Smoking Is Associated with Increased Risk of Binge Drinking in a Young Adult Hispanic Population at the US/Mexico Border

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Abstract

Background—We examine factors related to general health and health behavior, including smoking, that may be associated with binge drinking, drinking 'at risk' and potential for alcohol use disorder among young adults of Mexican ancestry.

Methods—2191 young adult emergency department (ED) patients (18–30) of Mexican ancestry in a public hospital proximate to the US/Mexican border were interviewed using health surveys including questions on general health, drinking, smoking and drug use.

Results—37% of the study participants reported binge drinking, 38% were "at risk" alcohol users above NIAAA guidelines and 22% were RAPS positive (indicating potential for alcohol use disorder). Smoking was reported by 31%, marijuana use by 16%, and other drug use by 9%. Multiple variable models revealed that smoking was the strongest factor predicting binge drinking. Those who smoked were 3.1(p<0.0001) times more likely to binge drink. Other factors independently associated with binge drinking were age 22–25 year old (OR=1.5, p=0.003), male gender (OR=1.5, p=0.0001), and ED visit for injury (OR=1.4, p=0.007).

Conclusions—There is a strong association of smoking and binge drinking; hence brief interventions for young Hispanics should be designed to include discussion of avoidance of binge drinking and smoking which could improve the efficacy of these interventions.

Introduction

Excessive alcohol use accounts for an estimated average of 80,000 deaths and 2.3 million years of potential life lost in the United States and an estimated $223.5 billion in economic costs each year.[1] Binge drinking, defined as consuming four or more alcoholic drinks on one or more occasions for women and five or more drinks on one or more occasions for men, was responsible for more than half of these deaths, two-thirds of years of life lost[2], and three quarters of the economic costs.[1] For these reasons, reducing binge drinking among adults is a leading health target identified in Healthy People 2020 (objective SA-14.3).[3]

The CDC 2011 Behavioral Risk Factor Surveillance System (BRFSS) performed a telephone survey on 457,555 U.S. adults, and reported that 18.4% adults binge drink with a frequency of 4.1 binge drinking episodes and 7.7 drinks per occasion during the past 30 days. Binge drinking prevalence was significantly higher among young adults, 18–24 years (30.0%) and 25–34 years (29.7%) with the highest number of drinks (18–24 and 25–34; 8.9

and 8.2 drinks, respectively).[4] Binge drinking is a risk factor for many adverse health and social outcomes, including unintentional injury, motor vehicle crash, assault; suicide; sexually transmitted disease; and unintended pregnancy.[5]

The Hispanic population is the largest and most rapidly growing ethnic minority group in the United States, with an estimated 52 million people in 2011. People of Mexican ancestry represent the largest and most rapidly growing subgroup of Hispanics in the US. El Paso, situated at a crossroads of Mexico and two states in the United States, Texas and New Mexico, has a population that is 80% Hispanic, five times the national average.[6] El Paso's unique location provides an opportunity to study trends among this rapidly growing minority group. One such trend of particular importance is the use of alcohol and tobacco products. In the most recent reports by CDC, binge drinking was significantly less common among Hispanics (17%) than non-Hispanic whites (21%). Hispanic binge drinkers had a lower frequency of binge drinking (3.3 vs. 4.1 episodes/30 days), but with the same intensity (6.8 drinks) compared to non-Hispanic whites.[4] Tobacco use was also less frequent among Hispanics than non-Hispanic whites (22.9% vs. 25.8%).[7]

In other publications, Hispanics are described as having distinct problems related to the development of alcohol use disorder and are reported to have more alcohol-related problems.[8] The proportion of Hispanic adults who drink on a daily basis is reported as smaller than other groups. However, when Hispanics drink alcohol, other surveys report that they consume more alcohol per drinking day.[9] Other studies have reported a higher risk for binge drinking among Hispanics.[10] Use of alcohol at a young age correlates strongly with early smoking and drug use. Among young Hispanic students as well as young adults cigarettes are often first used followed by alcohol use.[11] Alcohol and tobacco are consistently among the leading causes of preventable death in the United States. Both substances have adverse effects on survival through pathophysiologic processes and traumatic injury, and when used in combination increase the risk of certain forms of cancer.[12] In this report we further explore the association of alcohol and tobacco use by a young Hispanic population.

Methods

Population

Our data were derived from young adults of Mexican ancestry who were screened for alcohol problems during a randomized controlled trial of a brief intervention for alcohol that was conducted at a level one trauma center and academic university hospital on the US-Mexico border (the University Medical Center of El Paso in collaboration with Texas Tech University Health Sciences Center Department of Emergency Medicine). As part of that trial, patients were screened in the ED by trained, employed research associates utilizing a 16 item general health questionnaire.[13] Between the hours of 10:00 a.m. to 10:00 p.m. 7 days a week from November, 2010 through April, 2012, all available emergency patients between ages 18–30 were approached by research associates. Only those who self-identified as being of Mexican ancestry were screened. Screening was conducted in Spanish and English. Of those self-identifying as being of Mexican ancestry, 22.2% were not screened because they were too ill (6.8%), in police custody (7.1%) or refused screening (8.3%). The

population screened reflects the gender and injury characteristics of the ED population in the age range, 18–30. The study was approved by the university Institutional Review Board.

Variables

The outcome variable of interest in this study was binge drinking, defined as 5 or more drinks per day for men and 4 or more drinks per day for women. If the response to question "What is the maximum number of drinks that you had on any given day in the past month?" exceeded the defined limit, the participant was considered a binge drinker.

The main exposure variable of interest in this study was smoking, defined as current or not current. Health and behavior variables were surveyed using the following questions:

> Do you smoke cigarettes or other tobacco products?
>
> Are you concerned about your weight?
>
> Do you exercise?
>
> How often do you feel stressed?
>
> How often do you wear your seatbelt?
>
> How often have you used marijuana?
>
> Have you ever used drugs?
>
> Do you regularly take prescribed or over the counter medication?

The general health questionnaire included a single alcohol treatment question:

> Have you been treated for an alcohol problem in the last year?

3 screening questions to identify patients with 'at risk' alcohol consumption were included:

> On average, how many days a week do you drink alcohol (for example: beer, wine, liquor)?
>
> On a typical day when you drink, how many drinks do you have? (A drink is defined as one 12 ounce beer or wine cooler, one 5 ounce glass of wine, or 1.5 ounces of distilled spirits.)
>
> What is the maximum number of drinks that you have had on any given day in the past month?

Being an "at risk drinker" was defined according to the NIAAA guideline: 15 or more drinks per week for men; 8 or more drinks per week for women; or binge drinking positive. The total number of drinks per week was calculated using "Number of drinks on a typical day when you drink" multiplying "On average, how many days a week do you drink alcohol?" If the total number of drinks per week, or the maximum number of drinks per day exceeds the defined limit, the participant was considered drinking 'at risk.'[14]

The questionnaire included the Rapid Alcohol Problem Screen (RAPS), consisting of 4 questions. In the ED the specificity of RAPS for alcohol use disorder is 95% and the

sensitivity is 86%; when any question is answered positively on RAPS.[15] The RAPS questions are the following:

> During the last year, have you had a feeling of guilt or remorse after drinking?

> During the last year, has a friend or family member ever told you about things you said or did while you were drinking that you could not remember?

> During the last year, have you failed to do what was normally expected from you because of drinking?

> Do you sometimes take a drink when you first get up in the morning?

For certain variables, categories with small sample sizes were combined for easier analysis and interpretation. Age was analyzed as 3 categories (18–21, 22–25, 25–30). All other variables were dichotomized.

The general health screening questionnaire has been used in other similar studies because embedding questions concerning substance use within other general health questions has been found to result in more accurate responses.[16] In other populations, responses to this general health screening questionnaire have been used to describe health needs and identify associations between risk behaviors and other health behaviors.[17]

Data collection

Data were collected via personal interview from patients during their ED visit. Each participant completed a 5–10 minute interview during which basic demographic information (gender, age, reason for ED visit) and questionnaire response data were collected, either in English or Spanish. No remuneration was given upon completion of the interview.

Statistical analyses

Descriptive statistics for all continuous variables are presented as means and standard deviations (SD) and discrete variables are presented as frequencies (n) and proportions (%).

The association between smoking and binge drinking was measured using logistic regression models. The measures of association were presented as Odds Ratios (OR) and 95% confidence intervals (95% CI) with p-values. A multiple variable logistic regression model was used to calculate adjusted estimates. The final adjusted model presented was identified via backward stepwise variable selection methodology using entry/exit criteria SLS (significance level of stay) = 0.05 SLE (significance level of entry) =0.15. P-values less than 0.05 were considered as statistically significant. Analyses were performed using SAS statistical software version 9.3.[18]

Results

In this study we examined the associations between alcohol use and smoking, drug use, demographic factors and other elements of general health and health behavior among young adults of Mexican ancestry. We examined models that could predict binge drinking. Of the 2,191 young adults who were surveyed, only 2162 provided answers to all smoking and

drinking related questions. All available data were used in univariate and multiple variable analyses.

Table 1 presents descriptive statistics of variables stratified by binge drinking status (yes/no). All participants were Hispanics of Mexican ancestry with an average age of 23.9 (SD=3.6), 54.4% were female and 28.6% of their emergency visits were for injuries. Among all participants who responded to the specific questions regarding alcohol, tobacco and other drug use, 16.3% (out of 2161) reported marijuana use in the past 3 months, 34.6% (out of 575) reported past drug use, and 31.2% (out of 2162) reported current smoking. Of the surveyed population, 37 % reported binge drinking, 38.5 % were identified as 'at risk' drinkers, 24.8 % were RAPS positive, and only 33 (1.7 %) had been treated for alcohol problems in the past. Among binge drinkers, all measures of alcohol use were significantly higher. 16.6% of binge drinkers drink at least 3 days every week, 18.8% report more than 12 drinks on a typical drink day, and 42.6% reported a maximum of 12 or more on a single drinking day. Of note 47.2% of binge drinkers were RAPS positive, while only 9.4% of non-binge drinkers were RAPS positive.

In addition on questions not related to substance use, 58.1% of the participants were not concerned about their weight, and 58.4% were doing regular exercises. Nearly 60% of the participants felt stressed weekly or more frequently. Most of the patients (96%) always wore their seat belts while in a car. About 33% of the participants were taking prescribed or over the counter medication. This may reflect underlying chronic medical conditions or their treatment for current illness or injury.

Table 2 presents odds ratios (OR) with 95% confidence intervals (CI) and p-values for binge drinking related to all the variables from univariate or multiple variable logistic regression. All variables were initially analyzed by univariate logistic regression. All significant variables from the univariate analysis were first used as predictors in separate logistic regression models and then stepwise methods were used to select variables for the final model (significance of entry (SLE) =0.15, and significance of selection (SLS) =0.05). Among all significant variables in the final model, smoking had the highest odds ratio of 3.1, suggesting that smokers were three times more likely, compared to non-smokers, to binge drink. Patients within the age group of 22–25 years old were 1.5 times more likely, compared to the age group of 18–21years old, to binge drink. Males were also 1.5 times more likely, compared to females, to binge drink. If patients' reason for the ED visit was an injury, they were 1.4 times more likely, compared to patients with a non-injury illness, to binge drink. Patients who used marijuana were 2.9 times more likely, compared to the ones who did not use marijuana, to binge drink. And finally, patients taking medication were 0.7 times less likely to binge drink, compared to the ones who were not on medication.

Table 3 presents descriptive statistics of alcohol misuse characteristics for all participants stratified by smoking status (yes/no). All alcohol misuse related variables were compared between smokers and non-smokers. There was a significant difference between these two groups for all variables (p-value <.0001): binge drinking (59.6% for smokers vs 27.0% for non-smokers), drinking 'at risk (61.4% for smokers vs 28.2% for non-smokers), and RAPS positive (36.5% for smokers vs 19.3% for non-smokers).

In addition to data presented in tables, there was a striking difference between genders in terms of tobacco use and binge drinking with the prevalence of smoking or binge drinking being almost twice as high among men. Among female participants, 22.4% were smokers, while in male participants, 41.3% were smokers. Similarly, 28.5% of the females reported binge drinking, whereas 47.8% of the males were binge drinkers. None-the-less, controlling for other factors, the strongest independent factor associated with binge drinking was smoking for both males (OR=3.1, p<0.0001) and females (OR=3.3, p<0.0001).

Discussion

The aim of our study was to explore the factors associated with alcohol misuse in a young adult population of Mexican ancestry. We found tobacco use to be the major factor associated with alcohol misuse. Smoking was reported by 31% of those surveyed and was associated with an increased the risk of binge drinking (OR=3.1). While marijuana use was associated with a nearly equally increased the risk of binge drinking (OR=2.9), marijuana use was reported by only 16% of those surveyed. Previous studies found adults who reported episodes of binge drinking were twice as likely to be current smokers, and up until the late 1990s approximately 90% of adults diagnosed with an alcohol use disorder were regular smokers.[19]

Hispanics generally have a lower prevalence of smoking among United States ethnic groups, averaging 12.9%.[7] However in our young Hispanic population at the border 31% reported smoking. This may in part be explained by young age (18–30), low educational achievement, poor economic status and lack of acculturation, all of which would characterize our emergency population and also have been reported as factors associated with higher smoking prevalence.[20]

We examined models that could predict binge drinking and selected the model that was the most parsimonious. While a number of other factors (marijuana use, male gender, injury, etc.) also predicted more alcohol use, smoking was the strongest independent predictor of binge drinking. Including other factors in the prediction model did not significantly attenuate the relationship between smoking and binge drinking and the strong association of smoking with binge drinking was found both for men and women. Others who have examined risk behaviors, have found strong correlation between drinking and smoking as well.

The prevalence of ever drinking and ever smoking among adolescents of Mexican ancestry has recently been reported at 30% and 28%, respectively.[21] In our population, 58.6% used some alcohol in the last 30 days and 31% were current tobacco users. These proportions are higher than most prior reports and likely reflect the higher substance use rates among emergency patient populations.[22] The high prevalence of alcohol and tobacco use among ED patients makes them a good potential target for intervention. The gender differences we observed with twice the proportion of males vs. females reporting smoking and binge drinking could be related to the acculturation process, as several studies suggest that the impact of acculturation among youth is different for girls and boys.[23,24] Other studies have found that lower levels of acculturation were associated with increased odds of drinking alcohol among youth of Mexican ancestry.[25] In traditional Mexican families, boys are

granted more freedom than girls; drinking and smoking are both culturally acceptable for males but not females.

Concomitant use of tobacco, alcohol, and other drugs such as marijuana seem to have roots in the experimenting behavior of adolescents. There has been interest in identifying risk factors responsible for this experimentation, and some studies have shown strong associations between smoking, alcohol use, sensation seeking and risk taking in young Hispanic populations.[21] By some accounts, Hispanic youth across the country have some of the highest reported numbers of alcohol misuse events, such as driving under the influence.[26] In our location, one possible contribution to a higher number of misuse events is the proximity to the US-Mexico border. This location offers opportunities for adolescents to begin drinking at a younger age by crossing the border to drink, thus the border may act as a catalyst for young adult misbehavior.[27] In addition, the lower income and educational status and more permissive cultural influence of a neighboring developing country may have catalyzing influences.[25] These factors impact young adults of Mexican ancestry in the Southwestern United States; especially at major ports of entry such as El Paso.

Our population reported significant burdens of feeling stressed and overweight. Stress has been linked to higher rates of alcohol, tobacco and other drug use, and there is a growing interest in obesity's role in addiction physiology.[28] Alcohol, tobacco, and obesity have adverse impacts on cardiovascular morbidity.[29,30] For these reasons it may be particularly important to address smoking and alcohol use whenever interventions to improve general health are undertaken in this population. Positive health behaviors were reported by our population with the majority always using seat belts and exercising regularly. This should encourage further efforts at health promotion in this population.

There are several potential limitations of our study. First, we did not survey a random sample of our area population. All participants were selected from a county hospital, and were patients in the ED being evaluated for illness and injury. These patients would be expected to have more alcohol, tobacco and other drug use and disorders than the general population. Our findings are most relevant to similar segments of the population with higher alcohol, tobacco and other drug use. Second, our survey included a general question about tobacco use and did not specifically address amount smoked, quit attempts, etc. More detailed questions were included about drinking behavior than smoking. Third, data was gathered directly from verbal responses to questions and could be affected by personal sensitivities. Self-report data has limitation when reported on alcohol, tobacco and other drug use. In general self-reported data on alcohol consumption reflects the overall trends with some underreporting.[16] Since we allowed participants to continue with the survey if they chose to not answer questions, we anticipate less of their answers to be biased by a desire to supply answers that the participants think the interviewer wants.

Fourth, on all questions, there were some missing data (usually less than 10%), but on some questions more than 10% of data were missing. On one sensitive question, drug use, the majority of the participants did not answer and hence, we only speculate as to the actual prevalence of drug use. With 575 responses (reporting drug use in 38.5% of cases), we cannot know if this result reflects the drug use of the 2191 members of the study population

at large. Almost all of the missing data on RAPS questions was from participants who were not binge drinking and most did not answer any of the 4 questions. It seems likely that most of these respondents would be RAPS negative. Those having reported little or no alcohol use might have chosen not to respond to RAPS questions. Hence our finding of 9.4% of non-binge drinkers to be RAPS positive is likely higher than the actual prevalence of RAPS positivity among non-binge drinkers. On other questions the impact missing data did not seem to be of significance. In models used during preliminary analyses missing data effects were included and did not change our overall findings of a strong independent association of smoking with binge drinking.

In conclusion, our results confirm previous research and expand our understanding of alcohol use among Hispanics, especially young adults of Mexican ancestry. We find that among young adults of Mexican ancestry at the US/Mexico border smoking is associated with increased risk of binge drinking (OR=3.1, p<0.0001).This strong association of smoking with binge drinking has implications for the development of prevention and intervention programs. Our results suggest the importance of addressing both alcohol, especially binge drinking and tobacco smoking in discussions with Hispanic young adults. Tailoring intervention programs to Hispanics by gender, addressing underlying cultural and gender-based differences and addressing both alcohol and tobacco could improve the efficacy of preventive interventions.

Acknowledgment

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Table 1

Descriptive statistics of variables by binge drinking status

Variable	Total (n=2191)		Binge (n=2191)		
			No (n=1381)	Yes (n=810)	
	n	%	%	%	p-value
Age					0.026
18–21	653	30.53	31.69	28.61	
22–25	717	33.52	31.39	37.06	
26–30	769	35.95	36.93	34.33	
Missing	52		46	6	
Gender					<.0001
F	1181	54.37	62.04	41.48	
M	991	45.63	37.96	58.52	
Missing	19		19	0	
Reason for ER visit					0.001
Injury	518	28.6	25.56	33.02	
Non-injury	1293	71.4	74.44	66.98	
Missing	380		309	71	
Concerned about weight					0.038
N	1262	58.08	56.39	60.95	
Y	911	41.92	43.61	39.05	
Missing	18		12	6	
Exercise					0.032
N	898	41.61	43.36	38.65	
Y	1260	58.39	56.64	61.35	
Missing	33		25	8	
Smoke					<.0001
N	1488	68.83	79.99	49.94	
Y	674	31.17	20.01	50.06	
Missing	29		22	7	

Variable	Total (n=2191)		Binge (n=2191)		
			No (n=1381)	Yes (n=810)	
	n	%	%	%	p-value
Stressed					0.143
Less than weekly	838	40.19	41.42	38.18	
Weekly or more often	1247	59.81	58.58	61.82	
Missing	106		87	19	
How often stressed					0.209
More than twice a week	737	35.35	33.46	38.43	
Twice a week	172	8.25	8.19	8.34	
Weekly	338	16.21	16.92	15.04	
Monthly	453	21.73	21.79	21.62	
Less than monthly	183	8.78	9.2	8.09	
Never	202	9.69	10.43	8.47	
Missing	106		87	19	
Use seatbelt					0.007
Not always	96	4.4	3.5	5.94	
Always	2085	95.6	96.5	94.06	
Missing	10		8	2	
Use marijuana					<.0001
no	1808	83.66	91.19	70.84	
yes	353	16.34	8.81	29.16	
Missing	30		19	11	
How often use marijuana					<.0001
More than once weekly	109	5.04	2.57	9.26	
Weekly	43	1.99	0.96	3.76	
Monthly	63	2.91	1.69	5.01	
Infrequently	138	6.38	3.6	11.13	
Never	1808	83.66	91.19	70.84	
Missing	30		19	11	
On medication					0.0001

Variable	Total (n=2191)		Binge (n=2191)			
			No (n=1381)	Yes (n=810)		
	n	%	%	%	p-value
N	1378	66.99	63.85	72.03	
Y	679	33.01	36.15	27.97	
Missing	134		114	20	
Ever used drugs					<.0001
no	376	65.39	69.15	45.65	
yes	199	34.61	30.85	54.35	
Missing	1616		898	718	
Treated for alcohol problem before					0.031
No	1865	98.26	98.81	97.5	
Yes	33	1.74	1.19	2.5	
Missing	293		284	9	
Drink days per week					<.0001
None	901	41.41	64.47	2.35	
Less than 1	459	21.09	21.49	20.42	
1	416	19.12	10.45	33.79	
2	256	11.76	2.85	26.86	
3–7	144	6.62	0.73	16.58	
Missing	15		13	2	
Drinks per typical drink day					<.0001
None	775	35.58	56.25	0.62	
1–4	806	37.01	39.01	33.62	
5–11	431	19.79	3.73	46.97	
12+	166	7.62	1.02	18.79	
Missing	13		12	1	
Maximum number of drinks					<.0001
None	936	42.72	67.78	0	
1–4	495	22.59	32.22	6.17	
5–11	415	18.94	0	51.23	

Variable	Total (n=2191)		Binge (n=2191)			
			No (n=1381)	Yes (n=810)		
	n	%	%	%	p-value
12+	345	15.75	0	42.59	
Missing	0		0	0	
RAPS score					<.0001
negative	1486	75.16	90.6	52.79	
positive	491	24.84	9.4	47.21	
Missing	214		211	3	

Table 2

Regression analysis of binge drinking on patients with complete data on binge drinking and smoking (n=2162)

Variable	Univariate analysis			Multiple variable analysis		
	OR	95% CI	P-value	OR	95% CI	P-value
Smoke						
No	1			1		
Yes	4.0	(3.3, 4.9)	<.0001	3.1	(2.5, 3.9)	<.0001
Age						
18–21	1			1		
22–25	1.3	(1.1, 1.6)	0.016	1.5	(1.1, 1.9)	0.003
26–30	1.0	(0.8, 1.3)	0.759	1.1	(0.9, 1.5)	0.366
Gender						
Female	1			1		
Male	2.3	(1.9, 2.7)	<.0001	1.5	(1.2, 1.9)	0.0001
Reason for ER visit						
Non-injury	1			1		
Injury	1.4	(1.2, 1.8)	0.001	1.4	(1.1, 1.8)	0.007
Concerned about weight						
No	1					
Yes	0.8	(0.7, 1.0)	0.036			
Exercise						
No	1					
Yes	1.2	(1.0, 1.5)	0.023			
Stressed						
Less than weekly	1					
Weekly or more often	1.1	(1.0, 1.4)	0.135			
Use seatbelt						
Always	1					
Not always	1.7	(1.1, 2.6)	0.010			
Use marijuana						
No	1			1		

Variable	Univariate analysis			Multiple variable analysis		
	OR	95% CI	P-value	OR	95% CI	P-value
Yes	4.3	(3.4, 5.5)	<.0001	2.9	(2.2, 3.9)	<.0001
On medication						
No	1			1		
Yes	0.7	(0.6, 0.8)	0.0002	0.7	(0.6, 0.9)	0.001
Ever used drugs						
No	1					
Yes	2.6	(1.7, 4.1)	<.0001			

Table 3

Descriptive statistics of alcohol misuse characteristics by smoking status

Variable	Smoking Status (n=2186)				P-value
	No (n=1508)		Yes (n=678)		
	n	%	n	%	
Drink days per week					<.0001
None	746	50.03	149	22.04	
Less than 1	319	21.40	139	20.56	
1	246	16.50	171	25.30	
2	130	8.72	123	18.20	
3–7	50	3.35	94	13.91	
Missing	17		2		
Drinks per typical drink day					<.0001
None	643	43.07	125	18.49	
1–4	560	37.51	246	36.39	
5–11	225	15.07	204	30.18	
12+	65	4.35	101	14.94	
Missing	15		2		
Maximum number of drinks					<.0001
None	752	50.54	165	24.48	
1–4	364	24.46	128	18.99	
5–11	229	15.39	182	27.00	
12+	143	9.61	199	29.53	
Missing	20		4		
Missing	50		10		
Binge drinking					<.0001
N	1087	73.05	272	40.36	
Y	401	26.95	402	59.64	
Missing	20		4		
RAPS					<.0001
Negative	1074	80.75	405	63.48	

Variable	Smoking Status (n=2186)				
	No (n=1508)		Yes (n=678)		P-value
	n	%	n	%	
Positive	256	19.25	233	36.52	
Missing	178		40		