

Skyline College: Reducing Campus Environmental Smoke Exposure



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Description

Cigarette smoking is the single most preventable cause of disease and death in the United States and results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires combined. Deaths attributed to smoking between 1997 and 2001 averaged 37,800 annually and averaged approximately 261 per 100,000 Californians each year. Smoking rates among college students 18 to 24 years of age continue to rise even though there has been a decrease in the general adult population. Results from the California Health Interview Survey reveal current smoking among this population in California is on the rise (CHIS, 2007).

Skyline College, a community college located on the San Francisco Peninsula in San Bruno California, recognizes that smoking on campus is a public health issue. Serving a young student population, this issue is of great concern (Skyline College, 2007). The college has worked towards limiting exposure to environmental smoke by creating smoking areas well away from entrances to buildings and clear of main pathways. With poor compliance and ineffective enforcement, students and college employees continue to be exposed to environmental tobacco smoke (ETS).

Research has demonstrated that policies to create smoke free environments can deter students who were not regular smokers in high school from initiating smoking or becoming regular smokers when they reach college (Wechsler, Rigotti, 2001). These policies can also force and support smokers who desire to quit but find it very difficult. Colleges and universities can develop and implement successful smoke free policies by engaging stakeholders in the process, incorporating best practice models, and addressing barriers which may deter its effectiveness. Because the entire campus community will be affected, all constituents must be involved to gain a comprehensive assessment and provide effective solutions to the identified problem.

This project proposal aims to assess prevalence and perceptions of smoking for students and employees at Skyline College and to identify components of a policy aimed at reducing smoking and exposure to environmental tobacco smoke on campus.

Introduction and Purpose

Recognition of the health effects of environmental tobacco smoke (ETS) on nonsmokers has prompted widespread tobacco-control efforts throughout the United States. As of April 2004, 1,703 U.S. municipalities had local clean indoor air laws, 291 of which provide 100% smoke free protection for private workplaces, government buildings, restaurants, and bars. These regulations have led to significant decreases in exposure to nicotine and other dangerous substances in ETS which have been reported by the US Environmental Protection Agency (EPA) in savings of \$4-\$8 billion in operational and maintenance costs (Gerson, et al., 2005).

Smoking rates among college students continue to rise even though there has been a decrease in the general population (CDC, 2004). This behavior contributes to many health risks including lung disease, heart disease, and cancer (American Lung Association, 2003). These health issues not only affect smokers but also those who are exposed to environmental tobacco smoke also referred to as second hand smoke.

Skyline College recognizes that smoking on campus is a public health issue. For many years, the campus has been addressing the issue in hopes of decreasing the health risks to members of its community. Efforts have been made to create smoking areas which are well away from entrances to buildings and clear of main pathways throughout the college. With poor compliance and ineffective enforcement, many students and college employees continue to be exposed to environmental tobacco smoke.

The purpose of this assessment is to better understand the prevalence and perceptions of smoking among students and employees at Skyline College and how the college can reduce the amount of smoking and exposure to environmental tobacco smoke towards developing an effective policy.

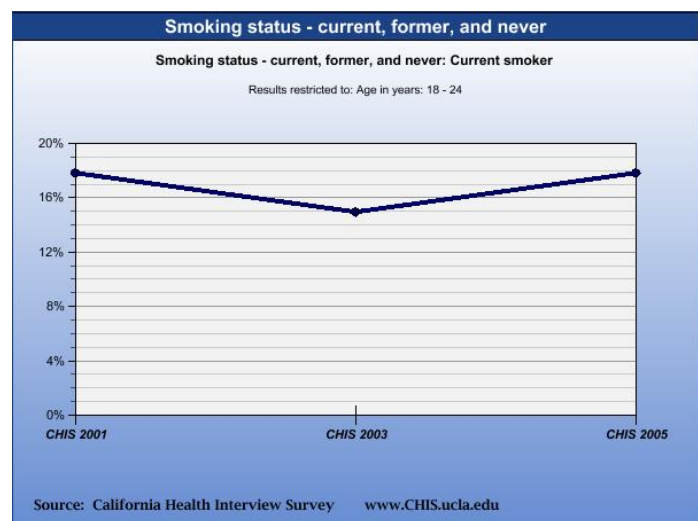
Recommendations derived from this assessment will be utilized by the Skyline College Health and Safety Committee and College Council to aid in development and implementation of an effective environmental tobacco smoke reduction campus policy.

Problem Statement

Cigarette smoking is the single most preventable cause of disease and death in the United States and results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires combined. Tobacco-related deaths number more than 438,000 per year among U.S. adults, accounting for 1 in 5 deaths, and representing more than 5 million years of potential life lost. Direct medical costs attributable to smoking total at least \$50 billion. Smoking is a major risk factor for heart disease, stroke, lung cancer, and chronic lung diseases—all leading causes of death. Smoking during pregnancy can result in miscarriages, premature delivery, and sudden infant death syndrome. Other health effects of smoking result from injuries and environmental damage caused by fires (American Lung Association, 2003). Environmental tobacco smoke (ETS), also known as second hand smoke, increases the risk of heart disease and significant lung conditions, especially asthma and bronchitis in children. ETS is responsible for an estimated 3,000 lung cancer deaths each year among adult nonsmokers (Healthy People 2010, 2007).

Smoking rates among college students 18 to 24 years of age continue to rise even though there has been a decrease in the general adult population. As of 2004 the Center for Disease Control currently estimates smoking among this age group nationally at 24.4% which is higher than the overall national average for adults which hovers at 20.9%. Cigarette smoking is more common among men (25.9%) than women (21.5%). Prevalence of cigarette smoking is highest among American Indians/Alaska Natives (32.0%), followed by whites (21.9%), African Americans (21.5%), Hispanics (16.2%), and Asians [excluding Native Hawaiians and other Pacific Islanders](11.3%)(CDC, 2007).

Deaths attributed to smoking between 1997 and 2001 averaged 37,800 annually and averaged approximately 261 per 100,000 Californians each year. 2005 statistics from the California Health Interview Survey reveal current smoking among all California 18 to 24 year olds is on the rise from 2003 (15%) to 2005(18%). Forty-seven percent of students at Skyline College are 18-22 years and 24% are 23-28 years; a large percentage of the student population falling into this high risk category.



Research has focused on social smoking among college students as it may prove to be a critical period where students transition to becoming regular smokers (Wechsler et al, 1998). The tobacco industry anticipated that the life transitions experienced in young adulthood could play a factor in starting smoking or increasing consumption. College students are an ideal market for the tobacco industry as they impressionable and of legal age to purchase and use tobacco products.

A student's decision to smoke cigarettes may be influenced by environmental factors such as smoking policies, tobacco advertising, and easy access to tobacco products. The academic atmosphere provides not only a captive audience but also many natural 'teachable moments' that may impact a young person's decision to prevent or reduce tobacco use (Bratton, Trieu, 2005).

Skyline College recognizes that smoking on campus is a public health issue. Serving a high percentage of 18-24 year olds, the college serves a population at risk of starting or establishing life-long smoking behaviors that will contribute their own poor health and expose others to environmental smoke (Skyline College, 2007). For many years now, the campus has been trying to address the issue in hopes of decreasing the health risks to members of its community. Efforts have been made towards creating smoking areas which are well away from entrances to buildings and clear of main pathways throughout the college. Even with these efforts students and college employees continue to be exposed to environmental tobacco smoke.

Student and employee surveys were conducted in spring 2006 as part of Skyline College's Accreditation Self Study and revealed support to reduce exposure to environmental smoke on campus. Two questions regarding smoking were asked. The adequacy of smoking restrictions on campus had one of the widest dissatisfaction gaps on the survey and numerous comments indicated dissatisfaction with the amount of smoking on campus. There were some written comments submitted. Of these many students believed there has been too much smoking on campus and that it was not only a health risk to those who did not smoke but made for an unpleasant environment. The pervasiveness of smoking on campus likely had an impact on people's perception of the cleanliness of the campus. Some comments mentioned the need for

a no smoking policy or smoking restrictions on campus with effective enforcement (Skyline College OPRIE, 2006).

Skyline College is ripe to tackle environmental smoke exposure on campus. By instituting more effective smoking restrictions, students can be deterred from becoming regular smokers and minimize their exposure to second hand smoke. This environmental change can decrease development of acute and chronic disease as well decrease tobacco related deaths and potential years of life lost.

If young adults in a college atmosphere experience clean and healthy environments during their academic careers, they will be more likely to establish and demand these healthy environments out in their communities. College students are the future leaders of this nation and beliefs and behaviors learned by them will have far reaching implications for our society.

Skyline's student population comprises a high percentage of young students. The College must address this issue to reduce smoking, exposure to environmental smoke and thus improving their health. Results from this community health assessment can guide policy makers such as the Skyline College Health and Safety Committee and College Council in developing and implementing an effective ETS reduction campus policy.

Literature Review

Worksite smoke free policies, in effect for many years, have been intended to protect non-smokers from exposure to secondhand smoke. Added benefits as indicated by many cross-sectional studies reveal an effect to smokers as well. These policies have been shown to discourage smoking, reduce cigarette consumption, increase people's desire to quit, and increase their likelihood of cessation (Borland et al, 1992; Wakefield, Wilson, 1992; Glasgow, Cummings, Hyland, 1997).

These smoke free policies are applicable to Academic Institutions as well. In 2000, the American College Health Association (ACHA) adopted a position statement encouraging Colleges and Universities to adopt a "campus-wide tobacco / smoke free environments" (ACHA, 2007). Healthy People 2010 focus 21 of their objectives targeting tobacco. Health goals stated are:

- to reduce the proportion of adults who smoke to below 12% by the year 2010
 - to positively influence America's college students to help them remain or become tobacco-free.
 - to reduce cigarette smoking by college students to below 10.5%
 - to reduce smokeless tobacco use to below 1.0% by the year 2010
- (US Department of Health and Human Services, 2000)

College Students and Smoking

It is during the college years when students transition towards adulthood that many begin smoking regularly, while those who have already established the habit may attempt to quit. While overall smoking rates are on the decline, many recent studies identify an alarming increase in cigarette smoking among college students, particularly in the 18 – 24 year age bracket. The Monitoring the future survey found that the number of college students who reported smoking in the past 30 days increased from 24% in 1991 to 31% in 1999 before decreasing to 27% in 2002 (Johnston, O'Malley, Bachman, 2003). Findings from the Harvard College Alcohol Study also revealed an increase from 22% in 1993 to 29% in both 1997 and 1999. Results from a nationally representative sample of college students showed a 5.2% increase in reported past-month smoking between 1993 and 1999 (Wechsler et al, 1998). The Center for Disease Control currently estimates smoking among this age group at 24.4%. Though data is revealing a decline in smoking rates, the percentage of college smokers still exceeds the overall national average for adults, which hovers at 20.9% (CDC, 2005). These rates are well above the Healthy Campus 2010 goals and signify a health concern for this young population.

College is a place of experimentation for young adults. On campuses where there are minimal restrictions on environmental tobacco smoke exposure, smokers and nonsmokers are equally at risk for adverse health effects. Many factors contribute to increasing students' engagement in the high risk behavior of smoking. Marketing of tobacco towards 18 -24 year olds, a population overrepresented among college students has contributed to college student smoking. Publicly released tobacco industry documents indicate that marketing to this age group occurs through sponsorship of music and sporting events, parties and bar promotions. This group is easy prey and extremely vulnerable to advertising campaigns because they are the youngest legal target group since the Master Settlement Agreement went into effect in 1998 (Bratton, Trieu, 2005).

These college students are impressionable and look to socially fit in. Ott, Cashin, and Altekruise state that as young adults move toward independence, many engage in risky behaviors, including most types of substance abuse. Cigarette smoking, a behavior that is highly addictive, is less susceptible to cessation or modification and therefore is harder to quit past their experimental years. Other research indicates that more than one-fourth of all college smokers begin to smoke regularly at or after age nineteen enforcing their vulnerability (Everett, Husten, 1999). One particular survey study involving 1,279 college students in freshmen-level classes at a large urban university found that 3 major factors underlie students' beliefs about cigarette use.

1. *Peer Environment.* This belief states that students chose to smoke cigarettes with peers. If smoking is allowed on a College campus, then it is easier to smoke or start smoking in that environment.
2. *Concern for personal appearance and personal desirability.* Coupled with tobacco advertisement and peer pressure, this creates an easy avenue to smoke.
3. *Campus Policy Endorsement.* A liberal College campus smoking policy creates an atmosphere that supports other beliefs about cigarette smoking (Loukas, Garcia, Gottlieb, 2005).

Social norms play an important factor in prevalence of smoking among 18 -24 year olds. It has been documented in many studies that college students have misperceptions of cigarette smoking. College students tend to overestimate the quantity and frequency of their peers' cigarette smoking. For example Perkins and colleagues reviewed and analyzed national data sets from college campuses across the nation and found that most students believed that their peers used tobacco almost weekly; and almost half of those surveyed believed that their peers used tobacco every day (Page, 1998; Perkins, et al 1999). In another study respondents thought that 53.3% of their fellow students were daily smokers when the actual proportion of daily smokers was only 31.4% (Ott, Cashin, Alterkruse, 2005). Policies that cause smoking

students to stand at entrances and exits to tobacco-free buildings may lead students to overestimate how common smoking is. The premise of this perceived social norm theory encourages them to adopt behaviors they feel are prevalent giving the feeling of acceptance among their peers. Students' perceptions of norms of their peer group have been found to be good predictors of their behavior (Perkins et al, 1999). Research strongly suggests that college students are encouraged to participate in the risky behavior of smoking from many ecological levels. The scope of this review will focus on findings surrounding policy.

Outdoor Tobacco Policies

Much attention has been focused on indoor tobacco policies. As of early 2005, seven states (California, Delaware, New York, Connecticut, Maine, Massachusetts, and Rhode Island) representing approximately 24% of the US population, had enacted statewide smoke-free worksite legislation. California law states all public college campuses must prohibit smoking within 20 feet of a main entrance, exit, and operable window (California Government Code Sections 7596-7598 – www.leginfo.ca.gov). The law does allow colleges to adopt more restrictive local ordinances or policies regarding smoking. The American College Health Association (ACHA) and the American Cancer Society (ACS) have formally recognized that tobacco use in any form is a health hazard and have encouraged colleges and universities to take action to address prevention, reduction, and cessation as it pertains to tobacco/smoking issues by prohibiting smoking in all public areas of the campus (ACHA, 2007).

Many colleges and universities have adopted policies stronger than California state law indicating much support for providing a healthier environment for college students. To date there are fifty-one such academic institutions supporting this movement (CYAN, 2007).

Definition of a Smoke Free Policy

There is no agreed upon definition of a smoke free policy. It varies from campus to campus and by region. Definitions can be 100% smoke-free prohibiting smoking anywhere on College property. They can be smoke-free campus policies with the exception of parking lots or smoke-free campuses with designated smoking areas. Woodland Community College smoke free policy states “use of any tobacco is prohibited at all times on all grounds and buildings of the Woodland Hills campus” (Woodland Community College, 2003). Ohlone College, located in Fremont, California defines a smoke-free campus as one in which smoking is not allowed anywhere on campus with the exception of general parking lots (Bratton, Trieu, 2005). San Francisco State University's smoke free policy states that “smoking is prohibited on University owned or leased property, except for officially posted designated smoking areas” (Corrigan, 2004). Campuses striving to achieve a “smoke free” policy should clearly define in the planning

stages what smoke free means in their community as there is no single true definition and policy.

Best Practices

In order to truly create a successful smoke-free campus, it's necessary to address the issue with many strategies. Many guides for advocating smoke-free policies urge promoters to enlist create partnerships with campus stakeholders such as students, faculty, staff, and administrators. *A Handbook for Change* produced and distributed by the Tobacco Education Clearinghouse of California and *Advocating for a Tobacco-Free Campus* produced by the American Cancer Society urge creating alliances for effective policies, stating "forging alliances with campus groups will give your movement strength and voice" (California Department of Health Services, 2005). Promoters of the smoke-free policy at Ohlone College stated their greatest asset was the partnerships that were created and nurtured with various groups on campus and the community. Leadership on campus also provided a great deal of support and shared in the vision towards success (Bratton, Trieu, 2005). Modesto Junior College in California highlights creating positive working relationships with key individuals and decision makers in order to understand the college system and ultimately achieve successful adoption (Modesto Junior College, 1999). Enlisting support of college community members such as students, faculty, staff, and administrators can create a grassroots effort and provide for success.

Also important is an agreed upon definition of a smoke free policy. Each campus is different and holds unique physical and community characteristics. Based on needs and constraints, these smoke free policies are developed to meet the needs of the communities they serve. Of the fifty-one colleges and universities instituting strong smoke free policies, only three have instituted 100% smoke free campus policies. The others hold policies greater than California state law but less than 100% smoke free. Their goal is to institute a policy that will be effective for their particular campus (CYAN, 2007).

Challenges in Implementing a Smoke-Free Policy

Though many Colleges have implemented smoke-free policies, multiple factors influence the successful outcomes of reducing environmental smoke exposure. One main factor for many is effective enforcement of the policy. Research suggests that without effective enforcement, smoke-free policies have very little effect. Strict enforcement of smoking policy is associated with decrease in smoking prevalence. A 2001 study reports that college student's smoking behaviors are influenced when smoking restrictions reach some threshold levels that make it difficult for smokers to ignore these policies (Czartc, Pacular, Chaloupkaf, & Wechsler, 2001). *A Handbook for Change* confirms that enforcement is the most difficult aspect of outdoor

tobacco policies. It is often difficult to convince campus administrators of the importance of policy enforcement (California Department of Health Services, 2005).

Students provide a great voice and movement as they are main constituents who benefit from smoke-free policies. However, researchers agree that involving students in the process is often difficult. Ohlone College confirmed this finding as they found difficulty creating a student coalition at the beginning of the campaign. Community college students are often less involved than their counterparts at state or university campuses because more students work, there is no campus housing, and there is less campus investment given that the college is a place of transition for many (Bratton, Trieu, 2005).

Research reveals most college students believe that campus buildings should be smoke free and that secondhand smoke causes them harm however, there is evidence that students disagree with prohibiting smoking everywhere on campus (*Loukas, Garcia, Gottlieb, 2005*). Some students do not believe harm from others' cigarette use extend to outdoor spaces and also believe that smokers have the right to use tobacco and that this right should be extended to some areas of the college campus. These findings highlight debates within the tobacco community regarding the ethics of banning tobacco in outdoor spaces and questioning whether zero tolerance of any tobacco is reasonable. This issue provides an obstacle for creating a 100% smoke-free campus (Block, Shopland, 2000).

Moving Towards a Smoke Free Policy

Research has demonstrated that policies to create smoke free environments can deter students who were not regular smokers in high school from initiating smoking or becoming regular smokers when they reach college (Wechsler, Rigotti, 2001). These policies can also force and support smokers who desire to quit but find it very difficult. Colleges and universities can develop and implement successful smoke free policies by engaging stakeholders in the process, incorporating best practice models, and addressing barriers which may deter its effectiveness.

Purpose

To better understand the prevalence and perceptions of smoking among students and employees at Skyline College and how the college can reduce the amount of smoking and exposure to environmental tobacco smoke towards developing an effective policy.

Key Questions:

To adequately understand the perceptions of the target population and develop an effective smoke free policy, the following key questions will be explored:

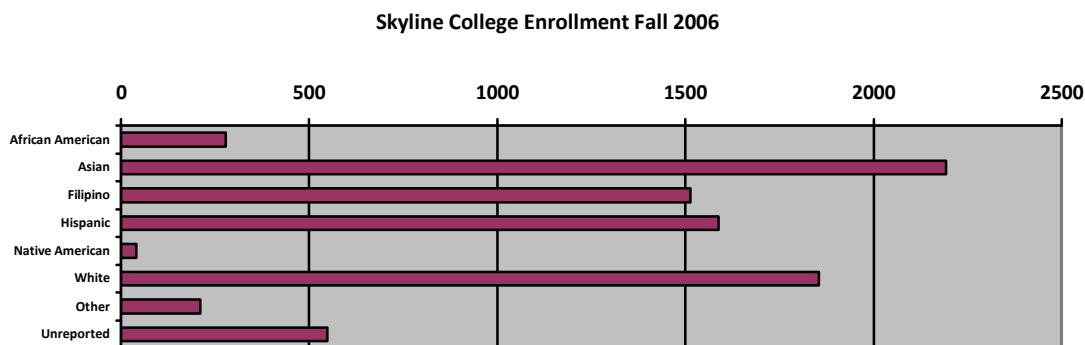
- What is the prevalence of smoking among students and employees at Skyline College?
- What are the perceptions of students and employees at Skyline College regarding the effects of smoking and environmental tobacco smoke?
- What are current campus, local, state, and national regulations and how can they influence this health issue on campus?
- How can different constituency groups at Skyline (i.e. administrators, staff, faculty, students) work together to address this situation?
- What are realistic steps which can be taken to reduce the amount of smoking and exposure to environmental tobacco smoke on campus?
- What are ways in which enforcement of smoking restrictions can make for an effective policy?

Target Population

The target population for this community assessment are all students and employees at Skyline College. The academic atmosphere provides for a captive audience in which students and employees can be deterred from becoming regular smokers, minimize their exposure to environmental tobacco smoke, and embrace and demand a healthier environment. While the problem of smoking is highest among 18-24 year olds, results from this assessment will have college wide policy implication and will affect all members of the community. As such, the assessment will be most effective by involving all campus constituents to gain comprehensive data and provide effective solutions to the identified problem.

Located on the San Francisco Peninsula, in San Bruno, California, Skyline College is a public degree and certificate granting institution. The College primarily serves northern San Mateo County and residents drawn from the southern portion of San Francisco whose boundary is five miles north of the College. The campus consists of 111-acres bounded by residential developments and the Golden Gate National Recreation Area. Brisbane, Colma, Daly City, Milbrae, Pacifica, and South San Francisco are the closest communities to Skyline College. The City of San Bruno is adjacent to San Francisco International Airport.

Skyline College is one of three colleges in the San Mateo County Community College District (SMCCCD). The district enrolls more than 45,000 students each year and Skyline College's share of this enrollment is nearly one-third, approximately 14,322. The College of San Mateo and Cañada College, constitute the other two-thirds of the district's total enrollment, respectively.



Reflecting the Bay Area's increasing racial and ethnic diversity, Skyline College serves a student body that is 20 percent White, 28 percent Asian, 19 percent Hispanic, 19 percent Filipino, and 3 percent African American. Fifty-three percent are female, 46% male, and 1% unreported. Forty-seven percent of students are age 18-22 and 24% are 23-28. Sixty-five and one half

percent of students live in San Mateo County, 26% live in San Francisco County, and 8.5 % live elsewhere (Skyline College, 2007).

In Fall of 2006, Skyline College employed 432 full and part time employees. Three hundred and fourteen are faculty of which 113 are tenured/tenure track and 201 are temporary, 104 are considered classified staff, and the remaining fourteen are administrators. No specific ethnic demographics have been reported (California Community Colleges Chancellor's Office, 2007).

Methods Description and Rationale

Data for this assessment will be obtained using the following methods:

- Student Surveys
- Employee Surveys
- Key informant interviews

STUDENT SURVEY

An online survey identifying smoking prevalence, exploring smoking attitudes/behaviors and smoke free policy views of students will be conducted. The survey will be administered using Zoomerang, an online survey platform utilized by Skyline College. A brief questionnaire modeled from other similar academic applied survey instruments will be administered requesting pertinent demographic information followed by the survey instrument posing close ended questions directly related to key questions and assessment purpose. The instrument will be piloted on a small group of Respiratory Therapy students at Skyline College prior to conducting the student survey. Feedback provided on the utility of the instrument will be applied prior to its use.

Subject Selection / Recruitment

Sampling method will utilize census enrollment following the first month of the Spring semester 2008. Unduplicated head count is estimated at 14, 300 (Skyline College, 2007). An expected response rate is 8,500 or 60%. Inclusion criteria:

- Currently enrolled at Skyline
- Full or part time status

All students will be contacted via mass electronic mailing alerting them of the purpose of the assessment and requesting participation. Follow up contact via electronic mailing will promote a sufficient sampling (see workplan). Students will be given the opportunity to decline if they so choose.

EMPLOYEE SURVEY

Employee surveys will be administered using a traditional printed survey to maintain confidentiality and promote a high response rate. The survey will be distributed to each employee's mailbox or division contact person and collected via drop box or campus mail. The same survey instrument which was developed and piloted for the student survey will be used for the employees.

Subject Selection / Recruitment

Sampling method will utilize census employment for Fall semester 2007. Employee count is reported at 432 for Fall 2006 (California Community Colleges Chancellor's Office, 2007). An expected response rate is 253 or 60%. Inclusion criteria:

- Currently employed at Skyline
- Full, part time or temporary status

Electronic mailing and flyer will be sent alerting employees of the purpose of the assessment and requesting participation. Follow up contact via email and flyer will promote a sufficient sampling (see workplan). Employees will be given the opportunity to decline if they so choose.

KEY INFORMANT INTERVIEWS

To broaden the assessment data and gain a comprehensive understanding towards development and implementation of a smoke free policy, 8 key informant interviews (KII) will be conducted. Research has emphasized the importance of buy in from all stakeholders in the development and implementation of an effective smoke free policy. Skyline College strives to build a collaborative environment and encourages all employees and students to take an active role in the decision making processes through an effective shared governance process. Each of the constituent groups—administrators, faculty, staff and students—has a leadership organization with established meetings which serve as the avenues through which to participate (Skyline College Accreditation Self Study, 2007).

Subject Selection / Process

Key informants will consist of a leader from each constituency group (administrator, faculty, staff, and students). Added to this list will be key informants who extend beyond the constituency groups but will provide important applicable information to this assessment. These KI's will include the Skyline College Chief Security Officer, Skyline College Health Center Nurse and key policy makers at Skyline's sister colleges: College of San Mateo and Canada. Preliminary data from the student and employee surveys will be presented to the key informants and incorporated into these interviews.

KEY INFORMANTS
Student Services Vice President
Academic Senate President
Classified Council President
Associated Students President
Chief Security Officer
Health Center Nurse
Student Services Vice President
• Canada
• College San Mateo

Consent will be obtained from each key informant prior to conducting the interview. The primary investigator will attend each interview and digital audio and hand written notes will be recorded with key informant permission. Each interview will be approximately 45-60 minute in length.

ANALYSIS PLAN

1. Student and employee survey data will be quantitative and coded and analyzed using SPSS. The results will be tabulated to capture ratings on the appropriate items, and frequency distributions (counts and percents) on each item. Cross-tabulations will also be reported by variables of interest (e.g. student, classified staff, faculty and administrators). A content analysis will be performed on all submitted comments. Preliminary data from these surveys will be presented to the key informants and utilized to conduct the interviews.
2. The key informant recordings and written notes will be reviewed and transcribed into detailed notes which will then be coded into emerging themes.
3. Results from student and employee surveys will be cross reviewed with key informant interviews for common and differing findings and anomalies.
4. Final draft reports will be presented to college constituency groups and CE committee for review and commentary. Feedback and comments will then used to revise and update these reports for final presentation.
5. Final data results including recommendations and project limitations will be presented to the Skyline College community and San Francisco State University Master of Public Health Program.
6. The assessment final report will be delivered to the Skyline College Council and the information will be utilized to develop an effective environmental smoke reduction policy.
7. The Skyline College researcher will be consulted at each step. Feedback will be utilized to strengthen the reporting of results.

Workplan: Reducing Campus Environmental Tobacco Smoke Exposure

	Fall 2007					Spring 2008				
	S	O	N	D		J	F	M	A	M
Obtain project proposal approval										
Develop draft student and employee survey / key informants instruments										
Obtain human subjects approval										
Meet with CE committee										
Obtain student/employee survey instrument approval from Skyline College research committee										
Pilot student/employee survey - refine										
Obtain key informant instrument approval from Skyline College research committee										
Send student/employee survey announcement electronic email one week prior and reminder each week survey tool available										
Administer student/survey survey										
Enter and analyze quantitative student survey data using SPSS. Summarize results										
Schedule key informant interviews										
Submit progress report. Meet with CE committee										
Conduct key informant interviews										
Analyze qualitative data from key informant interviews										
Cross review student and employee results with key informant interviews for common and differing findings and anomalies										
Review data and findings with Skyline College researcher										
Prepare draft report										
Final draft report presented to Skyline College constituency groups and CE committee for review and commentary										
Present project findings to College Community										
Present project findings to MPH Program										

References

- American College Health Association Guidelines. Position Statement on Tobacco on College and University Campuses. 2000. Available at: www.acha.org . Accessed June 26, 2007. (ACHA, 2007)
- American Lung Association, (2003). Smoking and Lung Disease in Minority Groups. Retrieved May 2, 2007, Web site: <http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=44465>
- Bloch, M., Shopland, DR. 2000. Outdoor smoking bans: more than meets the eye. Tobacco Control. 9:99. (Bloch, Shopland, 2000)
- Borland R, Pierce JP, Burns DM, Gilpin E, Johnson M, Bal D, Protection from environmental tobacco smoke in California: the case for a smoke-free workplace, JAMA. 1992;268:749-752. (Borland et al, 1992)
- Bratton, S., Trieu, S. L. 2005. Tobacco Control: Case Study at a California Community College. Californian Journal of Health Promotion. Vol 3, Issue 3, 61-72. (Bratton, Trieu, 2005)
- California Community Colleges Chancellor's Office. 2007 Staffing Reports. <http://www.cccco.edu/divisions/tris/mis/reports.htm> Retrieved October 6, 2007 (CCCCO, 2007)
- California Department of Health Services. 2005. A Handbook for Change: Developing, implementing, and enforcing outdoor tobacco policies on Community College campuses.
- California Health Information Survey. 2007. Current smokers Asian 18-24 years. Current smokers All 18-24 years. <http://www.CHIS.ucla.edu> Retrieved August 26, 2007 (CHIS, 2007)
- California Youth Advocacy Network. Smoke Free Campus Policies. <http://www.cyanonline.org/policy.asp?pageid=2109> Retrieved August 26, 2007 (CYAN, 2007)
- Center for Disease Control. *Adult Cigarette Smoking in the United States: Current Estimates*. http://www.cdc.gov/tobacco/data_statistics/Factsheets/adult_cig_smoking.htm Retrieved June 26, 2007
- Center for Disease Control. *Table 1. Smoking Prevalence (Adult and Youth)*. http://www.cdc.gov/tobacco/data_statistics/state_data/data_highlights/2006/00_pdfs/DataHighlights06table1.pdf Retrieved June 27, 2007
- Center for Disease Control. *Table 2: Smoking Prevalence Among Adults*. http://www.cdc.gov/tobacco/data_statistics/state_data/data_highlights/2006/00_pdfs/DataHighlights06table2.pdf Retrieved June 27, 2007
- Centers for Disease Control and Prevention. *Early Release of Selected Estimates Based on Data From the January–June 2003 National Health Interview Survey*. Available at: http://www.cdc.gov/nchs/data/nhis/earlyrelease/200312_08.pdf . Accessed June 21, 2004

- Corrigan, R (2004, August 4). SF State special message. Retrieved June 28, 2007, from SF State special message Web site: <http://www.sfsu.edu/~news/announce/smokingpolicy.htm> (Corrigan, 2004)
- Czart, P., Chaloupkaf, & Wechsler. 2001. The impact of prices and control policies on cigarette smoking among college students. *Contemporary Economic Policy*, 19(2), 135-149. (Czartc, Pacular, Chaloupkaf, & Wechsler, 2001)
- Gerson, M.; Allard, J.; Towvim, L. 2005. Impact of Smoke-Free Residence Hall Policies:The Views of Administrators at 3 State Universities. *Journal of American College Health*. Vol. 54, No. 3. Pp. 157-58
- Glasgow RE, Cummings KM, Hyland A, Relationship of worksite smoking policy to changes in employee tobacco use: fmdings from COMMIT *Tob Control*, 1997;6(suppl 2):S44-S48. (Glasgow, Cummings, Hyland, 1997)
- Healthy People 2010. 2007. Leading Health Indicators. Retrieved June 27, 2007. Website: http://www.healthypeople.gov/document/html/uih/uih_4.htm#tobaccouse
- Johnston LD, O'Malley PM, Bachman JG. *Monitoring the Future: National Survey Results on Drug Use, 1975-2002. Volume II: College Students and Adults Ages 19-40*. NIH Publication No. 03-5376. Bethesda, MD: National Institute on Drug Abuse; 2003. (Johnston, O'Malley, Bachman, 2003)
- Loukas, A., Garcia, M., Gottlieb, N. 2005. *Development and Validation of the College Tobacco Survey*. *Journal of American College Health*, Vol. 53, No. 5. (Loukas, Garcia, Gottlieb, 2005)
- Modesto Junior College. 1999. Smoke-free Campuses: A Case Study of Policy Adoption and Implementation. Modesto Junior College.
- Ott, C., Cashin, S., Altekruise, M. 2005. Development and Validation of the College Tobacco Survey. *Journal of American College Health*. Vol. 53, No. 5. (Ott, Cashin, Alterkruse, 2005)
- Page RM. College students' distorted perception of the prevalence of smoking. *Psychol Rep*. 1998;82(2):474. (Page, 1998)
- Perkins HW, Meilman PW, Lechlitter JS, et al. 1999. Misperceptions of the norms for the frequency of alcohol and other drug use on college campuses. *J Am Coll Health*. 47:253-258. (Perkins et al, 1999)
- Skyline College (2007). Skyline College Enrollment 2002 – 2006. Retrieved June 27, 2007. Website: http://www.smccd.edu/accounts/skypro/enrollment_reports/term/Fall/enrollment_fall_demog.htm
- Skyline College Accreditation Self Study (2007). *Skyline College Reaffirmation for Accreditation*.
- Skyline College Office of Planning, Research & Institutional Effectiveness. 2006. *Employee Voice Survey Executive Summary*.
- Skyline College Office of Planning, Research & Institutional Effectiveness. 2006. *Student Campus Climate Survey Executive Summary*.

US Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health*. Gov Doc: HE 20.2:P 39/4/2000. Washington, DC; 2000. (US Department of Health and Human Services, 2000).

Wakefield MA, Wilson D, Owen N, et al. Workplace smoking restrictions, occupational status, and reduced cigarette consumption, *J Occup Med*, 1992;34:693-697. (Wakefield, Wilson, 1992)

Wechsler H, Lee JE, Rigotti, 2001. Cigarette use by college students in smoke-free housing: Results of a national study. *Am J Prev Med.*;20:202–207. (Wechsler, Rigotti, 2001)

Wechsler H, Rigotti NA, Gledhill-Hoyt J, Lee H. Increased levels of cigarette use among college students: a cause for national concern. *JAMA*. 1998;280:1673–1678. (Wechsler et al, 1998)

Woodland Community College, 2003 *WCC Administrative Procedure 1001.03: Tobacco Policy*. Retrieved June 27, 2007. Website: http://www.yccd.edu/woodland/tobacco_policy.pdf