



Vermont Center on  
Behavior & Health  
The University of Vermont

**12TH ANNUAL CONFERENCE**

# **Tobacco Use: Intersections with Other Addictions, Chronic Disease, and Health Disparities**



# Welcome

**OCTOBER 3-4, 2024**

**HOTEL CHAMPLAIN, BURLINGTON, VT**

A Hybrid Event  
#VCBH2024



Dear Colleagues,

Welcome to the 12th Vermont Center on Behavior and Health annual conference. Following our success of the past several years, we again offer this conference as a hybrid experience, allowing attendees to participate both in person and virtually. This allows everyone to attend in a way that works best for their own circumstances.

Our theme for this year's conference is *Tobacco Use: Intersections with Other Addictions, Chronic Disease, and Health Disparities*. Cigarette smoking alone, directly contributes to risk for a myriad of chronic diseases causing almost 500,000 premature deaths in the U.S. annually. Smoking and other tobacco use disproportionately impacts certain subpopulations including those with other addictions, contributing to health disparities. Many of the presentations over the next two days will also examine sex and gender differences as tobacco use among women often carries the additional risk of multigenerational adverse health effects and disproportionately impacts certain subgroups of women including those residing in rural regions, those who have other addictions or are socioeconomically disadvantaged, and those who have multiple risk factors (i.e., cumulative vulnerability). Advancing scientific understanding of these important topics provides the opportunity to continue reducing the terrible burden that tobacco use has on U.S. and global population health.

Our speakers this year again come from across the United States, bringing with them a multitude of perspectives on tobacco use. We have experts who can speak to this matter on a national level as well as those who can discuss the impact on selected subpopulations or regions, and particular types of tobacco use alone or in combination with other tobacco products and other addictive drugs.

I would like to thank U.S. Senator Peter Welch, for again taking time from his busy schedule to provide opening remarks. A great deal of thanks also goes to our keynote speaker, Nancy Rigotti, MD, an accomplished scholar and clinician, who is a globally recognized expert in tobacco control and innovations in cessation interventions.

I am deeply grateful to our speakers for their time and energy in sharing their scientific and clinical insights on this very important topic. I also extend my deep gratitude to the National Institute of General Medical Sciences (NIGMS), National Institute on Drug Abuse, the U.S. Food and Drug Administration Center for Tobacco Products, and the University of Vermont for their generous support without which these conferences would not be possible.

We hope you enjoy our 12th annual conference! Thank you, as always, for your contributions and support.

Sincerely,



Stephen T. Higgins, PhD  
Director, Vermont Center on Behavior and Health  
University Distinguished Professor  
Virginia H. Donaldson MD '51 Endowed Professor of Translational Science  
Departments of Psychiatry and Psychological Science



## ACCREDITATION

In support of improving patient care, The Robert Larner College of Medicine at The University of Vermont is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.



The University of Vermont designates this live activity for a maximum of 7.25 *AMA PRA Category 1 Credit(s)*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This program has been reviewed and is acceptable for up to 7.25 Nursing Contact Hours.

## TARGET AUDIENCE

Physicians, Nurses

## CONFERENCE OBJECTIVES

1. Discuss the relationship between behavior patterns (lifestyle) and risk for chronic disease and premature death.
2. Identify evidence-based interventions that successfully promote health-related behavior change.

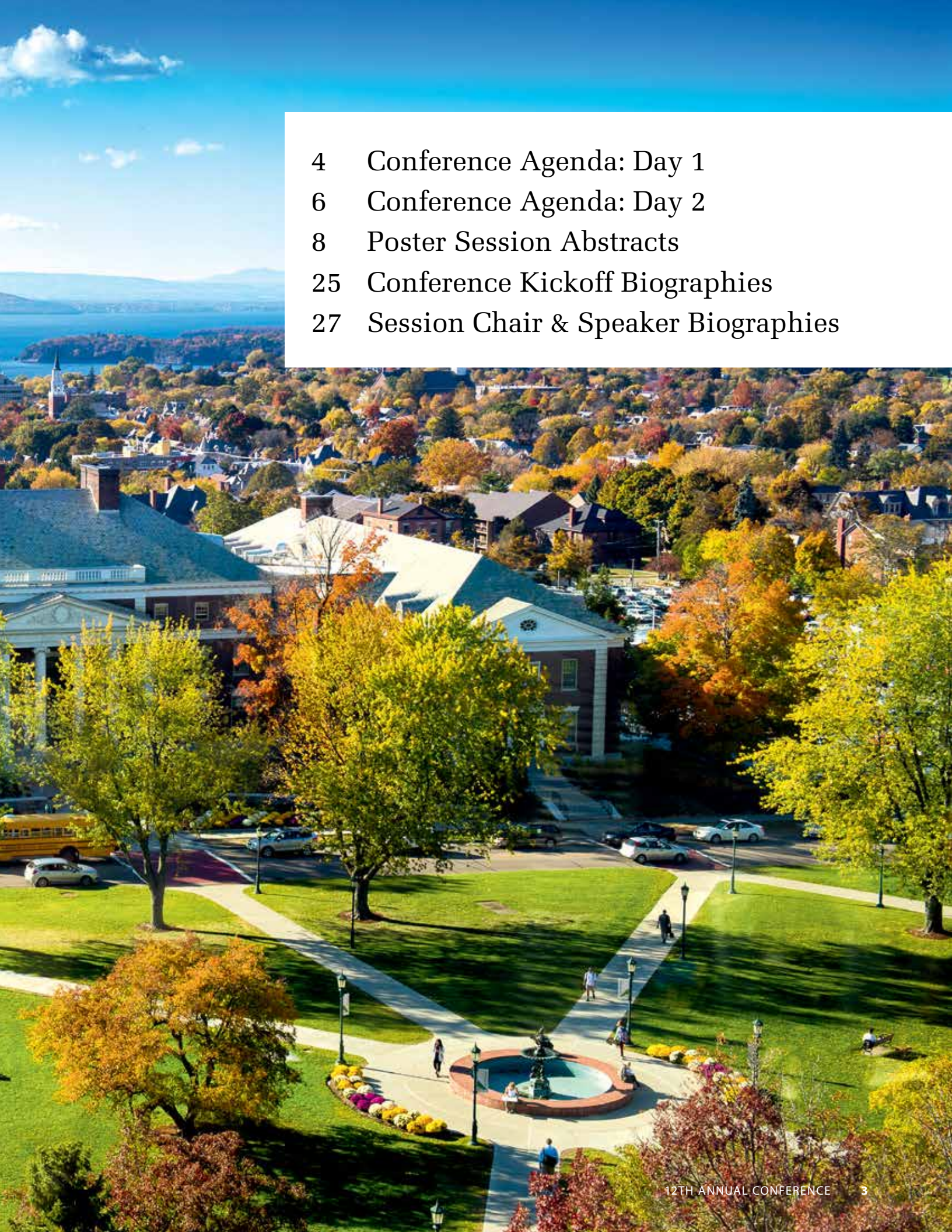
## MEETING DISCLAIMER

Regarding written materials and information received, written or otherwise, during this Conference, the scientific views, statements, and recommendations expressed during this activity represent those of the authors and speakers and do not necessarily represent the views of the University of Vermont.

## FUNDING

This event is funded in part by generous support from the National Institute of General Medical Sciences (NIGMS), the National Institute on Drug Abuse (NIDA), and the U.S. Food and Drug Administration (FDA) Center for Tobacco Products (CTP). The content is solely the responsibility of the authors and does not necessarily represent the official views of NIGMS, NIDA, FDA, or CTP.





4 Conference Agenda: Day 1  
6 Conference Agenda: Day 2  
8 Poster Session Abstracts  
25 Conference Kickoff Biographies  
27 Session Chair & Speaker Biographies

# Thursday, October 3

## CONFERENCE AGENDA

|                |   |   |                  |
|----------------|---|---|------------------|
| 8:15-9:00 AM   | <b>Breakfast</b>  | Adirondack AB   |                  |
|                | <b>Registration</b>   | Lobby   |                  |
| 9:00-9:10 AM   | <b>Opening Remarks</b>  | Adirondack CD   |                  |
|                |   | <a href="https://uvmcom.zoom.us/j/99079544990">https://uvmcom.zoom.us/j/99079544990</a>   | password: 100324 |
|                | <b>Stephen T. Higgins, PhD</b> , Director, Vermont Center on Behavior and Health, University Distinguished Professor, Virginia H Donaldson Professor in Translational Science, Departments of Psychiatry and Psychological Science, University of Vermont |   |                  |
|                | <b>Special Welcome</b>  | <b>Peter Welch</b> , U.S. Senator for Vermont   |                  |
| 9:10-10:10 AM  | <b>Keynote Address</b>  | <b>Cytisine for Tobacco Cessation: New Opportunities for an Old Drug</b><br><b>Nancy A. Rigotti, MD</b> , Professor of Medicine, Harvard Medical School, Founding Director, Tobacco Research and Treatment Center, Massachusetts General Hospital |                  |
| 10:10-10:25 AM | <b>Break</b>  | Prefunction   |                  |

|  |   |  |                  |
|--|---|--|------------------|
| 10:30 AM-12:25 PM  | <b>Session 1</b>  | Adirondack CD  |                  |
|  |   | <a href="https://uvmcom.zoom.us/j/96617042387">https://uvmcom.zoom.us/j/96617042387</a>  | password: 100324 |
| <b>Tobacco Product Use and Cessation Among People with Comorbid Substance Use</b><br>Session Chair: <b>Stacey C. Sigmon, PhD</b> , Director, UVM Center on Rural Addiction, Professor of Psychiatry and Psychological Science, University of Vermont |   |  |                  |
| 10:30-10:55 AM   |   | <b>Tobacco Product Use and At-Risk Drinking: Integrated Treatment Strategies &amp; Emerging Trends</b><br><b>Lisa M. Fucito, PhD</b> , Associate Professor of Psychiatry, Yale University School of Medicine, Director, Tobacco Treatment Service, Smilow Cancer Hospital at Yale-New Haven, Co-Director, Digital Insights Lab |                  |
| 11:00-11:25 AM   |   | <b>Tobacco Use and Cessation Among Individuals Receiving Medication for Opioid Use Disorder (MOUD)</b><br><b>Stacey C. Sigmon, PhD</b> , Director, UVM Center on Rural Addiction, Professor of Psychiatry and Psychological Science, University of Vermont   |                  |
| 11:30-11:55 AM   | <b>Developing and Testing Novel Tobacco Treatments for Adults with Opioid Use Disorder</b><br><b>Joanna M. Streck, PhD</b> , Assistant Professor in Psychiatry and Medicine, Harvard Medical School |  |                  |
| 12:00-12:25 PM   | <b>Audience/Panel Q&amp;A Discussion</b>  |  |                  |
| 12:30-1:30 PM  | <b>Lunch</b>  | Adirondack AB  |                  |

|              |  |   |                  |
|--------------|--|---|------------------|
| 1:35-3:30 PM | <b>Session 2</b>                         | Adirondack CD   |                  |
|              |  | <a href="https://uvmcom.zoom.us/j/91089956915">https://uvmcom.zoom.us/j/91089956915</a>   | password: 100324 |
|              |  | <b>Intersections of Tobacco Use and Chronic Health Conditions</b><br>Session Chair: <b>Ira M. Bernstein, MD</b> , John Van Sicklen Maeck<br>Professor and Chair, Department of Obstetrics, Gynecology and<br>Reproductive Sciences, University of Vermont |                  |
| 1:35-2:00 PM |  | <b>Emerging Nicotine Products and Pulmonary Health:<br/>Balancing the Risks and Benefits</b><br><b>Katherine E. Menson, DO</b> , Assistant Professor, Pulmonary and<br>Critical Care Medicine, University of Vermont                                      |                  |
| 2:05-2:30 PM |  | <b>Nicotine/Tobacco Use Among People with PTSD</b><br><b>Kelly R. Peck, PhD</b> , Assistant Professor, Departments of Psychiatry<br>and Psychological Science, University of Vermont  |                  |
| 2:35-3:00 PM |  | <b>Nicotine/Tobacco Use Among People with HIV</b><br><b>Patricia A. Cioe, PhD</b> , Associate Professor, Department of<br>Behavioral and Social Sciences, Center for Alcohol and<br>Addiction Studies, Brown University, School of Public Health          |                  |
| 3:05-3:30 PM | <b>Audience/Panel Q&amp;A Discussion</b> |   |                  |
| 3:35-3:55 PM | <b>Break</b>                             | Prefunction   |                  |
| 4:00-5:30 PM | <b>Reception/<br/>Poster Session</b>     | Montpelier Conference Room  |                  |
|              |  | Session Chair: <b>Eric A. Thrailkill, PhD</b> , Assistant Professor,<br>Departments of Psychological Science and Psychiatry,<br>University of Vermont   |                  |
|              |  | See pages 8-21 for Poster Titles & Abstracts  |                  |

# Day 1

# Friday, October 4

## CONFERENCE AGENDA

|                   |  |  |                  |
|-------------------|--|--|------------------|
| 8:15-9:00 AM      | <b>Breakfast</b>                           | Adirondack AB  |                  |
|                   | <b>Registration</b>                        | Lobby  |                  |
| 9:00-9:05 AM      | <b>Opening Remarks</b>                     | Adirondack CD  |                  |
|                   |  | <a href="https://uvmcom.zoom.us/j/99808074232">https://uvmcom.zoom.us/j/99808074232</a>  | password: 100424 |
|                   |  | <b>Elias M. Klemperer, PhD</b> , Assistant Professor, Departments of Psychiatry and Psychological Science, Associate Director, Vermont Center on Behavior and Health, University of Vermont  |                  |
| 9:00-10:30 AM     | <b>Session 3</b>                           | Adirondack CD  |                  |
|                   |  | <b>Tobacco Use: Intersections with Chronic Health Conditions, Rurality, and Sex</b><br>Session Co-Chairs: <b>Sarah H. Heil, PhD</b> , Associate Director, UVM Center on Rural Addiction, Professor of Psychiatry and Psychological Science, University of Vermont; <b>Stephen T. Higgins, PhD</b> , Director, Vermont Center on Behavior and Health, University Distinguished Professor, Virginia H Donaldson Professor in Translational Science, Departments of Psychiatry and Psychological Science, University of Vermont |                  |
|                   |  | <b>The Effects of IQOS Use on Cigarette Smoking Behaviors: Do the Effects Differ by Sex?</b><br><b>Janet Audrain-McGovern, PhD</b> , Professor & Director, Addictions Section, Depart. of Psychiatry, Perelman School of Medicine, University of Pennsylvania  |                  |
|                   |  | <b>E-cigarette Use and Cigarette Smoking Among Adults with Chronic Health Conditions: National Findings from the PATH Study</b><br><b>Karin A. Kasza, PhD</b> , Assistant Professor of Oncology, Department of Health Behavior, Roswell Park Comprehensive Cancer Center   |                  |
| 9:05-9:30 AM      |  |  |                  |
| 9:35-10:00 AM     |  |  |                  |
| 10:05-10:30 AM    | <b>Audience/Panel Q &amp; A Discussion</b> |  |                  |
| 10:30-10:45 PM    | <b>Break</b>                               | Prefunction  |                  |
| 10:50 AM-12:35 PM | <b>Session 4</b>                           | Adirondack CD  |                  |
|                   |  | <a href="https://uvmcom.zoom.us/j/92371260806">https://uvmcom.zoom.us/j/92371260806</a>  | password: 100424 |
|                   |  | <b>Tobacco Use: Intersections with Chronic Health Conditions, Rurality, and Sex (Continued)</b><br>Session Co-Chairs: <b>Sarah H. Heil, PhD; Stephen T. Higgins, PhD</b>   |                  |
|                   |  | <b>Gender and Rurality Differences in Adolescent Cigarette Smoking</b><br><b>Tyler G. Erath, PhD</b> , Postdoctoral Fellow, Department of Psychiatry, University of Vermont  |                  |
|                   |  | <b>Disparities in Smoking: Disproportionate Impacts on Rural Women by Chronological Age</b><br><b>Stephen T. Higgins, PhD</b> , Director, Vermont Center on Behavior and Health, University Distinguished Professor, Virginia H Donaldson Professor in Translational Science, Departments of Psychiatry and Psychological Science, University of Vermont   |                  |
| 10:50-11:15 AM    |  |  |                  |
| 11:20-11:45 AM    |  |  |                  |
| 11:50 AM-12:15 PM |  |  |                  |
| 12:20-12:35 AM    | <b>Audience/Panel Q &amp; A Discussion</b> |  |                  |



|                            |  |   |                        |
|----------------------------|--|---|------------------------|
| 12:40-1:10 PM              | <b>Lunch &amp; Learn</b>                   | Adirondack AB: Buffet and Seating   | Adirondack CD: Session |
|                            |  | <a href="https://uvmcom.zoom.us/j/91263332597">https://uvmcom.zoom.us/j/91263332597</a>   | password: 100424       |
|                            |  | Session Chair: <b>Kelly R. Peck, PhD</b> , Assistant Professor, Departments of Psychiatry and Psychological Science, University of Vermont  |                        |
|                            |  | <b>Kelly R. Peck, PhD</b> , Assistant Professor, Departments of Psychiatry and Psychological Science, University of Vermont   |                        |
|                            |  | <b>Innovative Strategies to Promote Harm Reduction in Rural Communities</b><br><b>Gail L. Rose, PhD</b> , UVM Center on Rural Addiction, Assistant Professor of Psychiatry, University of Vermont   |                        |
| 1:45-3:10 PM               | <b>Session 5</b>                           | Adirondack CD   |                        |
|                            |  | <a href="https://uvmcom.zoom.us/j/93384904826">https://uvmcom.zoom.us/j/93384904826</a>   | password: 100424       |
|                            |  | <b>Tobacco Use: Intersections with Chronic Health Conditions, Rurality, and Sex</b> (Continued)<br>Session Co-Chairs: <b>Sarah H. Heil, PhD; Stephen T. Higgins, PhD</b>  |                        |
|                            |  | <b>Characterizing the Relationship between Moral Injury and Demand for Cigarettes Among Women Veterans</b><br><b>Justin T. McDaniel, PhD</b> , Associate Professor of Public Health, Southern Illinois University   |                        |
| 1:45-2:10 PM               |  | <b>Biases in Decision Making and Smoking Risk Among Women and Girls</b><br><b>Eric A. Thrailkill, PhD</b> , Associate Professor, Departments of Psychological Science and Psychiatry, University of Vermont   |                        |
| 2:15-2:40 PM               |  |   |                        |
| 2:45-3:10 PM               | <b>Audience/Panel Q &amp; A Discussion</b> |   |                        |
| 3:15-3:20 PM               | <b>Closing Remarks</b>                     | Adirondack CD   |                        |
|                            |  | <b>Stephen T. Higgins, PhD</b> , Director, Vermont Center on Behavior and Health, University Distinguished Professor, Virginia H Donaldson Professor in Translational Science, Departments of Psychiatry and Psychological Science, University of Vermont |                        |
| <b>Conference Adjourns</b> |  |   |                        |

# Day 2

# Poster Session Abstracts

Alphabetical order by primary author

## *Investigating reasons for first product use after waking among young adults who dually use cigarettes and e-cigarettes: A secondary analysis of baseline responses among participants in a randomized clinical trial*

**Lucia C. Berglund**

University of Vermont, Burlington, VT

**Marc Jerome P. Feinstein, BA**

University of Vermont, Burlington, VT

**Peace Ogadi**

Norwich University, Northfield, VT

**Shannon O'Connor, MS**

University of Vermont, Burlington, VT

**Elias M. Klemperer, PhD**

University of Vermont, Burlington, VT

### **INTRODUCTION**

Dual use of cigarettes and e-cigarettes is common in the US; especially among students. First product used after waking is a strong predictor of dependence and treatment outcomes.

### **METHODS**

A sample of 396 young adult (aged 18-29) dual users (used e-cigarettes on >10 of past 30 days, >5 cigarettes daily) reported the product they typically use first after waking and their rationale for doing so in an open response format. Two coders independently categorized responses into 5 inductive categories. Chi-square tests and logistic regressions were used to compare the first product used across each reason category and associations with being a current student.

### **RESULTS**

Reasons for first product used included greater drug reward (positive reinforcing properties of nicotine; n=111), convenience (ease of use/access; n=73), habit (regular/automatic routine or use patterns; n=62), non-nicotine product characteristics (flavor, device, or other property; n=43), alleviation of withdrawal (reducing/alleviating aversive symptoms or feelings; n=37), other (n=23) and no reason provided (n=84). Being in school was associated with reporting convenience as the reason for first product use (OR=2.64, 95% CI=1.47-4.71) but no other reason. Convenience was most likely to be the rationale for vaping first (86.4%; p<0.001). Drug reward and habit were both associated with smoking first (94.3% and 100%, respectively; both p<0.001). No other reason categories were significant.

### **DISCUSSION**

Findings underscore the need to consider both drug and non-drug factors in developing treatment for dual users and highlight potential differences in reasons for use among those attending school.

# Abstracts

## *Implementation of contingency management in Vermont: Addressing the tobacco use disparity in behavioral health populations*

Nationally, and in Vermont, individuals with behavioral health conditions – persons living with substance use dependence and/or mental health diagnoses – are nearly twice as likely to use commercial tobacco products than people without such conditions. This disparity in tobacco use leads to higher rates of chronic disease and premature death, largely from tobacco-attributed diseases. While Vermont has achieved near-universal rates of tobacco screening in populations with behavioral health conditions (94% of individuals in SUD treatment programs were screened for tobacco use in 2020), the percentage of these individuals who then receive any evidence-based treatment is deficient (only about 55% of individuals in SUD treatment received counseling or nicotine replacement therapy in 2020). To improve outcomes for people in Vermont with behavioral health conditions who use tobacco, the Tobacco Control Program added a contingency management protocol to the tobacco cessation quitline, 802Quits. In 2023, there were 3,155 enrollees to 802Quits services; 30% had a behavioral health condition. By adding contingency management to 802Quits through financially incentivizing completion of coaching calls, the Vermont Tobacco Control Program aimed to increase the quit attempts amongst people in Vermont with a behavioral health condition. In 2023, 150 people in Vermont received incentives for utilizing 802Quits Behavioral Health Protocol, with 80% receiving the NAQC standard of minimal treatment (one counseling call or NRT). While we are unable to measure quit success, by adding the Behavioral Health Protocol to 802Quits, the Vermont Tobacco Control Program is providing more support for quit attempts amongst this vulnerable population.

**Dana Bourne, MPH**  
*Vermont Department of Health*

“I’ve learned that I’m open-minded to this possibility”

*Evaluating the feasibility and acceptability of a psilocybin-aided smoking cessation study for people with HIV who smoke: A qualitative study*

**Patricia A. Cioe, PhD**

**Garrett S. Stang, MPH**

**Danish Azam, BA**

**Sarah Dugal**

*Department of Behavioral and Social Sciences, Brown University School of Public Health, Providence, RI*

**BACKGROUND**

People with HIV (PWH) are disproportionately affected by cigarette use, with a 40–70% prevalence rate. Although many express a strong interest in quitting, many PWH who smoke experience lower cessation rates with traditional treatment, in part due to their comorbid anxiety and depressive symptoms. Psilocybin, a classic psychedelic referred to as a “breakthrough therapy” by the U.S. Food & Drug Administration (FDA), has been shown to have potential as a therapeutic treatment for psychiatric symptoms, (e.g., anxiety and depression) and substance use disorders, including tobacco dependence. Preliminary evidence has also shown that administering psilocybin to people who smoke and have been previously unable to quit with traditional treatments resulted in impressive smoking abstinence rates (80%) at 6-months in two smoking cessation pilot studies.

**METHODS**

Semi-structured, in-depth qualitative interviews were conducted with PWH who smoke. Interviews were audio-recorded, transcribed verbatim, and analyzed using thematic analysis.

**RESULTS**

Twenty-five participants were enrolled: 15 cis male, 9 cis female, and 1 transgender female. Five main themes emerged: participants had varying previous experiences with psilocybin; they had uncertainty about psilocybin’s effects and concern over potential side effects; there was a need for trusted sources of information and testimonials; they were ultimately willing to try psilocybin-aided therapy for medical and/or tobacco treatment; and they expressed that set and setting of psilocybin use matters.

**CONCLUSIONS**

Psilocybin-assisted tobacco treatment may be acceptable among PWH who smoke. Participants highlighted the importance of addressing key concerns related to an emerging therapy to increase acceptability and willingness to try it.

# Abstracts

## *A single-group pilot feasibility study of a cognitive-behavioral treatment plus physical activity tracker for smoking cessation*

### **INTRODUCTION**

Smoking and sedentarism are two of the major preventable risk factors for diverse diseases. Studies suggest that physical activity can enhance the effectiveness of smoking cessation therapies<sup>1</sup>. New approaches to increase physical activity such as physical activity trackers (PAT) have shown positive results<sup>2</sup>. The study aimed to examine the effect of cognitive behavioral therapy (CBT) plus PAT on 1) smoking outcomes, and 2) physical activity.

### **METHODS**

41 participants (73.18% women) received a 6-session group CBT in the Addictive Behaviors Clinical Unit (University of Oviedo, Spain). Participants also wore an activity tracker during the entire treatment duration.

### **RESULTS**

The number of smoked cigarettes per day decreased significantly at post-treatment [Mpre-treatment = 15.43 (SD = 4.61); Mpost-treatment = 6.14 (SD = 5.05);  $p < 0.004$ ], as well as the CO ppm levels [Mpre-treatment = 27.81 (SD = 12.88); Mpost-treatment = 8.65 (SD = 17.52);  $p < 0.001$ ]. Regarding PA, the number of steps per day was significantly higher at the post-treatment [Mpre-treatment = 7433 (SD = 5561); Mpost-treatment = 10420 (SD = 2990);  $p < 0.002$ ]. No statistically significant differences were found in the weekly hours of moderate physical activity [Mpre-treatment = 2.83 (SD = 3.63); Mpost-treatment = 3.50 (SD = 2.75);  $p < 0.420$ ].

### **DISCUSSION**

CBT+PAT seems promising to enhance smoking abstinence and daily physical activity among the general population of cigarette smokers. Future studies should include larger samples, control groups, and long-term follow-ups to fully explore activity trackers' potential.

**Ignacia Cuesta-López**

**Roberto Secades-Villa**

**Alba González-Roz**

**Layla Alemán-Moussa**

**Clara Iza-Fernández**

*Addictive Behaviors Research Group  
Department of Psychology,  
University of Oviedo, Oviedo, Spain*

*A secondary analysis of smoking cessation treatment for young adults who dually use cigarettes and e-cigarettes: Investigating e-cigarette abstinence as a mediator of smoking cessation*

**Marc Jerome P. Feinstein, BA**

**Katya Marsh**

**Stephen T. Higgins, PhD**

**Elias M. Klemperer, PhD**

*University of Vermont, Burlington, VT*

**SIGNIFICANCE**

Dual use of cigarettes and e-cigarettes is increasingly prevalent among young adults, but treatment research is limited. E-cigarettes are effective for smoking cessation among exclusive smokers but their role in treatment for established dual-users remains unclear. Our recent randomized clinical trial (RCT) found nicotine replacement therapy (NRT) for smoking cessation was most effective when combined with the recommendation to simultaneously quit vs continue e-cigarettes among young adult dual-users. This analysis explored e-cigarette abstinence as a mechanism of treatment effects.

**METHODS**

In the parent 2x2 factorial RCT, participants (N=396) were aged 18-29, smoked >5 cigarettes daily, used e-cigarettes on >10 of the past 30 days, and were motivated to quit smoking. Participants received 12 weeks of 14mg patch + 4mg lozenge NRT vs. No NRT, along with treatment recommendations (12 weeks of text messages) to quit vs. continue e-cigarettes. Regression analyses explored e-cigarette abstinence during treatment as a mediator of treatment recommendation's effect on smoking cessation at the end of treatment.

**RESULTS**

Seven-day point-prevalence e-cigarette abstinence at week 4 was greater among those who received a treatment recommendation to quit (60.6%) vs continue (22.7%) e-cigarettes ( $p < 0.05$ ) with no effect for NRT. Those who abstained from e-cigarettes at week 4 had greater odds of 7-day point prevalence cigarette abstinence at week 12 (OR=1.71, 95% CI=1.14-2.56). Finally, there was an indirect effect such that e-cigarette abstinence mediated treatment recommendation's effect on smoking cessation ( $p < 0.05$ ).

**DISCUSSION**

In this sample of treatment-seeking young adult dual-users, e-cigarette abstinence during treatment increased the odds of successful smoking cessation.

# Abstracts

## *Patient characteristics and outcomes by sex and smoking status in pulmonary and cardiac rehabilitation*

### **INTRODUCTION**

Those with established pulmonary or coronary disease should attend secondary prevention programs. Attendance at these programs is known to differ by sex and by smoking status, with females and those who smoke being less likely to attend. However, little is known about whether the risk factors of being female and smoking are cumulative, and how outcomes from secondary prevention differ by these subgroups. Accordingly, we sought to examine patient characteristics at entry and outcomes of those attending pulmonary (PR) and cardiac rehabilitation (CR) by sex and smoking status.

### **METHOD**

Data were from patients enrolled in programs participating in a national registry between 2013-2021 (PR) or 2012-2021 (CR). Variables examined included: age, sex, race, educational attainment, insurance coverage, qualifying diagnosis, BMI, number of PR/CR sessions attended, and baseline and change in psychosocial (depression and anxiety symptoms) and physical function and fitness measures (6-minute walk distance [6MWD]/metabolic equivalents [METs]).

### **RESULTS**

Analyses included 41,087 PR and 447,921 CR patients. Current smoking was reported in 14.3% (PR) and 8.4% (CR) of patients. Across PR/CR, at baseline, current smoking and female sex were both associated with higher depression scores, lower fitness/function measures, and completing fewer sessions. Both current smoking and female sex were significantly associated with less improvement in 6MWD, METs and depression scores within CR.

### **CONCLUSIONS**

Both sex and smoking status are important risk factors for those entering secondary prevention programs. Females who smoke have higher risk factors at entry, attend fewer sessions, and, especially in CR, may see less benefit from attending.

**Diann E. Gaalema, PhD**

*University of Texas Medical Branch,  
Galveston, TX*

**Yu Zhang, MS**

*UC Santa Cruz, Santa Cruz, CA*

**Sulamunn R. M. Coleman, PhD**

*University of Vermont, Burlington, VT*

**George Howard, DrPH**

*University of Alabama at Birmingham,  
Birmingham, AL*

**Katherine E. Menson, DO**

*University of Vermont, Burlington, VT*

## *Smoking characteristics of adults with posttraumatic stress disorder who were receiving medications opioid use disorder*

**Jillian Giannini, BS**

**Rebecca Cole, BA**

**Peter Lontine, BA**

**Olivia Tarmey, MPH**

**Kelly R. Peck, PhD**

*Vermont Center on Behavior and Health, University of Vermont, Burlington, VT*

### **AIM**

Compared to the general population, smoking rates are disproportionately high among individuals with posttraumatic stress disorder (PTSD) and those receiving medications for opioid use disorder (MOUD), respectively. In this study, we sought to characterize the smoking patterns of individuals with PTSD who were receiving MOUD.

### **METHODS**

Ninety-four buprenorphine- or methadone-maintained adults with PTSD were randomized to receive either: (a) continued MOUD treatment as usual (n=31), (b) Prolonged Exposure therapy (PE; n=31), or (c) PE plus financial incentives for PE session attendance (PE+; n=32) in one of three recent trials evaluating PE+ for improving therapy attendance and PTSD symptoms. We also examined self-reported cigarette smoking, cigarettes smoked per day, years of smoking, urine cotinine levels, and measures of combustible and e-cigarette dependence (Fagerström Test for Nicotine Dependence [FTND]; e-FTND) in participants who provided this data.

### **RESULTS**

Most participants (76.6%) reported smoking cigarettes. Those who reported smoking cigarettes smoked an average of 13.8 cigarettes per day and had smoked for an average of 22.4 years. Among those who smoked, urine cotinine levels remained high throughout the studies, regardless of experimental condition. As part of a recently initiated randomized trial, participants reported an average FTND score of 4.3, indicating low to moderate levels of cigarette dependence and an average e-FTND score of 5 suggesting moderate levels of e-cigarette dependence.

### **CONCLUSION**

These findings highlight the high smoking prevalence among individuals with PTSD who are receiving MOUD. Future research should examine whether PTSD treatment is associated with smoking cessation in this vulnerable population.



# Abstracts

## *Randomized clinical trial examining reduces nicotine content cigarettes among pregnant people with socioeconomic disadvantage who smoke*

### **SIGNIFICANCE**

Randomized controlled trials have shown that reducing the nicotine content of cigarettes given to people who smoke – including relatively healthy adults as well as priority populations disproportionately affected by smoking like those with psychiatric conditions or socioeconomic disadvantage – decreases the number of cigarettes smoked per day (CPD) and biomarkers of exposure without increasing compensatory smoking. The present study examined whether those effects extend to pregnant people with socioeconomic disadvantage.

### **METHODS**

A 12-week randomized clinical trial was conducted at two sites (University of Vermont, University of Kentucky). Participants were pregnant (<25 weeks gestational age), socioeconomically disadvantaged (< Associate's degree), and not planning to quit smoking in the next 30 days. Participants were assigned to smoke their usual brand (UB) cigarettes or very low nicotine content (VLNC) cigarettes (0.4 mg nicotine/g of tobacco) for the duration of the study. Cigarettes were provided weekly at no cost to participants. Weekly assessments included measures of CPD and expired breath carbon monoxide (CO) levels. The primary outcome was total CPD at 12 weeks and secondary outcomes included breath CO levels at 12 weeks and examinations of both variables over time.

### **RESULTS**

Twenty-three participants completed the trial (11 UB, 12 VLNC). Baseline characteristics did not differ between conditions. Regarding baseline smoking characteristics, it was notable that both conditions reported an average CPD decrease of just 17% after learning of pregnancy, well short of the 50% decrease typically reported by this population. Mean ( $\pm$ SEM) total CPD at 12 weeks did not differ between conditions (18.4 $\pm$ 2.3 and 16.3 $\pm$ 2.6, respectively), nor did it vary over time. Expired breath CO levels did not differ between conditions (16.7 $\pm$ 2.2 and 17.8 $\pm$ 1.9, respectively), but did decrease over time, though there was no interaction between condition and time.

### **CONCLUSIONS**

Results suggest that this sample of pregnant people did not realize the same benefits of VLNC cigarettes as other priority populations, although there was also no evidence of harm in the form of compensatory smoking. The muted decline in CPD in response to becoming pregnant suggests this sample was especially resistant to changing their smoking and it remains possible that other pregnant people who smoke will respond to VLNC cigarettes as other priority populations have.

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## *Exploring the intersectionality of disparities in cigarette smoking among US adults by gender, rurality, and military veteran status, 2013-2019*

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### **BACKGROUND**

Disparities in smoking by gender (males > females) and rurality (rural > urban) are well-documented in the US. However, more remains to be learned including how these disparities impact veterans, a group at high-risk for smoking. This study explores intersections of gender, rurality and veteran status.

### **METHODS**

Cross-sectional data are from the 2013-2019 National Surveys on Drug Use and Health. Participants were adults aged  $\geq 18$  years. First, we used weighted logistic regression to assess the association between a rurality by gender interaction on smoking status in the entire population, controlling for age, race, annual income, educational attainment, and study wave (model 1). Next, we repeated these analyses among the sub-sample of veterans (model 2).

### **RESULTS**

There was a significant interaction between rurality and gender in model 1 (aOR=0.16, 95% CI=0.79-0.92), wherein prevalence of smoking between 2013-2019 was higher among males compared to females when compared within rural (rural men [29.37%] > rural women [24.60%]) or urban residents (urban men [23.55%] > urban women [18.25%]), but not when compared between rural and urban residents (rural women [24.60%] compared to urban men [23.55%]). In model 2, the interaction between rurality and gender was not significant (aOR=0.74, 95% CI=0.50-1.09); however, the gender main effect was significant (aOR=0.71, 95% CI=0.59-0.84), with women veterans (32.59%) having higher overall smoking rates than men (28.24%).

### **CONCLUSIONS**

These results underscore a need for greater efforts to reduce smoking among rural residents, especially rural women whose smoking has reached levels comparable to urban males, and female veterans generally.

# Abstracts

## *Health conditions and tobacco-use disparities across high- and low-tobacco burden U.S. states*

### **INTRODUCTION**

Cigarette smoking remains significantly higher than the national average in 13 high-tobacco burden states (Alabama, Arkansas, Indiana, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Ohio, Oklahoma, South Carolina, Tennessee, West Virginia) and may be associated with serious health consequences. We examined the prevalence of health conditions (cardiometabolic diseases, pulmonary conditions, cancer) and associations with cigarette smoking and quitting among those living in high versus 4 low tobacco-burden states (California, Illinois, Maryland, Virginia).

### **METHODS**

Respondents in high (n=4,550) and low-burden states (n=1600) were from an American Cancer Society probability-based rapid response survey of U.S. adults in 2023. Associations of residency with tobacco use and cessation attempts in a health condition-stratified sample were examined with weighted logistic regressions.

### **RESULTS**

Individuals in high- versus low-burden state were more likely to report having a cardiometabolic (59.3% versus 40.7%,  $p = .0021$ ) or pulmonary (58.7% versus 41.3%,  $p = .0116$ ) condition, but not cancer ( $p = .7708$ ). Further, current smoking was more likely among individuals in high-burden states with cardiometabolic conditions (OR: 1.54, 95% CIs: 1.01-2.36,  $p = .047$ ) and pulmonary conditions (OR: 2.17, 95% CIs: 1.39-3.39,  $p = .001$ ). Quit attempts were not influenced by region across all health conditions.

### **CONCLUSIONS**

Smoking was comorbid with higher prevalence of cardiometabolic and pulmonary among individuals in high-burden states. Quit attempts did not differ from low-burden states, suggesting an equal level of interest to quit. Therefore, reducing the tobacco-related disease burden in these states will require increased cessation resources.

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## *Reduced nicotine content cigarettes and access to e-cigarettes in vulnerable populations: Effects on the modified cigarette and e-cigarette evaluation questionnaires*

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### **SIGNIFICANCE**

Availability of appealing non-combusted tobacco products may enhance the impact of a nicotine-reduction policy, especially in vulnerable populations. Here we present results from a secondary analysis examining participant ratings on the modified Cigarette and E-Cigarette Evaluation Questionnaires (mCEQ & mECEQ) from three 16-week randomized clinical trials with adults who smoke daily with affective disorders (n=172), opioid use disorder (n=74), and lower-educated women of reproductive age (n=80).

### **METHODS**

Participants used normal nicotine content cigarettes (NNC, 15.8 mg nicotine/g tobacco, n=83), very low nicotine content cigarettes (VLNC, 0.4 mg/kg, n=85), VLNC cigarettes plus e-cigarettes limited to tobacco flavor (VLNC+TF, n=74), or VLNC cigarettes plus e-cigarettes in preferred flavors (VLNC+PF, n=84). Participants completed the mCEQ and mECEQ every other week and results were examined using linear mixed models.

### **RESULTS**

VLNC cigarettes reduced the addiction potential of smoking, as reflected by significant decreases in four mCEQ ratings across all VLNC conditions versus NNC ( $P_s < 0.01$ ). Additionally, three of these mCEQ ratings were significantly lower in the VLNC+PF versus VLNC-only conditions ( $P_s < 0.05$ ). E-cigarette mECEQ satisfaction ratings were also significantly higher in the VLNC+PF versus VLNC+TF condition ( $P = 0.02$ ). Results were consistent across populations, with the exception of mECEQ enjoyment ratings among lower-educated women in the VLNC+TF condition ( $P_s < 0.05$ ).

### **DISCUSSION**

These results further confirm that VLNC cigarettes have a lower abuse liability than NNC cigarettes in vulnerable populations, and suggest those effects are enhanced by access to flavored e-cigarettes. Further, e-cigarettes may serve as more effective substitutes for combustible cigarettes when available in preferred flavors.

## *Nicotine/tobacco use in young adults with chronic pain: Relation to positive and negative urgency*

### **BACKGROUND**

Chronic pain is a prevalent and difficult to treat health problem that significantly reduces quality of life, especially for young adults. Nicotine/tobacco use is often reported as a coping strategy by individuals with chronic pain, but its use is associated with adverse health outcomes, including increased pain. Identifying self-regulatory processes that relate to nicotine/tobacco use in young adult chronic pain patients may inform prevention and intervention strategies.

### **METHOD**

Young adults (n=225) aged 18-26 with chronic pain completed an online survey assessing nicotine/tobacco use and self-regulation including positive/negative urgency, problems with emotion regulation, and broader self-regulation skills. 14.2% (n=32) reported current use, 26.7% (n=60) reported past use, and 59.1% (n=133) had never used. ANOVAs were used to compare self-regulation for the three use status groups (current, past, never users).

### **RESULTS**

Both current and past nicotine/tobacco users endorsed significantly higher positive urgency than never users ( $p < .01$ ). Additionally, current nicotine/tobacco users, but not past users, endorsed significantly higher negative urgency than never users ( $p = .04$ ). Emotion dysregulation and self-regulation did not differ between the three use status groups. Conclusions: These results suggest that current and past nicotine/tobacco use in young adults with chronic pain is related to higher positive, and for current use only, negative urgency. Moreover, this relationship may be specific to urgency and unrelated to broader emotion regulation and self-regulation difficulties. Urgency may be an important factor to consider in longitudinal studies and when developing interventions for reducing nicotine/tobacco use in young adults with chronic pain.

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# *Examining tobacco use among sexual and gender minorities at a community-based LGBTQ+ clinic*

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## **Peter Salhaney, ScM**

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## **Patricia A. Cioe, PhD**

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## **Philip A. Chan, MD**

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## **BACKGROUND**

Tobacco use is the leading cause of preventable death and disease in the US, and sexual and gender minorities (SGMs) are disproportionately affected. Tobacco use also increases susceptibility to bacterial infections, including sexually transmitted infections (STIs), which SGMs experience at higher rates.

## **METHODS**

We identified SGMs who visited an STI clinic between January 2023 and May 2024. Demographics and descriptive statistics were evaluated. We compared STI prevalence based on tobacco use (current vs. non) and type of product used (cigarettes, vape, dual use). Logistic regression analyses were conducted to assess the association between tobacco use and STI prevalence.

## **RESULTS**

A total of N=675 SGMs completed an STI visit. Of those, 20.8% (N=134) were current tobacco users: 32.8% smoked combustible cigarettes, 50% vaped, and 17.2% dual-used cigarettes and vape products. On average, patients were 32.2 (SD:7.6) years old; 85.2% White, 74.6% male at birth, 66.9% identified as a man, 44.8% identified as lesbian or gay, and 63.5% were previously diagnosed with an STI. When compared to tobacco use products, vape use was associated with significantly lower odds of having syphilis compared to cigarette use (OR: 0.206, 95% CI: 0.061 to 0.645).

## **CONCLUSIONS**

These findings support the high prevalence of tobacco use among SGMs and that vaping is associated with lower odds of contracting syphilis compared to smoking cigarettes. Clinical care services should consider integrating tobacco treatment into STI care. Future research should explore these associations and examine the long-term effects of tobacco use patterns on STI outcomes in SGMs.

## *Lower Loss Aversion is Associated with Higher Severity of Nicotine Dependence*

### **BACKGROUND**

Loss aversion describes the adaptive tendency for potential losses to have a stronger influence on choices than equivalent gains. Low loss aversion is associated with risk for cigarette smoking. This cross-sectional study examined the relationship between loss aversion and cigarette dependence in a sample that reported current smoking.

### **METHOD**

Individuals (N=139) who reported current cigarette smoking status (>5 cigarettes per day) were recruited online from Prolific and completed a measure of loss aversion consisting of hypothetical monetary gambles, the six-item Fagerström Test of Nicotine Dependence, and basic demographics. The study included a monetary choice questionnaire measure of delay discounting which was assessed as a control measure.

### **RESULTS**

In analyses adjusted for age, gender, and educational attainment, among individuals that reported not attempting to quit smoking, lower loss aversion was significantly associated with greater cigarette smoking dependence and greater number of cigarettes smoked per day. Lower loss aversion remained significantly associated with cigarette dependence severity when delay discounting was included in the analysis. These associations were attenuated when assessed among individuals that reported a current quit or cigarette reduction attempt.

### **CONCLUSIONS**

Overall, these findings suggest that low loss aversion is related to increasing severity of nicotine dependence among individuals who smoke cigarettes and are not currently attempting to quit. Aside from providing new evidence to support the role of loss aversion in cigarette smoking and other substance use dependence, loss aversion may be sensitive to changes in smoking behavior that occur when individuals attempt to reduce or quit smoking.

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**Lilly Varga**

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*Vermont Center on Behavior and Health, Departments of Psychiatry and Psychological Science, University of Vermont, Burlington, VT*

## Conference Kickoff Biographies



### *Stephen T. Higgins, PhD*

*Director, Vermont Center on Behavior and Health*

Stephen T. Higgins, PhD, is the director of the Vermont Center on Behavior and Health at the Larner College of Medicine, University of Vermont, and is the principal investigator on five NIH grants on the general topic of behavior and health, including the UVM Center of Biomedical Research Excellence (COBRE) and the Tobacco Center on Regulatory Science (TCORS). He is a Distinguished Professor and the Virginia H. Donaldson Endowed Professor of Translational Science in the departments of psychiatry and psychological science. His research centers around behavioral economics and behavioral pharmacology to investigate tobacco, substance abuse, and other health-related risk behaviors in vulnerable populations. Dr. Higgins' projects focus on examining mechanisms underpinning vulnerability to tobacco and improve health outcomes, treatment interventions to reduce them and improve health outcomes, and regulatory science. He has held many national scientific leadership positions, including terms as president of the College on Problems of Drug Dependence (CPDD) and the American Psychological Association's Division of Psychopharmacology and Substance Abuse. He is the author of more than 450 journal articles and invited book chapters and editor of a dozen volumes and therapist manuals in behavior and health. In 2022, he received the SABA Award for Scientific Translation and the Nathan B. Eddy Memorial Award, a career achievement award from CPDD.



### *Peter Welch*

*US Senator for Vermont*

Peter Welch was born in Springfield, Massachusetts in 1947. He graduated from the College of the Holy Cross in 1969. After working in Chicago fighting housing discrimination as one of the first Robert F. Kennedy Fellows, he enrolled in law school at the University of California, Berkeley, and graduated in 1973. After law school, he settled in White River Junction, Vermont, where he worked as a public defender before founding a small law practice. He was first elected to represent Windsor County in the Vermont Senate in 1980. In 2006, Mr. Welch was elected to Vermont's only seat in the U.S. House of Representatives. In 2022, he was elected to the United States Senate. He is married to Margaret Cheney, commissioner of the Vermont Public Utility Commission. They share a home in Norwich, Vermont.



### *Nancy Rigotti, MD*

*Keynote Speaker*

Dr. Rigotti is a general internist and Professor of Medicine at Harvard Medical School based at Massachusetts General Hospital (MGH). Her research aims to reduce tobacco-related disease and death by identifying new tobacco cessation treatments and promoting their delivery across health care systems nationally and internationally. She founded and directs MGH's multidisciplinary Tobacco Research and Treatment Center, is Past President of both the Society for Research in Nicotine and Tobacco and the Society of General Internal Medicine, and is a member of the FDA's Tobacco Products Scientific Advisory Committee (TPSAC). For the past decade, much of her work has focused on exploring the potential of cytisine as a new treatment for smoking and vaping and the risks and benefits of e-cigarettes as tools for smoking cessation and tobacco harm reduction.



# Session Chairs & Speakers

*Alphabetical order*

## *Janet Audrain-McGovern, PhD*

Dr. Audrain-McGovern is a Professor and Director of the Addictions Sections in the Department of Psychiatry and a member of the Abramson Cancer Center at the University of Pennsylvania. She has extensive tobacco use research experience, including tobacco regulatory science. Dr. Audrain-McGovern's research has varied in study design (longitudinal cohort, randomized clinical trial, human laboratory), tobacco product (combustible cigarettes, e-cigarettes, cigars, IQOS, nicotine pouches), and population (adolescents, young adults, adults, depression-prone, exclusive e-cigarette users, dual product users). For example, she has conducted longitudinal cohort studies of adolescent tobacco product uptake, behavioral economic-informed human laboratory studies of nicotine and flavoring effects on use behavior, tobacco product switching studies, and randomized smoking cessation clinical trials among youth and adults. Over the past decade, much of Dr. Audrain-McGovern's research findings have had regulatory implications. She has served as the Director of postdoctoral training for three NIH P50 tobacco research centers and Co-Director of two FDA-funded Tobacco Centers of Regulatory Science Career Enhancement Cores. Dr. Audrain-McGovern recently completed four years of service the NIH study section, Interventions to Prevent and Treat Addictions.



## *Ira Bernstein, MD*

Dr. Bernstein is Professor and University Scholar in the department of Obstetrics, Gynecology and Reproductive Sciences. He graduated magna cum laude from Union College in NY with a degree in Psychobiology (1978) and is an Alpha Omega Alpha medical honor society graduate from the University of Vermont College of Medicine (1983). He has served as director of maternal fetal medicine (MFM) and MFM fellowship training as well as Senior Associate Dean for Research at the UVM college of medicine (2009-14) and chair of the department of Obstetrics, Gynecology and Reproductive Sciences (2012-24). Dr. Bernstein's primary research interest is the investigation of human integrative physiology and its pathophysiologic variations during the course of pregnancy. He has been funded from NIH for a series of projects examining pre-pregnancy determinants of preeclampsia and has also collaborated on another series of NIH funded projects examining mechanisms to facilitate smoking cessation during pregnancy and their effects. Dr. Bernstein has served on, or chaired, several study sections at NIH and the Gates Foundation including 2 years as the chair of the NIH Pregnancy and Neonatology standing study section. Dr. Bernstein is past president of the New England Perinatal Research Society and the International Perinatal Research Society. He was a member of the American College of Obstetrics and Gynecology Task Force on Hypertension and has served as a member of multiple NIH workshops examining perinatal complications. Dr Bernstein was recognized with the Distinguished Academic Achievement Award from the UVM College of Medicine in 2002 and as a University Scholar in 2016. He has received research awards from the New England Perinatal Society, the Society for Maternal Fetal Medicine and the Society for Reproductive Investigation. He currently serves as chair of the medical advisory board for the Preeclampsia Foundation and is a member of the Executive Board of the Vermont Oxford Neonatal Network.





### *Dana M. Carroll, PhD*

Dr. Carroll is an epidemiologist and certified tobacco treatment specialist with a research program that focuses on identifying what works for health disparity populations to quit smoking and informing the evidence based on regulatory approaches for reducing the appeal and addictiveness of cigarettes. In 2023 and 2024, she was awarded the Early Career Investigator Award from the National Institute on Minority Health and Health Disparities (NIMHD), National Institutes of Health (NIH) and the Jarvik-Russell Award (an early career investigator award) from the Society for Research on Nicotine and Tobacco. She has contributed to several studies providing the evidence base that reducing nicotine levels in cigarettes is likely a highly effective public health policy for people who smoke and an opportunity for advancing health equity.



### *Patricia Cioe, PhD*

Dr. Cioe is Associate Professor of Behavioral and Social Sciences at Brown University. She received a Ph.D. in Nursing from the University of Massachusetts Medical School Worcester in 2012, and completed a postdoctoral fellowship at the Center for Alcohol and Addiction Studies at Brown University where she cross-trained in HIV, tobacco dependence, and other substance use disorders. She received training in qualitative research methods and behavioral intervention development. Dr. Cioe's research interests focus broadly on cardiovascular risk reduction in people with HIV, with a specific focus on smoking cessation and smoking harm reduction. Specifically, her research seeks to improve clinical outcomes for people with HIV through the development of innovative interventions and promotion of health behavior change at the patient level. She is the Principal Investigator of several NIH-funded studies. Dr. Cioe developed and pilot tested a tailored invention, that incorporated techniques of motivational interviewing and personalized feedback to improve cardiovascular risk perception and the adoption of heart-healthy behaviors in PWH. Her current work is focused on the development of tailored smoking cessation interventions for PWH, including the cross-training of HIV clinic-based peer navigators for smoking cessation counseling and the provision of social support for quitting. She also recently completed a pilot that incorporated app-based mindfulness training to reduce anxiety prior to a quit attempt. Finally, Dr. Cioe recently completed a randomized pilot examining the efficacy of electronic nicotine delivery systems for harm reduction in PWH who smoke and are unable or unwilling to quit. Dr. Cioe received the Nurse Researcher Recognition Award from the Association of Nurses in AIDS Care in 2018, and was named Nurse Scientist of the Year by the Rhode Island State Nurses Association in 2019.



### *Tyler G. Erath, PhD*

Dr. Erath is a research fellow at the University of Vermont (UVM) in the Department of Psychiatry and the Vermont Center on Behavior and Health (VCBH). He received his PhD in Behavioral Psychology from the University of Kansas in 2021. As a behavioral scientist, Dr. Erath's research is broadly focused on substance use disorders and health disparities. A central tenet that connects his research aspirations is a desire to integrate evidence-based practices into real-world, community settings. His current research includes collaborative work with local harm reduction and syringe service programs examining substance use and treatment implementation for service recipients. In addition to this work, Dr. Erath has been developing two lines of tobacco research which include systematic reviews, experimental studies, and epidemiological research. One focus is on menthol cigarette smoking and using behavioral economics to understand the substitutability of potential alternative products. The second focus is on understanding and addressing disparities in adolescent smoking.

## *Lisa Fucito, PhD*

Dr. Lisa Fucito is a licensed clinical psychologist, Associate Professor of Psychiatry at the Yale University School of Medicine, Director of the Tobacco Treatment Service at Smilow Cancer Hospital, and Member of the Prevention and Control Research Program at Yale Comprehensive Cancer Center. She is an expert in the assessment and treatment of tobacco use and specializes in vulnerable subpopulations with co-morbid psychiatric and medical conditions. Her research focuses on increasing tobacco treatment engagement, developing novel tobacco interventions that promote multiple behavior change, and studying non-combustible tobacco product use transitions among individuals who smoke combustible cigarettes. Her work has generated important scientific contributions. These include the unique treatment needs and preferences of individuals who smoke and engage in heavy alcohol use and effective intervention strategies, deficient sleep as a mechanism of smoking behavior and tobacco treatment target, non-combustible tobacco product use for cigarette substitution among adults, and evidence-based strategies for e-cigarette cessation. In a distinct line of research, Dr. Fucito also studies biobehavioral predictors of alcohol use and innovative risk phenotyping and treatment strategies for alcohol use disorders, with a focus on digital health technology.

Dr. Fucito has received multiple NIH grants and authored over 100 peer-reviewed publications including several in top tier journals such as JAMA Internal Medicine, The Journal of the National Cancer Institute, Cancer, American Journal of Psychiatry, and the Journal of Abnormal Psychology. She is a Board Member of the Society for Research on Nicotine and Tobacco and served for 8 years as Associate Editor for the Society's journal, Nicotine and Tobacco Research. As an international leader advocating for improving tobacco treatment access and engagement, Dr. Fucito led an official practice guideline encouraging the pairing of tobacco treatment with lung cancer screening as well as a policy statement calling on the FDA to change the labeling of nicotine replacement therapies (NRT) to allow for combined use, pre-quit use, and prolonged use. In addition to these activities, she is a current panel member for a new inpatient tobacco treatment clinical practice guideline under development on behalf of the American College of Chest Physicians (CHEST). As Director of the Tobacco Treatment Service, she oversees a multidisciplinary team that treats hundreds of patients monthly across the CT-statewide Yale New Haven Health system and directs research conducted through the Service. To date the Service has supported 10 NIH-funded clinical trials or implementation projects including large-scale smoking cessation trials for patients with cancer or elevated risk of developing cancer.



## *Sarah Heil, PhD*

Dr. Heil is the Associate Director of the UVM Center on Rural Addiction. She is a Professor of Psychiatry and Psychological Science at UVM and a faculty member of the Vermont Center on Behavior and Health. Dr. Heil earned her PhD from Dartmouth College in 1997, then completed National Institutes of Health postdoctoral fellowships in substance abuse research at Wayne State University and UVM. She joined the faculty at UVM in 2002. Continuously funded by the National Institute on Drug Abuse since that time, her research interests revolve around the reproductive health needs of people with substance use disorders, with a recent focus on helping these people avoid unintended pregnancy. Dr. Heil has more than 150 publications to her credit and is an elected Fellow of two divisions of the American Psychological Association. She has served on the Board of Directors of the College on Problems of Drug Dependence and the editorial board of the journal Psychology of Addictive Behaviors and the journal Experimental and Clinical Psychopharmacology.





### *Karin A. Kasza, PhD*

Dr. Kasza is an Assistant Professor of Oncology at Roswell Park Comprehensive Cancer Center. For more than a decade, her work has leveraged large-scale population-based datasets to investigate tobacco product use behaviors occurring in the ‘real-world’ to inform tobacco regulatory decisions for the betterment of public health. Dr. Kasza led seminal work from the Population Assessment of Tobacco and Health (PATH) Study, including establishing the Study’s foundational tobacco use estimates published in the *New England Journal of Medicine*. She has also worked extensively with the International Tobacco Control Policy Evaluation Project (ITC Project), where her work demonstrated effectiveness of smoking cessation medications when used in the general population, consistent with clinical trial-indicated medication efficacy. Dr. Kasza received a PhD and Certificate of Advanced Study in Applied Statistical Analysis from the State University of New York at Buffalo.



### *Elias M. Klemperer, PhD*

Elias Klemperer, PhD is an Assistant Professor of Psychiatry and Psychological Science at the Vermont Center on Behavior and Health, Larner College of Medicine, University of Vermont (UVM). As a behavioral scientist and licensed clinical psychologist, his research broadly falls within tobacco regulatory science and tobacco control. He primarily focuses on nicotine reduction, dual use of cigarettes and e-cigarettes, and interventions for people who are not ready to quit smoking. Dr. Klemperer uses a range of research methodologies, including clinical trials, controlled laboratory studies, meta-analysis, and fine-grained naturalistic research. He has experience conducting both fully-remote and in-person trials. In addition to his work in tobacco, Dr. Klemperer has an emerging line of research examining the treatment of opioid use disorder among people who are incarcerated, which reflects his clinical work in correctional settings. As the Associated Director of the Vermont Center on Behavior and Health (VCBH), he oversees two pilot project programs which support fellows and junior faculty in conducting pilot research to seed future NIH funding. Dr. Klemperer is the primary mentor for one Clinical Psychology pre-doctoral fellow, serves on multiple Master’s thesis and Doctoral dissertation committees, and works regularly with pre- and post-doctoral trainees within the VCBH. Dr. Klemperer received his PhD in clinical psychology from the University of Vermont and completed his clinical internship at Yale University in 2019. He joined the University of Vermont faculty in 2020.



### *Grace Kong, PhD*

Dr. Kong is an Associate Professor in the Department of Psychiatry at Yale School of Medicine. She has a PhD in Clinical Psychology with Specialization in Child and Adolescent Psychology. Her research is focused on preventing youth tobacco use using a variety of methods, such as qualitative and quantitative strategies, including social media analytics to understand tobacco use and promotional trends to inform policies and to develop novel prevention/cessation interventions. She is also dedicated to preventing tobacco use among marginalized youth, such as youth from low-income and communities of color who may experience disproportionate levels of tobacco-related cancer and other illnesses due to tobacco use in the future. Dr. Kong has served as a Principal Investigator and Co-Investigator on multiple NIH-funded studies, and she is committed to training the next generation of independent researchers to use social media to prevent tobacco use and other addictive behaviors to promote positive health behaviors.

### *Katherine Menson, DO*

Dr. Menson is a graduate of University of New Hampshire and obtained her Doctor of Osteopathic Medicine from the University of New England. She completed residency and fellowship at the University of Vermont where she is currently an Assistant Professor in the Division of Pulmonary and Critical Care Medicine. Dr. Menson has been engaged in the delivery of pulmonary rehabilitation since 2017. She currently sits on the board of directors of the American Association of Cardiovascular and Pulmonary Rehabilitation and the editorial review board for the Journal of Cardiopulmonary Rehabilitation and Prevention. She has written the most recent guidelines on Pulmonary Rehabilitation in the non-COPD population. She is currently supported the NIH Tobacco Centers of Regulatory Science and by an early career investigator award from the American Lung Association measuring the feasibility of accelerated pulmonary rehab in the preoperative period. Dr. Menson lives in Burlington, Vermont with her family.



### *Kelly Peck, PhD*

Dr. Peck joined the Vermont Center on Behavior and Health faculty in March 2019, after completing his postdoctoral fellowship with Dr. Stacey Sigmon. He is a licensed clinical psychologist and assistant professor with joint appointments in the departments of psychiatry and psychological science at University of Vermont. He is also the director of clinical operations for the University of Vermont Center on Rural Addiction (UVM CORA) which is one of three national Rural Centers of Excellence on Substance Use Disorders. His primary research and clinical interests are two-fold. First, he has conducted research focused on the development and evaluation of novel treatments for opioid use disorder (OUD). Most recently, this has included randomized clinical trials evaluating a novel interim buprenorphine treatment for reducing illicit opioid use and other high-risk behaviors among adults with untreated OUD. Second, he has worked extensively to address co-occurring PTSD in individuals with substance use disorders (SUDs), particularly around the delivery and evaluation of cognitive-behavioral treatments for PTSD. Dr. Peck is currently conducting a randomized clinical trial aimed at developing and evaluating a novel Prolonged Exposure (PE) therapy protocol for improving PE therapy attendance and PTSD symptom severity among individuals with co-occurring PTSD and OUD.



### *Gail L. Rose, PhD*

Dr. Rose is an Assistant Professor of Psychiatry at UVM. As a researcher, she has directed and contributed to projects broadly focused on clinical, health services, and patient self-directed care for behavioral health and substance misuse. In particular, her work has focused on the application of various technologies to the identification and treatment of substance misuse in outpatient settings, and on the integration of behavioral health in primary care. Dr. Rose received her PhD in Clinical Psychology from the University of Iowa.





### *Stacey Sigmon, PhD*

Dr. Sigmon is a tenured professor in the University of Vermont's Department of Psychiatry with a secondary appointment in psychological science and is a faculty member at the Vermont Center on Behavior and Health. She has conducted behavioral pharmacology and clinical drug abuse research for nearly three decades, with a primary focus aimed at developing more efficacious treatments for opioid use disorder (OUD). She also conducts research leveraging behavioral economic principles to develop smoking cessation interventions in challenging groups of smokers, particularly those with co-occurring vulnerabilities such as OUD and other substance use disorders. Dr. Sigmon also served as director of Vermont's first and largest opioid treatment clinic, which serves 1,000 opioid-dependent patients; as president of the American Psychological Association's Division on Psychopharmacology; and president of The College on Problems of Drug Dependence (CPDD), the oldest and largest organization dedicated to advancing the scientific study of substance use. She has served as the primary mentor and advisor for 13 pre- and post-doctoral fellows, one junior faculty, and as a member or chair of 20 thesis and dissertation committees. Finally, Dr. Sigmon currently leads one of three national Rural Centers of Excellence on Substance Use Disorders, funded by HRSA, dedicated to disseminating science-based treatments and tools to expand treatment capacity and reduce opioid-related morbidity and mortality in the rural areas so disproportionately impacted by the current opioid epidemic.



### *Joanna Streck, PhD*

Dr. Streck is an Assistant Professor in Psychiatry and in Medicine at Harvard Medical School (HMS), the Associate Director of Addiction Science Research and Programs in the Health Promotion and Resiliency Program at Massachusetts General Hospital (MGH), a Core Faculty Member in the MGH Tobacco Research and Treatment Center and MGH Center for Addiction Medicine, and a licensed Clinical Psychologist at the MGH Substance Use Disorder (SUD) Bridge Clinic. Her program of research seeks to identify effective tobacco cessation and harm reduction interventions for vulnerable populations who smoke including those with comorbid SUD.



### *Eric Thraikill, PhD*

Eric Thraikill, PhD is an Associate Professor in the Departments of Psychological Science and Psychiatry at the University of Vermont. His work concentrates on how decision making and instrumental behavior influences risk for substance use disorders, cigarette smoking, and overeating, and how such factors connect to fundamental mechanisms of associative learning and behavioral regulation. Dr. Thraikill's current focus is on 1) the relationship between loss aversion, or the tendency for potential losses to have a stronger influence on behavior than equivalent gains, and risk for cigarette smoking and other substance use, 2) understanding the sequential, "chained" structure of instrumental behavior and how this informs how we make and break habits whether healthy or not, and 3) variables that influence the effectiveness of treatments that involve differential reinforcement. His goal is to improve the understanding of cognitive mechanisms and behavioral processes that underpin durable behavior change. Dr. Thraikill received his PhD from Utah State University and completed his postdoctoral work at the University of Vermont.

*This event is funded in part by generous support from the National Institute of General Medical Sciences (NIGMS), the National Institute on Drug Abuse (NIDA), and the U.S. Food and Drug Administration (FDA) Center for Tobacco Products (CTP). The content is solely the responsibility of the authors and does not necessarily represent the official views of NIGMS, NIDA, FDA, or CTP.*









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