

# Northern Arizona University National College Health Assessment Survey: Comparison of 2005 to 2007 Findings

## INTRODUCTION

The Fronske Health Center Health Promotion Office conducts student health surveys to determine health care needs, set program priorities, and evaluate disease prevention and health promotion program effectiveness. The health center participates in the American College Health Association (ACHA) [National College Health Assessment Survey](#) biannually. This survey helps the university compare the health status of our students to the ACHA national reference standard of over 94,000 students from 117 higher education institutions in 2006. The assessment provides a general overview on the following health issues:

- Alcohol, tobacco, and other drug use
- Sexual health
- Weight, nutrition, and exercise
- Mental health
- Personal safety and violence

ACHA and Fronske Health Center conducted the survey on NAU's campus first in February and March of 2005. The second survey was held at NAU again in February and March of 2007. A trend analysis was conducted to compare student responses in the 2005 survey to those in the 2007 survey.

## METHODS

This assessment was held as an anonymous, online survey approved by the NAU Institutional Review Board and hosted on the ACHA Internet server. The survey questionnaire gathers student demographic information and asks 50 questions about:

- Students health information sources and source believability
- Perceived health status
- General health problems experienced in the past school year
- Preventive health practices
- Impact of health problems upon academic performance
- Health behaviors involving alcohol and other drugs, sex, mental health, personal safety, violence, nutrition, and fitness
- Body Mass Index
- Health insurance.

Students were selected randomly and sent an email invitation. In 2005, 727 students participated, reflecting a 23% return rate. In 2007, 739 students took the survey with a return rate of 17%. A [sample of the questionnaire](#) can be found at ACHA. The [executive report](#) for 2007 is available at the Fronske web site .

The findings shown below compare the responses for all NAU students in 2005 and in 2007. Because fewer men responded to the survey in 2005 than in 2007, most data were weighted to represent the proportion of men and women in each of the respective survey years. The demographic and health insurance statistics are presented unweighted. With a sample of 700 students, the survey has an error rate of plus or minus 3.0% at the 90% confidence level.

## **FINDINGS**

A large majority of reported health issues remained stable over the past two years. The difference was less than 3% for most health problems reported by students. Issues that may have improved significantly in the past two years are:

- Vaccination against the flu in the last year increased by 8.1%
- Alcohol harm reduction (alternating non-alcoholic beverages) increased by 5.9%
- Vaccination against meningococcal disease increased by 5.4%
- Men performing testicular self-exam increased by 5.4%
- Use of condom last time having sex increased by 5.3%
- Alcohol harm reduction (avoiding drinking games) increased by 4.6%
- Having a dental exam and cleaning last year increased by 4.5%
- Vaccination against hepatitis B increased by 4.2%
- Tobacco use in past 30 days decreased by 3.9%

Health issues that may have significantly worsened include:

- Students with a diagnosis of depression taking medication for depression dropped by 9.6%
- Stress causing academic problems increased by 6%
- Internet/computer games causing academic problems increased by 4.8%
- Sleep difficulties causing academic problems increased by 4.7%
- Health insurance coverage for women dropped by 4.0%
- Allergy problems increased by 3.8%
- Strep throat problems increased by 3.8%
- Health status very good to excellent decreased by 3.8%

## General Health of College Students

### Perceived Health Status

Health Status Rating	2005 (%)	2007 (%)
Very good to excellent	61.3	57.5

### Health Problems

Health Problem Experienced in Past Year	2005 (%)	2007 (%)
Back pain	55.0	52.7
Allergy problems	48.1	51.9
Sinus infection	31.6	34.1
Depression	22.7	21.4
Strep throat	12.8	16.0
Anxiety disorder	15.2	14.3
Asthma	14.8	14.0
Ear infection	9.4	10.9
Bronchitis	9.2	8.6
Repetitive stress injury	8.5	7.9
High blood pressure	5.7	7.1
Broken bone/fracture	5.5	6.8
Seasonal affective disorder	4.4	6.4
Substance abuse problem	3.9	4.8
High cholesterol	4.3	4.0
Chronic fatigue syndrome	3.3	3.4
Bulimia	2.2	3.2
Genital warts/HPV	2.3	2.4
Mononucleosis	2.5	2.3
Endometriosis	1.3	1.5
Diabetes	0.8	1.4
Anorexia	1.9	1.3
Chlamydia	1.4	1.0
Genital herpes	1.0	0.9
HIV infection	0.5	0.7
Hepatitis B or C	0.4	0.4
Tuberculosis	0.3	0.4
Pelvic inflammatory disease	0.1	0.2
Gonorrhea	0.4	0.1

## Preventive Health Practices

Health Practice	2005 (%)	2007 (%)
Wore seatbelt (mostly or always)	93.4	93.7
Vaccinated with measles, mumps, rubella (2 shots).	87.5	85.4
Having their blood pressure checked in the last 2 years.	85.5	83.5
Having a dental exam and cleaning in the last year.	71.2	75.7
Wore a motorcycle helmet (mostly or always)	73.6	73.3
Vaccinated against hepatitis B.	61.9	66.0
Females: having a routine gynecological exam in the last year.	54.9	56.1
Vaccinated against varicella (chicken pox).	52.6	52.5
Female: performed breast self-exam in the last month.	46.8	47.4
Males: performed testicular self-exam in the last month.	38.3	43.7
Vaccinated against meningococcal disease.	37.3	43.0
Having cholesterol checked in the last 5 years.	35.3	38.7
Vaccinated against the flu in the last year.	16.5	24.6
Wore a helmet when riding a bike (mostly or always)	22.2	22.2
Using sunscreen daily.	16.1	19.1

## ACADEMIC IMPACTS

<b>Factors Affecting Academics in Past Year</b>	<b>2005 (%)</b>	<b>2007 (%)</b>
Stress	28.4	34.4
Cold/flu/sore throat	28.4	31.6
Sleep difficulties	24.7	29.4
Concern for a troubled friend or family member	18.1	19.3
Depression/anxiety disorder/seasonal affective disorder	15.2	18.2
Internet use/computer games	11.3	16.1
Relationship difficulty	13.2	15.6
Sinus infection/ear infection/bronchitis/strep throat	11.0	9.5
Death of a friend/family member	8.7	9.1
Attention deficit disorder	9.8	9.0
Alcohol use	6.7	7.3
Allergies	3.8	5.9
Learning disability	4.4	5.6
Injury	4.4	3.9
Chronic illness	4.0	3.5
Chronic pain	3.8	3.5
Drug use	1.3	1.8
Mononucleosis	1.7	1.8
Assault (sexual)	0.3	0.9
Eating disorder/problem	1.0	0.9
Pregnancy (yours or partner's)	1.1	0.8
Assault (physical)	0.3	0.5
Sexually transmitted disease	0.4	0.4
HIV infection	0.2	0.3

## VIOLENCE

<b>Experienced in Past School Year</b>	<b>2005 (%)</b>	<b>2007 (%)</b>
An emotionally abusive relationship	14.9	13.1
Sexual touching against their will	6.8	6.7
A physical fight	6.4	5.8
Being physically assaulted (non-sexually)	4.0	4.2
Verbal threats for sex against their will	2.5	3.8
A physically abusive relationship	1.6	2.8
A sexually abusive relationship	1.1	2.2
Attempted sexual penetration against their will	3.2	1.9
Sexual penetration against their will	1.2	0.8

## ALCOHOL, TOBACCO and OTHER DRUG USE

Substance Use Practices	2005 (%)	2007 (%)
Alcohol BAC < .08 last time partied/socialized	75.0	71.8
Alcohol: Used in past 30 days	63.7	66.9
Marijuana: Never used	67.0	66.0
Alcohol: $\leq$ 4 drinks last time partied/socialized	68.8	65.5
Alcohol: <u>0</u> times drank 5+ drinks in 2 weeks	67.9	65.2
Tobacco: Never used	61.4	63.2
Alcohol: Abstained	22.0	20.7
Tobacco: Used in past 30 days	20.0	16.1
Marijuana: Used in past 30 days	13.0	13.2

### Alcohol Harm Reduction Behavior (within past school year)

Behavior	2005 (%)	2007 (%)
Report doing one or more harm reduction behaviors when drinking	100.0	100.0
Use a designated driver:	85.2	85.4
Eat before and/or during drinking:	84.6	84.0
Keep track of how many drinks being consumed:	67.5	67.1
Avoid drinking games:	49.0	45.4
Determine in advance not to exceed a set number of drinks:	39.7	41.4
Alternate non-alcoholic with alcoholic beverages:	34.3	40.2
Pace drinks to one or fewer an hour:	32.3	34.4
Choose not to drink alcohol:	31.5	30.4
Have a friend let you know when you have had enough:	26.5	28.0
Drink an alcoholic look-alike:	8.5	8.2

### Alcohol Risk Negative Consequences (within past school year)

Negative Consequences	2005 (%)	2007 (%)
Doing something they later regretted	32.8	31.7
Forgetting where they were or what they had done	23.6	24.7
Being physically injured	16.1	15.8
Having unprotected sex	13.3	14.6
Being involved in a fight	5.7	6.4
Physically injured another person	3.1	5.3
Having someone use force or threat of force to have sex with them	1.5	0.1

### SEXUAL BEHAVIOR

Number of Partners in Past School Year	2005 (%)	2007 (%)
Having had no sexual partner	27.4	27.9
Having had 1 sexual partner	49.7	49.3
Having had 2 or more sexual partners	22.9	22.8

### Behavior among Sexually Active Students

Behavior	2005 (%)	2007 (%)
Used condom last time having sex	46.4	51.7
Birth control pills (women)	35.8	39.1
Condoms last time having vaginal sex	35.7	38.3
Used condom in past 30 days (mostly or always)	37.1	36.1
Withdrawal method last time having vaginal sex	16.8	18.0
Used emergency contraception within school year (women)	6.3	9.2
No contraception used last time having sex	6.0	5.5
Had unintentional pregnancy within school year	1.7	2.8

## NUTRITION, EXERCISE & SLEEP

<b>Behavior</b>	<b>2005 (%)</b>	<b>2007 (%)</b>
Getting enough sleep to feel rested: 3 or more days per week	64.8	65.0
Strength training 1 or more days per week	63.5	64.4
1 or 2 fruit servings per day	64.1	62.2
Exercising to lose weight	58.8	59.6
Little or no aerobic exercise	54.7	52.9
Aerobic exercise 3 or more days	45.3	47.1
Not attempting dieting or exercise to lose weight	37.4	35.5
Dieting to lose weight	33.4	33.3
3-4 fruit servings per day	25.4	26.9
5 or fruit servings more per day	5.6	6.4
Don't eat fruits and vegetables	4.9	4.5
Taking diet pills to lose weight	4.3	4.2
Vomiting or taking laxatives to lose	2.6	2.8

## BODY MASS INDEX (all students)

<b>BMI Classification</b>	<b>2005 (%)</b>	<b>2007 (%)</b>
< 18.5 Underweight	4.7	3.4
18.5-24.9 Healthy Weight	60.1	59.1
25-29.9 Overweight	20.6	24.1
30-34.9 Class I Obesity	9.3	7.3
35-39.9 Class II Obesity	2.7	3.7
>= 40 Class III Obesity	1.9	1.5

## DEPRESSION

<b>Diagnosis and Therapy</b>	<b>2005 (%)</b>	<b>2007 (%)</b>
College students reported diagnosed with depression	17.0	17.3
Among students with depression diagnosis:		
Diagnosed with depression in the last school year	27.6	24.6
Currently in therapy for depression	20.5	23.8
Currently taking medication for depression	36.5	26.9

### Depression Symptoms (all students)

Symptoms in Past School Year	2005 (%)	2007 (%)
Feeling exhausted (not from physical activity): 11+ times	24.5	25.1
Feeling overwhelmed by all one had to do: 11+ times	23.6	24.8
Feeling very sad: 11+ times	13.1	12.9
Feeling things were hopeless: 11+ times	10.8	9.7
Feeling so depressed it was difficult to function: 11+ times	6.1	7.0

### SUICIDE

Ideation within Past School Year	2005 (%)	2007 (%)
Seriously considering attempting suicide (1 or more times)	10.6	11.0
Attempting suicide (1 or more times)	1.6	1.8

### HEALTH INSURANCE\* (unweighted)

Insurance Status	2005 (%)	2007 (%)
Has health insurance or prepaid plan (HMO) all students	82.2	79.7
Men	76.0	79.0
Women	85.0	81.0

### DEMOGRAPHICS\* (unweighted)

#### Gender

	2005 (%)	2007 (%)
Male	31.9	37.6
Female	68.1	62.4

#### Age

	2005 (%)	2007 (%)
Age (Median)	21.0	21.0

### Class Standing

	<b>2005 (%)</b>	<b>2007 (%)</b>
1st year undergraduate	25.1	23.6
2nd year undergraduate	17.8	16.8
3rd year undergraduate	22.0	20.2
4th year undergraduate	13.2	16.4
5th year or more undergraduate	6.8	7.5
Graduate or professional	13.5	14.4
Adult special	0.3	0.3
Other	1.3	0.8

### Ethnicity

	<b>2005 (%)</b>	<b>2007 (%)</b>
White - not Hispanic	79.0	78.9
Black - not Hispanic	1.6	4.5
Hispanic or Latino	7.9	10.1
Asian or Pacific Islander	2.6	3.6
American Indian or Alaskan	6.8	5.1
Other	3.7	5.1

### Residence

	<b>2005 (%)</b>	<b>2007 (%)</b>
Campus resident	50.1	50.5

## **DISCUSSION**

Because of sampling error, most of the reported changes from 2005 to 2007 fall within the 3% margin of error. Despite health promotion program efforts across the campus, most reported prevention behaviors have remained unchanged. In some instances, large numbers of students are reporting healthy behaviors such as seatbelt use, use of designated drivers, low BAC levels among drinkers, and a few harm reduction behaviors. A program ceiling effect may have occurred with these issues wherein increased program effort will provide little return. However, other areas particularly those addressing stress and depression may be more largely rooted in environmental or economic conditions.

### **Good News and Bad News**

Back pain, respiratory problems, depression and anxiety, and allergies are the top 5 health problems that affect students on both surveys. Problems that adversely affect most students' academic performance are (1) stress, (2) colds/flu/sore throat, (3) sleep disorders, (4) concern over a troubled friend or family member, and (5) depression. Nationally, ACHA reports the same five leading impediments to academic performance in the same ranking.

More students reported getting vaccinated against infectious disease compared to 2005. The health center has conducted education campaigns to encourage students to receive these before coming to NAU or while at NAU.

The health center clinic may consider having more extensive cold prevention and cold care education interventions for student prior to and during cold/flu season.

A large majority of students (93.7%) report wearing seatbelts most or all of the time. At the same time, only 22% of bike riders wear helmets when riding.

Stress and mental health problems persist widely on campus. Stress may be the main contributor to depression symptoms. A quarter of all surveyed students report being overwhelmed and exhausted at least 11 or more times during the school year. About 10% said they experienced hopelessness and sadness 11 or more times during the school year. 17% of students said they have been diagnosed with depression at one time in their life. Significantly more students in 2007 who have a diagnosis of depression report not taking medication compared to students in 2005. Suicide ideation and attempts remained stable although it may be important to note that about 1 in 10 NAU students reported considering attempting suicide at least once in the past school year. Students reporting internet and computer game use adversely affecting school work and performance also increased. The increase was mostly attributable to more women citing this problem.

Student eating and exercise habits could be improved to help reduce some of the acute and chronic health problems as well as reduce the impact of stress in their lives. One indicator of dietary adequacy is the number of servings of fruit students eat each day.

Two thirds of students eat less than 3 servings a day. More than half of all students are not conditioned aerobically. About one-third of students are overweight or obese.

The majority of students report using alcohol responsibly. Most students who drink report drinking that keeps their blood alcohol concentration (BAC) below .08 and drank 4, fewer, or no drinks when they partied last. One key alcohol harm reduction strategy -- avoiding drinking games-- appears to have decreased. On the other hand, reported negative consequences, despite educational efforts on campus, remained the same between 2005 and 2007. One in four drinkers reported blacking out while drinking in the past school year and one-third of drinkers said they did something they later regretted. One in seven drinkers said they had experienced unprotected sex while drinking.

Tobacco use may have dropped somewhat in 2007. Reported marijuana use remained stable over the past two years. Marijuana is used at about the same rate as tobacco.

Reported victimization of violent acts showed little change between 2005 and 2007. Still, 13% of all students said they were in an emotionally abusive relationship in the past school year and about 1 in 20 student said they were physically assaulted or in a fight in the past year. Reported sexual assault and sexually abusive relationships remained at the same levels from 2005 to 2007.

It is difficult to tell if sexual behavior has changed much in the past two years. Sexual abstinence and the number of sex partners have remained the same. Reported condom use may have increased in 2007: but so has the use of emergency contraceptives. The increase could be due to over-the-counter availability of the medication or just statistical error within the survey. Unintentional pregnancies increased from 1.7% to 2.8% of students.

These findings clearly point to the need of focusing on stress reduction and mental well-being promotion strategies. These can be reinforced by interdepartmental efforts to improve general student wellness through healthy eating, fitness, and stress management promotion; diagnosis and treatment of students with mental health problems; and instituting more comprehensive alcohol screening and prevention education programs.