encourage established psychologists to attend and mingle. Hors d'oeuvres will be served.

Please join us to kick off your APA experience with Happy Science Hour, where you can mingle with researchers in a happy hour to foster camaraderie/networking among psychological scientists. This event is co-hosted with APA Divisions 1, 3, 5, 6, 8, 23, 28, 38, 40, and the Board of Scientific Affairs. All weary travelers, first-timers eager

to get acquainted, and APA (semi-) regulars looking to reconnect are invited to attend, Wednesday from 5-7pm!

We want to remind you about the annual SoAP Business Meeting (Friday 11am-12pm) where we will discuss the past year's activities of the Executive Board and all SoAP committees. The Business Meeting immediately follows the SoAP Presidential Address given by our esteemed John Kelly prompting us to answer the question "*What If We Really Believed Addiction Was a Chronic Disease?*" In addition, we invite all student members to join us on Thursday from 3-5pm at our annual Social Hour where we will be awarding Student Poster Awards and the G. Alan Marlatt Award for Distinguished Scientific Early Career Contributions, as well as to distribute awards to SoAP members who have made outstanding contributions to the field (invitation only).

The full program is listed on the following pages. The wide range of presentations reflects SoAP's longstanding goal of enhancing discussion and dialogue between researchers and clinicians. We hope to see you there! 





## **SOCIETY OF ADDICTION PSYCHOLOGY (Division 50) 2014 APA CONVENTION PROGRAM**

### **Thursday, August 7<sup>th</sup>**

#### **8:00 AM - 9:50 AM: SYMPOSIUM**

(Convention Center Room 102B)

##### ***Health Care Reform -- Impacts on Treatment for Alcohol and Drug Use Disorders***

D. McCarty, C. Barry, H. Knudsen,  
D. Satre, H. Pollack, S. Duffy

#### **11:00 AM - 11:50 AM: ROUNDTABLE**

(Convention Center Room 208)

##### ***Two Steps Forward, One Step Back?***

##### ***DSM 5 and Addictive Disorders***

K. Sher, C. Martin, W. Compton, A. Budney

#### **11:00 AM - 11:50 AM: SYMPOSIUM (collaborative program)**

(Convention Center Room 150B)

##### ***How Psychology Can Reduce Health Disparities Through Proactive Smoking Interventions***

L. Beatty, F. Belgrave, M. Iguchi

#### **12:00 PM - 1:50 PM: WORKSHOP**

(Convention Center Room 204B)

##### ***Grant-writing Workshop***

H. Perl

#### **2:00 PM - 3:50 PM: SYMPOSIUM**

(Convention Center Room 140B)

##### ***Cannabis, Prescription Drugs, and Legal Highs – Research on Drugs of Evolving or Mixed Legal Status***

M. Johnson, P. Johnson, E. Disney, E. Herrmann, R. Vandrey

#### **3:00 PM - 4:50 PM: DIVISION 50 BOARD AND COMMITTEE RECEPTION (Closed)**

(Renaissance Washington DC Hotel, Ballroom West A)

### **Friday, August 8<sup>th</sup>**

#### **8:00 AM - 9:50 AM: SYMPOSIUM**

(Convention Center Room 102A)

##### ***Community Approaches to Assessing and Intervening on University Student Drinking***

R. Smith, M. Bowdring, M. Dassira,  
Z. Robinson, V. Deal, S. Geller

#### **8:00 AM - 9:50 AM: SYMPOSIUM**

(Convention Center East Salon F)

##### ***At the Crossroads – Findings from an Integrative Treatment for Comorbid PTSD and Alcohol Use Disorder***

D. Hien, T. Lopez-Castro, P. Yoon, L. Ruglass, L. Eidlitz

#### **9:00 AM - 9:50 AM: POSTER SESSION**

(Convention Center Halls D and E)

##### ***Division 50 Poster Session on Addictive Behaviors***

#### **10:00 AM - 10:50 AM: PRESIDENTIAL ADDRESS**

(Convention Center Room 208)

##### ***What If We Really Believed Addiction Was a Chronic Disease?***

Division 50 President: John Kelly

#### **10:00 AM - 10:50 AM: SYMPOSIUM (collaborative program)**

(Convention Center Room 150B)

##### ***Roles of Drug and Alcohol Use in Suicidal Behavior***

D. Lamis, C. Bagge, K. Conner

#### **11:00 AM - 11:50 AM: DIVISION 50 BUSINESS MEETING**

(Convention Center Room 208)

Open to all Division 50 members

**4:00 PM - 5:50 PM: NIDA/NIAAA EARLY CAREER  
INVESTIGATORS POSTER SESSION AND SOCIAL HOUR**  
(Renaissance Washington DC Hotel Grand Ballroom South)  
Open to all convention attendees.

### **Saturday, August 9<sup>th</sup>**

#### **8:00 AM - 9:50 AM: SYMPOSIUM**

(Convention Center Room 144C)

##### ***Depression, Anxiety, Anger: Targeting Negative Emotions in the Treatment for Alcohol Use Disorders***

K. Walitzer, J. Kelly, M. Kushner, P. Stasiewicz, J. Kassel

#### **10:00 AM - 11:50 AM: SYMPOSIUM (collaborative program)**

(Convention Center Room 150B)

##### ***Considering Cannabis? Potential Public Health Implications of Marijuana Legalization***

B. Kilmer, J. Grube, K. Lisdahl, A. Budney

#### **11:00 AM - 11:50 AM: POSTER SESSION**

(Convention Center Halls D and E)

##### ***Division 50 Poster Session on Addictive Behaviors***

#### **12:00 - 1:50 PM: SYMPOSIUM**

(Convention Center Room 103A)

##### ***Evolving Role of Behavior in Science at the National Institute on Drug Abuse***

M. Glantz, M. Lynch, J. Acri, K. Sirocco,  
C. Wetherington, B. Sims

**12:00PM - 1:50PM: EXECUTIVE BOARD MEETING (Closed)**  
(Marriott Marquis Washington DC Hotel, Capitol Hill Room)

## **Sunday, August 10**

**8:00 AM - 9:50 AM: SYMPOSIUM**  
(Convention Center Room 204A)

### ***Introduction to Implementation Science – Application to Alcohol Use Disorders Treatment***

H. Hagedorn, A. Kilbourne, L. Damschroder,  
M. Bauer, J. Smith

**10:00 AM - 11:50 AM: SYMPOSIUM**  
(Convention Center Room 103A)

### ***Gender Differences in SUD Treatment: Recent Findings From the Clinical Trials Network***

D. Hien, S. Greenfield, E. Wells, A. Campbell,  
A. Brooks, T. Killeen

**12:00 PM - 12:50 PM: SYMPOSIUM**  
(Convention Center Room 204A)

### ***Exploring the Journey – Psychological, Spiritual, and Social Constructs in NA Recovery***

S. Seibert, B. Bergman, A. Ellis, H. Howrey,  
D. Beitra, C. DeLucia



*The Washington Monument, Washington, DC*



*Try some of the fine restaurants along 18th Street, NW, in the Adams Morgan area of Washington, DC.*



**It's a social hour and...  
EVERYONE IS INVITED!**

**The 2014 NIAAA/NIDA  
Early Career Investigator  
Poster Session and Social Hour**

**Renaissance Washington DC Hotel  
Grand Ballroom South  
Friday August 8  
4–6pm**

*Come support the rising stars of  
Division 28 and 50 while networking,  
mingling, and noshing!*



Above, the South Lawn of the White House, Washington, DC. City tours provide an overview of the monuments, historical and public buildings, museums, and residential areas such as Georgetown and Old Town Alexandria. Find more about tourism and Washington, DC, leisure activities at <http://www.apa.org/convention/activities/tourism/index.aspx>.

**Relax. Refresh. Connect.**

**Happy Science Hour**

**Weds, Aug 6, 5-7 pm**

**Renaissance Washington DC Hotel  
Mount Vernon Square Room A and B**

**Hosted by  
APA Divisions 1, 3, 5,  
6, 8, 23, 28, 38, 40, and 50,  
and the Board of Scientific Affairs**





# E-cigarettes: An Innovation That Can Obsolete Cigarettes

**Jean-François Etter**  
*University of Geneva, Switzerland*

In the early decades of the twentieth century, lung cancer was not particularly prevalent in the U.S. or in Europe. Rather, the cancer that killed most people at this time was stomach cancer. Technological innovations (mainly refrigeration) caused a considerable decrease in stomach cancer mortality. Another technological innovation, the cigarette rolling machine, caused a spectacular increase in lung cancer, that peaked in the U.S. in the 1990s. By the beginning of the twentieth century, cigarettes were not yet very popular, and tobacco was used mainly without combustion (chewed or snorted). A public health disaster followed the increasing popularity of cigarettes and combustion as the main technology to obtain nicotine, and now 430,000 people die prematurely each year in the U.S. because they smoke tobacco (Mokdad, Marks, Stroup, & Gerberding, 2004), and five million globally according to the World Health Organization (WHO, 2008). Each of these deaths is entirely unnecessary and avoidable. "Smokers smoke for nicotine, but they die from the smoke." If they used tobacco or nicotine without combustion, the smoking-related mortality could be entirely avoided, and lung cancer rates would return to the very low levels observed at the beginning of the twentieth century. The good news is that combustion, as a way to vaporize and inhale nicotine, is an obsolete technology, about to be replaced by several new technologies. Smokers are aware of the risks of smoking, and they are looking for alternatives to cigarettes. However, many of them are dependent on nicotine, and either cannot or do not want to stop using it. Medications (nicotine patch, gum, etc.) have been available since the 1970s, but they never represented a satisfactory alternative to cigarettes, because they do not deliver nicotine

quickly enough to the blood and brain.

Electronic cigarettes were invented in 2004 by the Chinese pharmacist Lik Hon and became available in the U.S. and in Europe in 2006. E-cigarettes comprise a battery, an atomizer (metallic coil electrically heated), and a tank or cartridge that contains a liquid that is heated and vaporized. The liquid consists of a mix of propylene glycol and glycerol, nicotine, water, flavors and ethanol. Currently, half the smokers in the U.K. have tried e-cigarettes and 18% use them regularly (ASH, 2014). The spectacular success of e-cigarettes proves that they correspond to a strong demand from the public. Pharmacokinetics is key to understanding this success. E-cigarettes deliver nicotine more quickly than nicotine medications, but more slowly than tobacco cigarettes (Farsalinos et al., 2014). Inhalation allows for the deposit of the vapor droplets in the lung and for a quick transfer of nicotine to the arterial blood, whereas nicotine medications deliver nicotine slowly to the venous blood.

At least two other new technologies vaporize nicotine without combustion. First, the company Nicoventures, a subsidiary of British American Tobacco (BAT), developed a product called Voke that vaporizes nicotine using a physico-chemical reaction, without electronics, using the technology of asthma inhalers. The Voke inhaler is about to be approved as a medication in the U.K. Second, Philip Morris International (PMI) acquired a technology that uses a chemical reaction to vaporize nicotine, called nicotine pyruvate (Rose, Turner, Murugesan, Behm, & Laugesen, 2010). At least three other technologies vaporize tobacco (rather than pure nicotine) without burning it. Several tobacco companies, including PMI and BAT, develop heated tobacco products. In these products, which will hit the market later this year, the tobacco is

heated either by an electric heater or by a burning charcoal. The charcoal is just a source of heat, and the user does not inhale its combustion by-products. Finally, several portable electronic vaporizers are used to inhale tobacco vapors. E-vaporizers comprise a battery, a heating element (metallic coil), and a chamber in which the tobacco leaves are inserted (there is no liquid). The metallic coil is electrically heated and produces a flow of hot air that vaporizes the nicotine and flavors on the surface of the tobacco. Examples of these vaporizers include the Ploom by the company Pax, recently acquired by Japan Tobacco, the Da Vinci, the micro Gpen, etc. Preliminary, unpublished data show that some of these products are very efficient at delivering nicotine. This favorable pharmacokinetic profile will be a key element in their success on the market.

Should we welcome these new products? First, any technology that enables users to inhale nicotine without combustion is preferable to cigarettes. Nicotine, at the dose used by smokers, users of nicotine medications or vapers, is not very toxic. Nicotine medications have recently been approved for long-term use by the FDA. Financial analysts predict that the cigarette market will decrease by half in the next years, as smokers will switch to vaporizers. If this prediction proves to be true, there will be enormous consequences for public health, and millions of deaths will be avoided. Will this effect be canceled by increasing numbers of young non-smokers who use vaporizers to discover nicotine, then get addicted to nicotine, then switch to tobacco? Fortunately, this famous "gateway hypothesis" is not confirmed by data. More and more young non-smokers experiment with e-cigarettes, but there is no peer-reviewed report of daily use of e-cigarettes in young non-smokers. On the contrary, youth smoking rates are decreasing in countries where

e-cigarettes are popular. In fact, extremely few people initiate nicotine addiction with products that do not contain tobacco. For instance, addiction to the nicotine gum in people who never used tobacco is an extremely rare phenomenon (Etter, 2007). Fruit-flavored nicotine gums have been available for decades, and they have never been used by young non-smokers as a gateway to smoking. Addiction to the nicotine gum is seen in some former smokers (Etter, 2009), but few users get addicted to the gum, and addiction to the nicotine gum is not a public health problem. Similarly, addiction to e-cigarettes will probably not be a public health problem, even though long-term safety data are not yet available. Will e-cigarettes renormalize tobacco? This argument is not supported by data and lacks logic: Vaping will promote vaping, not smoking. Finally, the tobacco industry, the traditional enemy of public health, will be an inescapable partner in these new harm reduction approaches. Will we be able to enter this debate with a

cold, scientific mind?

In the EU, the Tobacco Products Directive, that regulates e-cigarettes, was approved by the E.U. Parliament in February 2014 and must now be transposed in the national laws of the member States. In the U.S., the FDA started in April 2014 the consultation procedure for its regulation of e-cigarettes. The outcome of this procedure is still unknown. Thus, the next months represent a window of opportunity, during which e-cigarettes will be regulated. These products must be regulated wisely, keeping in mind that the priority is to decrease the smoking-related mortality and morbidity. The stakes are high, but there is no guarantee that excessive regulation will be avoided, stifling the ability of vaporizers to compete with cigarettes.

## References

ASH. (2014). *Use of electronic cigarettes in Great Britain: Action on smoking*

and health.

- Etter, J. F. (2007). Addiction to the nicotine gum in never smokers. *BMC Public Health*, 7, 159. doi: 1471-2458-7-159
- Etter, J. F. (2009). Dependence on the nicotine gum in former smokers. *Addict Behav*, 34(3), 246-251. doi: S0306-4603(08)00300-6
- Farsalinos, K. E., Spyrou, A., Tsimopoulou, K., Stefopoulos, C., Romagna, G., & Voudris, V. (2014). Nicotine absorption from electronic cigarette use: Comparison between first and new-generation devices. *Sci Rep*, 4, 4133. doi: 10.1038/srep04133
- Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *JAMA*, 291(10), 1238-1245. doi: 10.1001/jama.291.10.1238
- Rose, J. E., Turner, J. E., Murugesan, T., Behm, F. M., & Laugesen, M. (2010). Pulmonary delivery of nicotine pyruvate: Sensory and pharmacokinetic characteristics. *Exp Clin Psychopharmacol*, 18(5), 385-394. doi: 2010-21046-001
- WHO. (2008). *WHO report on the global tobacco epidemic*. Geneva: WHO. ♡

# Electronic Cigarettes: Friend or Foe?

**Karl Fagerström**

*Fagerström Consulting, Vaxholm, Sweden*

**Kevin Bridgman**

*Nicoventures Ltd, London, England*

Up until about 1980 cigarette smoking was regarded as nothing more than a habit, but work by individuals such as Michael Russell (Russell, 1971) gradually introduced the role of nicotine (N) as a crucial determinant for cigarette smoking, and tobacco use in general. After the US Surgeon General's report *Nicotine Addiction* in 1988, N was seen as the necessary and dominating determinant for tobacco use. Use of tobacco was thereafter often

referred to as nicotine dependence. Parallel with the shift from habit to N dependence, nicotine replacement (NR) products were developed. These products increased the chances of becoming smoke-free, but the efficacy was modest even when the common problem of under-dosing was avoided (Dale et al., 1995). More recently the complexity of cigarette smoking has been increasingly recognized. Animal studies have shown that dependence on N is greater if self-administration is linked to environmental stimuli (Caggiula et al., 2002). Abstinent smokers seem to prefer a non-nicotine containing cigarette to an N-containing NR product (Donny, Houtsmuller, & Stitzer, 2007) and the non-nicotine cigarette also reduces withdrawal symptoms better (Barrett, 2010). The Fagerström Test for Nicotine Dependence has also, in accordance with the increased understanding of the

non-nicotinic factors, been renamed the Fagerström Test for Cigarette Dependence (Fagerström, 2012).

The remarkable uptake of electronic cigarettes (E-cigs), which has in a few years reached a turnover equal or more to that of NR products marketed by the pharmaceutical industry for 35 years, most likely rests on its two pillars of giving some replacement for both the N and habit components. The replacement is not complete or identical. The N obtained from E-cigs is for the most part less and slower than from traditional cigarettes (Farsalinos et al., 2014) and the behavior and sensory impact of the E-cigs do not fully replace those from cigarettes. Nevertheless, today's hard-pressed smokers seem to find E-cigs good enough, especially when they believe them to be safer than cigarettes. Left unregulated or lightly regulated, some

Contact Information: Karl Fagerström, [karl.fagerstrom@swipnet.se](mailto:karl.fagerstrom@swipnet.se); Kevin Bridgman, [kevin.bridgman@nicoventures.co.uk](mailto:kevin.bridgman@nicoventures.co.uk)

analysts have predicted E-cigs will surpass cigarettes sales in ten years (Herzog, 2014).

Whilst burnt tobacco is acknowledged as the leading cause of preventable morbidity and mortality in the western world, the risks of harm from nicotine alone are low. There is, however, concern that allowing products that deliver low risk purified nicotine, but using devices that resemble cigarettes, will “renormalize” the act of smoking in public and tempt non-smokers into the category who would otherwise not have smoked. This concern would be well-founded if these individuals then “gateway” into smoking cigarettes. These issues need careful study, but the balance of evidence to date suggests that E-cigs are being used primarily to ‘gateway’ out of smoking. The ultimate test will be whether further declines in the prevalence of smoking can be achieved in the markets where these products are widely available.

Another source of mixed opinions stems from the unusual lack of regulation currently applied to this category in many markets. Variable standards of product quality and safety have resulted. Consequently, while E-cigs undoubtedly have the potential to be much safer than cigarettes, it is hard to know how much health benefit an individual can expect when moving from cigarettes to any given device in the absence of vapor testing conducted to appropriate levels of detection. For the two-thirds of smokers in countries like the UK who would rather not smoke (mainly for health reasons), but who struggle to quit, replacing cigarettes with E-cigs for the medium to long-term should at least provide the assurance that this will afford a significant health advantage. Many assume that these products must in all cases be safer than cigarettes. The reality is that an E-cig is nothing more than a device for delivering a chemical vapor for inhalation. While most are based on pharmaceutical grade nicotine, glycerol or propylene glycol and water, other ingredients vary. So do the materials used to make the devices, and the degree to which the formulations

are heated, resulting in a range of degradation products, extractables and leachables, even when different devices heat the same formulation. The potential for formulations to become even more “innovative” as competition increases in the market brings further risk as well as opportunity. Without regulation to ensure proper assessment of the vapor, formulation composition, design and selection of materials used to make the devices, and manufacturing standards, there is no guarantee that products will not contain toxic chemicals or particulates not seen in cigarette smoke, having an acute or sub-acute health effect, which could create a serious danger to users. Both the industry and regulators have a responsibility to protect consumers and encourage greater confidence in the category.

Some argue that pharmaceutical regulations provide a legal framework under which this protection could work. To be successful it would have to be a very “light touch” with the main focus on quality and safety. Demonstrating efficacy in the standard large clinical trials expected from the pharmaceutical industry, while of interest, would be beyond many of the smaller companies working in this field and would certainly hamper innovation. In practice, uptake and ultimately commercial success are practical “real-life” indicators of efficacy, provided they are supported by evidence that smoking prevalence is declining. There are a number of respected academic units who are carefully assessing smoking behavior with some helpful insights on the impact and efficacy of E-cigs. In the UK the Smoker’s Toolkit Study surveys a representative sample of smokers every month. Questions of E-cigs have been included since 2009. According to data from this study, the proportion of smokers in the UK who have used an E-cig in the past three months increased from around 2% in May 2011 to 15% in November 2013 (Brown, West, et al., 2014). In a very recent study of the 5,863 smokers who had made a quit attempt during the last 12 months, 464 had used an E-cig, 1,922 used nicotine replacement and 3,477

did not use an aid. Those using E-cigs were more likely to be abstinent (20%) than either those who used NR products (10%; OR 2.2 CI 1.7 - 2.9) or no aid (15%; OR 1.4 CI 1.1 - 1.7) (Brown, Beard, Kotz, Michie, & West, 2014).

The same authors found that in 2013 E-cigs became the most used aid for smoking cessation in the UK. Quitting activity also seems to have increased—success in quitting and smoking prevalence decrease accelerated since the introduction of E-cigs in the UK ([www.smokinginengland.info/latest-statistics/](http://www.smokinginengland.info/latest-statistics/)). The use pattern of E-cigs may be different and less favourable in other countries with other anti-smoking climates.

As much as there is a continuum of harm for N containing products, where E-cigs using the current base ingredients of pharmaceutical grade nicotine, water, glycerol or propylene glycol, rate relatively low (Nutt et al., 2014), there is also a continuum of dependence. On such a continuum, cigarettes are rated the most dependence-producing product while nicotine patches are found at the other end of the continuum (Fagerström & Eissenberg, 2012). Available evidence so far for E-cigs clearly suggests that dependence is reduced compared to when the E-cig users were smoking cigarettes (Dawkins, Turner, Hasna, & Soar, 2012; Farsalinos, Romagna, Tsiapras, Kyrzopoulos, & Voudris, 2013).

The current authors believe that the E-cig could play a significant role in reducing tobacco caused death and disease if regulated in a sensible way. That regulation should, at the very least, ensure that:

1. Vapor composition is properly assessed by manufacturers and the data shared with regulators and ultimately consumers. This will require some standardization of the analytical methods used.
2. Companies implement appropriate quality management systems to provide confidence that all batches manufactured perform in line with



those used to generate the initial vapor data.

3. Advertising and company communication is responsible and appropriately targeted.

Both the Tobacco Product Directive in the EU and “deeming” regulation in the US are working on the detail behind broadly similar proposals. While there are many twists and turns still to unfold in the evolution of an appropriate regulatory landscape, the prize of radically reducing the morbidity and mortality associated with burnt tobacco, using the potential afforded by this new technology, is something that should continue to excite and inspire all concerned parties.

## References

Barrett, S. P. (2010). The effects of nicotine, denicotinized tobacco, and nicotine-containing tobacco on cigarette craving, withdrawal, and self-administration in male and female smokers. *Behavioural Pharmacology*, 21(2), 144-152. doi: 10.1097/FBP.0b013e328337be68

Brown, J., Beard, E., Kotz, D., Michie, S., & West, R. (2014). Real-world effectiveness of e-cigarettes when used to aid smoking cessation: A cross-sectional population study. *Addiction*. <http://dx.doi.org/10.1111/add.12623>

Brown, J., West, R., Beard, E., Michie, S., Shahab, L., & McNeill, A. (2014). Prevalence and characteristics of e-cigarette users in Great Britain: Findings from a general population survey of smokers. *Addictive Behaviors*, 39(6), 1120-1125. doi: 10.1016/j.addbeh.2014.03.009

Caggiula, A. R., Donny, E. C., White, A. R., Chaudhri, N., Booth, S., Gharib, M. A., . . . Sved, A. F. (2002). Environmental stimuli promote the acquisition of nicotine self-administration in rats. *Psychopharmacology*, 163(2), 230-237. doi: 10.1007/s00213-002-1156-5

Dale, L. C., Hurt, R. D., Offord, K. P., Lawson, G. M., Croghan, I. T., & Schroeder, D. R. (1995). High-dose nicotine patch therapy. Percentage of replacement and smoking cessation. *Journal of the American Medical Association*, 274(14), 1353-1358. doi: 10.1001/jama.1995.0353017003

Dawkins, L., Turner, J., Hasna, S., & Soar, K. (2012). The electronic-cigarette: Effects on desire to smoke, withdrawal symptoms and cognition. *Addictive Behaviors*, 37(8), 970-973. doi: 10.1016/j.addbeh.2012.03.004

Donny, E. C., Houtsmuller, E., & Stitzer, M. L. (2007). Smoking in the absence of nicotine: Behavioral, subjective and physiological effects over 11 days. *Addiction*, 102(2), 324-334. doi: 10.1111/j.1360-0443.2006.01670.x

Fagerström, K. (2012). Determinants of tobacco use and renaming the FTND to the Fagerström Test for Cigarette Dependence. *Nicotine & Tobacco Research*, 14(1), 75-78. doi: 10.1093/ntr/ntr137

Fagerström, K., & Eissenberg, T. (2012). Dependence on tobacco and nicotine products: A case for product-specific

assessment. *Nicotine & Tobacco Research*, 14(11), 1382-1390. doi: 10.1093/ntr/nts007

Farsalinos, K. E., Romagna, G., Tsiapras, D., Kyrzopoulos, S., & Voudris, V. (2013). Evaluating nicotine levels selection and patterns of electronic cigarette use in a group of “vapers” who had achieved complete substitution of smoking. *Substance Abuse: Research and Treatment*, 7, 139-146. doi: 10.4137/SART.S12756

Farsalinos, K. E., Spyrou, A., Tsimopoulou, K., Stefopoulos, C., Romagna, G., & Voudris, V. (2014). Nicotine absorption from electronic cigarette use: Comparison between first and new-generation devices. *Scientific Reports*, 4. doi: 10.1038/srep04133

Herzog, B. (Producer). (2014). U.S. tobacco trends: Disruptive innovation should drive outsized growth. [PowerPoint slides] Retrieved from [www.ecigarette-politics.com/files/WF-DallasMarch2014.ppt](http://www.ecigarette-politics.com/files/WF-DallasMarch2014.ppt)

Nutt, D. J., Phillips, L. D., Balfour, D., Curran, H. V., Dockrell, M., Foulds, J., . . . Sweanor, D. (2014). Estimating the harms of nicotine-containing products using the MCDA approach. *European Addiction Research*, 20(5), 218-225. doi: 10.1159/000360220

Office of the Surgeon General, & U.S. Dept. of Health and Human Services. (1988). *The health consequences of smoking: Nicotine addiction: A report of the Surgeon General*. (88-8406). Washington, DC: Government Printing Office.

Russell, M. A. (1971). Cigarette dependence. I. Nature and classification. *British Medical Journal*, 2(5757), 330-331. ♡

# The Treatment Effects of Cigarettes and Nicotine on Schizophrenic Sufferers

**Christopher B. Hill**  
*James Madison University*

The concept of schizophrenia and nicotine in cigarettes is investigated, addressing health issues inherent in the dynamic. Conclusions are drawn as to their interaction. Hence, there is more than enough evidence pointing to further recommendations.

Cigarette inhalation is the most effective primary route for nicotine to enter the body (Doweiko, 2012).

Nicotine inhaled through cigarettes may cause more dopamine and glutamate to be released, reversing the trend of negative symptoms in schizophrenia (D'Souza et al., 2012, Xiang Yang et al., 2012). In addition, evidence suggests that smokers are using cigarettes to self-medicate for anxiety (Bjørngaard et al., 2013; Hughes, Stead, & Lancaster, 2000). Furthermore, people who are struggling with schizophrenia may be using cigarettes to reduce their overall anxiety due to positive symptoms, like hallucinations and delusions, as well

as overwhelming cognitive distress (de Beaurepaire, 2012; Doweiko, 2012) as well as limiting negative symptoms (Xiang Yang et al., 2012).

## Cigarettes Affect Oral Fixation Unlike Other Nicotine Alternatives

Briefly, the idea of oral fixation goes back to Freud. The action of oral fixation, or oral need, goes back to breast feeding. Not only is oral fixation a concept of arousal, but also one of satisfaction. Smoking is one way to

meet an oral fixation (Wagg & Pridmore, 2004). The nicotine patch, while an effective means of providing nicotine (DeVaugh-Geiss, Chen, Kotler, Ramsay, & Durcan, 2010), has no effect on oral fixation. Similarly, nicotine infusions into the bloodstream have been unable to have the same effects as inhaled nicotine (D'Souza et al., 2012).

### Cigarettes Affect Socialization Unlike Other Nicotine Alternatives

In particular, people with schizophrenia have the negative symptom of isolation. Exacerbation of symptoms can stem from the added stress that occurs from an overload environmental stimuli (Pedersen & Mortensen, 2001; Geis & Ross, 1998). Cigarettes could counteract isolation in that smoking sections are set up in various public places, thereby ensuring that the smoker, using such designated places, is surrounded by likeminded individuals. As with most socialization by exclusion, bonding occurs between those that are forced to be together, thereby counteracting isolation. One smoker can sit outside by himself avoiding others, but in many instances, smokers end up being near one another in the same space while using cigarettes (DeLay, Laursen, Kiuru, Salmela-Aro, & Nurmi, 2013; Hilton, 2000). One way to engage people with schizophrenia is through groups. In fact, adequate social supports are able to lower stress in sufferers (Betensky et al., 2008).

Cigarettes cause increased rates of socialization (DeLay et al., 2013; Hilton, 2000). Groups that are formed around smoking may be one way to better engage this special isolated population. As stated previously, the nicotine patch is an effective delivery system for the drug to the brain (DeVaugh-Geiss et al., 2010), but, unfortunately, it does not provide the added benefit of socialization.

### Smoking, Self-Medication, and Electronic Cigarettes

Those suffering from schizophrenia as well as others with mental illness smoke up to half of all cigarettes consumed in

the United States (Chambers, 2009). In fact, there is evidence pointing to inhaled nicotine consumption as a possible self-medication for sufferers of schizophrenia (de Beaurepaire, 2012). Despite this evidence, self-medication from cigarette use remains controversial due to the potential for development of cancer as well as the other medical problems that are related to this habit (Chambers, 2009). Electronic cigarettes provide a vaporized puff of nicotine to the smoker. As there is no detectable odor, hygiene is enhanced. Furthermore, there is no tobacco combustion in the electronic cigarette, no threat of fire, or need to leave the area that the smoker is currently occupying. Despite these facts, electronic cigarettes need to be smoked in special areas (Johnson, 2014).

Electronic cigarettes are an effective means for nicotine to be administered into the body. Research has found that nicotine abuse related to cigarette smoking is greatly reduced in electronic cigarette smoking (Vansickel, Weaver, & Eissenberg, 2012). Research shows that electronic cigarettes are still banned in buildings, ensuring that forced socialization effect of being mandated into a smoking section outside the building endures (McAuley, Hopke, Zhao, & Babaian, 2012). The amount of research comparing electronic cigarettes to their forerunners is negligible regarding health concerns. Certainly, more research into electronic cigarettes and health needs to be completed (Odum, O'Dell, & Schepers, 2012; Cobb, Byron, Abrams, & Shields, 2010).

### Conclusions

Smoking is assumed to cause 5 million deaths annually (Davis, Wakefield, Amos, & Gupta, 2007). In fact, the average male who smokes could lose up to 13.2 years of their life and females could lose 14.5 years of their life due to their habit (Doweiko, 2012). Self-medication with cigarettes is an intervention that has proven successful in the treatment of some symptoms of schizophrenia (D'Souza et al., 2012,

Xiang Yang et al., 2012). Smoking interventions have shown to decrease negative symptoms of schizophrenia (Xiang Yang et al., 2012).

### Recommendations

1. Nicotine from cigarettes could prove to be another treatment in combination with other medication or on its own. Too much data and information is being disseminated by groups that have a stake in cigarette sales. Therefore, systematic research must be done by a third party that does not have financial ties to the industry.

2. Electronic cigarettes as well as other delivery systems of nicotine need further research because cigarette combustion continues to be problematic despite its ability to help people with schizophrenia with mental health symptoms and socialization (Odum, O'Dell, & Schepers, 2012).

### References

- Betensky, J., Robinson, D., Gunduz-Bruce, H., Sevy, S., Lencz, T., Kane, J., ... Szeszko, P. (2008). Patterns of stress in schizophrenia. *Psychiatry Research*, 160(1), 38-46. doi:10.1016/j.psychres.2007.06.00
- Bjørngaard, J. H., Gunnell, D. D., Elvestad, M. B., Smith, G., Skorpen, F. F., Krokan, H. H., Vaten, L., & Romundstad, P. P. (2013). The causal role of smoking in anxiety and depression: A Mendelian randomization analysis of the HUNT study. *Psychological Medicine*, 43(4), 711-719. doi:10.1017/S0033291712001274
- Chambers, R. (2009). A nicotine challenge to the self-medication hypothesis in a neurodevelopmental animal model of schizophrenia. *Journal of Dual Diagnosis*, 5(2), 139-148. doi:10.1080/15504260902869808
- Cobb, N. K., Byron, M., Abrams, D. B., & Shields, P. G. (2010). Novel nicotine delivery systems and public health: The rise of the "e-cigarette." *American Journal of Public Health*, 100(12), 2340-2342.
- Davis, R. M., Wakefield, M., Amos, A., & Gupta, P. C. (2007). The hitchhiker's guide to tobacco control: A global assessment of harms, remedies, and controversies. *Annual Review of Public Health*, 28(1), 171-194. doi:10.1146/

- annurev.publhealth.28.021406.144033
- DeLay, D., Laursen, B., Kiuru, N., Salmela-Aro, K., & Nurmi, J. (2013). Selecting and retaining friends on the basis of cigarette smoking similarity. *Journal of Research on Adolescence*, 23(3), 464-473. doi:10.1111/jora.12017
- de Beaupaire, R. (2012). Smoking, schizophrenia, and the self-medication hypothesis. *Current Medical Literature: Psychiatry*, 23(1), 1-11.
- DeVaugh-Geiss, A., Chen, L., Kotler, M., Ramsay, L., & Durcan, M. (2010). Pharmacokinetic comparison of two nicotine transdermal systems, a 21-mg/24-hour patch and a 25-mg/16-hour patch: A randomized, open-label, single-dose, two-way crossover study in adult smokers. *Clinical Therapeutics*, 32(6), 1140-1148.
- Doweiko, H. E. (2012). *Concepts of chemical dependency* (8<sup>th</sup> ed.). Pacific Grove, CA: Brooks/Cole-Thomson Learning.
- D'Souza, D. C., Ahn, K., Bhakta, S., Elander, J., Singh, N., Nadim, H., ... Ranganathan, M. (2012). Archival report: Nicotine fails to attenuate ketamine-induced cognitive deficits and negative and positive symptoms in humans: Implications for schizophrenia. *Biological Psychiatry*, 72, 785-794. doi:10.1016/j.biopsych.2012.05.009
- Geis, K. J., & Ross, C. E. (1998). A new look at urban alienation: The effect of neighborhood disorder on perceived powerlessness. *Social Psychology Quarterly*, 61(3), 232-246.
- Hilton, M. (2000). *Smoking in British popular culture, 1800-2000: Perfect pleasures*. Manchester, UK: Manchester University Press.
- Johnson, S. (2014). Chicago votes to ban use of e-cigarettes in indoor spaces. *Modern Healthcare*, 44(3), 6-7.
- Hughes, J., Stead, L., & Lancaster, T. (2000). Anxiolytics for smoking cessation. *Cochrane Database of Systematic Reviews*, 4.
- McAuley, T. R., Hopke, P. K., Zhao, J. J., & Babaian, S. S. (2012). Comparison of the effects of e-cigarette vapor and cigarette smoke on indoor air quality. *Inhalation Toxicology*, 24(12), 850-857. doi:10.3109/08958378.2012.724728
- Odum, L. E., O'Dell, K. A., & Schepers, J. S. (2012). Electronic cigarettes: Do they have a role in smoking cessation? *Journal of Pharmacy Practice*, 25(6), 611-614. doi:10.1177/0897190012451909
- Pedersen, C. B., & Mortensen, P. B. (2001). Evidence of a dose-response relationship between urbanicity during upbringing and schizophrenia risk. *Archives of General Psychiatry*, 58(11), 1039-1046.
- Vansickel, A. R., Weaver, M. F., & Eissenberg, T. (2012). Clinical laboratory assessment of the abuse liability of an electronic cigarette. *Addiction*, 107(8), 1493-1500.
- Wagg, F., & Pridmore, S. (2004). Oral fixation in the 21st century. *Australian and New Zealand Journal of Psychiatry*, 38, 478. doi: 10.1111/j.1440-1614.2004.01395.x
- Xiang Yang, Z., Da Chun, C., Mei Hong, X., Haile, C. N., Sun, H., Lin, L., ... Kosten, T. R. (2012). Cigarette smoking and cognitive function in Chinese male schizophrenia: A case-control study. *Plos ONE*, 7(5), 1-7. doi:10.1371/journal.pone.003656ψ

## Harm Reduction for Vulnerable Populations

**Pasquale Caponnetto**

**Marilena Maglia**

**Riccardo Polosa**

*University of Catania, Catania, Italy*

### Introduction

The harm of tobacco smoking to the individual and to society is well-known. It is the single most important cause of avoidable premature mortality in the world, killing nearly 6 million people per year (World Health Organization, 2008). We all agree that complete smoking cessation is the best outcome for smokers, but for those who experience very long-term—perhaps lifelong—disruption of brain function, mood or cognitive ability following smoking cessation, nicotine cessation may not be the healthiest approach. Such individuals may require long-term treatment

support or nicotine maintenance to enable them to maintain smoking abstinence (Caponnetto, Keller, Bruno, & Polosa, 2013; Royal College of Physicians, 2007). Consequently, many smokers will keep smoking because when given only the options of smoking or completely giving up nicotine, many will not give it up. Bearing in mind that products that deliver nicotine without the smoke carry only a fraction of the health risks of smoking (Nutt et al., 2014), it is important to consider that a third option is also available to smokers, tobacco harm reduction (THR), the substitution of low-risk nicotine products for cigarette smoking.

Existing non-combustible nicotine-containing products make THR a realistic strategy for smokers who have difficulty quitting. However, to be successful these alternatives need to be as readily available as cigarettes, competitively priced, socially acceptable, and approved for regular long-term recreational use rather than as short-term cessation

aids. Because of their similarities to smoking, including the hand-to-mouth repetitive motion and the visual cue of a smoke-like vapor, e-cigarettes are proving to be an attractive and popular long-term alternative to tobacco cigarettes (Caponnetto, Russo, et al., 2013) and have been recently proposed as a very promising product for THR (Polosa, Rodu, Caponnetto, Maglia, & Raciti, 2013). This novel approach can be exploited successfully among marginalized and socially disadvantaged smokers from high smoking prevalence groups such as those with mental health disorders and chronic disease. Here we specifically address the case for e-cigarette use in smokers with schizophrenia.

### The Schizophrenic Smoker

Tobacco smoking is highly prevalent among people with schizophrenia (de Leon & Diaz, 2005) and smokers with schizophrenia appear to smoke more heavily, extract more nicotine from each cigarette, and

Contact Information: [p.caponnetto@unict.it](mailto:p.caponnetto@unict.it) or 0039 095 3781537



suffer from more severe nicotine dependence compared to smokers without schizophrenia (Williams et al., 2005). As a consequence, smoking-related morbidity and mortality is particularly high among individuals with schizophrenia (Kelly et al., 2011). Moreover, excessive cigarette smoking often creates a substantial financial burden for people with schizophrenia (McCreadie & Kelly, 2000; McDonald, 2000).

Nonetheless, for most schizophrenic patients, smoking may have some therapeutic value given that the use of cigarettes appears to mitigate clinical symptoms and side effects of antipsychotic medications (Winterer, 2010). For instance, nicotine is known to improve attention deficits and working memory in people with schizophrenia. This finding is aligned with the cognitive approach to the self-medication hypothesis, which suggests that people smoke to improve their cognitive deficits. (Ochoa & Lasalde-Dominicci, 2007). Although smoking cessation may save these individuals' lives, the currently approved smoking cessation medications (e.g., nicotine replacement therapy, bupropion and varenicline) are not particularly effective among smokers with schizophrenia (Aubin, Rollema, Svensson, & Winterer, 2012). This scenario is further complicated by professional and patient beliefs that quitting smoking will worsen psychiatric symptoms, or that these smokers have little or no interest in quitting. Moreover, the prescribing information for bupropion and varenicline carry a "black-box" warning highlighting an increased risk of psychiatric symptoms and suicidal ideation in patients reporting any history of psychiatric illness (Polosa & Benowitz, 2011).

### Interventions to Reduce Harm in Smokers with Schizophrenia

A different solution for smokers with schizophrenia is urgently needed. Our earlier clinical trials with e-cigarettes in smokers not intending to quit showed a surprising—yet important—reduction in cigarette consumption (Caponnetto, Campagna, et al., 2013; Polosa et al.,

2011). We hypothesized that these promising findings could be replicated in high-risk smokers with schizophrenia. In a prospective 12-month proof-of-concept study, we have shown for the first time that regular e-cigarette use substantially decreased consumption of conventional cigarettes without causing significant side effects in smokers with chronic schizophrenia (Caponnetto, Auditore, Russo, Cappello, & Polosa, 2013). Large prospective randomized controlled trials are now required to confirm these initial observations.

With this in mind, we have recently designed a large multi-center study to monitor possible modifications in the smoking habits of a group of 153 psychiatrically stable (no recurrence/hospitalization or need for psychopharmacological treatment modification in last 12 months) individuals with schizophrenia who were offered second generation personal vaporizers in order to reduce the risk of their tobacco smoking (Caponnetto et al., 2014). At screening, participants' schizophrenia diagnosis will be assessed using the Structured Clinical Interview for DSM-IV Axis I Disorders-Clinician Version (SCID-I-CV; First, Spitzer, Gibbon, & Williams, 1996) and symptomatology will be assessed using the Positive and Negative Syndrome Scale (PANSS; Kay, Fiszbein, & Opler, 1987) to grade diagnostic severity. Participants will be then randomized in a three-arm clinical trial designed to receive either e-cigarettes with 24 mg nicotine, e-cigarettes without nicotine, or nicotine-free plastic inhalators. Participants will receive a full supply of study products for a total of 12 weeks. A prospective evaluation of efficacy and safety will be carried out regularly throughout the study until the final follow-up visit at 24 weeks. The goal is to propose a complementary treatment strategy for smokers with schizophrenia that can effectively and substantially reduce tobacco consumption. Hopefully, this Smoking Cessation and Reduction in Schizophrenia (SCARIS) study protocol will contribute to our fundamental understanding of the role of e-cigarettes in smoking cessation and harm reduction, and the influence

of e-cigarettes on the health status of this vulnerable population.

### Concluding Remarks

Marginalized and socially disadvantaged smokers with schizophrenia are known to experience significant barriers to cessation including poverty, stressful circumstances, and symptom resurgence. Patient-centered approaches to nicotine management should be proposed to assist these challenging smokers irrespective of their attitude to quitting; these approaches require the adoption of flexible solutions and shared goals. The preliminary positive findings we observed with e-cigarettes allows us to advance the hypothesis that this lower-risk substitute for conventional cigarettes may help smokers with schizophrenia reduce their cigarette consumption or remain abstinent, thereby decreasing the socioeconomic burden and adverse health effects posed by cigarette smoking in this high-risk group.

### References

- Aubin, H.-J., Rollema, H., Svensson, T. H., & Winterer, G. (2012). Smoking, quitting, and psychiatric disease: A review. *Neuroscience & Biobehavioral Reviews*, 36(1), 271-284. doi: 10.1016/j.neubiorev.2011.06.007
- Caponnetto, P., Auditore, R., Russo, C., Cappello, G., & Polosa, R. (2013). Impact of an electronic cigarette on smoking reduction and cessation in schizophrenic smokers: A prospective 12-month pilot study. *International Journal of Environmental Research and Public Health*, 10(2), 446-461. doi: 10.3390/ijerph10020446
- Caponnetto, P., Campagna, D., Cibella, F., Morjaria, J. B., Caruso, M., Russo, C., & Polosa, R. (2013). Efficiency and safety of an eElectronic cigAreTte (ECLAT) as tobacco cigarettes substitute: A prospective 12-month randomized control design study. *PLoS ONE*, 8(6), e66317. doi: 10.1371/journal.pone.0066317
- Caponnetto, P., Keller, E., Bruno, C. M., & Polosa, R. (2013). Handling relapse in smoking cessation: Strategies and recommendations. *Internal and Emergency Medicine*, 8(1), 7-12. doi: 10.1007/s11739-012-0864-z

- Caponnetto, P., Polosa, R., Auditore, R., Minutolo, G., Signorelli, M., Maglia, M., . . . Aguglia, E. (2014). Smoking cessation and reduction in schizophrenia (SCARIS) with e-cigarette: Study protocol for a randomized control trial. *Trials*, 15(1). doi: 10.1186/1745-6215-15-88
- Caponnetto, P., Russo, C., Bruno, C. M., Alamo, A., Amaradio, M. D., & Polosa, R. (2013). Electronic cigarette: A possible substitute for cigarette dependence. *Monaldi Archives for Chest Disease*, 79(1), 12-19.
- de Leon, J., & Diaz, F. J. (2005). A meta-analysis of worldwide studies demonstrates an association between schizophrenia and tobacco smoking behaviors. *Schizophrenia Research*, 76(2-3), 135-157. doi: 10.1016/j.schres.2005.02.010
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1996). *Structured Clinical Interview for DSM-IV Axis I Disorders, Clinician Version (SCID-CV)*. Washington, DC: American Psychiatric Press, Inc.
- Kay, S. R., Fiszbein, A., & Opler, L. A. (1987). The Positive and Negative Syndrome Scale (PANSS) for schizophrenia. *Schizophrenia Bulletin*, 13(2), 261-276.
- Kelly, D. L., McMahon, R. P., Wehring, H. J., Liu, F., Mackowick, K. M., Boggs, D. L., . . . Dixon, L. (2011). Cigarette smoking and mortality risk in people with schizophrenia. *Schizophrenia Bulletin*, 37(4), 832-838. doi: 10.1093/schbul/sbp152
- McCreadie, R. G., & Kelly, C. (2000). Patients with schizophrenia who smoke: Private disaster, public resource. *The British Journal of Psychiatry*, 176(2), 109. doi: 10.1192/bjp.176.2.109
- McDonald, C. (2000). Cigarette smoking in patients with schizophrenia. *The British Journal of Psychiatry*, 176(6), 596-597. doi: 10.1192/bjp.176.6.596-b
- Nutt, D. J., Phillips, L. D., Balfour, D., Curran, H. V., Dockrell, M., Foulds, J., . . . Sweanor, D. (2014). Estimating the harms of nicotine-containing products using the mCDA approach. *European Addiction Research*, 20(5), 218-225. doi: 10.1159/000360220
- Ochoa, E. L. M., & Lasalde-Dominicci, J. (2007). Cognitive deficits in schizophrenia: Focus on neuronal nicotinic acetylcholine receptors and smoking. *Cellular and Molecular Neurobiology*, 27(5), 609-639. doi: 10.1007/s10571-007-9149-x
- Polosa, R., & Benowitz, N. L. (2011). Treatment of nicotine addiction: Present therapeutic options and pipeline developments. *Trends in Pharmacological Sciences*, 32(5), 281-289. doi: 10.1016/j.tips.2010.12.008
- Polosa, R., Caponnetto, P., Morjaria, J. B., Papale, G., Campagna, D., & Russo, C. (2011). Effect of an electronic nicotine delivery device (e-Cigarette) on smoking reduction and cessation: A prospective 6-month pilot study. *BMC Public Health*, 11(1), 1-12. doi: 10.1186/1471-2458-11-786
- Polosa, R., Rodu, B., Caponnetto, P., Maglia, M., & Raciti, C. (2013). A fresh look at tobacco harm reduction: The case for the electronic cigarette. *Harm Reduction Journal*, 10(1), 1-11. doi: 10.1186/1477-7517-10-19
- Royal College of Physicians. (2007). *Harm reduction in nicotine addiction: Helping people who can't quit. A report by the Tobacco Advisory Group of the Royal College of Physicians*. London: Author.
- Williams, J. M., Ziedonis, D. M., Abanyie, F., Steinberg, M. L., Foulds, J., & Benowitz, N. L. (2005). Increased nicotine and cotinine levels in smokers with schizophrenia and schizoaffective disorder is not a metabolic effect. *Schizophrenia Research*, 79(2-3), 323-335. doi: 10.1016/j.schres.2005.04.016
- Winterer, G. (2010). Why do patients with schizophrenia smoke? *Curr Opin Psychiatry*, 23(2), 112-119. doi: 10.1097/YCO.0b013e3283366643
- World Health Organization. (2008). *WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER package*. Retrieved from [http://whqlibdoc.who.int/publications/2008/9789241596282\\_eng.pdf?ua=1](http://whqlibdoc.who.int/publications/2008/9789241596282_eng.pdf?ua=1)

## E-cigarettes: More Frenemy than Enemy

Ellen Meier and  
Theodore L. Wagener  
University of Oklahoma Health  
Sciences Center

E-cigarettes have been increasing in popularity since their advent in the United States in 2009. They have introduced a new addiction lexicon including “vaping” (i.e., puffing on an e-cigarette), “vapers” (people who use e-cigarettes), and “e-juice” (the flavored

nicotine liquid inside e-cigarettes), to name a few. Tobacco researchers and regulatory agencies have fervently tried to keep pace with the marketplace as e-cigarettes continue to evolve from 1st generation (G1: “cig-a-likes”) to 2nd generation (G2: “tank systems”) devices. G2s improve upon G1 devices, with the addition of a refillable e-juice tank, higher capacity batteries, and multiple design features (e.g., variable voltage for higher heating). Most research to date is limited to investigations of 1st generation devices, with only a handful of survey and clinical laboratory studies of 2nd generation types.

The potential public health impact of e-cigarettes is not well-understood, but there are concerns that they may decrease smokers’ motivation to quit smoking, be used mainly as a bridge

product for current smokers when they are in situations where smoking is prohibited (dual use), or as a gateway product for youth. Our lab has been eager to answer these questions, as well as others, to help inform effective regulatory policy.

### E-cigarettes Effects on Smoking Behavior

One concern among researchers and public health officials is that e-cigarettes may decrease smokers’ motivation to quit. To examine this, we conducted a pilot randomized clinical laboratory trial (Wagener et al., 2014). A sample of smokers, uninterested in quitting, and with no history of e-cigarette use, sampled three different G1 brands as well as their usual brand of cigarette. They were then allowed

---

**Corresponding Author:** Theodore L. Wagener, PhD, Co-Director, Oklahoma Tobacco Research Center, Assistant Professor | Oklahoma TSET Research Scholar, University of Oklahoma Health Sciences Center, General & Community Pediatrics, 1200 Children’s Ave., Suite 12400, Oklahoma City, OK 73104, [theodore-wagener@ouhsc.edu](mailto:theodore-wagener@ouhsc.edu)

to select their preferred brand of e-cigarette to use *ad libitum* for one week. We found that readiness and confidence to quit smoking significantly increased during the sampling session and continued to increase throughout the week of *ad libitum* use, suggesting that e-cigarettes may be a useful cessation induction device. E-cigarettes were also as effective as conventional cigarettes in reducing cravings to smoke. Moreover, participants reduced their conventional cigarette use by 44% during the week of *ad libitum* use.

In addition to our own, other research has found that e-cigarettes are about as effective at curbing cravings as conventional cigarettes (Vansickel & Eissenberg, 2013; Vansickel, Weaver, & Eissenberg, 2012). However, few G1 users are able to completely quit smoking; most are able to just reduce (Farsalinos, Romagna, Tsiapras, Kyrzopoulos, & Voudris, 2013). As a result, dual use is common. This does not appear to be the case with G2 users. G2s are much more effective in delivering nicotine, achieving levels comparable to conventional cigarettes, but only if users puff more often (Farsalinos et al., 2014). Indeed, experienced users may maintain cigarette-like levels of nicotine by taking puffs more frequently from their e-cigarette.

Studies assessing G1's effect on longer term smoking behavior suggest that they are effective replacements for conventional cigarettes for some but more often only lead to reduced conventional cigarette use. For instance, two small uncontrolled trials (Caponnetto, Auditore, Russo, Cappello, & Polosa, 2013; Polosa et al., 2011) found smoking cessation rates of 23% (6-month follow-up) and 14.3% (12-month follow-up) and at least a 50% smoking reduction rates of 33% (6-month) and 50% (12-month). Two larger controlled trials support these findings, with a 12-month cessation rate of 11% (Caponnetto, Campagna, et al., 2013) and a 6-month cessation rate of 7.3% (vs. 5.8% for nicotine patch; Bullen et al., 2013); an additional 50% reported at least a 50% smoking reduction (Bullen et al., 2013). Collectively,

the research suggests that e-cigarettes may be an effective method of smoking reduction for many and a means of cessation for some.

### As a Gateway Product

Many public health officials and tobacco control researchers are concerned about how e-cigarettes may affect youth tobacco experimentation and uptake (Kmietowicz, 2014; Pepper et al., 2013). To begin to address this issue, our lab conducted a cross-sectional study surveying primarily first and second year college students (*M* age = 19.57; Meier, Tackett, Miller, Grant & Wagener, under review). Participants answered questions regarding past/current use of all tobacco and nicotine replacement products (e.g., gum, patch, lozenges), including e-cigarettes. Out of 1,304 students, 191 (14.6%) had tried e-cigarettes, of which 17 “occasionally” used (1.3%) and one used daily. Additionally, e-cigarettes were the first tobacco product ever tried by 46 students (3.8%); however, only one was still using e-cigarettes “occasionally” and only two (4.3%) went on to become a daily or occasional smoker of conventional cigarettes. For comparison, of the 326 students (25%) who first tried conventional cigarettes, 80 (24.5%) were still using conventional cigarettes “occasionally” or “daily.” This suggests that although some youth seem to be trying e-cigarettes, uptake is relatively low and few are moving on to conventional cigarettes. Nonetheless, many of these participants were approximately 14 to 15 years old when e-cigarettes were introduced to the United States and some may have already tried their first tobacco product. Therefore, continued surveillance of e-cigarette experimentation and uptake by youth is needed. Furthermore, for youth who begin with e-cigarettes and eventually move on to conventional cigarettes, the ultimate question is—would they have started smoking regardless of whether they tried e-cigarettes? Only large-scale and long-term epidemiological studies (such as the PATH Study, [www.pathstudyinfo.nih.gov](http://www.pathstudyinfo.nih.gov)) that examine changes in total tobacco use rates will be able to effectively answer this question.

### G2 Devices and Vape Shops—Not Just for E-cigarette Aficionados Anymore

“Vape shops,” or e-cigarette specialty stores, are quickly becoming a large part of the vaping culture. This rapidly growing sector of the market primarily sells G2 devices in addition to e-juice. There are currently an estimated 5,000 vape stores in the U.S. At one time, it was believed that vape stores and G2 devices were only for e-cigarette aficionados; however, these ideas are changing with emerging research from our lab as well as others’.

In our first study of vape shop customers (Lechner et al., 2014), largely comprised of exclusive G2 users (~70%), we found that the longer customers used e-cigarettes, the fewer conventional cigarettes they smoked. This reduction tended to be more drastic within the first 6 months of e-cigarette initiation with most eventually reporting smoking cessation. Moreover, users tended to decrease the strength of their e-liquid over time, potentially suggesting reduced nicotine dependency.

In a second study, also among vape shop customers (Wagener et al., 2014), we found similar levels of reduction, but also conducted biochemically confirmed self-reported smoking cessation. For those who reported quitting conventional cigarettes (69%), cessation was confirmed for 64% using carbon monoxide (CO) testing. Additionally, the majority of customers reported improvements in smoking-related symptoms including: decreased coughing, increased ability to exercise, and increased sense of smell and taste. E-cigarettes were even perceived as less harmful than all other nicotine and tobacco products. Finally, customers frequently reported starting with a G1 device and then switching to a G2 device in hopes of improving the quality and satisfaction of their e-cigarette, and for the wide variety of e-liquid flavors available.

Recent tobacco and market research support our lab’s findings. A growing number of e-cigarette users now begin with G2 devices; current estimates are



30%. While G1 models still represent approximately 65% of sales, G2 sales have nearly quadrupled as G1 sales have started to decline (Herzog, 2014a, 2014b). A recent worldwide survey of 19,000 e-cigarette users showed that only 3% were currently using a G1 product (Farsalinos, Romagna, Tsiapras, Kyrzopoulos, & Voudris, 2014).

## Future Research

Our research team continues to investigate these lines of e-cigarette research. We also are beginning to examine the effect of e-cigarette use on exposure to harmful and potentially harmful chemical constituents as well as downstream physiological effects. The overall goal of this research is to inform effective regulatory policy.

## References

- Bullen, C., Howe, C., Laugesen, M., McRobbie, H., Parag, V., Williman, J., & Walker, N. (2013). Electronic cigarettes for smoking cessation: a randomised controlled trial. *Lancet*, 382(9905), 1629-1637. doi: 10.1016/S0140-6736(13)61842-5
- Caponnetto, P., Auditore, R., Russo, C., Cappello, G.C., & Polosa, R. (2013). Impact of an electronic cigarette on smoking reduction and cessation in schizophrenic smokers: A prospective 12-month pilot study. *International Journal of Environmental Research and Public Health*, 10, 446-461.
- Caponnetto, P., Campagna, D., Cibella, F., Morjaria, J. B., Caruso, M., Russo, C., & Polosa, R. (2013). Efficiency and Safety of an eElectronic cigAreTte (ECLAT) as tobacco cigarettes substitute: A prospective 12-month randomized control design study. *PLoS One*, 8(6), e66317. doi: 10.1371/journal.pone.0066317
- Farsalinos, K. E., Romagna, G., Tsiapras, D., Kyrzopoulos, S., & Voudris, V. (2013). Evaluating nicotine levels selection and patterns of electronic cigarette use in a group of "vapers" who had achieved complete substitution of smoking. *Substance Abuse*, 7, 139-146. doi: 10.4137/SART.S12756
- Farsalinos, K. E., Romagna, G., Tsiapras, D., Kyrzopoulos, S., & Voudris, V. (2014). Characteristics, perceived side effects and benefits of electronic cigarette use: a worldwide survey of more than 19,000 consumers. *Int J Environ Res Public Health*, 11(4), 4356-4373. doi: 10.3390/ijerph110404356
- Farsalinos, K.E., Spyrou, I., Tsimopoulou, K., Stefopoulos, C., Romagna, G., & Voudris, V. (2014). Nicotine absorption from electronic cigarette use: Comparison between first and new-generation devices. *Scientific Reports*, 4, 4133. doi: 10.1038/srep04133
- Herzog, Bonnie. (2014a). *Tobacco talk: Vapors/tanks driving next wave of e-vapor growth* (pp. 1-17): Wells Fargo Securities LLC.
- Herzog, Bonnie. (2014b). Vape shops—Springing up across the country. *Tobacco Equity Research* (pp. 1-7): Wells Fargo Securities.
- Kmietowicz, Z. (2014). E-cigarettes are "gateway devices" for smoking among young people, say researchers. *BMJ: British Medical Journal*, 348: g2034. doi: 10.1136/bmj.g2034
- Lechner, W.V., Tackett, A.P., Grant, D.M., Tahirkkeli, N.N., Driskill, L.M., & Wagener, T.L. (in press). Effects of duration on electronic cigarette use. *Nicotine and Tobacco Research*.
- Meier, E., Tackett, A.P., Miller, M.B., Grant, D.M., & Wagener, T.L. (under review). *Which tobacco products are gateways to regular use? An examination of first used tobacco products and current use in college students*.
- Pepper, J.K., Reiter, P.L., McRee, A.L., Cameron, L.D., Gilkey, M.B., & Brewer, N.T. (2013). Adolescent males' awareness of and willingness to try electronic cigarettes. *Journal of Adolescent Health*, 52, 144-150. doi: 10.1016/j.jadohealth.2012.09.014
- Polosa, R., Caponnetto, P., Morjaria, J. B., Papale, G., Campagna, D., Russo, C. (2011). Effect of an electronic nicotine delivery device (e-Cigarette) on smoking reduction and cessation: a prospective 6-month pilot study. *BMC Public Health*, 11, 786. doi: 10.1186/1471-2458-11-786.
- Polosa, R., Morjaria, J. B., Caponnetto, P., Campagna, D., Russo, C., Alamo, A., Amaradio, M. D., & Fisichella, A. (2013). Effectiveness and tolerability of electronic cigarette in real-life: A 24-month prospective observational study. *Internal and Emergency Medicine*, 1-10. doi: 10.1007/s11739-013-0977-z
- Vansickel AR, Eissenberg T. (2013). Electronic cigarettes: effective nicotine delivery after acute administration. *Nicotine and Tobacco Research*, 15, 267-70. doi: 10.1093/ntr/ntr316.
- Vansickel, A. R., Weaver, M. F., & Eissenberg, T. (2012). Clinical laboratory assessment of the abuse liability of an electronic cigarette. *Addiction*, 107, 1493-1500. doi:10.1111/j.1360-0443.2012.03791.x
- Wagener, T. L., Lechner, W. V., Tackett, A. P., Quinalty, L., Tahirkheli, N., & Meier, E. (2014, January). *Electronic cigarette store costumers: "Vaping" behaviors and beliefs*. Poster presented at the annual Society for Research on Nicotine and Tobacco, Seattle, WA.
- Wagener, T. L., Meier, E., Hale, J. J., et al. (2014). Pilot investigation of changes in readiness and confidence to quit smoking after E-cigarette experimentation and 1 week of use. *Nicotine & Tobacco Research*, 16, 108-114.ψ

# Chronic Medical Disease Diagnosis Increases Likelihood of Seeking Alcohol Abuse Treatment

Jeffrey Scot Brzostek  
Texas A & M Medical School

Rajeshwari S Puneekar  
HealthCore, Inc.

Jahn K Hakes  
United States Census Bureau

John H. Shale  
TAMU HSC College of Medicine

## Introduction

In the years 2005, 2006, and 2007 over 5 million people between the ages of 25 and 64 entered treatment for drug or

alcohol problems (Substance Abuse and Mental Health Services Administration, 2012). Yet most substance abusers who need treatment do not get it (Perkonig et al., 2006). One report estimated that less than 25% of individuals with problems related to alcohol will receive treatment (Cohen, Feinn, Arias, &

Kranzler, 2007).

Alcohol has been identified as a risk factor for chronic diseases for centuries. Orford et al. (2006) developed a model to explain why people with alcohol problems seek professional help. They reported that when a person realizes his drinking is leading to a worsening of medical issues and is combined with the triggering event such as family or professional intervention, the individual is more likely to seek professional help. Dawson, Goldstein, Ruan, and Grant (2012) found a marginal association between recovery and the person having two or more medical conditions.

However, until now the literature has lacked empirical evidence demonstrating the magnitude of the statistical association between the presence of chronic medical conditions and an individual's actually seeking treatment for a problem with alcohol. Therefore, this study examines the relationship between the presence of chronic conditions and likelihood of seeking treatment for alcohol abuse or dependence.

## Methods

### Data

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) is a longitudinal, nationally representative survey funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Since the current study aimed to examine the likelihood of receiving alcohol treatment, we restricted our sample to current drinkers in the NESARC data. The NESARC data defined "current drinkers" as those consuming 12 drinks per year, which obviously would include many individuals, likely the majority, whose alcohol consumption would not be problematic. Because there were so few current drinkers above 65 years of age who enrolled in any alcohol treatment program, we restricted our sample to current drinkers between 18 and 64 years of age. Based on NIAAA drinking risk definition, current drinkers were categorized as heavy drinkers or low risk drinkers (Dawson, 2010).

Men who had <14 drinks per week or <4 drinks per day and women who had <7 drinks per week or <3 drinks per day were termed as low risk drinkers. On the other hand, men who had  $\geq 14$  drinks per week or  $\geq 4$  drinks per day and women who had  $\geq 7$  drinks per week or  $\geq 3$  drinks per day were termed as heavy drinkers.

Based on these inclusion and exclusion criteria, the final sample included 15,237 current drinkers between 18-64 years of age. Among these current drinkers, 4,485 respondents have at least one of the chronic medical conditions tracked by NESARC, and 10,752 respondents do not have any of the tracked chronic medical conditions (Table 1).

### Measures

The primary outcome measure for this study was whether a respondent had received alcohol treatment. In this study, 13 alcohol treatment programs listed in the NESARC were re-grouped into 6 categories (ever attended: 12-step organization, alcohol/drug detoxification, alcohol/drug rehabilitation, community mental health program, emergency room or crisis center, or other services) and measured as binary outcomes (1 = yes; 0 = no).

General health was presented as five categories—excellent, very good, good, fair, and poor. Chronic medical conditions included arteriosclerosis, arthritis, hypertension, heart diseases, liver cirrhosis, liver disease, stomach ulcer, and gastritis. Mental health disorders included schizophrenia, major depression disorder, and bipolar disorder.

### Analysis

Table 1 provides descriptive statistics including case counts and relative frequencies for baseline demographic and socio-economic characteristics, general health status, chronic medical conditions, and mental health disorders. For purposes of comparison, the categorical variables are subdivided between current drinkers without chronic medical conditions and current

drinkers with a chronic medical condition, with chi-square tests used to assess the hypothesis of equal proportions at  $\alpha = 0.05$ .

To control for potential differences between current drinkers with and without chronic conditions, a propensity score model was developed to determine the likelihood (i.e., propensity) of each participant being diagnosed with a chronic condition (Rosenbaum & Rubin, 1983; d'Agostino, 1998). Categorical variables for age group and educational attainment were included in the propensity score development model. The propensity score was then used as a covariate in subsequent lagged logistic regression models (Kurth et al., 2006). Lagged logistic regression models were used to determine the influence of chronic condition diagnosis on the likelihood of receiving alcohol treatment, after controlling for baseline demographic and SES characteristics, general health status, chronic medical conditions, drinking status (heavy or low-risk drinkers), and mental health disorders. In this model, the receipt of alcohol treatment was captured in Wave 2 (2004-2005) whereas the values for the regressors were captured in Wave 1 (2001-2002). All the analysis was conducted using Statistical Analysis Software Version 9.2.

## Results

The descriptive statistics in Table 1 show that the current drinkers with chronic medical conditions tended to be older than the drinkers without chronic medical conditions. Among drinkers with chronic conditions, 45.2% ( $SE = 0.45\%$ ) had arthritis, 42% ( $SE = 0.43\%$ ) had hypertension, and 26.7% ( $SE = 0.40\%$ ) had heart disease. Table 2 lists the type of treatment utilized.

The results of the lagged logistic regressions in Table 3 show that drinkers with at least one chronic condition were more likely to enroll in an alcohol treatment program than drinkers without any chronic conditions,  $OR = 1.17$ , 95% CI [1.04, 1.31]. Drinkers with heart disease ( $OR = 1.56$ , 95% CI [1.30,

**Table 1.** Sample characteristics of current drinkers, 2001-2002

Participant characteristics	No chronic conditions <i>N</i> = 10,752			Chronic conditions <i>N</i> = 4,485			<i>p</i> -value
	<i>N</i>	%	SE	<i>N</i>	%	SE	
Sex							
Males*	5,673	57.5	0.25	2,272	56.5	0.39	0.023
Females*	5,079	42.5	0.25	2,213	43.5	0.39	0.023
Age							
18-24*	1,817	18.9	0.32	307	7.4	0.25	<.0001
25-34*	3,027	28.2	0.26	656	15.3	0.35	<.0001
35-44*	3,117	27.0	0.22	1,064	23.5	0.38	<.0001
45-54*	1,990	18.5	0.20	1,380	29.9	0.43	<.0001
55-64*	801	7.4	0.13	1,078	24.0	0.43	<.0001
General Health							
Excellent*	4,630	44.3	0.25	792	19.3	0.37	<.0001
Very good*	3,697	34.9	0.26	1,406	32.7	0.37	<.0001
Good*	1,911	16.7	0.20	1,397	30.3	0.43	<.0001
Fair*	413	3.3	0.11	645	13.1	0.29	<.0001
Poor*	83	0.6	0.04	238	4.5	0.19	<.0001
Chronic conditions							
Arteriosclerosis				92	2.1	0.12	
Arthritis				2,037	45.2	0.45	
Hypertension				1,942	42.4	0.43	
Heart disease				1,205	26.7	0.40	
Liver cirrhosis				28	0.6	0.11	
Liver disease				76	1.5	0.12	
Stomach ulcer				370	7.9	0.30	
Gastritis				782	17.5	0.32	
Mental health disorders							
Schizophrenia*	16	0.1	0.03	36	0.7	0.06	<.0001
Major depressive disorder*	771	6.5	0.14	612	12.6	0.29	<.0001
Bipolar disorder*	307	2.7	0.09	292	6.3	0.23	<.0001

*Note.* Observations are weighted to be representative of U.S. national sub-populations of 68.5 million current drinkers without chronic medical conditions and 27.2 million current drinkers with chronic medical conditions. Standard errors have been adjusted to allow for complex survey design effects.

\**p* < .05; *p*-values are for chi-square tests of equal proportions.

1.87]), liver cirrhosis (OR = 2.08; 95% CI [1.04-4.16]), and gastritis (OR = 1.65; 95% CI [1.17-2.34]) were more likely to enroll in an alcohol treatment program;

whereas drinkers with arteriosclerosis (OR = 0.53; 95% CI [0.40-0.72]) were less likely to participate in an alcohol treatment program.

Drinkers with health status ranging from poor to very good are more likely to participate in a treatment program than those in excellent health.



**Table 2.** Alcohol consumption behavior and alcohol treatment patterns, 2001-2002

Participant characteristics	No chronic conditions <i>n</i> = 10,752			Chronic conditions <i>n</i> = 4,485			p-value
	N	%	SE	N	%	SE	
<b>Alcohol consumption</b>							
<b>Low risk drinkers</b>	7,917	72.9	0.24	3,237	72.0	0.41	0.037
Men*	4,040	40.4	0.22	1,549	38.8	0.43	0.002
Women	3,877	32.5	0.25	1,688	33.1	0.35	0.157
<b>Heavy drinkers*</b>	2,835	27.1	0.24	1,248	28.0	0.41	0.037
Men	1,633	17.1	0.19	723	17.6	0.42	0.239
Women	1,202	10.0	0.19	525	10.4	0.21	0.116
<b>Current alcohol abuse/de- pendence*</b>	1,801	17.0	0.24	793	18.1	0.37	0.014
<b>Alcohol treatment*</b>	142	1.2	0.05	107	2.3	0.12	<.0001
Alcoholics Anonymous or 12 step program	87	0.7	0.05	62	1.5	0.10	<.0001
Alcohol detoxification ward	25	0.2	0.02	31	0.8	0.08	<.0001
Alcohol rehabilitation program	43	0.4	0.04	37	0.9	0.08	<.0001
Community mental health program	41	0.4	0.03	42	1.0	0.08	<.0001
Emergency room or crisis center	17	0.2	0.03	23	0.5	0.05	<.0001
Other services	84	0.7	0.06	79	1.8	0.11	<.0001

Observations are weighted to be representative of U.S. national sub-populations of 68.5 million current drinkers without chronic medical conditions and 27.2 million current drinkers with chronic medical conditions. Standard errors have been adjusted to allow for complex survey design effects.

## Discussion

The current study supports the hypothesis that chronic medical conditions are associated with alcohol treatment. The data demonstrate a likelihood of seeking alcohol treatment is about 17% higher for current drinkers with at least one chronic medical condition versus the similarly unstratified group of current drinkers with no chronic medical conditions. Among eight chronic medical conditions discussed in this study, heart disease, gastritis, and cirrhosis increase the likelihood of seeking alcohol treatment by 56%, 65%, and 108%, respectively.

These data seem to suggest that many individuals realizing the association of their alcohol abuse and potentially life threatening medical conditions may well be motivated to seek treatment for the alcohol abuse.

## Conclusion

While this is a preliminary study that would require replication, it does demonstrate a strong positive statistical correlation between the presence of serious chronic medical conditions and seeking treatment for alcohol abuse.

Given the magnitude of the problem of alcohol abuse and dependency in terms of deleterious health effects and the resulting medical costs it would seem that prospective studies, though costly and difficult to do, would be a worthwhile investment of research assets. Designing more effective intervention strategies and treatment programs would likely be improved by a clearer understanding of the impact of health problems and encouraging those with alcohol abuse and dependency to seek treatment.

**Table 3.** Odds ratio (OR) for alcohol treatment program

Predictors	OR	95% CI		p-value
		Lower Limit	Upper Limit	
<b>Any chronic condition*</b>	1.17	1.04	1.31	0.010
Arteriosclerosis *	0.53	0.40	0.72	<.0001
Arthritis	0.84	0.67	1.05	0.117
Hypertension	1.14	0.96	1.35	0.149
Heart disease*	1.56	1.30	1.87	<.0001
Liver dirrhosis*	2.08	1.04	4.16	0.039
Liver disease	1.34	0.71	2.53	0.363
Stomach ulcer	1.23	0.92	1.64	0.165
Gastritis*	1.65	1.17	2.34	0.005
<b>Drinking status</b>				
Heavy drinker-male*	2.84	2.37	3.40	<.0001
Heavy drinker-female*	2.28	1.85	2.83	<.0001
<b>Female*</b>	0.52	0.42	0.64	<.0001
<b>Age</b>				
25-34*	1.74	1.00	3.01	0.049
35-44	2.34	0.74	7.41	0.149
45-54	6.09	0.55	68.05	0.142
55-64	4.69	0.12	179.71	0.406
<b>General health</b>				
Very good*	1.31	1.11	1.55	0.002
Good*	2.19	1.86	2.57	<.0001
Fair*	2.82	2.29	3.46	<.0001
Poor*	1.70	1.24	2.33	0.001
<b>Mental illness</b>				
Major depressive disorder*	2.10	1.75	2.52	<.0001
Bipolar disorder	0.89	0.68	1.16	0.385

Reference group: Male; 18-24 years of age; non-Hispanic White; married; no education; poor; private insurance; and excellent health

\* Significant at 5% level

## References

- Cohen, E., Feinn, R., Arias, A., & Kranzler, H. R. (2007). Alcohol treatment utilization: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions. *Drug and Alcohol Dependence*, 86(2), 214-221.
- d'Agostino, R. B. (1998). Tutorial in biostatistics: Propensity score methods for bias reduction in the comparison of a treatment to a non-randomized control group. *Stat Med*, 17(19), 2265-2281.
- Dawson, D. A., Goldstein, R. B., Ruan, W. J., & Grant, B. F. (2012). Correlates of recovery from alcohol dependence: A prospective study over a 3-year follow-up interval. *Alcoholism: Clinical and Experimental Research*, 36(7), 1268-1277.
- Dawson, D. A. (2010). Defining risk drinking.
- Kurth, T., Walker, A. M., Glynn, R. J., Chan, K. A., Gaziano, J. M., Berger, K., & Robins, J. M. (2006). Results of multivariable logistic regression, propensity matching, propensity adjustment, and propensity-based weighting under conditions of nonuniform effect. *American Journal of the National Institute on Alcohol Abuse and Alcoholism*, 34(2), 144-156.

- of *Epidemiology*, 163(3), 262-270.
- Orford, J., Kerr, C., Copello, A., Hodgson, R., Alwyn, T., Black, R., Smith L., Thistlethwaite, G., Westwood, A., & Slegg, G. (2006). Why people enter treatment for alcohol problems: Findings from UK alcohol treatment trial pre-treatment interviews. *Journal of Substance Use*, 11(3), 161-176.
- Perkonig, A., Settele, A., Pfister, H., Höfler, M., Fröhlich, C., Zimmermann, P., Roselind, L., & Wittchen, H. U. (2006). Where have they been? Service use of regular substance users with and without abuse and dependence. *Social Psychiatry and Psychiatric Epidemiology*, 41(6), 470-479.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.
- Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). (2009). Discharges from Substance Abuse Treatment Services. DASIS Series S-60, HHS Publication No. (SMA) 12-4704. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2012. [ψ](#)

## Mid to Late Life Use, Abuse, and Dependence on Alcohol

**Breanne Benedict, Lindsay Meyer, Thomas Burroughs, Jon R. Haber, & Theodore Jacob**  
*Palo Alto Veterans Affairs Health Care System*

Mid to late life alcoholics are a highly vulnerable population given that less alcohol is needed to adversely affect cognitive and interpersonal functioning. In addition, older problem drinkers are at increased risk for adverse alcohol-medication interactions, and the cumulative effects of problem drinking are likely to manifest in physical and medical impairments. Most problematic, within the next 20 years, an increasing number of older drinkers (700,000 to 1,400,000) will have a current diagnosis of alcohol use disorder (AUD) (National Institute of Alcohol Abuse and Alcoholism, [NIAAA], 2010). Thus, mid-late life drinking is more than an area of marginal interest; it is a critical period for a large and growing segment of our population, that poses a significant mental and public health problem that must be addressed. For these reasons, it is important to understand the nature of alcohol processes in mid-late life, specific predictors that influence outcome, factors most amenable to change, barriers that inhibit

treatment seeking, and approaches to treatment that are most likely to promote entry into recovery. The purpose of this report is to provide an overview of current work in these areas; the guiding rationale key issues that will be addressed in upcoming analysis; implications of project findings for understanding the epidemiology and clinical course of AUD; and efforts aimed at identifying promising treatment interventions.

The current project, “Course of AUD in Mid to Late Life,” is part of our ongoing program of studies examining AUD among veterans from the Vietnam Era Twin Registry (VETR) (Eisen et al, 1987). The registry itself ascertained 7,375 male-male twin pairs born between 1939 and 1957 where both twins served on active military duty during the Vietnam era (from May 1965 to August 1975). Previous studies have shown the VETR to be a large unbiased, non-treatment sample of male twins (Eisen et al., 1987; Henderson et al., 1990), who have repeatedly reported on their substance use and concomitant factors through well-validated measures. The core sample of the current project includes 2054 twins, 1123 of whom had a lifetime diagnosis of alcohol dependence (AD) (American Psychiatric Association [APA], 1987) when assessed in the 1992 Harvard Drug Study (Tsuang et al., 1996). Participants were conducted through extensive assessments in 2001 and 2012. The 2001 assessment included telephone interviews focused on the Lifetime Drinking History (LDH;

Skinner, 1984), as well as a brief psychiatric symptom checklist, updated demographic data, and family information. The 2012 assessment extended the LDH characterization to 2012. In addition, the assessment included measures of barriers to treatment (McKellar et al., 2010), preferences for alternative types of treatments (TAHOE; McKellar, 2010), and measures of stress, coping, and resilience. In 2001, the average age of participants was 61 years ( $M = 60.81$ ;  $SD = 3.6$ ); 90% were Caucasian; 39% high school graduates while 51% attended some college or achieved a degree; 50% retired; and 72% currently married. These later-life assessments provide later-life characterizations of drinking careers that supplement an existing database that began with drinking, psychosocial, and military assessments beginning in 1987. Hence, a wealth of data is available that will permit informative analyses of the major predictors of both late life alcohol use behavior and concomitant medical and mental health outcomes and the potential mediators and moderators of these influences.

### The “Course” Project Subsumes Four Major Aims

**(1) Characterize late life drinking and nondrinking outcomes.** Results from various large sample studies have corroborated the relationship between a history of AD and mid-late life problem drinking. Consistent with current literature, data on the drinking characteristics of our course sample in-

**Acknowledgment:** This research was supported by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) grant AA016402 and by a Merit Review Grant from the Department of Veterans Affairs Medical Research Service, Washington, DC, awarded to Theodore Jacob.



dicating that 65% of those with an earlier history of AD (assessed in 1992) were regular drinkers twenty years later, in 2012. Furthermore, the prevalence of medical and psychosocial problems was substantial. Subsequent analyses will be aimed at identifying those factors associated with medical, psychiatric, psychosocial, and treatment outcomes and how these influences may qualify or explain these effects.

**(2) Identify lifespan drinking trajectories and specific predictors of remission and relapse.** In previous assessments of the longitudinal course of problem drinking through age 50, we identified four drinking trajectories that have now been replicated in two independent, non-twin samples: (1) Severe, Chronic Alcoholism (SCA), (2) Young Adult Alcoholism (YAA), (3) Late Onset Alcoholism (LOA), and (4) Severe, Non Chronic Alcoholism (SNCA). Data from the most recent assessment (when the veterans were in their early sixties) will permit extension, refinement, and re-classification of the identified trajectories. We expect fewer drinkers to exhibit dependent drinking in this later life decade, but to be problematic drinkers nonetheless (Jacob, Koenig, Howell, Wood, & Haber, 2009).

**(3) Control for genetic influences in evaluating predictors of course and outcome of AD.** With these twin data, case control analyses will be conducted to identify environmental influences that contribute to course and outcome patterns that are not confounded by genetic effects. Here the key comparisons will involve identical twins, both satisfying lifetime diagnoses for AD, where the cotwins differ in regard to a relevant drinking outcome after 50 years of age. If the outcome discordant twins are also found to differ in regards to a hypothesized influence such as

social support—now having controlled for genetic, shared environmental and other potentially influential effects—evidence for the causal role of the hypothesized factor would be achieved.

**(4) Identify treatment barriers among mid-late life problem drinkers and to determine what factors differentiate those veterans who obtain treatment from those who do not.** Studies indicate that only about 20% of persons with AD obtain treatment. Commonly reported “barriers” or reasons for not seeking treatment include stigma, perceived ineffectiveness of treatment, viewing the problem as minor, and others. Consistent with these estimates, 75%-80% of our core sample remains untreated. This project will be addressing these issues by (i) identifying veterans with a history of AD who are least likely to seek treatment; (ii) determining the most significant barriers to treatment; and (iii) evaluating brief and novel interventions for addressing the negative impact of these barriers.

### Significance and Future Directions

Since problem drinking in later life is strongly related to morbidity, disability, care requirements, costs, and mortality, the current study aims to identify the impact of drinking (both in later life and at earlier times) on medical, psychiatric, interpersonal, and social/financial outcomes; aims to identify key moderators that influence patterns of remission and relapse; and aims to identify barriers to treatment and evaluate novel interventions that may overcome these barriers and better address the limitations of current clinical practice in treating mid-late life problem drinking. The latter aim is especially relevant to clinical care facilities that must treat large numbers of mid-to-late life individuals with alcoholism and related disorders, perhaps the best example being the VA Health

Care system. Given the various unique design features of the current study, it is anticipated that our planned analyses and project aims will provide an important contribution to the theoretical, empirical, and clinical literatures on AUD across the lifespan into later life.

### References

- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.
- Eisen, S., True, W., Goldberg, J., Henderson, W., & Robinette, C.D. (1987). The Vietnam Era Twin (VET) Registry: Method of construction. *Acta Geneticae Medicae et Gemellologiae*, 36, 61-67.
- Henderson, W. G., Eisen, S., Goldberg, J., True, W., Barnes, J.E., & Vitek, M.E. (1990). The Vietnam Era Twin Registry: A resource for medical research. *Public Health Report*, 105, 368-373.
- Jacob, T., Koenig, L. B., Howell, D. N., Wood, P. K., & Haber, J. R. (2009). Drinking trajectories from adolescence to the fifties among alcohol-dependent men. *Journal of Studies on Alcohol and Drugs*, 70(6), 859-869.
- McKellar, J. (2010, unpublished work). *TAHOE: The Alcohol Help-Seeking Options Evaluation*.
- National Institute of Alcohol Abuse and Alcoholism. (2010). Strategic Plan for Research, 2006-2010: Alcohol Across the Lifespan. Retrieved from <http://pubs.niaaa.nih.gov/publications/StrategicPlan/NIAA STRATEGICPLAN.htm>.
- Skinner, H. A. (1984). Instruments for assessing alcohol and drug problems. *Bulletin of the Society of Psychologists in Addictive Behaviors*, 3, 21-33.
- Tsuang, M. T., Lyons, M. J., Eisen, S., Goldberg, J., True, W., Meyer, J., & Eaves, L. Genetic influences on DSM-III-R drug abuse and dependence drugs: A study of 3,372 twin pairs. *American Journal of Medical Genetics*, 67, 373-377. ♡

# Abstracts

Amlung, M., & MacKillop, J. (in press). Understanding the effects of stress and alcohol cues on motivation for alcohol via behavioral economics. *Alcoholism: Clinical & Experimental Research*.

**Background:** Psychological stress and alcohol cues are common antecedents of both ongoing drinking and relapse. One candidate mechanism of risk from these factors is acute increases in craving, but experimental support for this hypothesis is mixed. Furthermore, the combination of stress and cues has been largely unstudied. The current study employed a behavioral economic approach to investigate the combined roles of psychosocial stress and alcohol cues on motivation for alcohol. **Methods:** In a sample of 84 adult heavy drinkers, we examined the effects of an acute laboratory stress induction and an alcohol cue exposure on subjective craving and stress, arousal, and behavioral economic decision-making. Primary dependent measures included an intertemporal cross-commodity multiple choice procedure (ICCMCP), incorporating both price and delay elements; an alcohol purchase task (APT), measuring alcohol demand; and a monetary delay discounting task (DDT), measuring intertemporal choice. **Results:** The stress induction significantly increased stress, craving, and the incentive value of alcohol on the ICCMCP and APT. Stress-related increases in value on the ICCMCP were mediated by increased alcohol demand. Exposure to alcohol cues only significantly affected craving, APT breakpoint, and arousal. Delay discounting was not affected by either stress or cues. **Conclusions:** These results reveal unique behavioral economic dimensions of motivation for alcohol following acute stress and an alcohol cue exposure. More broadly, as the first application of this approach to understanding the role of stress in drug motivation, these findings support its utility and potential in future applications.

Bernstein, M. H., Colby, S. M., Bidwell, L. C., Kahler, C. W., & Leventhal, A. M. (in press). Hostility and cigarette use: A comparison between smokers and nonsmokers in a matched sample of adolescents. *Nicotine & Tobacco Research*. doi: 10.1093/ntr/ntu033

**Introduction:** We examined the association between hostility—a personality trait reflective of negativity and cynicism toward others—and smoking in adolescents, by measuring: (a) several subcomponents of hostility, and (b) facial emotion processing ability, which has been previously linked to hostility. **Methods:** Participants ( $N = 241$ , aged 14-19) were 95 smokers and 95 demographically matched nonsmokers, as well as 51 nonmatched smokers. All participants completed the Cook-Medley (C-M) hostility scale, which provides a general hostility score and three component scores (cynicism, hypersensitivity, and aggressive responding), and a facial emotion processing task. This task, designed to assess emotion recognition, requires quickly identifying the emotion of faces that gradually morph from neutral to high intensity happy, angry, or fearful. **Results:** Independent sample  $t$  tests indicated that matched smokers scored significantly higher in cynicism and aggressive responding than nonsmokers. Among smokers, age of smoking onset was negatively correlated with general hostility and aggressive responding. All hostility scales were positively correlated with the intensity needed to recognize happy faces. Counterintuitively, smokers required a greater intensity to recognize angry faces than nonsmokers. No other relations between hostility/smoking status and facial emotion processing were observed. **Conclusions:** Aspects of hostility, particularly aggressive responding, may be a risk factor for early onset smoking. Although hostile participants exhibited a deficiency in their ability to recognize happiness in facial pictures, these results did not translate to differences in smoking

status. This study elucidates some of the complex interrelations between hostility, emotion processing, and adolescent smoking, which may have implications for teen smoking prevention.

Bujarski, S., & Ray, L. A. (in press). Subjective response to alcohol and associated craving in heavy drinkers vs. alcohol dependents: An examination of Koob's Allostatic Model in humans. *Drug and Alcohol Dependence*. doi: 10.1016/j.drugalcdep.2014.04.015

**Background:** Koob's allostatic model of addiction emphasizes the transition from positive reinforcement to negative reinforcement as dependence develops. This study seeks to extend this well-established neurobiological model to humans by examining subjective response to alcohol (SR) as a biobehavioral marker of alcohol reinforcement. Specifically, this study examines (a) differential SR in heavy drinkers (HDs) vs. alcohol dependent individuals (ADs) and (b) whether HDs and ADs differ in terms of the association between SR and craving. **Methods:** Data was culled from two alcohol challenge studies, totaling 91 participants (oversampled on OPRM1 Asp40 carriers). Alcohol was administered intravenously and participants completed standard measures of SR and craving at BrAC's of 0.02, 0.04, and 0.06 g/dL. SR was modeled as a multi-dimensional construct consisting of stimulation, sedation, and tension relief. **Results:** ADs reported significantly higher sedation and craving initially and exhibited a blunted response to alcohol along escalating BrACs. ADs exhibited greater initial tension but did not differ from HDs in tension reduction across rising BrACs. Further, alcohol-induced stimulation was associated with alcohol craving to a significantly greater degree in HDs, as compared to ADs. **Conclusions:** This study provides initial evidence that HDs and ADs differ in their subjective experience of alcohol and in the association

between dimensions of SR and craving for alcohol. Hypotheses derived from the allostatic model were partially supported, such that, while ADs and HDs did not differ on stimulation response, there was a relative dissociation between positive reinforcement and craving in ADs as compared to HDs.

DeMartini, K. S., & Fucito, L. (in press). Variations in sleep characteristics and sleep-related impairment in at-risk college drinkers: A latent profile analysis. *Health Psychology*. doi: 10.1037/hea0000115

**Objective:** Sleep disturbance and heavy drinking increase risk of negative consequences in college students. Limited research exists on how they act synergistically, and the overall nature of sleep and sleep-related impairment in college student drinkers is poorly understood. A latent profile analysis was conducted on the sleep characteristics and daytime sleep-related consequences of college student drinkers who were at-risk based on Alcohol Use Disorders Identification Test–Consumption scores. **Methods:** Participants ( $N = 312$ , mean age = 18.90 (0.97) years) consumed a mean (SD) of 20.93 (13.04) drinks per week. Scores on the ten items of the Sleep/Wake Behavior Problems Scale (SWPS) were the class indicators. **Results:** Four classes best described the sleep and sleep-related consequences of at-risk college drinkers. Classes represented different gradients and types of sleep patterns and sleep-related impairment; nearly half the sample reported late bedtimes and daytime consequences of insufficient sleep. Subsequent validation analyses indicated that these classes were directly correspondent with severity of alcohol consumption, alcohol-related consequences illicit substance use, and perceived health. **Conclusions:** These findings indicate the presence of significant heterogeneity in college drinkers' sleep patterns and experiences of sleep-related impairment. Class differences significantly impact the level of alcohol and drug use and the consequences members experience. Greater alcohol use and sleep/wake problems are

associated with increased risk for negative consequences for certain classes. These results suggest that college drinking interventions could benefit from the incorporation of sleep-related content and the value in adding brief alcohol assessments and interventions to other college health treatments.

Ingersoll, K., Dillingham, R., Reynolds, G., Hettema, J., Freeman, J., Hosseinbor, S., & Winstead-Derlega, C. (2014). Development of a personalized bidirectional text messaging tool for HIV adherence assessment and intervention among substance abusers. *Journal of Substance Abuse Treatment*, 46(1), 66-73. doi: 10.1016/j.jsat.2013.08.002

We describe the development of a novel, two-way text messaging intervention tool for substance users who are non-adherent with HIV medications, and examine message flow data for feasibility and acceptability. The assessment and intervention tool, *TxText*, is fully automated, sending participants mood, substance use, and medication adherence queries. Participants respond and the tool recognizes the category of response and sends an appropriate personalized intervention message that participants designed in return. In 10 months, the tool sent 15,754 messages to 57 participants, who responded with 6290 messages. Response rates to substance use (2296), medication (2770), and mood queries (4486) were 65%, 68%, and 62%, respectively. Responses indicating medication adherence and abstinence from substances or good moods were more common than negative responses. The *TxText* tool can send messages daily over a 12 week period, receive responses, and decode them to deliver personalized affirming or intervention messages. While we await the outcomes of a pilot randomized trial, the process analysis shows that *TxText* is acceptable and feasible for substance abusers with HIV, and may serve as a complement to HIV medical care.

Leeman, R. F., Ralevski, E., Limoncelli, D., Pittman, B., O'Malley, S. S., & Petrakis, I. L. (in press). Relationships between impulsivity and subjective response in an IV ethanol paradigm. *Psychopharmacology*. doi: 10.1007/s00213-014-3458-9

**Rationale:** Impulsivity and individual differences in subjective response to alcohol are risk factors for alcohol problems and possibly endophenotypes for alcohol dependence. Few prior studies have addressed relationships between the two constructs. **Objectives:** To predict subjective responses to ethanol, we tested self-reported impulsiveness, ethanol dose condition (high dose, low dose or placebo) and time (7 timepoints) along with interactions among these variables. **Methods:** The present study is a secondary analysis of data from a within subject, placebo-controlled, dose-ranging ethanol administration study using IV infusion with a clamping technique to maintain steady-state breath alcohol concentration. The sample consisted of healthy, non-alcohol dependent social alcohol drinkers between the ages of 21-30 ( $N = 105$ ). Participants at varying levels of impulsivity were compared with regard to stimulant and subjective responses to three ethanol dose conditions over time. **Results:** Individuals with higher impulsivity reported stronger stimulant and weaker sedative response to alcohol, particularly at the higher dose. Higher impulsivity was associated with a steeper increase in stimulant effects during the first half of clamped ethanol infusion with the higher dose. **Conclusions:** These results suggest that impulsive individuals may experience enhanced reinforcing, stimulant effects and relatively muted aversive, sedative effects from alcohol. These subjective responses may relate to enhanced risk of alcohol problems among more impulsive individuals.



Lewis, M. A. & Neighbors, C. (in press). An examination of college student activities and attentiveness during a web-delivered personalized normative feedback intervention. *Psychology of Addictive Behaviors*.

Both heavy drinking and related risky sexual behavior among college students are common and are often associated with a number of negative consequences. A previously reported randomized controlled trial showed that a brief personalized normative feedback (PNF) intervention reduced the alcohol consumption and alcohol-related risky sexual behavior of heavy drinking, sexually active college students (Lewis et al., in press). For the present study, we examined what activities students were engaged in when viewing the feedback as well as who they were with and where they were when receiving the intervention. Furthermore, we conducted supplemental analyses with attentiveness as a hypothesized predictor of change using the same sample ( $N = 480$ ). Findings indicated that most students were engaged in activities when viewing the feedback and that most students viewed the feedback alone and at home. Furthermore, results revealed PNF to be most effective in reducing drinks per week among participants who were more attentive. Clinical implications and suggestions for additional research examining how attentiveness can be increased during web-based interventions are discussed.

Rice, S. L., Hagler, K. J., & Tonigan, J. S. (2014). Longitudinal trajectories of readiness to change: Alcohol use and help-seeking behavior. *Journal of Studies on Alcohol and Drugs*, 75(3), 486-495.

**Objective:** Pre-post changes in Readiness for Change (RC) are commonly assessed in treatment outcome studies, often with contradictory results. Little is known about 12-month RC trajectories among those initiating change, or their association with within- or between-person alcohol use or time-lagged help-seeking behavior. **Method:** This observational longitudinal study measured RC as ambivalence, problem recognition, and taking steps (SOCRATES; Miller & Tonigan, 1996). Participants ( $N = 253$ ; 66.4% male) diagnosed with alcohol use disorders were recruited from treatment sites, Alcoholics Anonymous (AA) groups, and other community sources when first initiating change and assessed at baseline, 3, 6, 9, and 12 months. **Results:** Support for significant participant heterogeneity as well as linear and quadratic change in RC trajectories were found, although results differed across the three aspects of RC. Independent associations of both within- and between-person percent days abstinent were found for ambivalence and taking steps. Lagged, time-specific fluctuations in prior help-seeking behaviors within an individual predicting subsequent RC showed that both AA ( $B = -1.650$ ,  $p < .05$ ) and treatment attendance ( $B = 2.914$ ,  $p < .01$ ) were associated with subsequent ambivalence. Prior increases in taking steps within individuals were predictive of subsequent AA but not treatment attendance. **Conclusions:** Results inform treatment providers about how RC trajectories vary depending on alcohol use, both within and between individuals, and how individuals may mobilize change attitudes and behaviors, especially in relation to AA attendance. Future research should investigate additional predictors of RC trajectories and the causal direction between RC and help-seeking.

Scott-Sheldon, L. A. J., Carey, K. B., Elliott, J. C., Garey, L., & Carey, M. P. (2014). Efficacy of alcohol interventions for first-year college students: A meta-analytic review of randomized controlled trials. *Journal of Consulting and Clinical Psychology*, 82(2), 177-188. doi: 10.1037/a0035192

**Objective:** Alcohol use established during the first-year of college can result in adverse consequences during the college years and beyond. This meta-analysis evaluates the efficacy of interventions to prevent alcohol misuse by first-year college students. **Methods:** Prevention studies were included if the study reported an individual- or group-level intervention using a randomized controlled trial, targeted first-year college students, and assessed alcohol use. Forty-one studies with 62 separate interventions ( $N = 24,294$ ; 57% women; 77% White) were included. Independent raters coded sample, design, methodological features, and intervention content. Weighted mean effect sizes, using fixed- and random-effects models, were calculated. Potential moderators, determined *a priori*, were examined to explain variability in effect sizes. **Results:** Relative to controls, students receiving an intervention reported lower quantity and frequency of drinking and fewer problems ( $d_s = 0.07 - 0.14$ ). These results were more pronounced when the interventions were compared to an assessment-only control group ( $d_s = 0.11 - 0.19$ ). Intervention content (e.g., personalized feedback) moderated the efficacy of the intervention. **Conclusions:** Behavioral interventions for first-year college students reduce alcohol consumption and alcohol-related problems. Interventions that include personalized feedback, moderation strategies, expectancy challenge, identification of risky situations, and goal setting optimize efficacy. Strategies to prevent alcohol misuse among first-year students are recommended.  $\Psi$

# Announcements

## Postdoctoral Scholars

Two-year NIH/NIDA-funded positions as postdoctoral scholars in drug abuse treatment and services research are available in a multidisciplinary research environment in the Department of Psychiatry, University of California, San Francisco. Scholars work with a preceptor to design and implement studies on the treatment of drug dependence, and select a specific area of focus for independent research. Training of psychiatrists, women, and minorities for academic research careers is a priority. Send letter of interest, CV, research statement, samples of work, and two (2) letters of recommendation to:

Postdoctoral Training Program in  
Drug Abuse Treatment/Services  
Research  
University of California, San  
Francisco  
1001 Potrero Avenue, Bldg 20,  
Ward 21, Rm 2127  
San Francisco, CA 94110-3518

For more information please visit <http://addiction.ucsf.edu/education/postdoctoral-training> or contact Diane Coseo via e-mail: [diane.coseo@ucsf.edu](mailto:diane.coseo@ucsf.edu) or phone: 415-206-3051.

## SFGH Substance Abuse Clinical Researcher

*University of California, San Francisco,  
Department of Psychiatry*

The Department of Psychiatry at UCSF invites applications for a Substance

Abuse Clinical/Translational Researcher based at San Francisco General Hospital (SFGH). Alcohol related researchers are strongly preferred. This will be an important leadership opportunity in the UCSF Department of Psychiatry and its related programs at Mission Bay and SF VA hospital. The position will be full-time Associate to Full Professor; open until filled.



### Qualifications:

- MD/PhD; or MD, Board certified in Psychiatry; licensed to practice medicine in California at the time of appointment; or PhD in Psychology or PsyD from an APA-approved doctoral program and APA-approved internship, California Board of Psychology license or eligibility preferred

### Additional Requirements:

- Demonstrated leader with skills in research, clinical practice, and education, with a strong commitment to academic research

- Track record of independent extramural funding with a national reputation

Apply online at <https://aprecruit.ucsf.edu/>.

## Call for Proposals

*The 7th Annual Global Research Awards for Nicotine Dependence*

(GRAND) 2014 Advancing the Understanding of the Mechanisms of Nicotine Dependence and Its Treatment

Pfizer Inc is pleased to announce the funding of the Global Research Awards for Nicotine Dependence (GRAND) program for 2014. The GRAND program is a competitive awards program led by an independent review panel of experts in the field. The mission of the program is to advance the understanding of the mechanisms of tobacco and nicotine dependence and its treatment.

The intent of the program is to fund at least 5 grants between US \$50,000 to US \$200,000 for a total fund of US \$1 million.

For further information about the awards program, including details about previous winners, please visit <http://www.grand2014.org> after May 1, 2014 or email the GRAND Coordinator at [enquiries@grand2014.org](mailto:enquiries@grand2014.org).

*Application deadline: July 1, 2014* 

# Celebrating Achievements in Addiction

## Linda Sobell - Jellinek Memorial Award

Each year since 1968, the Jellinek Memorial Award has been given to the person considered to have made the greatest scientific contribution to problems relating to alcohol in the research area designated for that year. The awards are made in four annually rotating subject areas: (1) Biological and medical research; (2) Social cultural and policy studies; (3) Behavioral (Clinical and Experimental) studies; and (4) Epidemiology, population studies and economic.



Linda Sobell

The 2014 award is being presented in the area of Behavioral (Clinical and Experimental) studies to Linda Carter Sobell, PhD, ABPP for her outstanding behavioral research on alcoholism, including development of empirically based tools for the study of drinking behavior.

The award will be presented to Linda at the 48th annual convention of the Association for Behavioral and Cognitive Therapies in Philadelphia, PA on November 21<sup>st</sup>, 2014.

## John F. Kelly - Inaugural Incumbent of the Elizabeth R. Spallin Professorship in Psychiatry in the Field of Addiction Medicine at Harvard Medical School

Our SoAP President, John F. Kelly, PhD, Director of the Massachusetts General Hospital (MGH)—Harvard Medical School, Recovery Research Institute, has been named the inaugural incumbent of the Elizabeth R. Spallin Professorship in Psychiatry in the Field of Addiction Medicine at Harvard Medical School (HMS). This is the first endowed professorship at Harvard in Addiction Medicine. It is unusual also to be awarded to a psychologist.

The ceremony took place on January 24th, 2014. Receiving the plaque, Dr. Kelly said, "I am deeply honored to be the inaugural incumbent of the first professorship at Harvard in Addiction Medicine. This new professorship will facilitate continuous dedicated efforts in research, practice, teaching, and training in addiction. It also sends a message that underscores the importance of addiction in medicine at the highest academic level."

Congratulations to our President!

**Division 50 members Drs. Carlos DiClemente, Linda Sobell, Mark Sobell, and Kati Witkiewitz each received a Presidential citation from APA President Nadine Kaslow**

**Carlo DiClemente, PhD** - In recognition of his scientific and clinical contributions to understanding motivation and behavior change and developing

an integrative transtheoretical model that has changed approaches to the treatment and prevention of addictive and health behaviors. His career-long passion and dedication to create and research a more functional, multidimensional, and integrated care model for treating addictions has influenced providers from multiple disciplines.

**Linda Sobell, PhD, and Mark Sobell, PhD** - In recognition of their scientific and clinical contributions to the addictions field for four decades, which have had a major impact on evidence-based practice. The significance and impact of their early research, which was part of a paradigm shift to a public health approach and viewing alcohol problems as lying on a severity continuum was recognized as a Citation Classic.

**Katie Witkiewitz, PhD** - In recognition for her early career accomplishments and contributions to the research and treatment of addictive behaviors. She has challenged conventions in the analysis of alcohol treatment outcomes by incorporating newer quantitative methodology to better understand mechanisms of behavior change. ♡



John Kelly, left, and Dean Flier



# SoAP (Division 50) Leadership

## ELECTED OFFICERS

John F. Kelly	President	<a href="mailto:jkelly11@mgh.harvard.edu">jkelly11@mgh.harvard.edu</a>
Alan J. Budney	President-Elect	<a href="mailto:Alan.J.Budney@Dartmouth.edu">Alan.J.Budney@Dartmouth.edu</a>
Sara Jo Nixon	Past President	<a href="mailto:sjnixon@ufl.edu">sjnixon@ufl.edu</a>
Brandon Bergman	Secretary	<a href="mailto:bgberman@mgh.harvard.edu">bgberman@mgh.harvard.edu</a>
Jennifer Buckman	Treasurer	<a href="mailto:jbuckman@rci.rutgers.edu">jbuckman@rci.rutgers.edu</a>
Linda Carter Sobell	Council Representative (Science)	<a href="mailto:sobell@nova.edu">sobell@nova.edu</a>
Ray Hanbury	Council Representative (Practice)	<a href="mailto:hanburypsy@aol.com">hanburypsy@aol.com</a>
James Bray	Member-at-Large (Public Interest)	<a href="mailto:jbray@bcm.edu">jbray@bcm.edu</a>
Krista M. Lisdahl	Member-at-Large (Science)	<a href="mailto:medinak@uwm.edu">medinak@uwm.edu</a>
Mark Schenker	Member-at-Large (Practice)	<a href="mailto:mschenker@navpoint.com">mschenker@navpoint.com</a>

## APPOINTED STUDENT AND EARLY CAREER REPRESENTATIVES

Lauren Hoffman	Student Representative to the Board	<a href="mailto:lahoffman@ufl.edu">lahoffman@ufl.edu</a>
David Eddie	Student Representative to the Board	<a href="mailto:daveddie@eden.rutgers.edu">daveddie@eden.rutgers.edu</a>
Allison Labbe	Early Career Representative to the Board	<a href="mailto:AKLABBE@partners.org">AKLABBE@partners.org</a>
David Eddie	Finance & Budget	<a href="mailto:daveddie@eden.rutgers.edu">daveddie@eden.rutgers.edu</a>
Stephen Proctor	Advocacy & Policy	<a href="mailto:Sproct2@tigers.lsu.edu">Sproct2@tigers.lsu.edu</a>

## COMMITTEE CHAIRS

James Bray	Advocacy & Policy	<a href="mailto:jbray@bcm.edu">jbray@bcm.edu</a>
Nancy Piotrowski	Archives	<a href="mailto:napiotrowski@yahoo.com">napiotrowski@yahoo.com</a>
Nancy Piotrowski	Communication and Technology	<a href="mailto:napiotrowski@yahoo.com">napiotrowski@yahoo.com</a>
Kristina Jackson	Convention Program Chair - 2014	<a href="mailto:kristina_jackson@brown.edu">kristina_jackson@brown.edu</a>
Jennifer Buckman	Convention Program Chair - 2013	<a href="mailto:jbuckman@rci.rutgers.edu">jbuckman@rci.rutgers.edu</a>
James MacKillop	Convention Program Chair - 2012	<a href="mailto:jmackill@uga.edu">jmackill@uga.edu</a>
Katie Witkiewitz	Collaborative Perspectives on Addiction 2014	<a href="mailto:katiew@unm.edu">katiew@unm.edu</a>
Jennifer Buckman	Collaborative Perspectives on Addiction 2014	<a href="mailto:jbuckman@rci.rutgers.edu">jbuckman@rci.rutgers.edu</a>
TBD	Credentialing Oversight	
Chris Martin	Education & Training/CE	<a href="mailto:martincs@upmc.edu">martincs@upmc.edu</a>
Cynthia Glidden-Tracey	Education & Training/CE	<a href="mailto:cynthia.glidden-tracey@asu.edu">cynthia.glidden-tracey@asu.edu</a>
Sandra Brown	Fellows & Awards	<a href="mailto:sanbrown@ucsd.edu">sanbrown@ucsd.edu</a>
Marsha Bates	Finance & Budget	<a href="mailto:mebates@rci.rutgers.edu">mebates@rci.rutgers.edu</a>
Robert Leeman	Listserv	<a href="mailto:robert.leeman@yale.edu">robert.leeman@yale.edu</a>
Joel Grube	Membership	<a href="mailto:grube@prev.org">grube@prev.org</a>
Bruce Liese	Membership (August 2014)	<a href="mailto:bliese@ku.edu">bliese@ku.edu</a>
Amy Rubin	Nominations & Elections	<a href="mailto:Amy.Rubin@va.gov">Amy.Rubin@va.gov</a>
Krista Lisdahl	Science Advisory	<a href="mailto:medinak@uwm.edu">medinak@uwm.edu</a>
Ezemenari M. Obasi	Population and Diversity Issues	<a href="mailto:emobasi@Central.UH.EDU">emobasi@Central.UH.EDU</a>
Bettina Hoepfner	TAN Editor	<a href="mailto:TANEditor@mgh.harvard.edu">TANEditor@mgh.harvard.edu</a>
Ken Weingardt	Webmaster	<a href="mailto:ken.weingardt@va.gov">ken.weingardt@va.gov</a>

## LIAISONS

Sara Jo Nixon	APA Education Directorate	<a href="mailto:sjnixon@ufl.edu">sjnixon@ufl.edu</a>
Mark Schenker	APA Practice Directorate	<a href="mailto:mschenker@navpoint.com">mschenker@navpoint.com</a>
James Bray	APA Public Interest Directorate	<a href="mailto:jbray@bcm.edu">jbray@bcm.edu</a>
Krista M. Lisdahl	APA Science Directorate	<a href="mailto:medinak@uwm.edu">medinak@uwm.edu</a>
Kim Kirby	APA Task Force on Caregivers	<a href="mailto:kkirby@tresearch.org">kkirby@tresearch.org</a>
Ray Hanbury	Committee on Advancement of Professional Practice (CAPP)	<a href="mailto:hanburypsy@aol.com">hanburypsy@aol.com</a>
Nancy Piotrowski	Federal Advocacy Coordinator (FAC)	<a href="mailto:napiotrowski@yahoo.com">napiotrowski@yahoo.com</a>
Sharon Wilsnack	International Relations in Psychology (CIRP)	<a href="mailto:sharon.wilsnack@med.und.edu">sharon.wilsnack@med.und.edu</a>
Maria Felix-Ortiz	Women in Psychology Network	<a href="mailto:felixort@uiwtx.edu">felixort@uiwtx.edu</a>
Sara Jo Nixon	Research Society on Alcoholism (RSA)	<a href="mailto:sjnixon@ufl.edu">sjnixon@ufl.edu</a>
Clayton Neighbors	Association for Behavioral & Cognitive Therapy (Addictive Behaviors SIG)	<a href="mailto:cneighbors@uh.edu">cneighbors@uh.edu</a>
Thomas Brandon	Society for Research on Nicotine and Tobacco	<a href="mailto:thomas.brandon@moffitt.org">thomas.brandon@moffitt.org</a>
Sandra Brown	College of Professional Psychology	<a href="mailto:sanbrown@ucsd.edu">sanbrown@ucsd.edu</a>
David Teplin	Canadian Psychological Association - Substance Abuse/Dependence Section	<a href="mailto:info@drdavidteplin.com">info@drdavidteplin.com</a>
Carlo DiClemente	Friends of NIAAA	<a href="mailto:diclemen@umbc.edu">diclemen@umbc.edu</a>
Position Open	Friends of NIDA	
Lauren Hoffman	APAGS Division Student Representative Network (DSRN)	<a href="mailto:lahoffman@ufl.edu">lahoffman@ufl.edu</a>
Allison Labbe	Early Career Psychologist Network	<a href="mailto:aklabbe@partners.org">aklabbe@partners.org</a>

---

## RENEW NOW!

Renewal notices for January-December 2014 have been sent out to 2013 members and affiliates of SoAP. APA Members, Associates, and Fellows may renew at <http://www.apa.org/membership/renew.aspx>. Professional Affiliates and Student Affiliates may renew at [www.apa.org/divapp](http://www.apa.org/divapp). Everyone, even if no membership in APA, may check membership status by going to [www.apa.org](http://www.apa.org) and logging in and going to their myAPA page. If you hold membership in SoAP/Division 50 for 2014, you will see it listed in your divisions. If you have questions, contact the administrative office at [division@apa.org](mailto:division@apa.org) or 202-336-6013.

---

## Society of Addiction Psychology Executive Officers

---

### PRESIDENT

**John F. Kelly**  
MGH-Harvard Center for Addiction Medicine  
60 Staniford Street  
Boston, MA 02114  
Telephone: (617) 643-1980  
Fax: (617) 643-1998  
E-mail: [jkelly11@mgh.harvard.edu](mailto:jkelly11@mgh.harvard.edu)

### PRESIDENT-ELECT

**Alan J. Budney**  
Department of Psychiatry  
Geisel School of Medicine at Dartmouth  
Addiction Treatment and Research Program  
Rivermill Complex, Suite B3-1 85  
Mechanic St.  
Lebanon, NJ 03766  
Telephone: (603) 653-1821

### PAST PRESIDENT

**Sara Jo Nixon**  
Dept. of Psychiatry  
McKnight Brain Institute  
University of Florida  
P. O. Box 100256  
Gainesville, FL 32610  
Telephone: (352) 392-3681  
E-mail: [snixon@ufl.edu](mailto:snixon@ufl.edu)

### SECRETARY

**Brandon G. Bergman**  
MGH-Harvard Center for Addiction Medicine  
60 Staniford Street  
Boston, MA 02114  
Telephone: (617) 643-7563  
E-mail: [bgbergman@mgh.harvard.edu](mailto:bgbergman@mgh.harvard.edu)

### TREASURER

**Jennifer F. Buckman**  
Center of Alcohol Studies  
Rutgers University  
607 Allison Rd  
Piscataway, NJ 08854-8001  
Telephone: (732) 445-0793  
Fax: (732) 445-3500  
E-mail: [jbuckman@rci.rutgers.edu](mailto:jbuckman@rci.rutgers.edu)

### MEMBERS-AT-LARGE

**James H. Bray**  
Baylor College of Medicine  
Department of Family and Community Medicine  
3701 Kirby Drive, Suite 600  
Houston, TX 77098  
Telephone: (713) 798-7752  
E-mail: [jbray@bcm.edu](mailto:jbray@bcm.edu)

### Mark Schenker

Caron Treatment Centers  
PO Box 150  
Wernersville, PA 19565  
Phone: (215) 264-5412  
E-mail: [mschenker@navpoint.com](mailto:mschenker@navpoint.com)

### Krista M. Lisdahl

Department of Psychology  
University of Wisconsin - Milwaukee  
P.O. Box 413  
Milwaukee, WI 53201  
Telephone: (414) 229-4746  
E-mail: [medinak@uwm.edu](mailto:medinak@uwm.edu)

### COUNCIL REPRESENTATIVES

**Ray Hanbury**  
Mount Sinai School of Medicine and  
UMDNJ-Robert Wood Johnson Medical School  
2640 Highway 70 Bldg. 7A Suite 202  
Manasquan, NJ 08736-2609  
Telephone: (732) 223-1242  
Fax: (732) 223-3296  
E-mail: [hanburypsy@aol.com](mailto:hanburypsy@aol.com)

### Linda Carter Sobell

Center for Psychological Studies  
Nova Southeastern University  
3301 College Avenue  
Fort Lauderdale, FL 33314 USA  
Telephone: (954) 262-5811  
Fax: (954) 262-3895  
E-mail: [sobell@nova.edu](mailto:sobell@nova.edu)