of 45 young adults ages 18-20. We segmented participants into groups based on their e-vapor product use: current users (tried e-vapor prior to legal age (LA) and currently use e-vapor), previous users (tried e-vapor prior to LA ≥ 1 time but do not currently use any tobacco products) and never users (never tried any tobacco products). There were two focus groups for each user group. LA was 18. Study objectives included identifying factors associated with underage use and understanding how youth access e-vapor products. Our PATH analyses assessed a range of variables associated with onset of and established e-vapor use and youth e-vapor access. **Results:** Focus group results indicate that peer affiliation is an important factor for underage e-vapor trial/use. Social acceptability, ease of access and lack of underage e-vapor use prevention messaging are also relevant factors. Peers of LA are significant sources for access, followed by relatives (i.e., older siblings, parents). These findings align with our PATH Waves 1 and 2 analyses, which showed diverse factors associated with e-vapor onset and established use (use of >10 e-cigarettes/cartridges), with peer use having the strongest association. Our PATH analyses also indicate that social exchange is a primary source of youth e-vapor access. Among Wave 3 past 30-day e-vapor users ages 15-17, 41% usually obtained e-vapor by asking for/being offered and 27% gave someone money to buy. **Conclusions:** Our findings suggest the need to increase the LA of purchase and develop underage e-vapor use prevention messaging that discourages social sourcing from peers/relatives and counters social acceptability of underage use.

FUNDING: Tobacco Industry

POS5-119

TOBACCO USE PROFILES BY ASTHMA STATUS, ADULTS AND YOUTH IN THE PATH STUDY

Jamie Cordova, MPH[1], **Rachel Grana-Mayne, PhD, MPH**[1], Ruth Pfeiffer, PhD[2], Jacquie Bachand, MPH[3], Kelvin Choi, PhD, MPH[4], Carolyn Reyes-Guzman, PhD, MPH[1]. [1]Tobacco Control Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA, [2]Biostatistics Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA, [3]The Bizzell Group, LLC, Lanham, MD, USA, [4]Division of Intramural Research, National Institute of Minority Health and Health Disparities, National Institutes of Health, Bethesda, MD, USA.

Significance: The adult smoking prevalence has reached an historic low (14.1%), yet about 25% of U.S. adults with asthma are current cigarette smokers and may also use other tobacco products at a higher proportion than the general population. Smoking triggers asthma symptoms and exacerbates asthma-related morbidity, and recent studies indicate ENDS can trigger asthma symptoms among youth. **Methods:** Population Assessment of Tobacco and Health (PATH) study data from waves 1, 2, and 3 were combined. Separate analyses of adult and youth tobacco use by asthma status were conducted. Current tobacco use was determined by past 30-day use of at least one product at wave 3 (cigarettes, ENDS, hookah, smokeless tobacco, snus, cigars, cigarillos, or pipes). Current use groups were divided into exclusive combustible cigarette, exclusive ENDS, dual combustible cigarette and ENDS, other combustible, and combinations of poly-tobacco use. **Results:** Among 27,121 adults, 26.3% reported current use of any tobacco product at wave 3 and 13.6% reported an asthma diagnosis at any wave. Among asthmatic adults, 28.4% reported current tobacco use compared to 25.9% without asthma. Among asthmatic adults who reported current tobacco use, 57.8% were exclusive combustible cigarette users, 5.2% were exclusive ENDS users, 9.1% were dual cigarette and ENDS users, 13.4% were poly-tobacco users, and 12.3% were other combustible tobacco product users. Among 11,440 youth (ages 12-17), 7.3% reported current use of any tobacco product and 19.1% reported a current asthma diagnosis. Compared to non-asthmatic youth, a higher proportion of asthmatic youth were dual combustible cigarette and ENDS users (14.4% vs. 12.3%), poly-tobacco users (14.8% vs. 9.8%), and other combustible users (14.9% vs. 9.0%). **Conclusions:** Adults and youth with asthma reported greater tobacco product use than the general non-asthmatic population and most of that use involved combustible tobacco products. It is important for health care providers to discuss tobacco use with their asthmatic patients as part of their asthma care. **Disclaimer:** The contents of this abstract belong solely to the authors and do not represent NIH positions or policies.

FUNDING: Federal

POS5-120

PARAMETER ANALYSIS FOR PEDIATRIC PHYSIOLOGICALLY BASED PHARMACOKINETIC MODELS OF NICOTINE AND COTININE

Harvey Ho, PhD. University of Auckland, New Zealand, Auckland, New Zealand.

Significance: Nicotine exposure in neonates and infants caused by passive smoking is associated with the Sudden Infant Death Syndrome (SIDS), however our understanding of the pharmacokinetic profiles of nicotine and cotinine in very young children is poor. We aim to create a pediatric physiologically based pharmacokinetic model (p-PBPK) to simulate the time course of nicotine and cotinine in the plasma, tissue and organs of infants (< 1 year old). Methods: The p-PBPK model was extrapolated from a nicotine metabolism model for adults, while taking into consideration the physiological and nicotine metabolism differences between neonates/infants and adults. The physiological parameters of the model e.g. the blood flow rate and compartmental volume are adopted from published p-PBPK models of other drugs, while the pharmacokinetic parameters were estimated and calibrated with published clinical data (McMartin et al 2001) where the nicotine and cotinine concentrations in the lung tissues of 44 SIDS victims were measured. The Latin hypercube method was used for parameter analysis of the differential equation system of the model. Results: The model was able to generate nicotine/cotinine values in plasma and lung tissue consistent with the literature (McMartin et al 2001). The parameter analysis also yielded clues for a set of model parameters that may be used in different species (e.g. the rat) where animal model results may be adopted. Conclusion: This first PK study for infant exposure to secondhand smoking could be the basis for incorporating more *in vivo* or *in vitro* data associated with SIDS.

FUNDING: State

POS5-121

CIGARETTE SMOKING TRENDS FROM WAVES 1 AND 2 OF THE POPULATION ASSESSMENT OF TOBACCO AND HEALTH (PATH) STUDY

Mahathi Vojjala, MPH[1], Allison Glasser, MPH[1], Omar El-Shahawy, PhD[2], David Abrams, PhD[1], Raymond Niaura, PhD[1]. [1]New York University College of Global Public Health, New York, NY, USA, [2]New York University Langone School of Medicine, New York, NY, USA.

Significance: As cigarette smoking remains the largest preventable cause of death in the United States, it is imperative for researchers to study the trends of cigarette smoking to identify a national cessation, initiation, and relapse rate. *Methods:* This study had two aims: (1) characterize longitudinal cigarette smoking among adults in the Population Assessment of Tobacco and Health Study (n=32,248) and (2) examine cigarette smoking trends among Wave 1 every day and someday adult smokers and subsequent use in Wave 2 (n=13,529). *Results:* Weighted analyses showed that at baseline, most adults had never smoked cigarettes (32.9%), while 28.9% were current non-established (<100 lifetime cigarettes smoked) smokers, 20.2% were former established smokers, and 18.1% were current established (≥100 lifetime cigarettes smoked) smokers. By Wave 2, 11.7% of Wave 1 current established smokers and 6.2% of current non-established smokers became former established smokers (i.e., quit smoking). Initiation rates at Wave 2 among never smokers at Wave 1 were low compared to cessation rates; 41 (0.3%) never smokers became current established smokers, while 237 (1.9%) never smokers became current non-established smokers. Current non-established and former established smokers experienced a slight increase in smoking or relapse by becoming current established smokers by Wave 2 (4.9% and 6.2%, respectively). Current non-established smokers at Wave 1 had higher adjusted odds (aOR: 2.85; 95% CI: 2.44, 3.34) of quitting (no cigarette use in past 12 months or do not currently smoke now) (6.2%) by Wave 2 compared with established smokers (11.7%). Among both current established and current non-established smoker groups combined at Wave 1, 4.5% reported that they quit smoking by Wave 2. *Conclusion:* The results of this study indicate a national cigarette cessation rate of 4.5% among established and non-established smokers, along with a low initiation rate from 2013-2015. Non-established smokers were more likely to quit smoking, which indicates a need to further analyze and monitor this group. Monitoring cigarette smoking trends can inform policy and the potential for harm reduction tools to further decrease cigarette smoking rates.

POS5-122

DOES SIZE MATTER? AN EXPERIMENTAL STUDY OF DIFFERENT PICTORIAL HEALTH WARNING SIZES WITH INDONESIAN ADOLESCENTS AND ADULTS

Dien Anshari, PhD, Kartika A. D. Setio, MSPH, Rita Damayanti, Dr. Universitas Indonesia, Depok, Indonesia.

Significance: Indonesia have implemented pictorial health warning (PHW) regulation for cigarette packs since 2014. Its second round is scheduled in 2019 with five new PHWs, but the display size remains 40% of the pack. We assessed the affective and cognitive reactions to different PHW sizes among Indonesian adolescents and adults to provide policymakers with local evidence in line with WHO-FCTC recommenda-