POS1-1

RECRUITMENT AND RETENTION OF AMERICAN INDIAN SMOKERS INTO A CULTURALLY-TAILORED SMOKING CESSATION STUDY

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American Indians have the highest smoking rates of the major racial/ethnic groups in the United States. Furthermore, this underserved population has very low smoking cessation and abstinence rates. To date, few studies have focused on methods to encourage smoking cessation among American Indian smokers. The current study is an ongoing group randomized controlled trial to examine the efficacy of a culturally-tailored smoking cessation program, ¬ìAll Nations Breath of Life.¬î We randomized 28 groups per site (8 smokers per group) to tailored or non-tailored intervention for a total sample size of 448 American Indian smokers at two centers. We present the recruitment rate and the barriers for recruitment and retention in this population. The quarterly recruitment target for this study was 45 participants and of the 9 quarters of potential recruitment, we reached the target in 5 of the quarters. Initial delay in the recruitment of participants across both centers (University of Kansas Medical Center and the University of Oklahoma Health Science Center) was related to the time required to obtain tribal approvals. In addition, we encountered challenges related to training of facilitators and resistance of a few tribes to adopt a randomized trial design. Finally, the delay from initial screening to randomization of participants caused some smokers to lose interest in the program, which also impacted recruitment. The major reasons for lack of retention included phone numbers being disconnected, change of home addresses and/or phone numbers, child/family care responsibilities, transportation, intensity of the program (especially first 3 months), and coordination of the meeting day/time for each group member. Although we will reach our enrollment target of 448 total American Indian smokers, delays in the initial recruitment and maintenance of our target recruitment rate have presented challenges in conducting this study. Lessons learned from these challenges will inform future studies with this priority population.

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JUSTIFICATION: Effective culturally-tailored smoking cessation programs are needed to address the high prevalence of smoking among American Indians.

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POS1-2

HEALTH-RELATED EFFECTS REPORTED BY ELECTRONIC NICOTINE DELIVERY SYSTEMS (ENDS) USERS IN CHINESE SOCIAL MEDIA

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Background: China, with a smoking population of over 350 million, is the largest potential market for electronic nicotine delivery systems (ENDS). Despite the importance of understanding the health effects caused by ENDS use in China, related scientific research and surveillance efforts are sparce. The question on how ENDS use may affect the public health in China needs urgent investigation. This study aims to document the health effects of ENDS use in China by performing an analysis of messages in Chinese social media. Methods: The data source of our study is one of the most popular Chinese microblogging sites called Sina Weibo. With a customized crawler, we collected all messages which contained the Chinese keyword ¬ì???¬î (English: electronic cigarettes) and ranged from 2-26 - 2012 to 7-31 - 2013. The raw dataset included 8283 records. After eliminating duplicated messages and irrelevant messages (the messages that do not contain explicit feedback of ENDS consumers), a sample of 240 messages were analyzed in terms of type and frequency of health effects. Results: A total of 82 different symptoms due to ENDS use were found in our sample. In these symptoms, 30 were positive, 42 were negative, and 10 were neutral. The symptom mentioned by most messages was ¬ìENDS addiction¬î with 13 messages, followed by ¬ìnausea¬î with 9 messages, ¬ìchoke¬î with 5 messages, ¬ìsweet taste¬î with 5 messages, and ¬ìdizziness¬î with 5 messages. Conclusions: To the best of our knowledge, this is the first attempt to analyze the Chinese social media to document the health effects reported by ENDS consumers. The results of our study showed that social media provides a useful resource for assessing how ENDS use affects public health in China, which would help the public health authorities better educate the ENDS consumers and make appropriate regulatory decisions to ensure the product safety of ENDS in China.

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JUSTIFICATION: This study could help public health authorities gain a better understanding of ENDS use and inform regulatory decision making.

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POS1-3

THE IMPACT OF VARIATION OF HOOKAH COMPONENTS ON CHEMICAL AND PHYSICAL EMISSIONS

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To investigate the effects of hookah components on the chemical and physical properties of hookah smoke, we used machine smoking and a human puffing regimen obtained from subjects smoking a standard research grade hookah configuration. Topographies from ten subjects smoking the standard hookah in three separate laboratory sessions showed that hookah puffing varied throughout a session, with more frequent and larger puffs in the first ten minutes. Each subject¬ís topography was separated into tertiles and all puffing parameters were averaged by tertile to produce a single topography: 32 puffs (0.72 L volume, 4.6 s duration) for the first 11.2 min, 42 puffs (0.46 L, 3.6 s) for the remaining 22.6 min, for a total puffing volume of 42.4 L. The hookah was machine smoked in a controlled chamber similar in size and ventilation to a small residential bathroom (2.45 m3, 1.5 hr-1). Mainstream and sidestream smoke (MS and SS) was continuously monitored for each of four different hookah configurations (standard and 3 variations) to examine the impact of heat source (charcoal vs. electric coal), hose length (150 vs. 225 cm), and screen (foil with small holes vs. sheet metal with large holes) on particulate, semi-volatile, and volatile organic compound (SVOC and VOC) emissions. SS VOCs (acetonitrile, acrylonitrile, benzene, 1,3-butadiene, 2,5-dimethylfuran and isoprene) were quantified using a proton transfer reaction-mass spectrometer, and carbon monoxide (CO) was quantified using an environmental CO monitor. MS particle size distribution was measured and particulate was collected using an electrical low pressure impactor. Fine and ultrafine particulate were chemically extracted and MS SVOCs, including the tobacco-specific nitrosamines, benzo[a]pyrene, pyrene, nicotine, and quinoline were quantified. For the standard hookah configuration, SS benzene and acetaldehyde reached peak levels of ~0.2 ppm, and CO peak levels were more than 1,000 times greater (~500 ppm), well above the acute exposure threshold for experiencing CO exposure symptoms. Total mass of each chemical emitted in MS and SS showed differences across the four different hookah configurations.

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JUSTIFICATION: This work has public health implications in that (1) hookah smoking involves two different chemistries (the burning of charcoal and heating of