



LATINO COLLEGE HEALTH INITIATIVE



A STUDY OF TOBACCO-RELATED HEALTH DISPARITIES IN HISPANIC/LATINO SUBPOPULATIONS

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AUGUST 2014



Legacy envisions an America where tobacco is a thing of the past, where all youth and young adults reject tobacco use. Legacy's proven-effective and nationally recognized public education programs include **truth**[®], the national youth smoking prevention campaign that has been cited as contributing to significant declines in youth smoking; **EX**[®], an innovative public health program designed to speak to smokers in their own language and change the way they approach quitting; and research initiatives exploring the causes, consequences, and approaches to reducing tobacco use. Legacy also develops programs to address the health effects of tobacco use - with a focus on priority populations disproportionately affected by the toll of tobacco - through alliances, youth activism, training, and technical assistance. Located in Washington, D.C., the foundation was created as a result of the November 1998 Master Settlement Agreement (MSA) reached between attorneys general from 46 states, five U.S. territories, and the tobacco industry. To learn more about Legacy's life-saving programs, visit www.LegacyForHealth.org.

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The Hispanic Association of Colleges and Universities (HACU) was established in 1986 with a founding membership of eighteen institutions with a significant Hispanic student enrollment. Today, HACU, the champion of Hispanic success in higher education, represents more than 400 colleges and universities committed to Hispanic higher education success in the U.S., Puerto Rico, Latin America, and Spain. Our nation's economic and social success rests on the level of skills and knowledge attained by Hispanics, now the nation's largest minority population. Everyone has a stake in HACU's crucial goals: to promote the development of member colleges and universities; to improve access to and the quality of postsecondary educational opportunities for Hispanic students; and to meet the needs of business, industry, and government through the development and sharing of resources, information, and expertise.

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Legacy staff members **Kabi Pokhrel** and **Ines Alex Parks** conceptualized the framework, reviewed drafts, and contributed substantially to the writing of this report. **Zachary Slobig** served as the principal writer. The following Legacy staff members also reviewed and contributed to the creation of the report:

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The members of the initiative would also like to recognize the students and faculty from the four colleges that participated, all of whom provided valuable information for this report.

LEGACY'S DISSEMINATION REPORTS

Legacy's past grant making and partnership efforts have resulted in knowledge about a broad range of tobacco control issues and emerging strategies and interventions. To share this knowledge with other organizations involved in tobacco control and public health, Legacy has published a series of dissemination reports and profiles. They highlight key lessons learned from a wide range of tobacco control projects that Legacy's partners and past grantees have implemented. To access Legacy's past dissemination reports, visit legacyforhealth.org/dreports.

Latino College Health Initiative: A Study of Tobacco-Related Health Disparities in Hispanic/Latino Subpopulations is the 13th publication in Legacy's dissemination series. This publication showcases the Latino College Health Initiative as a research project on tobacco use among Hispanic/Latino subpopulations of college students. It highlights challenges and lessons learned from the research initiative, and it presents a summary of the key findings and conclusions based on data collected through the initiative.

[LEGACY RECOGNIZES AND HONORS THE FACT THAT TOBACCO HAS A SACRED CULTURAL PLACE IN AMERICAN INDIAN LIFE IN PARTS OF NORTH AMERICA. MANY NATIVE AMERICAN TRIBES USE TOBACCO FOR SPIRITUAL, CEREMONIAL, AND TRADITIONAL HEALING PURPOSES. LEGACY, THEREFORE, DISTINGUISHES TRADITIONAL, CEREMONIAL, AND SPIRITUAL USE OF TOBACCO FROM ITS COMMERCIAL USE. LEGACY PROMOTES TOBACCO CONTROL EFFORTS THAT ARE NOT GEARED TOWARD TARGETING TRADITIONAL TOBACCO.]



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EXECUTIVE SUMMARY

This publication explores a research initiative established to fill a glaring gap in public health knowledge: Little is known about tobacco use and its related health effects among Hispanic/Latino subpopulations in the United States such as Mexican Americans, Puerto Ricans, Cuban Americans, and Dominican Americans. The public health field has generally treated Hispanics/Latinos as a homogenous whole when investigating tobacco use—an oversight that fails to generate actionable data and does little to inform policy or education campaigns that could begin to address the considerable tobacco-related health disparities between the general population and the Hispanic/Latino subgroups. When treated as a homogenous group, the tobacco use of Hispanics/Latinos appears similar to that of non-Hispanic whites.

The researchers whose work is presented in the following pages collected their data in four geographically diverse, Hispanic-serving colleges to illuminate tobacco use behavior and related health disparities within the subset of Hispanic/Latino students. They aimed to dig deeper, in the hopes that their results would be considered both a catalyst for data collection toward similar goals and a model that holds promises for replication.

This report is guided by three main objectives:

- To present an overview of the Legacy Latino College Health Initiative;
- To examine commercial tobacco use and tobacco-related health disparities facing Hispanic/Latino populations in the United States; and
- To present a summary of the key findings and conclusions based on specific Hispanic/Latino subpopulation data collected through the initiative.

Chapter one of this publication offers an introduction to the Legacy Latino College Health Initiative (LCHI). It presents the history of the initiative and describes how Legacy and the Hispanic Association of Colleges and Universities (HACU) collaborated to design and implement the research study.

Chapter two provides an overview of the tobacco-related health disparities found within Hispanic/Latino subpopulations in the United States. Tobacco use by subgroup varies. For instance, based on the national data collected by CDC between 2002 and 2005, Puerto Ricans have the highest rates of smoking at 31.5 percent, followed by Cubans (25.2 percent), Mexicans (23.8 percent), and Central and South Americans (20.2 percent)! This chapter also explores acculturation and tobacco use patterns, youth smoking trends, access to culturally tailored interventions, and the methods used by the tobacco industry to target Hispanic/Latino communities.

Chapter three presents the case for college campuses as critical tobacco-related health research sites and outlines the development of the survey tool used in the LCHI. This chapter also reflects on the research methodology, with particular focus on the fact that this was not a fully randomized sample, but rather a convenience sample.

Chapter four contains a distillation of the aggregate data collected and a summary of key findings, followed by a collection of broad implications that arose from this research initiative.

Finally, an addendum provides contextual information on general health disparities facing the Hispanic/Latino community, including the effects of discrimination, the correlations between education and health, and immigrant acculturation and general health outcomes.

The research initiative presented in this report showed significant variations in smoking rates within Hispanic/Latino subgroups. Cigarette use among Dominican Americans was at 9 percent, followed by Mexican Americans at 22 percent. Significantly higher cigarette use rates were found among Puerto Ricans (34%) and Cuban Americans (37%). This disparity between Hispanic/Latino subgroups underlines that Hispanics/Latinos are not a single homogenous community. Some other important findings from this research study include:

- Students living on campus were more likely to smoke (29 percent) than students living off campus (16 percent).
- The percentage of students qualifying as smokers grew with the undergraduate year in school. The percentage of those who have quit also increased with the year in school.
- Puerto Rican and Cuban American smokers largely preferred mentholated brands (76 percent and 69 percent, respectively). Mexican Americans and Dominican Americans smokers were divided relatively equally in their preference for menthols (52 percent and 55 percent, respectively).
- A high number of students surveyed reported having tried hookah (49 percent). Although hookah initiation was highest among current smokers (71 percent), the percentage was similarly high for many other categories including early experimenters (61 percent), former smokers (54 percent), and recent quitters (79 percent).
- Participants in the survey frequently had tried more than one of the tobacco products or e-cigarettes. Significant percentage of the sample students had tried e-cigarettes (11 percent), chewing tobacco (15 percent), pipes (16 percent), bidis (13 percent), and cloves (17 percent).

This research initiative broke new ground—no research effort to date had focused as exclusively on tobacco use, attitudes toward and motivations for tobacco use, and tobacco-related health disparities in the Hispanic/Latino college student population. The research showed significant differences in tobacco use between four different Hispanic/Latino subpopulations. It also demonstrated the use of a promising web-based survey methodology which can be replicated in other research settings focused on young adults because young adults are very familiar with web-based technologies.

LAYING THE GROUNDWORK FOR THE INITIATIVE

1

INTRODUCTION

Smoking is the leading cause of preventable death. Smoking-related diseases claim 480,000 lives annually in the United States.² According to the U.S. Surgeon General, “If smoking persists at the current rate among young adults in this country, 5.6 million of today’s Americans younger than 18 years of age are projected to die prematurely from a smoking-related illness.”³

To date, public health and epidemiological research focused on tobacco-related health disparities has largely treated the Hispanic/Latino population as a homogenous group, overlooking the very distinct differences among subpopulations within the

Hispanic/Latino community. As a result, the current scientific literature has very limited data on tobacco use among various key Hispanic/Latino subpopulations such as Mexican Americans, Puerto Ricans, Salvadorans, Cuban Americans, Dominicans, Guatemalans, and Central and South Americans.⁴ This report investigates the differences in tobacco use at the subpopulation level among young adults from four geographically diverse college campuses. A detailed discussion of general health disparities facing Hispanic/Latino population in general—including the effects of discrimination and the relationship between immigrant acculturation and health outcomes—can be found in the addendum to this publication.



LCHI Advisory Committee Members with Legacy Staff (From Left to Right) Dr. Michael Baumann, Dr. Raymond Garza, Dr. Jeannette Noltenius, Rene A. Gonzalez, Ines Alex Parks, Dr. Ralph Caraballo and Laura Hamasaka

CHAPTER 1

LAYING THE GROUNDWORK FOR THE INITIATIVE

“More than 20 million Americans have died as a result of smoking since the first Surgeon General’s report on smoking and health was released in 1964. Most were adults with a history of smoking, but nearly 2.5 million were nonsmokers who died from heart disease or lung cancer caused by exposure to secondhand smoke. Another 100,000 were babies who died of sudden infant death syndrome (often referred to as SIDS) or complications from prematurity, low birth weight, or other conditions caused by parental smoking, particularly smoking by the mother.”

Source: U.S. Department of Health and Human Services, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Executive Summary*. Retrieved from <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/exec-summary.pdf>

HISTORY AND OVERVIEW OF LEGACY’S COLLEGE HEALTH INITIATIVE

There is great diversity within the Hispanic/Latino population in the United States; there is also significant variability in rates of tobacco use among subpopulations. National estimates of Hispanic/Latino tobacco use rates mask substantial variation among geographically and culturally distinct groups, and among generations and genders. The Legacy College Health Initiative (LCHI) research began in response to the glaring need for better surveillance data surrounding the Hispanic/Latino subpopulations to identify health risk behaviors and priorities.

LCHI has its roots in an earlier Legacy initiative—the On the Ground Smoking and Cessation Project that started in 2006 as a three-year initiative and focused on three Historically Black College and University (HBCU) campuses in North Carolina. “This was a grassroots community engagement project that developed and implemented an interdisciplinary collaboration approach,” said Amber Bullock, executive vice president of program development at Legacy. “The goals of the program were multifold: to address tobacco use rates, to promote and foster smoking cessation and prevention, to develop and implement an awareness campaign, and to develop cessation programs.”

“The goal of the more recent College Health Initiative was to highlight the importance of subpopulation research as well as to build capacity among college students as it is related to health surveillance,”

—Ines Alex Parks, Assistant Director of Program Development with Legacy.

PARTNERSHIP WITH THE HISPANIC ASSOCIATION OF COLLEGES AND UNIVERSITIES AND SITE SELECTION

Legacy found a natural and enthusiastic partner for this initiative in the Hispanic Association of Colleges and Universities (HACU), founded in 1986. Currently, HACU counts more than 400 colleges and universities in its network. 245 of these institutions serve student bodies with at least 25 percent Hispanic/Latino populations representing a total student population of over one million. This was the first tobacco health-related initiative for HACU, according to Rene Gonzalez, executive director of student services at HACU. HACU was well-positioned to aid in site selection due to its strong relationships with Hispanic-serving institutions from all parts of the country.

CHAPTER 1

LAYING THE GROUNDWORK FOR THE INITIATIVE

Legacy had already gathered an advisory committee for the project composed of key stakeholders in the Hispanic/Latino health and research community, including representatives of the Centers for Disease Control and Prevention and the National Latino Tobacco Control Network to work closely with HACU on development and implementation.

The advisory committee gave careful consideration to assembling a research sample that was robust and geographically diverse, and accounted for the major U.S. Hispanic/Latino subpopulations. Established working relationships within the academic and research communities expedited the outreach and site selection process. “With the input from the advisory committee, it was decided that we try and pocket geographical sites that would give us enough numbers, enough participation among the various Hispanic/Latino subgroups,” said Dr. Ray Garza, principal investigator of the research project. His faculty position at the University of Texas at San Antonio, allowed the initiative ready access to a strong sample of Mexican American students.

To access a comparably robust sample of Puerto Rican students, HACU identified Lehman College in the Bronx, New York. To target the Cuban American population, HACU identified Florida International University but discussions on participation were not productive. The advisory committee turned next to Barry University—a private Hispanic/Latino serving institution in Miami, Florida. Dr. Garza had some contacts there in the nursing school who indicated that they would be eager to join the project.

It became clear at that point that the initiative would need to include a site in California to legitimately present itself as a national study. Dr. Garza contacted Dr. Howard Friedman, a well-established academic in health psychology at the University of California, Riverside (UCR) to bring UCR into the initiative.

The appeal of participating in this initiative to the partnering institutions was very evident, according to Gonzalez. After all, the project aimed to collect data that had never been collected before and in the end would inform the field. “The data would be available to the faculty—their local data from the students at their institution—for review and for publications,” Gonzalez said.

“That was a primary incentive for the faculty members. Some of that information would be available to the president and the student services staff [of each institution] to see if it might be of use to them for planning purposes or for outreach programs to their students.”

More in-depth discussions of research activities and student populations at each college site will be presented in Chapter three of this report.



TOBACCO-RELATED HEALTH DISPARITIES IN HISPANIC/ LATINO SUBPOPULATIONS

2

INTRODUCTION

In the U.S. population overall, 18.1 percent of adults smoke cigarettes.⁵ However, wide variations in smoking rates exist among different racial and ethnic groups. On the whole among adults, the cigarette smoking rates of Hispanics/Latinos are lower than that of non-Hispanic/Latino whites; in 2012, 12.5 percent of Hispanic/Latino adults smoked, compared to 18.1 percent of non-Hispanic/Latino blacks, 19.7 percent of non-Hispanic/Latino whites, and 21.8 percent of American Indians/Alaska Natives.⁶ Hispanic/Latino women have a much lower smoking rate (7.8 percent in 2012) than Hispanic/Latino men (17.2 percent). 14.8 percent of non-Hispanic/Latino black women and 18.4 percent of non-Hispanic/Latino white women smoked in 2012.⁷ However, significant variations in smoking rates emerge within Hispanic/Latino subgroups— a theme this report explores in the context of college campuses.

SUBPOPULATION TOBACCO USE

Based on the data from the Centers for Disease Control and Prevention, Puerto Ricans have the highest rates of smoking at 31.5 percent, followed by Cubans (25.2 percent), Mexicans (23.8 percent), and Central and South Americans (20.2 percent).⁸ This data indicate that measurable differences emerge at the Hispanic/Latino subpopulation level— differences that present themselves as opportunities for targeted intervention and policy efforts. Considered as a group, Hispanic/Latinos tend to be lighter smokers and have a higher likelihood of non-daily smoking than the overall population.^{9,10,11,12} However, the leading causes of mortality of U.S. Hispanic/Latinos are smoking-related.¹³ Furthermore, Hispanic/Latino nondaily smokers are less likely to make a quit attempt compared to non-Hispanic Whites.¹⁴



CHAPTER 2

TOBACCO-RELATED HEALTH DISPARITIES IN HISPANIC/LATINO SUBPOPULATIONS

ACCULTURATION AND TOBACCO USE PATTERNS

As Hispanic/Latino women acculturate into the dominant American culture, their smoking patterns begin to increase to that of non-Hispanic/Latino whites. A study led by Dennis R. Trinidad et al. uncovered that as women began to learn English, their smoking rates increased and that women with lower-level English-language proficiency had significantly lower prevalence rates for both smoking and total tobacco use.¹⁵ Another study showed that “greater ethnic pride” had a direct effect on less frequent cigarette use, particularly for young Latinas. This dynamic indicates a protective effect of ethnic pride, Spanish language usage and family-oriented traditionalism in the overall Hispanic/Latino population.¹⁶

YOUTH SMOKING

During 2009-2010, smoking prevalence was 7.7 percent among Hispanics aged 12-17 years, whereas it was 13.6 percent among American Indian/Alaska Native youth, 10.2 percent among whites; and 5 percent among blacks.¹⁷ This was the latest data set available for analyzing smoking among youth aged 12-17 in various ethnic and racial groups. Compared to all other age groups, as of 2010, young adults (18-25 years old) in the general population have the highest smoking rates at 34.2 percent.¹⁸ According to the National Survey on Drug Use and Health in 2010, cigarette smoking rates were higher for young adult males (38.1 percent) than for females (30.3 percent).

Among various ethnic and racial groups of young adults aged 18-25 years, white young adults had the highest smoking prevalence rate (39.1 percent), compared to Hispanic (27.4 percent) and black

(23.3 percent) young adults.¹⁹ No directly comparable data are available on smoking among American Indians and Alaska Natives in the similar age group. It is important to note that smoking prevalence among Hispanic/Latino young adults (18-25 years old) at 27.4 percent was significantly higher than smoking among all adults in the general population (19.3 percent) in 2010.²⁰

Available data on cigarette smoking among Hispanic/Latino middle-school students is also a cause for alarm particularly because one-in-four newborns in the U.S. is a Hispanic/Latino.²¹ In 2012, among middle-school students, Hispanic/Latino young people were found to have the highest smoking prevalence rate, 5.4 percent, versus 3.1 percent of non-Hispanic/Latino white and 2.6 percent of black middle-school students.²² The smoking prevalence estimate for all middle-school students is 3.5 percent.²³ No directly comparable data on youth smoking were available for American Indians and Alaska Natives. These data reflect prevalence at the general Hispanic/Latino population level and not at subpopulation levels.

Another alarming statistic is that smoking rates are higher for Hispanic/Latino high-school students (14.3 percent) compared to black high-school students (9.6 percent).²⁴ These high smoking rates among middle-school and high-school Hispanic/Latino students merit special attention from the public health and tobacco control communities because Hispanics/Latinos are the youngest group amongst all racial ethnic groups²⁵ and according to the U.S. Census, they also represent the largest racial and ethnic group in the country.²⁶

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TOBACCO-RELATED HEALTH DISPARITIES IN HISPANIC/LATINO SUBPOPULATIONS

DISPARITIES IN TOBACCO CESSATION

Significant barriers exist that limit the Hispanic/Latino population's access to culturally appropriate and/or Spanish-language cessation services. Studies have found that though motivation to quit may be high—with concern for health effects on children and the family a primary motivator—Hispanics/Latinos mostly rely on themselves for cessation, with little use of cessation medications or available support services.^{27,28} Furthermore, there is evidence that Hispanic/Latino smokers experience lower levels of practitioner intervention in the health care system. Hispanics/Latinos are less likely than other racial and ethnic groups to report receipt of physician advice to quit smoking.²⁹

PERCEPTIONS TOWARD SMOKING AND HEALTH RISKS

A study conducted by Michael C. Zinser, Fred C. Pampel, and Estevan Flores found fatalistic and generally inaccurate beliefs about smoking and quitting amongst Hispanic/Latino smokers, at significantly higher rates than among non-Hispanic/Latino white smokers. For instance, a higher proportion of Hispanic/Latino smokers (42.7 percent) than non-Hispanic/Latino smokers (34.0 percent) agreed with the statement “Whether I die of smoking is in God’s hands, not mine.”³⁰

ACCESS TO HEALTH CARE AND CANCER DEATHS

Lung cancer is the leading cause of cancer deaths among Hispanics/Latinos and three of the four leading causes of deaths in this population are tobacco-related: cancer, stroke, and heart attack.^{31,32} Hispanics/Latinos in the United States are the least likely to have health insurance of any racial or ethnic group, which reduces their likelihood of accessing timely preventive medical services such as cancer-related and early detection examinations. Such barriers to medical care access, as well as distinct sociodemographic characteristics, likely play a role in cancer risk and detection in Hispanics/Latinos.³³

TARGETING OF HISPANIC/LATINO COMMUNITIES BY THE TOBACCO INDUSTRY

Hispanics/Latinos are an obvious target for any major industry, including the tobacco industry, because they represent the second largest racial or ethnic group in the United States after non-Hispanic whites.³⁴ They also are one of the two fastest growing racial or ethnic groups in the country.³⁵ Tobacco companies spend \$8.8 billion annually marketing their products,^{36,37} and the tobacco industry has been shown to target the Hispanic/Latino population with aggressive tailored marketing.³⁸ Furthermore, neighborhoods with high Hispanic/Latino concentrations and populations of lower socioeconomic status tend to have a high concentration of retail tobacco outlets.^{39,40} At least one study has shown that businesses that sell tobacco products to underage consumers are significantly more concentrated in Hispanic/Latino neighborhoods.⁴¹

Hispanic/Latino young adults have been the target of tobacco industry research to determine the impact of assimilation on tobacco purchasing behavior, as well as the subsequent marketing of tobacco products according to immigrant and acculturation status. An example of these efforts is the development of the cigarette brands “Rio” and “Dorado,” designed to appeal to Hispanic/Latino markets.⁴² In addition, young Hispanics/Latinos residing in the area of the United States/Mexico border are exposed to unrestricted tobacco marketing efforts taking place in Mexico.⁴³

A historical review of tobacco company R.J. Reynolds’ strategies for marketing to Hispanics/Latinos conducted by Lisbeth Iglesias-Rios and Mark Parascandola revealed an effort beginning as early as 1980, involving “a sophisticated surveillance system to track the market behavior of Hispanic smokers and understand their psychographics, cultural values, and attitudes.”⁴⁴ R.J. Reynolds used the information collected to shape the marketing

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campaigns for the Winston and Camel brands. R.J. Reynolds, and likely many other major tobacco companies, used this market research to appeal to Hispanic/Latino consumers' values and sponsored community activities that could appear legitimizing.⁴⁵

One study, for instance, revealed that tobacco companies had systematically provided Hispanic/Latino chambers of commerce in California with funding, making these organizations susceptible to tobacco industry influence.⁴⁶ Historically, the industry has also funded primary and secondary schools, universities and colleges, and scholarship programs for Hispanics/Latinos. Tobacco companies

have advertised in community publications and sponsored Hispanic/Latino cultural events.⁴⁷ Another study analyzed cigarette ads in popular magazines and found that the tobacco industry targeted Latinas differently than it did white women.⁴⁸ A similar study analyzed ads from 1998-2002 in Spanish-language editions of *People* magazine and found 2.6 times more ads for menthol cigarettes than in the English-language versions—and significantly more ads for brands, like Virginia Slims, that target women.⁴⁹ Such aggressive tobacco industry targeting of Hispanics/Latinos undeniably increases the potential for tobacco-related health disparities.

COLLEGE CAMPUSES

AS CRITICAL TOBACCO HEALTH-RELATED RESEARCH SITES

3

INTRODUCTION

College campuses provide unique opportunities for social norms testing and behavioral initiation, places where patterns can be established that extend into adulthood. With many students away from home for the first time, the college years are an opportunity for self-discovery and experimentation in many realms. “The lifestyle choices that you make in college are key,” said Dr. Jeannette Noltenius, national director of the National Latino Tobacco Control Network. Moreover, studies have shown a strong correlation between binge drinking and tobacco use on college campuses.^{50,51}

College-aged experimentation with unhealthy behavior is nothing new, however.^{52,53} According to Dr. Ralph Caraballo, epidemiology branch chief of the Centers for Disease Control and Prevention’s Office on Smoking and Health, what has changed may be the intensity of this dynamic. “The tobacco industry spends millions each day on advertising and promotion, which reaches this age group.”

ADAPTING THE ADULT TOBACCO SURVEY FOR HISPANIC/LATINO COLLEGE STUDENTS

Using SurveyMonkey⁵⁴, a comprehensive web-based survey tool, LCHI took the original CDC-developed Latino Adult Tobacco Survey (ATS)⁵⁵ and tailored it to gather crucial data on tobacco use, related attitudes, and motivating factors in the Hispanic/Latino college student population. The original ATS tool served as a solid foundation, but the advisory group quickly realized it fell short of offering the level of granularity that the initiative sought. “What we came to understand was that there really wasn’t

any data about what we were looking for, which was the attitudes of Latino college students towards smoking,” said Rene Gonzalez.

“There were items that were missing, items that would ask about variables that we knew could influence smoking, like cultural identity, social pressures, risk factors—especially for young adults who are Hispanic/Latino and probably the first generation to go to college,” said Dr. Stella Lopez, associate professor of psychology at UTSA and a collaborator with Dr. Garza.

“We know smoking is related to other types of self-destructive behaviors, and you know, the college atmosphere can promote that, too, and those things were missing in the existing format of the survey.”

Dr. Lopez led a literature review of research focused on Hispanic/Latino tobacco use and related health disparities in order to highlight the gaps in the ATS. Questions were subsequently added concerning a number of variables, such as cultural identity, depression, perceptions about smoking, and attitudes and beliefs about the self and smoking behavior.

The survey constructed for the initiative reflected the broad theoretical interests of the advisory group, covering a range of factors including social influence, self-impression, comorbidity, and motivational factors.

“[The ATS] was designed not to figure out why people smoke, but [to figure out] how many people are smoking,” said Dr. Michael Baumann, associate

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COLLEGE CAMPUSES AS CRITICAL TOBACCO HEALTH-RELATED RESEARCH SITES

professor in the Department of Psychology at UTSA and collaborator with Dr. Garza and Dr. Lopez. “If you’re looking at getting at the underlying reasons, they don’t really give you the types of things that you need. They don’t measure a lot of the psychological constructs; they measure self-reported behavior. So, it’s very focused on understanding the state of the problem instead of examining the cause of the problem.” The LCHI team built a survey tool they believed would surpass the capabilities of the original ATS to uncover crucial tobacco related behavior patterns within Hispanic/Latino subpopulations.

“That was a long process,” said Dr. Lopez. “We wanted to make sure we had every variable that we could think of in there. Then we had to make sure that the items were phrased, constructed, presented in a clear, comprehensible way and that response scales are understandable and open to analysis.” It became a very large survey. “I’ve never created this big of a survey in my career before,” Dr. Lopez added. “The ATS was a solid skeletal outline for us.”

Questionnaire development continued throughout 2009. The survey broke new ground—no research effort to date focused as exclusively on the tobacco use, attitudes toward and motivations for tobacco use, and tobacco-related health disparities in the

Hispanic/Latino college student population. Following a series of revisions that incorporated feedback from all key stakeholders, the survey was ready for pilot testing at the UTSA campus.

“It was innovative because it has a bigger picture to it than focusing on the basic questions: ‘Have you smoked more than 100 cigarettes in your lifetime?’” said Dr. Noltenius. “It includes mental health issues, employment issues, socioeconomic status, etc. We’re starting to realize, even though the data has been there for years, that context is a defining factor in terms of norms. This is a more comprehensive view. Do we take a Polaroid picture just of smoking, or do we get a view from an airplane?”

Dr. Noltenius also highlighted the challenges and barriers faced by the Hispanic/Latino college students. “Remember, close to 30-40 percent of Latinos drop out of high school, and this pattern has been going on since the 1960s,” she said. “That first year of college doesn’t ensure that Latinos are going to stay in college; they have their families to take care of, and you’re often expected to work and contribute. For many, many Latinos it’s the first generation to go to college. It’s exceptional to go to college—it’s against many odds. So, it’s a different set of stressors.”

Hispanic Academic Achievement

35.1 percent of Hispanics 25 and over have not completed high school as of 2012, compared to 12.5 percent of non-Hispanic whites.

14.5 percent have a bachelor’s degree and 4 percent an advanced degree as of 2012, compared to 34.5 percent and 12.5 percent for non-Hispanic whites.

Source: Hispanic Association of Colleges and Universities, Fact Sheet: Hispanic Higher Education and HSIs (Hispanic-Serving Institutions)—2014, http://www.hacu.net/hacu/HSI_Fact_Sheet.asp

Legacy Latino College Health Initiative Overview of Four College Sites and Recruitment Strategies

	University of Texas at San Antonio (UTSA)	Barry University	Lehman College	University of California, Riverside
Public or Private	Public	Private	Public (CUNY)	Public
Student Population	30,000 students (44% Hispanic)	8,900 students (25% Hispanic)	12,100 students (48% Hispanic)	21,000 students (32% Hispanic)
Academic Programs	<ul style="list-style-type: none"> • 64 BA/BS programs • 48 graduate programs • 21 PhD programs 	<ul style="list-style-type: none"> • 76 BA/BS programs • 96 graduate programs • 14 PhD programs 	<ul style="list-style-type: none"> • 76 BA/BS programs • 46 graduate programs 	<ul style="list-style-type: none"> • 89 BA/BS programs • 53 MA/MS programs • 45 PhD programs
Hispanic/Latino Subpopulation(s)	Large regional Mexican American population	Large regional Cuban American and Caribbean populations	Large regional Puerto Rican and Caribbean populations	Large regional Mexican American population
Recruitment Strategies	Through email and through Introduction to Psychology class	Through flyers and class announcements	Through flyers and class announcements	Through email

Source: Dr. Michael Baumann, Associate Professor, Department of Psychology, University of Texas at San Antonio

RECRUITMENT METHODOLOGY

To reach the survey completion goal, 500 responses for each institution, strategies varied depending on each institution’s unique practices, resources, and regulations. At the University of Texas at San Antonio, introductory psychology students took the survey as part of an experiential course requirement—the survey was completed on departmental computers. Another UTSA sample was recruited via mass email and students were given a link to the SurveyMonkey site to complete the survey at their convenience. The Barry University group relied on email outreach, word of mouth, and class announcements. Lehman College students were recruited through a mix of flyers and in-class and email announcements. The University of California, Riverside, reached its goal most quickly among the partnering institutions, as it relied on a

campus-wide mass email system reaching every one of the school’s nearly 21,000 students. A follow-up recruitment effort used the campus’s Chicano Student Program email list. In total, 2,337 respondents at the four campuses completed the survey, surpassing the original goal.

“The sites were pretty much independent,” said Gonzalez. “We did have a meeting where the site co-PIs [principal investigators, the coordinators at each campus site] were invited to a midpoint check, but there really wasn’t a whole lot of interaction among the sites.” Gonzalez, who comes from a student services background, did lend technical assistance to sites. “The technical assistance was very helpful,” said Paula Delpech, the site coordinator from Barry University. “Initially we went into classes

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and we weren't getting the numbers, so we put out a call for the students to participate on the main website and data was collected in less than a semester." Delpech found that \$20 Amazon gift cards were a very effective incentive for the Miami-area student population.

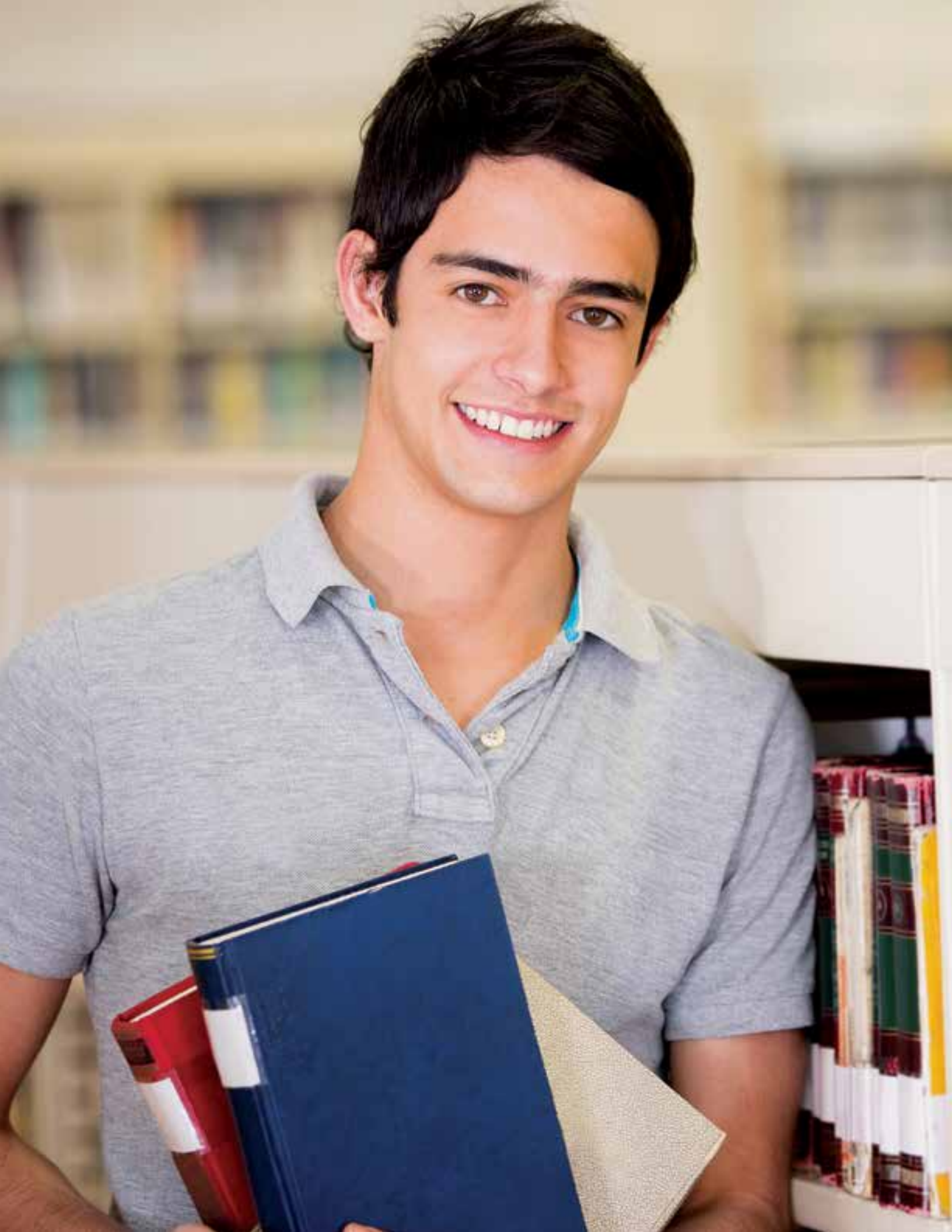
REFLECTIONS ON RESEARCH METHODOLOGY

By making use of a web-based survey tool and data collection system, the research team was able to be more expansive in its scope than may have been possible with a traditional paper-and-pencil survey instrument. UTSA's Dr. Baumann believes that administering the survey online allowed for a completion time of roughly half what it might have been on paper. This efficiency allowed for a broader data set and a deeper level of detail. Furthermore, the college-aged population is accustomed to extended screen time, so a

web-based approach was favorable to the analogue alternative and could provide a model for comparable data collection initiatives.

As a foundational partnership, the relationship between the Hispanic Association of Colleges and Universities and Legacy represented tremendous capacity at the national, local, and community levels. This was a truly mutually beneficial arrangement: Without Legacy, HACU could not have initiated substantive research on tobacco use in Hispanic/Latino subpopulations, and without HACU, Legacy could not efficiently and responsibly access those subpopulations. In fact, prior to the project, HACU had worked on some general health initiatives, but never any tobacco-related health programs. Likewise, Legacy had never had such intimate access to the Hispanic/Latino college population. The initiative thus fulfilled a critical need for both partners.





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In terms of sampling methodology, the project relied on a “convenience sampling” approach based on accessibility rather than a fully randomized selection procedure. The advantages to this approach are speed and decreased cost, but convenience sampling can also contribute to bias, as it does not necessarily touch the entire population. The data collected, however, is solid and promising, spanning four geographically diverse college campuses and touching significant samplings of Hispanic/Latino subpopulations. The effort was an important contribution to an underexplored field of study that warrants further research.

The largest setback the research initiative faced was a technological glitch that compromised the security of the reimbursement system. The HACU finance department found the discrepancies in the course of an internal audit, and the project was put on hold until the issue could be rectified.

In terms of incentives, each respondent who completed the survey was provided with a link to a separate compensation form to receive a \$20 Amazon gift card. Though the student participation incentive was adequate at some sites, for others it

seemed to fall short. Vanya Petrova, the site coordinator at Lehman College suspects that the incentive was not enticing enough to the local college-aged population. According to her, more than 50 percent of the student body consists of part-time students, many of whom have jobs outside campus and families of their own. “In New York, the pace of life and the cost of life made the survey not so popular,” said Petrova.

Her outreach took three semesters to yield the target number of survey results. She announced the survey in her own Biology Department courses (she specializes in the research of antioxidants used for combating chronic obstructive pulmonary disorder, or COPD, due to cigarette smoke exposure). She also announced the survey in classes outside her department, including Spanish, English, and Mathematics. She suggested that outreach could enjoy increased efficiency if social media were used as well as participation had factored into course credit or had been encouraged during class period. “The students were more concerned with getting an A than anything else,” said Vanya Petrova, the site coordinator at Lehman College.

DATA SUMMARY AND KEY FINDINGS

The analysis and presentation of the data collected in the initiative were conducted by the research group, with Dr. Michael Baumann and Dr. Ray Garza taking the lead on composition.

RESPONDENT DEMOGRAPHICS

The breakdown of usable survey responses by site was 821 from UTSA, 364 from Barry University, 412 from Lehman College, and 466 from UCR. UTSA's respondent pool was larger because of the inclusion of the introductory psychology students. UTSA's sample also skewed slightly younger, while Barry's sample—from a campus with a high number of non-traditional and older students—skewed older. Gender breakdowns at each site were consistent with the respective student populations.

The sample is not—nor was it meant to be—representative of the racial or ethnic makeup of the four sites. The project was primarily concerned with

tobacco use among Hispanic/Latino college students, and efforts were made to specifically recruit from that population. Combining across sites, the sample was 58 percent Hispanic/Latino. Major Hispanic/Latino groups present were Mexican Americans (36 percent of total sample), Puerto Ricans (6 percent), Cuban Americans (3 percent), and Dominican Americans (5 percent), with other Hispanic/Latino groups combined making up 8 percent of the sample. Major groups present in the non-Hispanic/Latino portion of the sample were non-Hispanic/Latino whites (22 percent of total sample), African Americans (8 percent), and Asians or Asian Americans (10 percent), leaving 2 percent other races or ethnicities, including multiracial.⁵⁶

Demographics of Respondents

Ethnic Identification	University of Texas at San Antonio (UTSA)	Barry University	Lehman College	University of California, Riverside
Mexican	59%	28%	2%	36%
Puerto Rican	2%	14%	16%	1%
Cuban	0.1%	14%	2%	1%
Dominican	0.3%	2%	21%	0%
Other Hispanic	9%	6%	8%	8%
Non-Hispanic White	20%	22%	19%	23%
Other	9%	13%	32%	31%

(n = 821) (n = 364) (n = 412) (n = 466)

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DATA SUMMARY AND KEY FINDINGS

As expected, the sites varied in terms of representation of Hispanic/Latino subgroups. The Hispanic/Latino sample at UTSA was primarily Mexican American (59 percent), with no more than 2 percent of any other Hispanic/Latino subgroup. The Barry University sample was more evenly distributed across Hispanic/Latino subgroups, with 28 percent of the total sample Mexican American, 14 percent Puerto Rican, and 14 percent Cuban American. The two most common subgroups in the Lehman College sample were Puerto Rican (16 percent) and Dominican American (21 percent). The Hispanic/Latino sample from UCR was primarily Mexican American (36 percent) with small numbers of respondents reporting various Central and South American identities (8 percent combined). The presence of large numbers of Mexican Americans, Puerto Ricans, Cuban Americans, and Dominican Americans allowed us to examine four of the five largest U.S. Hispanic/Latino subgroups.⁵⁷

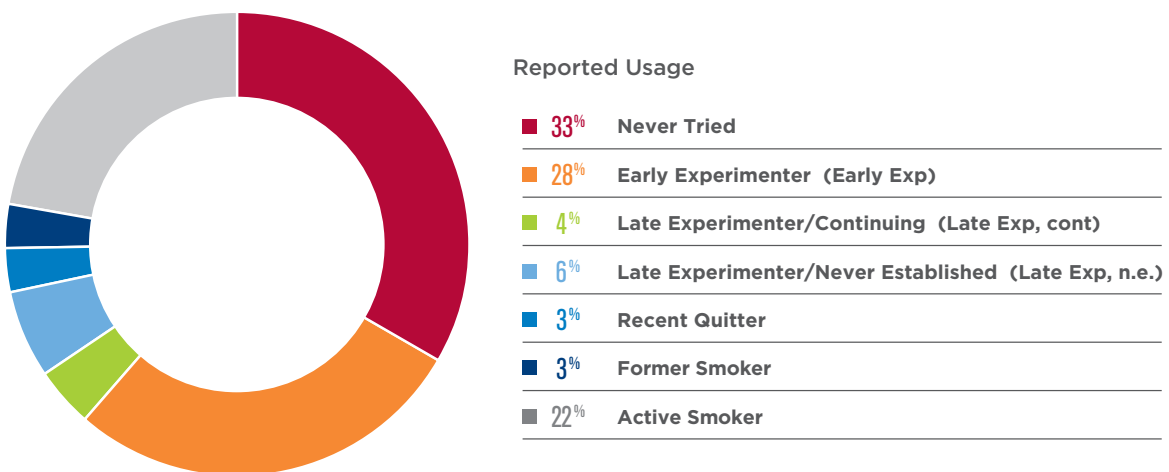
SELECTED FINDINGS

The data set generated in this research was quite large, and targeted analysis is ongoing at each site based on localized priorities (with tailored publications to come), but the following sections present a snapshot of the most salient reportable findings.

CIGARETTE USE

Respondents were separated into categories based on a combination of CDC criteria and classification models drawn from the initiation and cessation literature. Consistent with CDC criteria, a person was classified as a smoker if he or she currently smoked and had smoked at least 100 cigarettes in his or her lifetime (current smokers). People who at one point met CDC criteria but reported having stopped smoking within the last year were classified as recent quitters. Those having stopped over a year ago were former smokers. This distinction was made primarily due to the probability of relapse within the first six to nine months of a quitting attempt being significantly higher than a year or more out (e.g., Zhou et al., 2009⁵⁸).⁵⁹

Cigarette Use Patterns Amongst Hispanic/Latino Respondents



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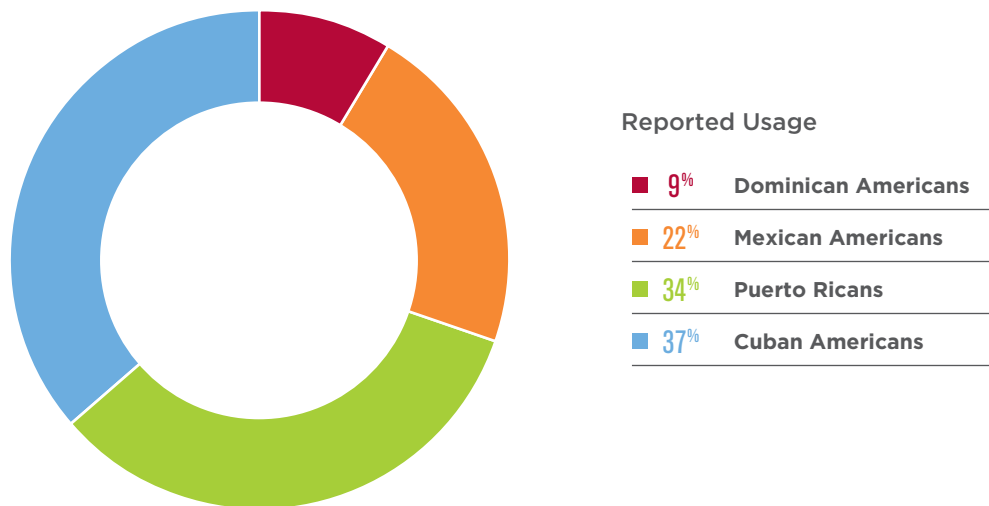
Classifications for the remaining participants were based on a modified version of a four-stage model of becoming a cigarette smoker proposed by Flay et al. in 1983.⁶⁰ People falling below the CDC level for smoking were separated into never triers (never even a few puffs); early experimenters (up to ten cigarettes); late experimenters, continuing (more than ten but fewer than 100 cigarettes and still smoking); and late experimenters, never established (between ten and 100 cigarettes but no longer smoking).

Across all four sites, 22 percent of Hispanic/Latino respondents qualified as current smokers. Very few respondents met the CDC criteria for recent quitters (3 percent) or former smokers (3 percent). Another 6 percent of the sample qualified as late experimenters, never established, and 4 percent qualified as late experimenters, continuing. The remaining respondents were split between early experimenters (28 percent) and never triers (33 percent).⁶¹

CIGARETTE USE BY HISPANIC/LATINO SUBGROUP

No statistically significant findings on cigarette use emerged when comparing Hispanics/Latinos and non-Hispanic/Latino whites, but critical differences come to light when comparing Hispanic/Latino subgroups. Cigarette use reported by Dominican Americans was at 9 percent, followed by Mexican Americans at 22 percent. Significantly higher cigarette use rates were reported by Puerto Ricans (34 percent) and Cuban Americans (37 percent). This disparity between Hispanic/Latino subgroups underscores that Hispanics/Latinos are not a single homogenous community.

Cigarette Use by Hispanic/Latino Subgroup

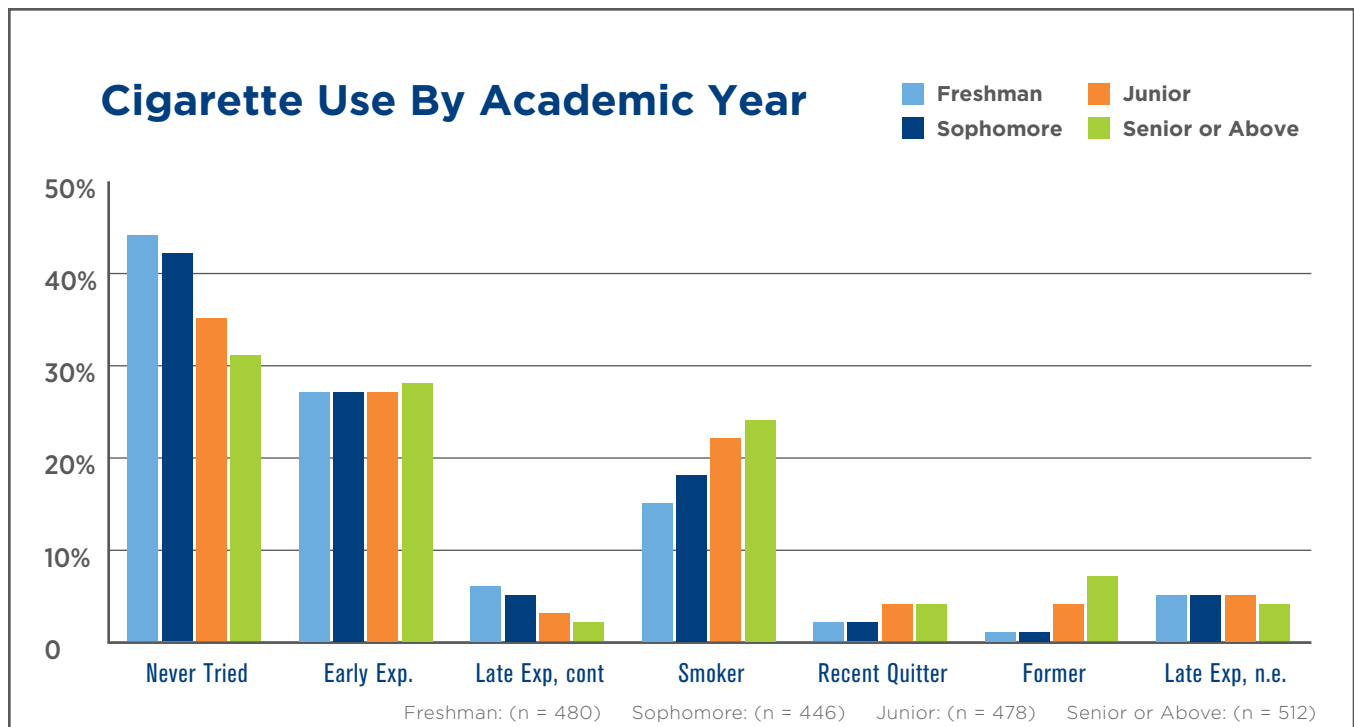


CIGARETTE USE BY ACADEMIC YEAR

Consistent with the literature showing a general increase in smoking prevalence during the college years (e.g., Wechsler, Rigotti, Gledhill-Hoyt, & Lee, 1998)⁶², the percentage of respondents qualifying as smokers increases with the undergraduate year in school. The percentage who have quit also increases with year in school.

off-campus counterparts at the Texas and Florida sites and more likely to have at least tried cigarettes at all three sites. Although the strength of the relationship between age and the various categories as well as academic year and the various categories differed by site, in general the relationship held when adjusting for appropriate control variables (specifically, age, site, gender, and their interactions).

Students living on campus were more likely to smoke (29 percent) than students living off campus (16 percent). The New York site did not, for all intents and purposes, have campus housing. To determine whether this skewed the results, living situation was reexamined excluding the New York site. Differences in cigarette use remained, with on-campus dwellers being more likely to be current smokers than their





CIGARETTE USE BY GENDER

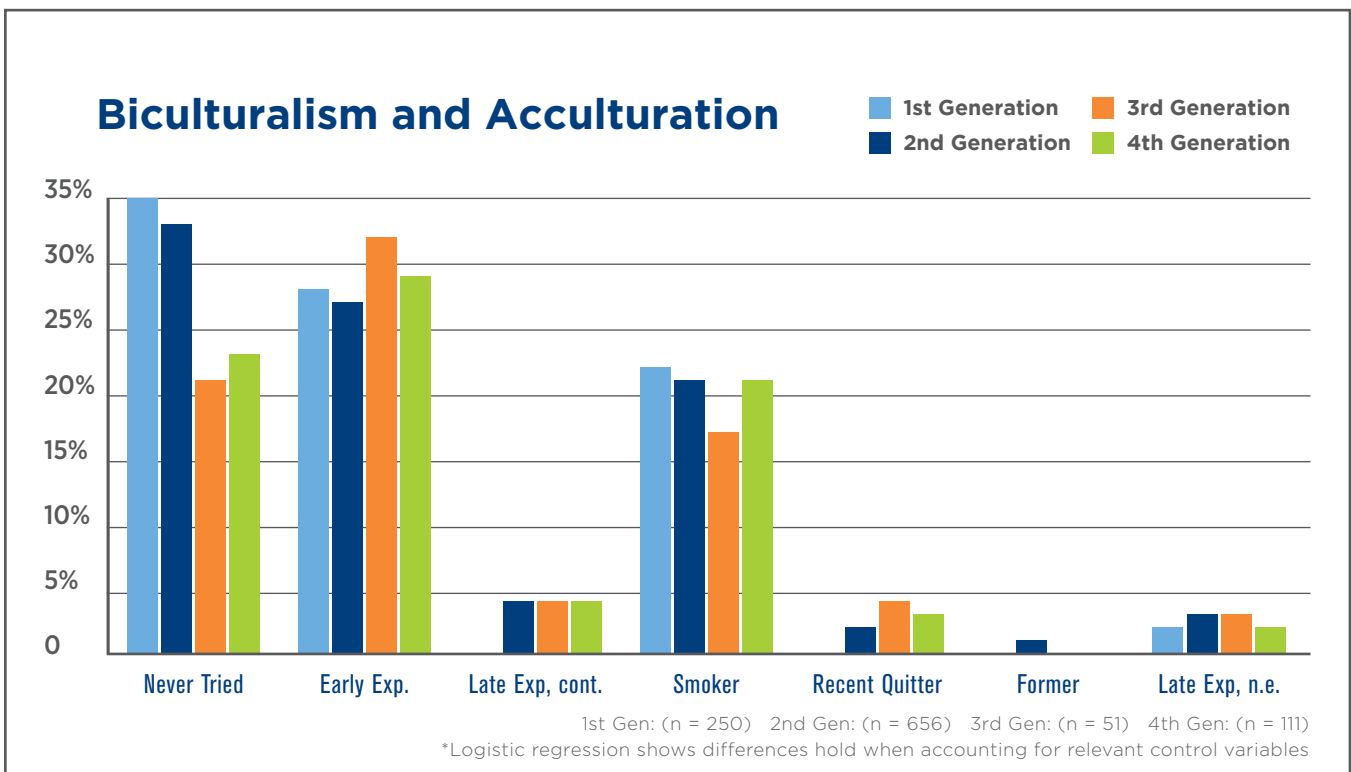
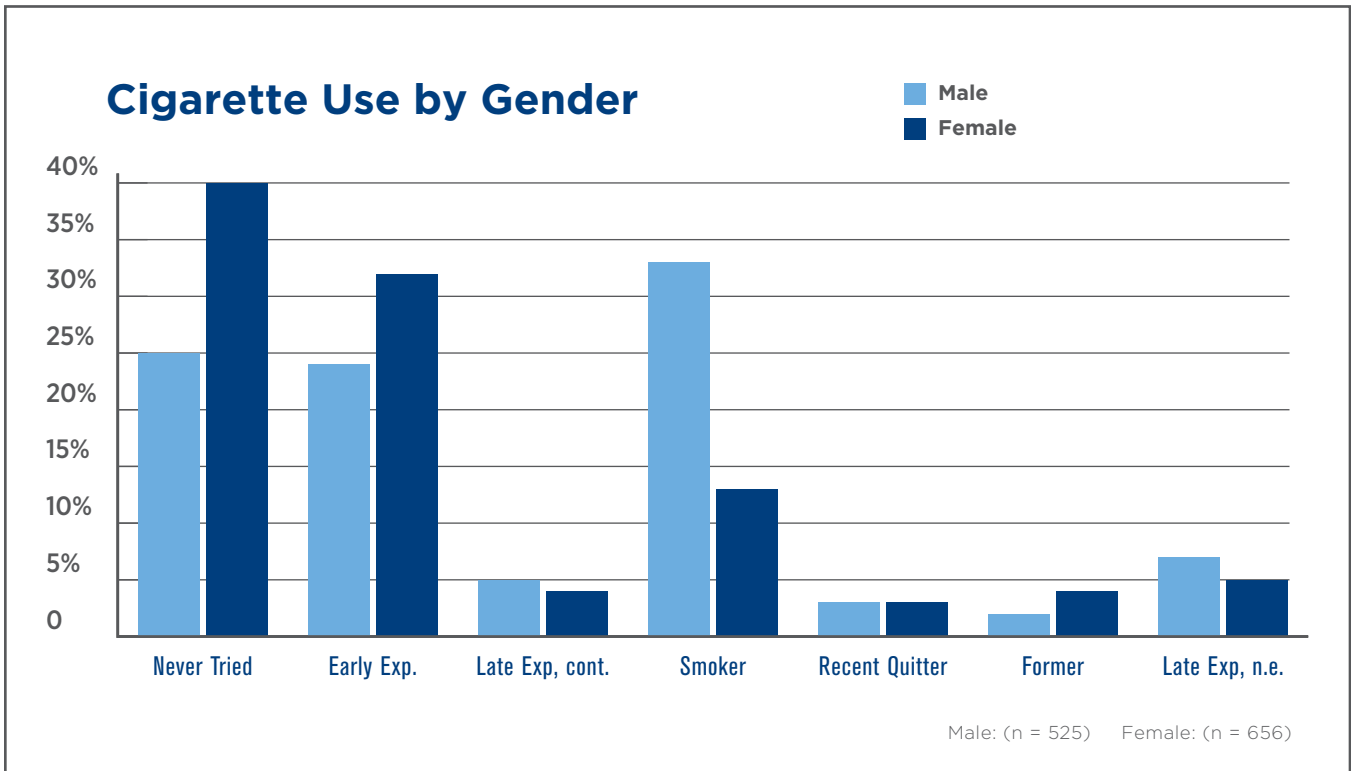
The prevalence of cigarette use differed by gender, with males being more likely to smoke than females. Male smokers also reported smoking more days in the last month than did female smokers (14 percent versus 11 percent). This difference was statistically significant when adjusting for relevant controls. Males also reported smoking more cigarettes per day they smoked compared to females (4.9 percent versus 3.7 percent), but this difference was not statistically significant.

CIGARETTE USE, BICULTURALISM, AND ACCULTURATION

The researchers in this initiative examined a bidirectional acculturation scale and number of generations, and each had a significant relationship with cigarette use initiation.

With greater bicultural identification (i.e., the less the respondent identified with one culture over the other), the respondent was more likely to have tried cigarettes. The likelihood of having tried them also shifted noticeably between the second and third generations—first- and second-generation Hispanics/Latinos were more likely to identify as “never triers” than third and fourth generations.





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BRAND PREFERENCE AND MENTHOL USAGE

Camel and Marlboro seemed to be the most popular brands among these students. 22 percent of smokers in the total sample endorsed Camel cigarettes, and 15 percent endorsed Marlboro. No other brands were endorsed by more than 10 percent of respondents. Fully half of smokers in the sample reported smoking menthol cigarettes. Given the relatively small number of respondents favoring any specific brand and the overlap of subgroup with location, it is impossible to determine how much of this difference is related to subgroup culture versus local culture or local market factors.

Hispanic/Latino subpopulations differed from one another and from non-Hispanic/Latino whites in terms of preference for mentholated cigarettes. Puerto Rican and Cuban American smokers largely preferred mentholated brands (76 percent and 69 percent, respectively). Mexican Americans and Dominican Americans smokers were split relatively evenly in their preference for menthols (52 percent and 55 percent, respectively). Non-Hispanic/Latino white smokers were slightly less likely to smoke menthols (46 percent).

COMORBIDITY

Smoking research in general suggests cigarette smoking is comorbid with other mental health and substance abuse problems including depression, low self-esteem, and alcohol use.⁶³ Although the current effort found strong association with alcohol use, the connection with depression and self-esteem was less clear. A connection was found to exist between depression and cigarette use, but the strength of the connection varied significantly by site. Specifically, it was relatively strong at the Florida and Texas sites but relatively weak at the California and New York sites.

USE OF OTHER TOBACCO PRODUCTS

A small but significant percentage of the sample reported having tried e-cigarettes (11 percent), chewing tobacco (15 percent), pipes (16 percent), bidis (13 percent), and cloves (17 percent). Generally, respondents who reported having tried these products were also smokers. A slightly higher percentage (22 percent) had tried new cigarette brands such as Camel Crush. The percentage having tried cigars was much higher (39 percent)—again was mainly comprised of current smokers.

A high number of students surveyed in this study reported having tried hookah (49 percent). Although hookah initiation was highest among current smokers (71 percent), the percentage was similarly high for many other categories including early experimenters (61 percent), former smokers (54 percent), recent quitters (79 percent), and both types of late experimenter (73 percent of continuing and 74 percent of never established). Even among respondents who had never tried even a puff of a cigarette, 19 percent had tried hookah. In addition, the majority of those having tried hookah reported using it either every day or some days. Hookah use also varied by Hispanic/Latino subgroup, being most common among Mexican Americans (57 percent, versus 48 percent for Cuban Americans, 40 percent for Puerto Ricans, and 53 percent for Dominican Americans). Another finding of major concern from this study was that among never triers and early experimenters, 41 percent of males and 40 percent of females had tried hookah.

Recent literature has noted the rise in popularity of hookah use on college campuses, including the increase in prevalence of hookah bars in proximity to campuses.^{64,65} These trends are cause for alarm in the tobacco control and public health communities. This research indicates that dramatically rising hookah use among Hispanics/Latinos deserves further targeted inquiry.



DUAL USE OF TOBACCO PRODUCTS BY SMOKERS

Participants in the survey frequently had tried more than one of the tobacco products or e-cigarettes mentioned in the questionnaire. This was true both of respondents who qualified as cigarette smokers and those who were otherwise non-smokers.

Generally speaking, similar to the finding that male respondents had a higher prevalence of smoking than females, males were more likely than females to have tried most of the products listed. One important exception to this is found in reported use of hookah. Males and females reported having tried hookah at almost identical rates. This was true for smokers as well as for those who reported never trying cigarettes or having tried cigarettes only a few times.

Interestingly, the data did not suggest participants favored any particular combinations of products. Put differently, trying any one product in the list appears to have increased the likelihood of trying any other product.

As presented in the table below, hookah appeared to be the most popular product amongst both males and females respondents from the group of never triers and early experimenters. In this group of respondents, a significant percentage of males (34 percent) and females (17 percent) use cigars. A small but considerable percentage of male never triers and early experimenters reported having tried e-cigarettes (11 percent), chewing tobacco (14 percent), pipes (12 percent), and bidis (9 percent).

Use of Other Products

Cigarette smokers and continuing experimenters having tried other products, and menthol use by gender		
	Males	Females
E-cig	35%	13%
Chew	52%	18%
Cigar	76%	69%
Pipe	50%	29%
Bidi	43%	26%
Hookah	73%	77%
menthol	61%	52%

Percentages for males based on n = 200; products rated one at a time
Percentages for females based on n = 106; products rated one at a time

Never triers and early experimenters having tried other products, by gender.		
	Males	Females
E-cig	11%	1%
Chew	14%	1%
Cigar	34%	17%
Pipe	12%	4%
Bidi	9%	4%
Hookah	41%	40%

Percentages for males based on n = 258; products rated one at a time
Percentages for females based on n = 471; products rated one at a time

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DATA SUMMARY AND KEY FINDINGS

ATTITUDES TOWARD SMOKING BANS

Mexican Americans surveyed were least supportive of smoking bans followed by Puerto Ricans, and Cuban Americans. Dominican Americans were most supportive. In other words, the group with the lowest smoking rate (Dominican Americans) was most supportive of bans, but the least supportive group was the one with the second lowest smoking rate (Mexican Americans). Attitudes towards smoking bans in these subgroups didn't exactly mirror the smoking prevalence rates. The subgroup differences in attitudes toward bans reflect something more than just differences in use. The researchers believe that there may be other cultural differences that may explain the reasons behind the differences in attitudes toward smoking bans.

HEALTH BELIEFS

In general, respondents agreed more strongly that negative health risks were associated with smoking compared to any positive health effects, and they associated quitting with positive health benefits compared to any negative health effects. The size of this difference varied with respondents' tobacco use. Relatively speaking, smokers agreed more with the positive health effects of smoking than their non-smoking counterparts and less with the negative health effects. Smokers also endorsed the positive effects of quitting less strongly than other participants. These beliefs did not vary by Hispanic/Latino subgroup, nor did they differ among Hispanic/Latino and non-Hispanic/Latino white participants.



KEY FINDINGS

The data obtained via the survey reflects existing research that overall levels of tobacco use among Hispanics/Latinos are nearly indistinguishable from that of non-Hispanic/Latino whites. The data also shows, however, that it would be inaccurate to treat Hispanics/Latinos as a single homogenous group. Hispanic/Latino subgroups differ significantly in tobacco use, use of other tobacco products, and attitudes toward smoking bans. Ignoring these differences in program development may lead to prevention and cessation plans that are effective for one subgroup but ineffective for others.

Though the researchers did not specifically examine smoking initiation, data collected suggest certain significant factors therein. Previous research has suggested trying cigarettes in this age group is part of sampling new experiences during their newfound freedom from parental supervision (e.g., Arnett, 2005). Several findings in the current effort support this, including the finding of those living on campus (i.e., away from home) being more likely to try cigarettes than other students as well as the findings regarding the association between tobacco, alcohol, and marijuana use and various “risky” behaviors included in the survey. If this behavior is, in fact, simply students exploring their options, the researchers suggest it may be possible to reduce initiation of tobacco use by continuing to make it appear unappetizing (that is, an option not worth trying) and providing other, more attractive opportunities for new experiences.

The findings regarding the prevalence of smoking among on-campus versus off-campus dwellers suggests that students may not take campus housing smoking bans seriously. The data do not speak to whether this stems from students perceiving the likelihood of being caught as low, the severity of the punishment being insufficient, or other

factors. It does, however, suggest the policies in place may not be as effective as the institutions would hope. Therefore, post-policy strategies need to be considered.

The message that smoking is bad for one’s health appears to have reached all but the most persistent smokers in this sample. However, respondents were more aware of some health problems than others. Most participants believed that cigarette smoking can cause lung disease (90 percent) and heart problems (73 percent). Similarly, even smokers generally agreed more strongly with the negative effects of smoking than with the positives. Nevertheless, only 26 percent of participants were aware that smoking has been linked to diabetes, 34 percent weren’t sure, and 39 percent said the two were not linked. Additional efforts to educate the population of this health risk are advised.

Although smokers generally acknowledged the negative consequences of smoking, most still expressed doubts about the overall benefits of quitting. One interpretation of this view is that campaigns designed to increase public awareness of the negative effects of smoking have been successful and that smokers who are likely to be sensitive to such forms of persuasion have, for the most part, quit smoking.

The researchers suggest that smokers who are persistent in their smoking may require a different approach. For example, it may be useful to shift some effort toward raising awareness of the benefits of quitting. The researchers note that current efforts to disseminate information on available cessation efforts focus more on how a person can quit, while providing information on the benefits of quitting may be more effective.

Finally, the data suggest that the “new thing” among these Hispanic/Latino college students appears to be hookah, and, as noted earlier, its popularity is alarming. Hookah lounges appear to be emerging as popular hangouts for students aged 18-20. Although not directly examined in the current effort, other research suggests college students mistakenly believe that hookah use is a safer alternative to smoking cigarettes. Unlike users of most other tobacco products, many of the hookah users surveyed would otherwise be classified as non-smokers. The researchers in this initiative advocate further study on hookah safety and whether hookah serves as a gateway to initiation of other tobacco use. “We need to have evidence-based recommendations so that colleges really become a place where living healthy lives, need to be addressed,” said Dr. Noltenius.

“I think it’s important to look at the context and to look at college as a unique opportunity to change policies, where college dorms need to be tobacco-free and college campuses need to be tobacco-free. The data can drive policy, but it requires advocates. Colleges should create a public health ripple effect in their community—a college can change the environment, become a breeding ground of public health, for its town and its county.”

—Dr. Jeannette Noltenius, National Director,
National Latino Tobacco Control Network

CONCLUSION

Legacy and the Hispanic Association of Colleges and Universities partnered to address what they discovered to be a gaping hole in the body of public health literature: substantive and actionable data that elucidate tobacco use and its related health effects on Hispanic/Latino college students at the subpopulation level. This data simply had not been collected before amongst college students. Treated as a homogenous group, Hispanics/Latinos appear to have similar tobacco use patterns to that of non-Hispanic whites, but that data masks the tremendous differences at the subpopulation level in the Hispanic/Latino community.

By conducting web-based survey research at four geographically diverse Hispanic-serving institutions of higher learning, this initiative achieved a depth and diversity of data that provides a substantial foundation for further investigation into the dynamics of tobacco use and its related health effects in Hispanic/Latino subpopulations. These measurable differences are opportunities for targeted intervention and policy initiatives. Furthermore, the project built the capacity of Hispanic-serving institutions to conduct related health disparity survey research—tobacco-related and otherwise—and helped guide policy efforts.



KEY TAKEAWAYS

01 Exploring differences among Hispanic/Latino subgroups is crucial to the success of tobacco prevention and cessation interventions.

02 More subpopulation-level research is needed to uncover the reasons for wide variations in smoking behaviors and use of other tobacco products among different subgroups.

03 Research supports the importance of interventions for on-campus students.

04 Tobacco-free on-campus policies alone may not lead to a social norm change around tobacco use.

05 More aggressive education is warranted for Hispanic/Latino subpopulations around the full health risks of tobacco use and the benefits of quitting.

06 Hookah use is of specific concern with this population and merits further research and tailored interventions.

ADDENDUM

GENERAL DISPARITIES IN THE HISPANIC/LATINO POPULATION

Numbering 50.5 million, Hispanics/Latinos in the United States constituted 16.3 percent of the population in 2010 and may comprise 35 percent of the population by 2050.⁶⁶ These numbers do not include the 4 million Puerto Ricans⁶⁷ living in Puerto Rico. 23.2 percent of Hispanics/Latinos were living below the poverty line during 2007-2011, compared to 11.6 percent of whites⁶⁸, and Hispanics/Latinos have lower rates of health insurance coverage than other groups: 40 percent of Mexican Americans, 26 percent of Cuban Americans, and 21 percent of Puerto Ricans go uninsured.⁶⁹ This may explain in part why Hispanics/Latinos are less likely than non-Hispanics/Latinos to use pharmaceutical aids such as nicotine replacement therapy to assist cessation, though they are more likely to attempt cessation than non-Hispanics/Latinos.^{70,71}

ADDITIONAL HEALTH DISPARITIES

Hispanics/Latinos are more likely to be obese than non-Hispanic/Latino whites (32 percent versus 26 percent), and to have lower levels of mammography use within the past year (46 percent versus 51 percent), colorectal screening at recommended intervals (47 percent versus 61 percent), and Pap test use within the past three years (74 percent versus 79 percent). Hispanic/Latino adolescents have a birth rate three times higher than that of non-Hispanic/Latino whites.⁷² Within the Hispanic/Latino population, the prevalence of these risk factors and early detection methods vary substantially by country of origin.⁷³

Hispanics/Latinos have higher rates of diabetes, some forms of cancer, liver disease, HIV, homicide, and work-related injuries than the general population.⁷⁴ The drivers of these trends in health disparities are

demographic, rooted in population structure, and non-random socioeconomic inequality.⁷⁵ Lung cancer is the leading cause of cancer deaths among Hispanics/Latinos, and three of the four leading causes of death in this population are tobacco-related: cancer, stroke, and heart disease.⁷⁶ This matrix of general health disparities for this rapidly expanding population compounds those that arise from tobacco use and should become a greater public health priority.

EFFECTS OF DISCRIMINATION

Experiencing discrimination and institutionalized racism affect the health of minority populations by multiple mechanisms.⁷⁷ The most recent Institute of Medicine (IOM) study of health disparities reports that good health, “is about more than just having access to care. It is critical to consider what happens before an individual needs to go to a doctor’s office and to consider what is happening in the community where that individual lives. Where people live, work, worship, and play has a greater impact on health outcomes than having access to a physician. ... It is essential to look at ways to reduce inequalities in the nonmedical social determinants of health.”⁷⁸ Furthermore, the IOM study concluded that these disparities are not getting any smaller—for Hispanics/Latinos, 80 percent of the core health care access measures either remained unchanged or grew worse from 2000-2006. Health care access is no panacea, however; the IOM notes that it is “necessary but not sufficient to reduce health disparities and improve quality [of health].”

One’s zip code is a primary driver of opportunities for good health, and segregated low-income neighborhoods bear the brunt of chronic health

ADDENDUM

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disparities. Communities of opportunity (complete with parks, grocery stores, financial institutions, high-performing schools, and good public transportation) enjoy a measurably higher good-health status than low-income communities characterized by fast-food chains, liquor stores, limited and unsafe parks, poor-performing schools, limited public transportation, and higher pollution).⁷⁹ Hispanics/Latinos are more likely to live in areas that do not meet the standard for ozone levels and have a higher rate of preventable hospitalization than non-Hispanic/Latino whites.⁸⁰ While the Hispanic/Latino population is on the rise in the United States, Hispanics/Latinos are also increasingly gathering in segregated areas.⁸¹ Improving the health disparities in the Hispanic/Latino population is therefore not solely a task for health care professionals. The entirety of socioeconomic, cultural, and physical environments—from employment and schools to infrastructure and public space—must be thoughtfully examined for the imbalances of opportunity that affect overall health and well-being.

CORRELATION OF EDUCATION AND HEALTH

Educational attainment has strong correlation to good health, and according to The Pew Hispanic Center, only 9 percent of Hispanics/Latinos or fewer than one in ten Hispanic/Latino dropouts obtained a General Educational Development (GED) credential, compared to 29 percent of whites and 20 percent of African Americans.⁸² This statistic shows that twice as many African American and three times as many white dropouts had a GED. Thus, Hispanics/Latinos were the least likely group to have this “second-chance” credential providing greater opportunities for future educational attainment and adequate employment.⁸³ According to the U.S. Census Bureau report, 61 percent of Hispanics/Latinos, in comparison to 89 percent non-Hispanic/Latino whites, have a high-school diploma. Similarly, only 12.5 percent of Hispanics/Latinos have a bachelor’s degree, in comparison to 30.5 percent of non-Hispanic/Latino whites.⁸⁴

IMMIGRANT ACCULTURATION AND HEALTH

Of primary concern is data that indicate a declining health status of subsequent generations of Hispanic/Latino immigrant families—“the evidence of an increasing morbidity and mortality burden among U.S.-born Latinos compared with foreign-born Latinos is overwhelming.”⁸⁵ These differences have been attributed to systematic variations in social resources, socialization, and formative human experiences over the life course.⁸⁶

Unfortunately, the longer that an immigrant remains in the United States, the worse his or her health becomes, and the longer a family stays in the United States, the greater the decline in health across a broad range of indicators.⁸⁷ This paradoxical erosion of the health of immigrants in the U.S. from the developing world (not just from Latin America), a process of assuming the patterns of behavior that lead to the kinds of chronic health problems common here, warrants deeper research and—given the growth of this population—is cause for greater alarm.



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