Major Risk and Protective Factors

Tobacco Use and Exposure

Tobacco use remains the leading preventable cause for death and disease in the United States,[1] causing 443,000 deaths annually.[2] According to the U.S. Centers for Disease Control and Prevention (CDC), cigarette smoking is the cause of about one in every five deaths in the United States each year.

According to data from the national 2011 Behavioral Risk Factor Surveillance System (BRFSS, an estimated 22 percent of Pennsylvania adults are cigarette smokers. This figure is higher than the 2010 estimate of 18 percent, in part due to methodological changes in survey administration. Prior to 2011, the survey was conducted using telephone landlines; since 2011, it has been administered as a dual-frame survey of both households with landline telephones and people who use only cell phones.[3]

Pennsylvania's rate of adult smokers (22 percent; CI: 21-24) in 2011 was close to the median national rate of 21 percent. Over the course of the 21st century to date, the trend with regard to cigarette smoking has been flat.[4]

U.S. data show that smoking among youth younger than 18 years of age has decreased dramatically since the mid-1990s, but increased promotional efforts on the part of tobacco companies has caused the decline to slow.

In 2010, the Pennsylvania Youth Tobacco Survey (YTS) was conducted in middle schools and high schools. The YTS found that approximately 18.6 percent of public high school students and 3.4 percent of public middle school students had smoked cigarettes during the 30 days prior.

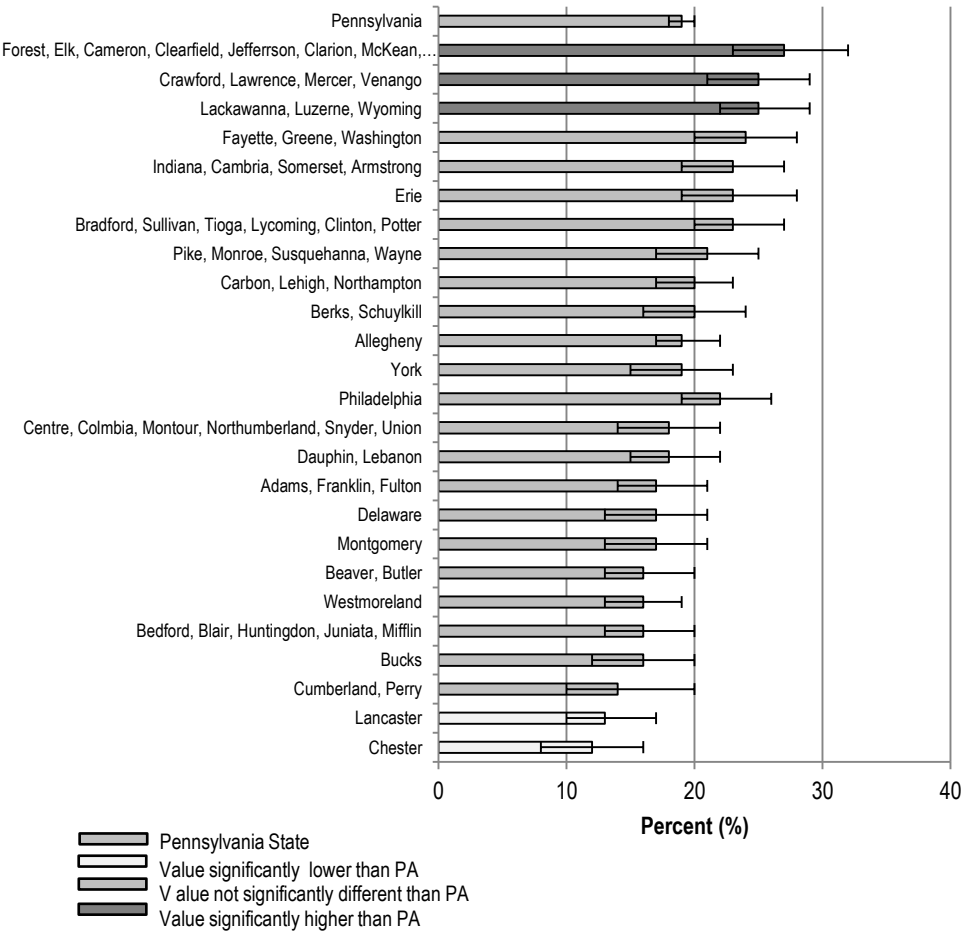
These results were similar to the 2008-2009 YTS findings of 18.4 percent for high school students and 4.3 percent for middle school students.[5]

County Differences

County-level BRFSS data from 2009 through 2011 show the prevalence of tobacco use to vary widely among the counties, from about 12 percent in Chester County to about 27 percent in northwestern Pennsylvania.

Chester and Lancaster counties have significantly lower smoking prevalence than the state. The northeast counties (i.e., Lackawanna, Luzerne, Wyoming) also have significantly higher smoking prevalence than the state estimate.

Figure 3.1 Percent of Adults Who Smoked Cigarettes, Pennsylvania, 2009 to 2011[6]



Note: Data are aggregated and represent responses to landline surveys only.

Age and Sex

Based on data from the 2010 Youth Tobacco Survey and the 2011 BRFSS, smoking prevalence seems to peak between late adolescence and age 29. See Figure 3.2 for details.

The prevalence of current smoking among males and females in middle and high school was not significantly different at the 95 percent confidence level. There was no significant different in adult smoking by gender, either.

Figure 3.2 Percent of Residents Who Smoked Cigarettes, by Age, Pennsylvania, 2010 and 2011[7,8]

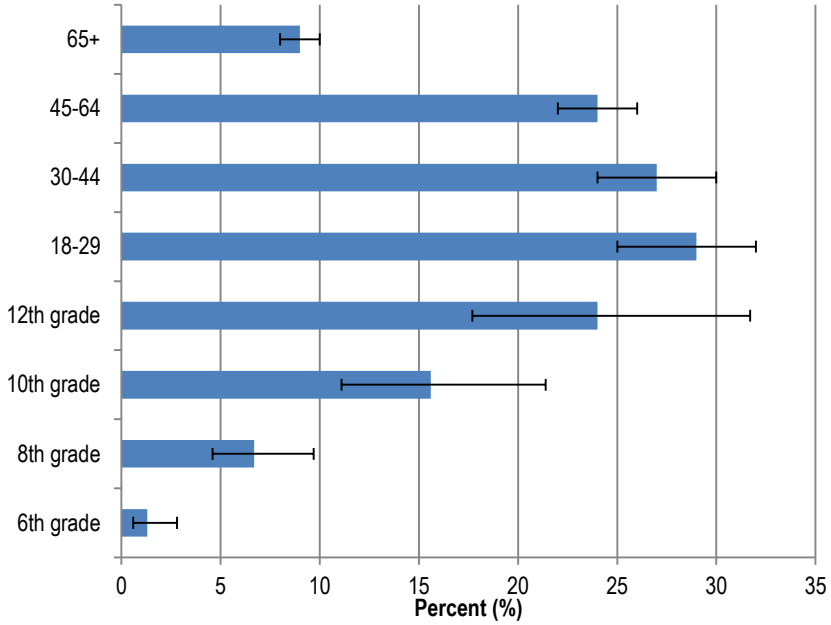


Figure 3.3 Percent of Youth Who Smoked Cigarettes, by Sex, Pennsylvania, 2010[9]

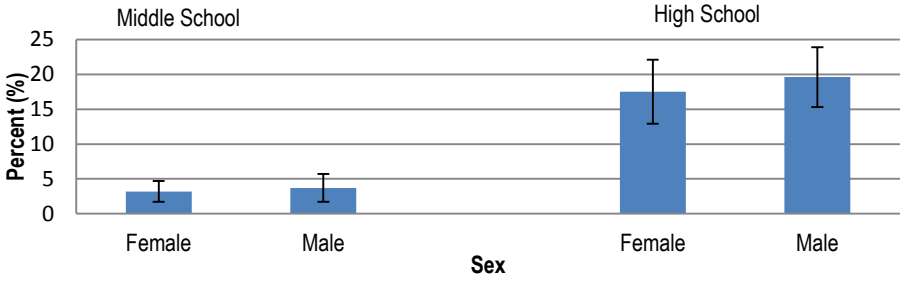
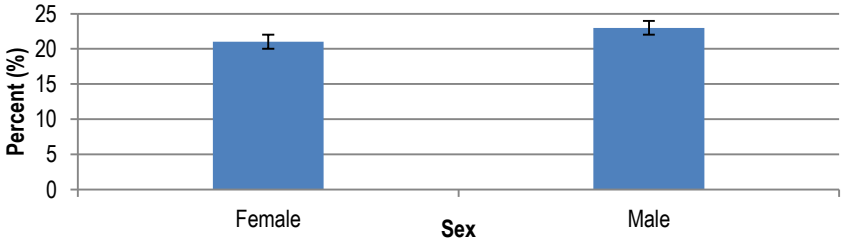


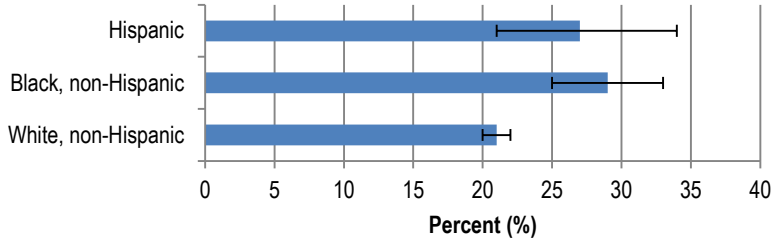
Figure 3.4 Percent of Adults Who Smoked Cigarettes, by Sex, Pennsylvania, 2011[10]



Race and Ethnicity

According to 2011 BRFSS data, smoking cigarettes was reported by more black and Hispanic residents than white residents. National data indicate that some of these differences are due to variations in income and education, as described below. After accounting for income, education, gender and age, smoking rates were similar.

Figure 3.5 Percent of Adults Who Smoked Cigarettes, by Race and Ethnicity, Pennsylvania, 2011

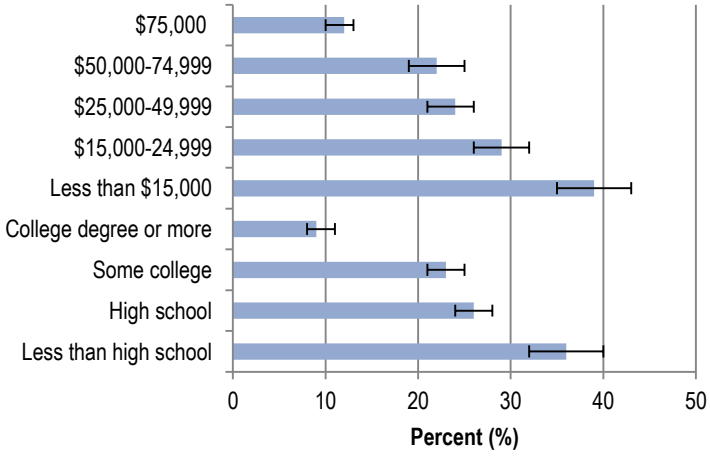


Income and Education

Low socioeconomic status increases the risk of tobacco use, as evidenced by the fact that 39 percent of Pennsylvania residents with a household income of less than $15,000 smoked cigarettes.

Additionally, 36 percent of adults 25 and older without a high school diploma or higher degree smoke.[11]

Figure 3.6 Percent of Adults Who Smoked Cigarettes, by Household Income and Education, Pennsylvania, 2011



Public Health Implications

Nationally, tobacco use remains the leading preventable cause of death. Statistically speaking:[12]

- Every year, about 443,000 Americans die from tobacco use;
- Tobacco users cause $96 billion to be spent on public and private health care every year;
- Smoking causes $97 billion in lost productivity annually;
- $2.6 billion is spent through Social Security Survivors Insurance for the more than 300,000 children who have lost at least one parent due to a smoking-caused death;
- Smoking-caused illnesses afflict 8.6 million people in the U.S.

In Pennsylvania:[13]

- Public and private health care costs of tobacco users are about $5.19 billion;
- Medicaid covers about $1.7 billion in related health care costs;
- Productivity loses of $4.73 billion are related to smoking annually.

Youth are more likely to be influenced by tobacco advertising, with one-third of underage experimentation with smoking linked to tobacco company advertising:[14]

- About $12.8 billion is spent on marketing nationally by the tobacco industry each year;
- An estimated $452.8 million is spent in marketing in Pennsylvania annually.

Pennsylvania's Role

Healthy People 2010

The national goal for adult tobacco use was an age-adjusted prevalence of 12 percent or less. Pennsylvania did not achieve this goal; the state's 2010 age-adjusted prevalence of tobacco use was 18 percent.

Healthy People 2020

The goal for adult tobacco use for 2020 is an age-adjusted prevalence of 12 percent or less. For youth, the goal is to reduce current smoking in grades 9 through 12 to less than 16 percent. Pennsylvania's 2010 estimate for current smoking in these grades was 18.6 percent.

Pennsylvania's goals for Healthy People 2020 are to:

- Reduce tobacco-related morbidity and mortality among all Pennsylvanians;
- Change community norms through state-advised, community-driven systems that create environments in which it is uncommon to see, use or be negatively impacted by tobacco products and tobacco smoke pollution (secondhand smoke).[15]

Intervention Strategies

The Pennsylvania Tobacco Control Program was established by the Department of Health (DOH) Bureau of Health Promotion and Risk Reduction, Division of Tobacco Prevention and Control (DTPC) under Chapter 7 of Act 2001-77, the Tobacco Settlement Act. Pennsylvania's evidence-based statewide tobacco control program is comprehensive, sustainable and accountable; it uses a coordinated effort to establish smoke-free policies and social norms to promote and assist tobacco users to quit and to prevent initiation of tobacco use. The program's mission to reduce disease, disability and death related to tobacco use.

The DTPC follows the CDC's "Best Practices for Comprehensive Tobacco Control Programs"[16] and has implemented an integrated and effective program to maximize outcomes built on the four CDC goals to affect changes in community norms:

1) Prevent the initiation of tobacco use among young people.
2) Promote quitting among adults and young people.
3) Eliminate nonsmokers' exposure to tobacco smoke pollution.
4) Identify and eliminate tobacco-related health disparities.

Substance Abuse Effort: Preventing Youth Access

The Pennsylvania DOH is responsible for the oversight and implementation of the annual Synar Survey of retail outlets that sell tobacco to determine the rate of illegal sales of tobacco to youth under 18 years old. This survey is a federal requirement of the Substance Abuse Prevention and Treatment Block Grant, and since 2002 the goal of the Substance Abuse and Mental Health Service Administration (SAMSHA) has been 20 percent or less. In Pennsylvania, illegal sales of tobacco to youth under the age of 18 have been measured at 10 percent or less since 2004. In 2012, the rate was 9 percent (CI: 7-12).

FDA Enforcement Initiative

In 2010, Pennsylvania was selected as one of 15 states to contract with the Food and Drug Administration (FDA) to enforce the Family Smoking Prevention and Tobacco Control Act by conducting inspections of tobacco retail establishments across the state. This act requires the FDA to limit young persons' access to tobacco products, impose age restrictions for the purchase of cigarettes and smokeless tobacco products, and set restrictions on marketing, to curb the appeal of these products to minors.

Every state in the initiative is required to identify adults to complete an FDA application and review process to become an FDA Commissioned Officer. Pennsylvania has 33 Commissioned Officers. Under the coordination of the DOH, Pennsylvania's officers conduct and report the outcomes of two types of FDA compliance checks on a minimum of 20 percent of the state's tobacco retail outlets:

- Youth access compliance checks ensure retailers are not selling tobacco to those younger than 18 years;
- Advertising and labeling checks ensure regulations are followed.

Cessation

During the winter of 2009-2010, the U.S. Centers for Disease Control and Prevention (CDC) conducted a National Adult Tobacco Survey (NATS). In collaboration with the CDC, Pennsylvania DOH expanded the survey to include an additional 1,000 interviews with Pennsylvania residents. The DOH will use the data to develop and improve public health programs to help people quit smoking, or prevent them from starting to smoke.

1-800 QUIT NOW

Pennsylvania's Free Quitline is available 24 hours a day, seven days a week. English- and Spanish-speaking counselors are available at all times; speakers of other languages are available as needed. From July 1, 2010 to June 30, 2011, Quitline services were provided through a partnership of DOH and Free and Clear, Inc. (now Alere).

Teen and adult tobacco users receive counseling from trained intake specialists and cessation counselors. After the initial call to the Quitline, callers who are ready to quit determine a quit date and are offered up to five free one-on-one counseling calls to assist them through the quitting process. The sessions are tailored to the individual needs of the caller, focusing on specific strategies and actions for that caller. Callers who are not ready to quit receive self-help materials and tailored fact sheets.

Fax to Quit

Pennsylvania implemented two fax referral pilot projects in the northeast and northwest regions of the state, with an outcome goal of achieving a Quitline enrollment rate of at least 40 percent. DOH plans to expand the fax referral initiative into other regions, and will educate health care providers about effectively providing tobacco prevention and cessation services to lesbian, gay, bisexual and transgender populations through a continuing education initiative with the Pennsylvania Medical Society.

HealthyWoman Program

Beginning in 2009, the HealthyWoman Program increased support for tobacco cessation as part of outreach and awareness education services. The HealthyWoman program provides free mammograms, clinical breast exams, education on breast self-exams, Pap tests and pelvic examinations. Services are available to women aged 40 to 65 years who are low income and have limited or no insurance.

A cross-promotional brochure has been developed to increase awareness of free services available from the Quitline and, the HealthyWoman Program.

PA cAARds

To address the dual risk of tobacco use and diabetes, the DTPC and the Diabetes Prevention and Control Program developed the PA cAARds initiative. Through this effort, health care professionals from both fields are trained to ask patients about diabetes and smoking status, advise them about behaviors that will improve their health and refer them to appropriate resources.

Smoke Free Multi-Unit Housing

Beginning in October 2013, Pennsylvania's statewide Smoke Free Multi-Unit Housing initiative was launched as a result of a successful pilot in select regions of the commonwealth. DOH works with multi-unit housing associations, local housing authorities, local government officials, tenant associations and other stakeholders to explore opportunities to promote smoke free multi-unit housing. The statewide objective is to increase the number of people newly protected by smoke

free policies in multi-unit housing. An online curriculum of how to implement a smoke-free policy in multi-unit housing properties like apartments and condominiums is used as a starting point for policy work.

Young Lungs at Play

In June 2010, DOH partnered with the Penn State Cooperative Extension to implement Young Lungs at Play[17] in Pennsylvania. Through the creation of tobacco free parks, community playgrounds and recreational areas, this health policy change initiative aims to decrease smoking prevalence, teen smoking initiation and exposure to secondhand smoke. YLAP volunteers educate municipal officials, stakeholders and residents about the health and environmental consequences of tobacco use and promote policy change through the passage of tobacco free ordinances or resolutions that ban tobacco use in outdoor spaces where children play. YLAP signs are displayed in support of tobacco free ordinances, to increase awareness of tobacco bans.

Figure 3.7 Young Lungs at Play Initiative Sign

Resources

Behavioral Risk Factor Surveillance System (BRFSS)—http://www.cdc.gov/brfss

Campaign for Tobacco-Free Kids—http://www.tobaccofreekids.org

Centers for Disease Control and Prevention (CDC)—http://www.cdc.gov/tobacco

Healthy People 2020—http://www.healthypeople.gov

Institute of Medicine— http://www.iom.edu/Reports/2009/Secondhand-Smoke-Exposure-and-Cardiovascular-Effects-Making-Sense-of-the-Evidence.aspx

Pennsylvania Alliance to Control Tobacco (PACT)—http://www.pactonline.org

Tobacco Prevention and Control Program, Pa. Department of Health—http://www.health.state.pa.us/tobacco

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Endnotes

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Obesity and Overweight

The U.S. Centers for Disease Control and Prevention (CDC) defines "overweight" in adults as a body mass index (BMI) of 25 to 29.9, "obesity" as a BMI of 30-39.9 and "morbid obesity" as a BMI of 40 or more. BMI is calculated by dividing a person's weight in kilograms by height in meters squared.[1]

Figure 3.8 BMI Calculation[2]

$$\frac{\text{(weight in pounds)}}{\text{(height in inches) x (height in inches)}} \times 703$$

or,

$$\frac{\text{(weight in kilograms)}}{\text{(height in meters) x (height in meters)}}$$

Although the BMI does not distinguish between fat and lean body mass, from a health perspective, "obesity" and "overweight" refer to high amounts of body fat in relation to lean body mass. The U.S. Preventive Services Task Force (USPSTF) recommends that "clinicians screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss of obese adults." [3]

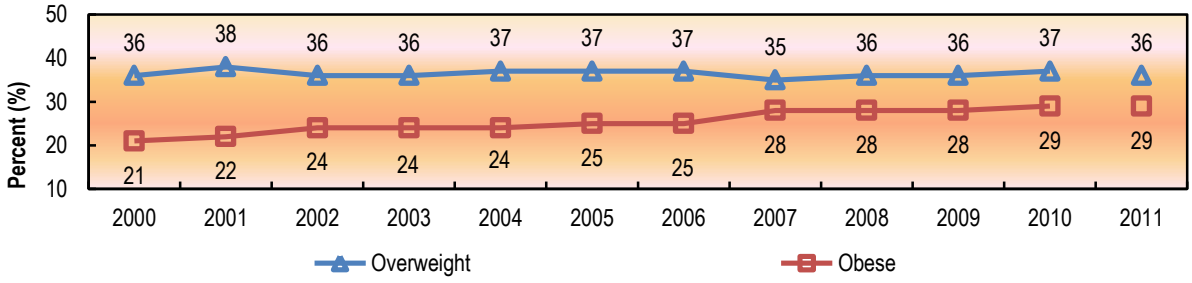
The Institute of Medicine (IOM) calls on health care providers to help prevent obesity in childhood, too. Specifically, the IOM recommends that pediatricians, family physicians and other clinicians take part in preventing childhood obesity by routinely tracking BMI, providing relevant evidence-based counseling and guidance, and serving as role models in the community.[4]

In addition to psychosocial consequences such as low self-esteem, depression and discrimination, obese and overweight persons are at increased risk of developing primary obesity-related health conditions, including heart disease, stroke, type 2 diabetes and certain types of cancer.[5] In 2008, the CDC estimated that U.S. medical expenditures associated with obesity totaled as much as $147 billion. Further, medical charges for those who are obese are $1,429 higher per year than those of their normal weight counterparts.[6]

In Pennsylvania, the percent of adults meeting the criteria as overweight or obese has increased steadily over the past decade. By 2011, 36 percent of residents 18 years and older were considered overweight (CI: 35-37) and 29 percent obese (CI: 27-30). These figures virtually matched the national median rates, of 36 percent and 28 percent, respectively. [7]

The national Healthy People 2020 goal is to decrease the prevalence of obesity in adults. Pennsylvania's Healthy People 2020 goal was set at 30 percent of adults and Pennsylvania reached this goal. Still, as of 2011, 65 percent of Pennsylvania adults met criteria as overweight or obese (BMI ≥ 25) (CI:63-66).[8]

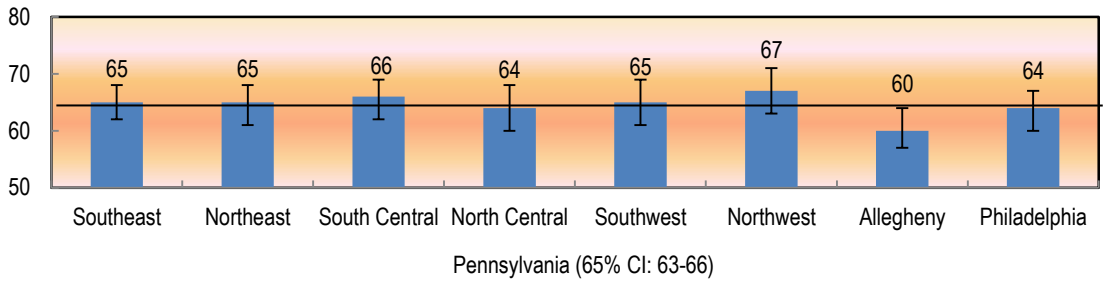
Figure 3.9 Percent of Overweight and Obese Adults, Pennsylvania, 2000 to 2011[9]



*A change in the survey methodology creates a discontinuity for 2011. Please refer to the technical notes for more information.

As shown in Figure 3.10, there are no statistically significant differences identified among the eight regions of Pennsylvania.

Figure 3.10 Percent of Overweight and Obese Adults by Health District, Pennsylvania, 2011[10]



Age, Sex, and Race and Ethnicity

As shown in Table 3.1, a significantly lower percentage of Pennsylvania adults between the ages of 18 and 29 years old were obese and overweight, compared to residents of other age groups.

Pennsylvania women residents had a significantly lower combined rate of obesity and overweight, compared to men. Figures for both sexes were 58 percent (CI: 57-60) and 71 percent (CI: 69-73), respectively.

In addition, non-Hispanic black residents had higher rates of obesity (36 percent; CI: 31-41) than non-Hispanic white residents (28 percent; CI: 27-29).

Table 3.1 Percent of Overweight and Obese Adults by Demographics, Pennsylvania, 2011[11]

	Overweight* (BMI 25 to 29.9)		Obese* (BMI ≥ 30)		Overweight or Overweight and Obese* (BMI ≥ 25)	
	%	CI	%	CI	%	CI
All adults	36	35-37	29	27-30	65	63-66
Male	41	39-43	30	28-31	71	69-73
Female	31	29-33	28	26-29	58	57-60
Ages:						
18-29	30	25-33	17	15-21	47	43-51
30-44	34	31-37	31	28-33	65	62-67
45-64	37	35-39	34	32-36	71	69-73
65+	41	39-44	28	26-30	69	67-71
Race and ethnicity:	36	34-37	28	27-29	64	62-65
White, non-Hispanic	35	31-40	36	31-41	71	66-76
Black, non-Hispanic	37	30-45	33	26-41	70	62-76
Hispanic						
Education:						
< High school	36	32-41	31	27-35	67	62-71
High school	37	34-39	32	30-34	68	66-70
Some college	33	30-35	30	27-33	63	60-65
College degree	38	36-41	22	20-23	60	58-62
Household income:						
< $15,000	32	28-36	34	30-38	66	61-70
$15,000 to $24,999	36	32-39	30	27-33	66	63-69
$25,000 to $49,999	38	35-41	30	28-33	68	65-71
$50,000 to $74,999	37	33-40	30	27-33	67	63-70
$75,000+	38	35-40	25	22-28	63	59-65

Income and Education

As shown in Table 3.1, in 2011, a significantly lower percent of Pennsylvania adult residents with household incomes of $75,000 or more had a significantly lower percentage of obesity compared to PA adults with household incomes of less than $15,000. Adults with a college degree also had a significantly lower percentage of obesity compared to those with less education.

Youth

One out of three children is considered overweight or obesity; the obesity rate for youth in the U.S. has tripled from just one generation ago. According to the 2007 National Survey of Children's Health, Pennsylvania ranked 20th among the fifty states in overall prevalence of "overweight or obese" youth. [12]

From age two through 20 years of age, persons have different body fat; therefore, health care providers must rely on BMI-for-age rather than standard BMI adult measurements. BMI-for-age is plotted on separate growth charts to determine the percentile ranking, with the child's own numbers plotted for easy comparison with normative curves and same-age peers.

Body mass index (BMI) should not be used as the sole tool for determining overweight and obesity in children. Physically active children may have higher BMIs due to the presence of more muscle, which weighs more than fat. Consulting a health care provider and tracking growth over time are more important than a one-time measurement. In addition, it's important for all children, regardless of BMI, to be active and eat healthy foods.

Overweight and obese youths are at higher risk of health problems, such as high blood pressure, type 2 diabetes, heart disease, asthma, joint problems, gallstones and some forms of cancer. They are also at higher risk of developing these conditions in adulthood.[13,14]

Table 3.2 Childhood BMI-for-Age Weight Status Categories and Corresponding Percentiles, United States

	Percentile Range
Underweight	Less than the 5th percentile
Healthy weight	5th percentile to less than the 85th percentile
Overweight	85th to less than the 95th percentile
Obese	Equal to or greater than the 95th percentile

In Pennsylvania, 36.2 percent of children in grades K to 6 and 34.1 percent of children in grades 7 to 12 were reported as being overweight or obese during the 2010-2011 school year; 16.7 percent of those in grades K to 6 and 17.7 percent of children in grades 7 to 12 were reported as "obese."

The national Healthy People 2020 goals for childhood weight are: to decrease the rate of obesity to 15.7 percent for children in grades K to 6 and to 16.1 percent for those in grades 7 through 12. Pennsylvania childhood obesity rates have not yet reached the Healthy People 2020 goals.[15,16]

Hispanic children in Pennsylvania had higher overweight or obesity rates than other children (53.5 versus 41 percent).

In addition, the percent of children ages 2 to 5 years old receiving WIC services and have a BMI at or above the 85th percentile has steadily increased from 24.7 percent (2006) to 26.9 percent (2010).[17]

Table 3.3 Percent of Obese Children by Age Group, Pennsylvania, 2007 to 2011 and HP 2020 Goals[18]

	Pennsylvania				
	2007-2008	2008-2009	2009-2010	2010-2011	HP2020 Goals
Grades K to 6 Percent who are obese (BMI at or above 95th percentile)	16.6	16.4	16.8	16.7	**15.7**
Grades 7 to 12 Percent who are obese (BMI at or above 95th percentile)	17.2	17.2	18.2	17.7	**16.1**

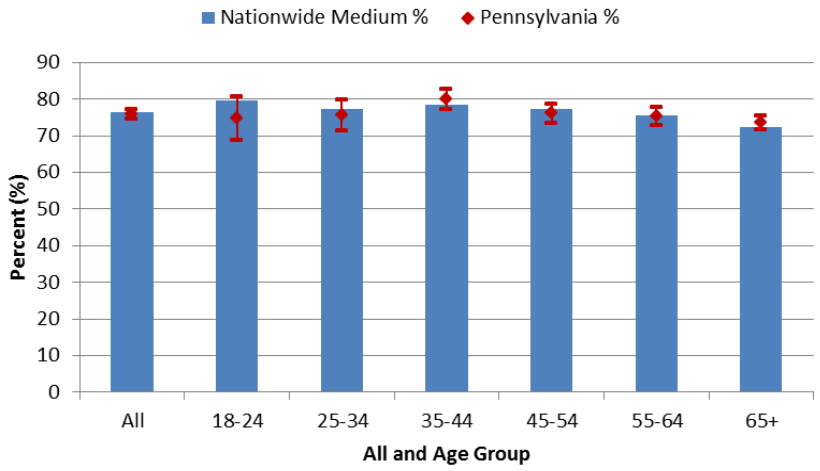
Risk and Protective Factors

The physiological target for obesity prevention is balancing energy intake with the energy needed for bodily functions and physical activity, to prevent the accumulation of excess body fat. Evidence of upward trends in BMI indicates positive energy balance at a population level: on average, people are consuming energy in excess of their energy expenditure. While there are many factors related to being overweight or obese, the primary focus is on habits related to nutrition and physical activity. Diets high in fruits and vegetables and low in fat and sugar help protect against the development of obesity. Likewise, adequate energy expenditure through physical activity is also a protective factor.

According to data from the 2011 Behavioral Risk Factor Surveillance System survey, less than half of Pennsylvania adults participate in the recommended 150 minutes of physical activity each week. When compared to the national average, nearly all age groups have lower than average rates of recommended weekly physical activity; the exception was residents aged 55 to 65.

Dietary guidelines recommend at least five servings of fruits and vegetables each day to help protect against obesity. In 2009, 76 percent of Pennsylvania residents (CI: 75-77) and 77 percent of U.S. residents said they eat less than the recommended number of servings each day. Consumption rates in Pennsylvania are similar to the national average; people aged 18 to 24 and 25 to 34 consumed less than the recommended servings of fruits and vegetables per day. U.S. rates were 80 and 78 percent for 18 to 24 and 25 to 34 year olds, respectively; Pennsylvania rates for these age groups were 75 percent (CI: 69-81) and 76 percent (CI: 71-80).

Figure 3.11 Fewer than Five Servings of Fruits/Vegetables Daily, Adults, Pennsylvania and United States, 2009[19]



Intervention Strategies

Pennsylvania employs a variety of obesity prevention and wellness promotion initiatives, as described below. These fall into several categories:

- Community-based interventions;
- School-based interventions.

Educating Practices/Physicians in their Communities (EPIC): Pediatric Obesity Evaluation, Treatment and Prevention in Community Settings (2011-ongoing)

The purpose of EPIC is to deliver an educational curriculum about childhood obesity screening, treatment and prevention within primary care practice settings to address protocols to:

- Ensure universal childhood obesity screening;
- Identify appropriate patient education materials to prevent and treat overweight children;
- Refer patients to community resources such as weight management programs, nutritionists, dietitians.

WalkWorks (2010-2012)
This program[20] offers enhanced access to local walking routes, as well as social support of persons wanting to improve their physical activity habits. It has identified, mapped and promoted safe walking routes that are accessible to people of all ages and abilities, established and promoted guided community-based walking groups, and provided education about local policy related to pedestrian safety in the built environment. Through this program, walking routes were established with attractive signage in 24 communities in six western Pennsylvania counties (i.e., Cambria, Crawford, Greene, McKean, Venango and Washington). Forty-eight walking groups have been established.

Nutrition Links[21]
Nutrition Links, from the Penn State Cooperative Extension, offers free nutrition education programs to participants eligible for public assistance to develop the knowledge and skills necessary to achieve a healthful diet on a limited budget. Nutrition Links staff provide thousands of Pennsylvania's limited-resource residents with education on topics such as food and nutrition safety, food preparation, and food budgeting.

Stair Prompts
Point-of-decision prompts are motivational signs placed on or near stairwells, elevators and escalators to encourage the use of stairs. Strong evidence suggests that point-of-decision prompts increase stair use and physical activity levels. This program has been incorporated successfully into the Pennsylvania Nutrition and Physical Activity Plan.

Safe Routes to School and Capacity Building Mini-Grant Programs[22] (2012-ongoing)
The Safe Routes to School Mini-Grant Program strives to increase the number of children who walk or ride bicycles to school. It is a national initiative to create safe, convenient and enjoyable opportunities for children to walk and bicycle to and from school. It is built on collaborative partnerships that often include educators, parents, city planners, business and community leaders and health care officials. The initiative incorporates the "5 Es": Engineering, Education, Encouragement, Enforcement and Evaluation.

New School Foods and Labeling System Initiative[23] (2010-2012)
This program is for school environments to support improved nutrition and healthier lifestyle choices. Innovative public-private partnership to introduce and promote new food items low in fat and sodium and high in micronutrients and fiber that meet or exceed the USDA and PDE nutrition guidelines have made their way into some elementary and secondary school lunches and vending machines in several Pennsylvania school districts.

Endnotes

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Physical Activity

Lack of physical activity has been termed a "modifiable risk factor" for cardiovascular disease, diabetes, colon and breast cancers, obesity, hypertension, depression, osteoporosis, and osteoarthritis.[1] Health benefits associated with physical activity include prevention of chronic disease, as well as improved health, fitness and quality of life. These are well-documented, even in persons who had a chronic disease. For prevention or remediation of several chronic diseases, a linear dose-response effect is seen, with further physical activity yielding increasing health benefits.[2]

Overall, about half of Pennsylvania's adult residents met the recommended physical activity guidelines of the U.S. Centers for Disease Control and Prevention (CDC) from 2001 through 2011.

Successful strategies for increasing physical activity continue to include education and management of individual behavior, but also recognize the importance of safe and convenient access to "physical activity areas." [3]Improving the built environment to create new areas for physical activity is critical, as is increasing access to existing facilities.

Pennsylvania's Role

Healthy People 2010

The age-adjusted percent of Pennsylvania adults who engaged in "moderate or vigorous" physical activity increased from about 47 in 2001 to about 51 in 2009, exceeding the national Healthy People 2010 goal of 50 percent.

However, Healthy People 2010 also included a goal for 30 percent of adult residents to participate in" vigorous" physical activity; Pennsylvania fell short of this goal, albeit narrowly. The percent of adults increased from about 25 in 2001 to 29 percent in 2009.

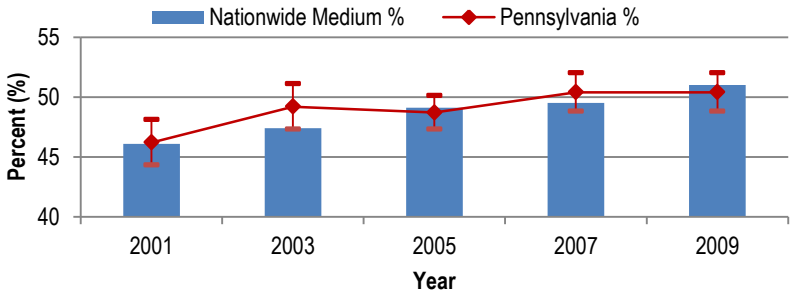
While Healthy People 2010 set the goal of reducing the percent of residents who engaged in "no leisure-time physical activity" to 20 percent, Pennsylvania's rate stayed relatively stable at 24 percent in 2001 and 25 percent in 2009.

Healthy People 2020

The physical activity goals for Healthy People 2020 are somewhat different than the 2010 goals. The national target for the percent of adults who engage in "vigorous or moderate" physical activity is 47.9 percent, with a baseline of 43.5 percent. Pennsylvania's adult population already exceeds this goal. In fact, the state's adult residents exceeded this goal in 2006, 2007, 2009 and 2011.

From 2001 through 2009, the overall proportion of Pennsylvania's adult residents who reported 30 or more minutes of moderate physical activity five or more days per week, or vigorous activity for 20 or more minutes three or more days per week, initially increased and then stabilized.

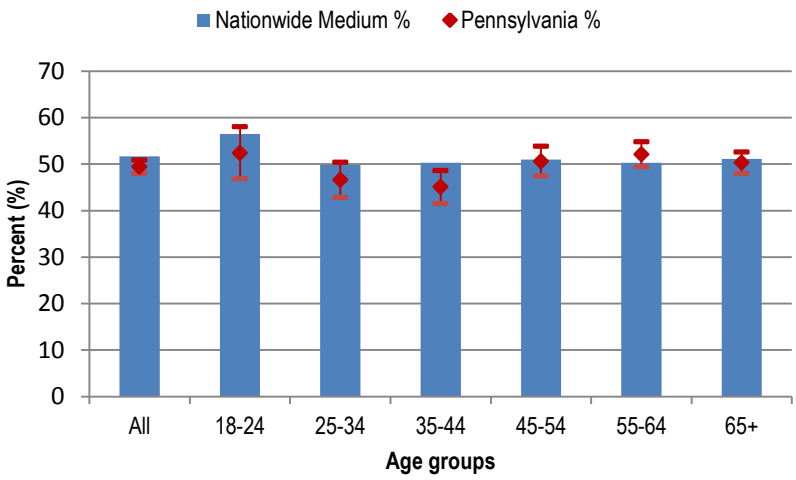
Figure 3.12 Participated in Recommended Amount of Physical Activity, Adults, Pennsylvania, 2001, 2003, 2005, 2007, 2009



Age, Sex, and Race and Ethnicity

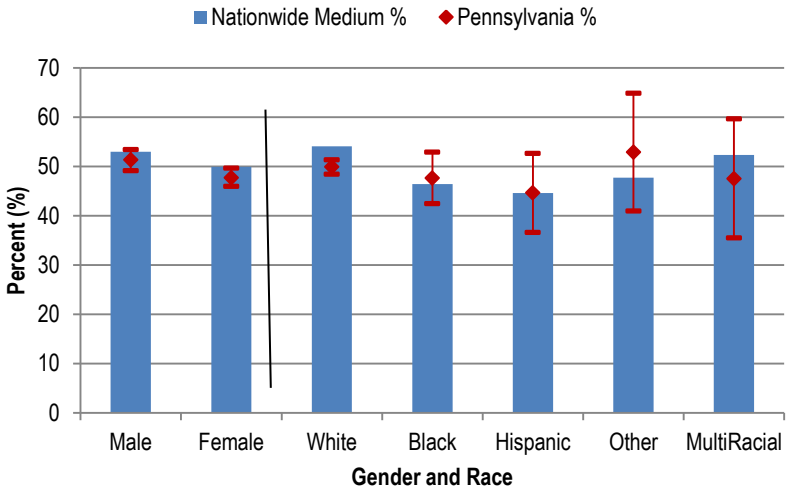
According to results of the 2011 BRFSS, 49 percent (CI: 48-51) of adults of all ages said they participated in at least 150 minutes of physical activity per week. This figure is below the U.S. rate of 52 percent. Among age groups, adults 18 to 24 years old reported the highest level of participation, at 52 percent. The differences between U.S. and Pennsylvania rates by age are not statistically significant.

Figure 3.13 Participated in Recommended Amount of Physical Activity, by Age Group, Adults, Pennsylvania, 2011



Just over half (51 percent; CI: 49-53) of men and just under half (48 percent; CI: 46-50) of women in Pennsylvania said they participated in 150 or more minutes of physical activity per week. By racial and ethnic group, no significant difference in responses was detected.

Figure 3.14 Participated in Recommended Amount of Physical Activity by Sex and Race, Adults, Pennsylvania, 2011[4]

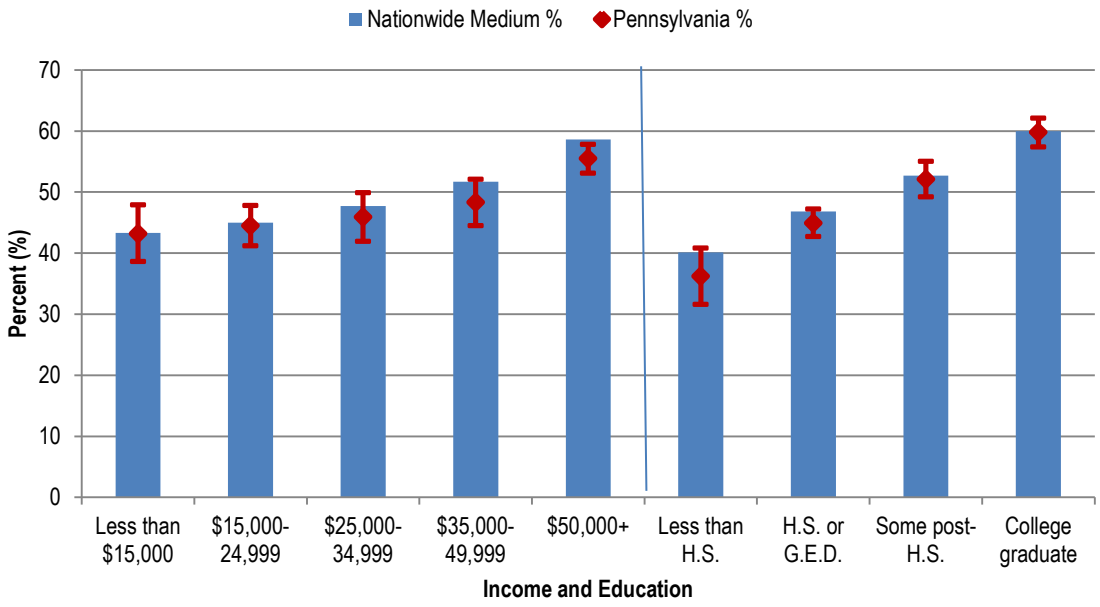


Income and Education

For adult residents of Pennsylvania, participation in physical activity was positively associated with income. The percent who participated in at least 150 minutes of physical activity per week was highest for those in the $50,000 or greater income bracket. The percent of respondents who met this goal fell as the reported income decreased.

A similar trend was seen for physical activity and education. Among all education levels, college graduates had the highest percent of respondents who said they participated in 150 or more minutes of physical activity as recommended. The percent who met this goal decreased as the amount of education decreased. These results are in line with previously documented associations of physical activity with postsecondary education and income. See Figure 3.15 for details.

Figure 3.15 Participated in Recommended Amount of Physical Activity by Income and Education, Adults, Pennsylvania, 2011[5]



Intervention Strategies

Safe Routes to School

The Pennsylvania Department of Health has implemented the Safe Routes to Schools program, which is a national initiative to create safe, convenient and enjoyable opportunities for children to walk and bicycle to and from school. It is built on collaborative partnerships that often involve educators, parents, city planners, business and community leaders, and health care providers. The Same Routes to School initiative incorporates the "5 Es": Engineering, Education, Encouragement, Enforcement and Evaluation. This program is designed to increase children's physical activity and play a critical role in reversing the national trend of childhood obesity and inactivity.

Capacity Building Program

The DOH Capacity Building Program will select a minimum of 15 schools to receive technical assistance and support to conduct the CDC School Health Index (SHI), a self-assessment and planning tool to improve health and safety policies, and programs related to physical education and nutrition. Participating schools will use SHI findings to develop an action plan, which will serve as the foundation for implementation of evidence-based strategies to include community-wide campaigns, social support for physical activity, joint use agreements, active schoolyards and playgrounds, and physical activity policies in the school. Disparate populations will be identified through data such as free/reduced school lunch program.

Safe and Healthy Communities Initiative

This initiative supports three county and two municipal health departments to implement a variety of healthy lifestyle interventions that strike to improve the overall health and safety of communities. Each intervention is focused on the

prevention of chronic disease by addressing modifiable risk factors, such as lack of physical activity. Interventions have included complete street designs and policies that create safe walkable and bikeable communities, Active Living by Design to create walking trails, and worksite wellness initiatives that encourage local businesses to implement policies that promote physical activity among employees.

Endnotes

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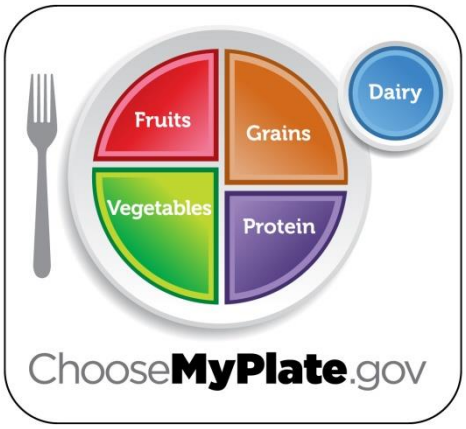
Nutrition

According to the World Health Organization (WHO), preventable risk factors associated with increased mortality and morbidity include poor infant feeding practices, childhood malnutrition (under-nutrition and over-nutrition), diabetes and obesity, among others. In adults, diabetes and being overweight or obese increase the risk of cardiovascular disease and several types of cancer. These risks also contribute to non-fatal diseases such as arthritis and loss of vision due to diabetic retinopathy.[1]

In June 2011, the U.S. Department of Agriculture (USDA) replaced the traditional "food pyramid" with MyPlate. This food group symbol serves as an easy-to-understand aid to help consumers adopt healthy eating habits. It is a visual cue that encourages the presentation of a healthy plate, consistent with the 2010 Dietary Guidelines for Americans. A key recommendation of these guidelines is increased fruit and vegetable consumption.

Figure 3.16 MyPlate Nutrition Guidance, U.S. Department of Agriculture



According to the U.S. Centers for Disease Control and Prevention (CDC), fruits and vegetables contribute important nutrients for the human body. Eating fruits and vegetables lowers the risk of developing many chronic diseases and can help with weight management. Creating greater access to quality and affordable fruits and vegetables nationwide is an important step towards increasing their consumption. On average, U.S. adults consume fruit about 1.1 times per day, and vegetables about 1.6 times per day.[2]

Healthy People 2020

The Healthy People 2020 nutrition objectives seek to increase consumption of fruits and vegetables in persons aged two years and older. For fruits, the goal is 0.9 equivalents per 1,000 calories; for vegetables, it is 1.1 cup equivalents per 1,000 calories, with an emphasis on dark green vegetables, orange vegetables and legumes.

In 2009, Pennsylvania tied with Arizona for a rank of 22nd out of fifty for percent of adults who reported eating five or more servings of fruits and vegetables daily. Both states reported 24 percent of adults meeting this mark, roughly the same as the national rate of 23 percent.

Age, Sex, and Race and Ethnicity

Between 2006 and 2009, the overall proportion of Pennsylvania adults who reported eating five or more servings of fruits and vegetables daily has remained steady. In 2009, residents age 65 and over were more likely than other adult age groups to report having the recommended intake of fruits and vegetables each day. Women were more likely than men to report eating five or more servings of fruits/vegetables daily.

No differences in consumption of fruits and vegetables were noted by race or ethnicity.

Figure 3.17 Reported Eating Five or More Servings of Fruits/Vegetables Daily by Age Group, Adults, Pennsylvania, 2009[3]

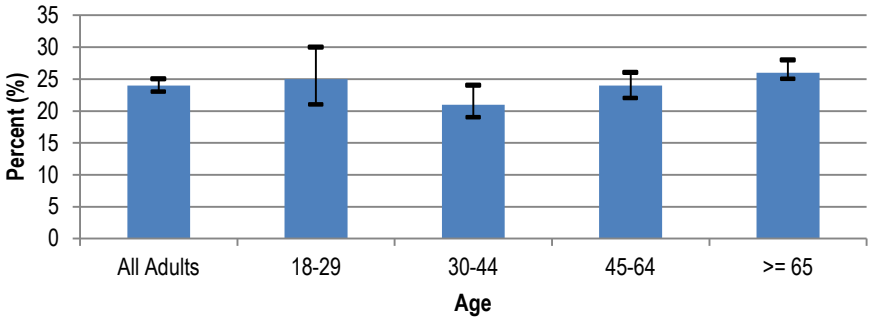


Figure 3.18 Reported Eating Five or More Servings of Fruits/Vegetables Daily by Sex, Adults, Pennsylvania, 2009[4]

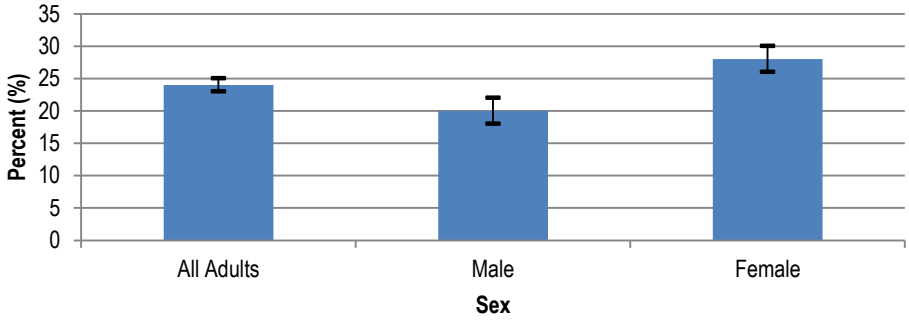
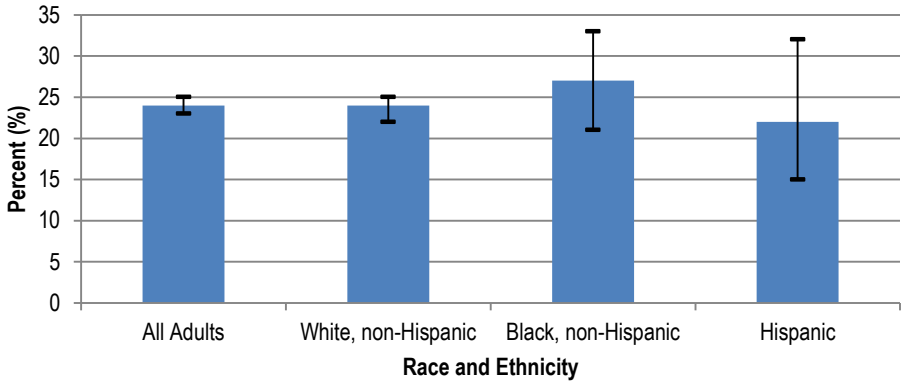


Figure 3.19 Reported Eating Five or More Servings of Fruits/Vegetables Daily by Race and Ethnicity, Adults, Pennsylvania, 2009[5]



Income and Education

Adults with an annual income of $75,000 or more were more likely than other surveyed adults to report eating five or more servings of fruits and vegetables daily. Also, Pennsylvania adult residents who reported having a college degree were more likely than other surveyed adults to report five or more servings of fruits and vegetables daily.

Figure 3.20 Reported Eating Five or More Servings of Fruits/Vegetables Daily by Household Income, Adults, Pennsylvania, 2009[6]

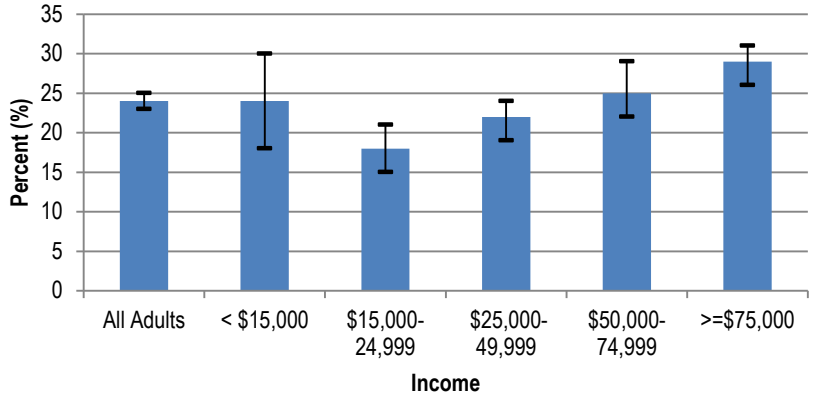
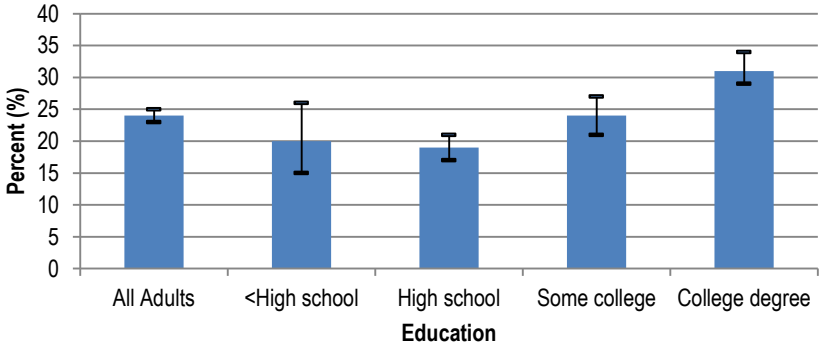


Figure 3.21 Reported Eating Five or More Servings of Fruits/Vegetables Daily by Education Level, Adults, Pennsylvania 2009[7]



Youth

Eleven percent (CI: 9-13) of ninth through twelfth graders who participated in the 2009 Pennsylvania High School Youth Risk Behavioral Survey (YRBS) reported that they had not eaten fruit in the seven days prior to the survey. This rate was consistent with national survey data.[8]

Nearly one-third (33 percent; CI: 30-36) of Pennsylvania youth respondents said they had not eaten a salad in the seven days leading up to the survey. This was slightly better than national data, which indicated that 37 percent of youth had not eaten a salad in the seven days before the survey. Of the 38 states who reported on the "salad" question, Pennsylvania ranked tenth.

Intervention Strategies

Safe and Healthy Communities Initiative

This provides funds to support interventions that promote and provide increased access to healthy foods. Interventions have included: start-up and support for community gardens, development of farmers markets in areas of low income populations, and initiatives to help local stores provide healthy food options promoted through signage and product placement.

Live Healthy PA Initiative

The Live Healthy PA Initiative is focused on creating supportive nutrition environments in multiple sectors, including early care and education centers (ECEs), schools, worksites and communities. The Department is working with partners to promote the adoption of and implementation of food service guidelines/nutrition standards, which include addressing sodium in worksites, ECEs and schools. In communities, the Department is working with partners to increase access to healthy foods and beverages by providing access to healthier food retail via the Pennsylvania Healthy Corner Store Initiative. The Department is also working with school districts to implement policies and practices that create supportive nutrition environments.

Endnotes

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Alcohol and Drugs

Alcohol and drug use/abuse pose numerous risks to the health and well-being of Pennsylvania residents. According to the National Survey on Drug Use and Health (NSDUH), Pennsylvania's rate for past year drug us, alcohol dependence, or substance abuse among persons age 12 years or older was 8.9 percent.[1] The rate of past month use of alcohol was 54.8 percent, and the rate of past month use of illicit drugs was 8.1 percent.

According to the Centers for Disease Control and Prevention (CDC), about 80,000 U.S. deaths each year are attributable to excessive alcohol use each year. Excessive alcohol use is the third leading lifestyle-related cause of death nationwide.[2]

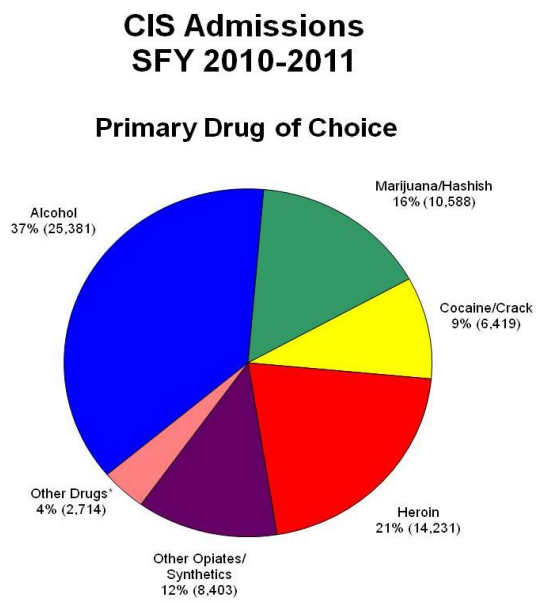
Substance Abuse and Dependence

Licensed drug and alcohol treatment providers in Pennsylvania that receive federal, state or local funds from the Department of Drug and Alcohol Programs (DDAP) are required to report the treatment services they provide to the Client Information System (CIS). Providers not receiving federal, state or local funds from DDAP are not required to report to the CIS. Therefore, the statistics generated from CIS should not be interpreted as a full representation of all drug and alcohol treatment services in Pennsylvania.

In the 2010-2011 state fiscal year (SFY), 67,736 admissions to treatment were reported, representing 47,354 unique clients. The number of admissions is greater than the number of unique clients in part because clients move through a continuum of care, with a new admission occurring each time they move into a new level of care. The majority (68 percent) of clients were male. Over half (51 percent) were in the 15 to 34 year old age group. Fifteen percent of clients were African American, and 6 percent were Hispanic.

As shown in Figure 3.22, the most common primary substance of abuse was alcohol (37 percent). Heroin (21 percent), marijuana/hashish (16 percent), cocaine/crack (9 percent) and other opiates/synthetics (12 percent) account for another 58 percent of admissions. The remaining 4 percent is "other drugs."

Figure 3.22 Substance Abuse and Dependence Treatment, 2010-2011[3]



*Other Drugs includes: Non-Prescription Methadone, PCP, Other Hallucinogens, Methamphetamines, Other Amphetamines, Other Stimulants, Benzodiazepine, Other Tranquilizers, Barbiturates, Other Sedatives, Inhalants, Over-the-Counter, and Other Drugs.
Total Admissions=67,736

Age, Sex, Race and Ethnicity

White residents were admitted for alcohol use more frequently than blacks (38 percent and 34 percent, respectively), more than three times as frequently for heroin (23 percent, compared with 7 percent) and over seven times as frequently for other opiates/synthetics (14 percent, compared with 2 percent).

Blacks were admitted three times as often for cocaine/crack as whites (23 percent and 7 percent, respectively), and more than two times as often for marijuana/hashish (29 versus 12 percent). Non-Hispanics were admitted for alcohol more frequently than Hispanics (40 percent and 33 percent, respectively), as well as more than three times as frequently for other opiates/synthetics (11 percent versus 3 percent).

Primary drugs of choice vary quite significantly among age groups. Members of older age groups are more likely to report alcohol as their primary drug of choice. Marijuana/hashish use decreases with age; clients who belong to older age groups are less likely to report marijuana/hashish as their primary drug of choice.

Similar trends in admissions can be found in data collected by the Department of Public Welfare, Office of Mental Health and Substance Abuse Services (OMSHAS) on individuals participating in the HealthChoices Program. The HealthChoices Program is the name of one of Pennsylvania's mandatory managed care programs for Medical Assistance recipients. In SFY 2010-2011, there were 110,216 admissions to drug and alcohol treatment. Over half of all admissions (55 percent) were of persons 15 to 34 years of age, and 26 percent were of blacks. As age increased from 25 to 55, blacks made up an increasingly large percent of admissions, as shown in Table 3.4.

Table 3.4 HealthChoices Drug and Alcohol Treatment Admissions by Age Groups and Race and Ethnicity, Pennsylvania, 2010-2011[4]

	Age Group						
	Under 15	**15 to 24**	**25 to 34**	**35 to 44**	**45 to 54**	**55+**	**Total**
American Indian/Alaskan Native	0.0%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%
Asian	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%
Black or African American	26.9%	21.9%	16.2%	30.2%	38.5%	43.4%	26.1%
Hispanic	0.0%	0.1%	0.0%	0.1%	0.1%	0.2%	0.1%
Native Hawaiian or Pacific Islander	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%
Other	10.2%	6.7%	6.3%	7.8%	6.1%	5.6%	6.7%
Unknown	1.5%	3.3%	5.4%	4.9%	4.9%	3.0%	4.5%
White	61.1%	67.4%	71.5%	56.5%	50.0%	47.3%	62.1%
Total	**1.1%**	**24.4%**	**30.2%**	**20.9%**	**18.3%**	**5.1%**	**100.0%**

The common primary substance of abuse among HealthChoices clients was opioids, including heroin (35 percent); this was the most common primary substance for persons seeking services in the 25 to 34, 35 to 44, and 55 and over age groups. Cannabis/marijuana was the most common primary substance of abuse for those under 25 and alcohol was the most common primary substance of abuse for those aged 45 to 54.

According to 2010-2011 NSDUH data, the rate for past-year illicit drug or alcohol dependence or abuse among persons aged 12 or older was 8.9 percent in Pennsylvania, and 8.4 percent nationally. Persons aged 18 to 25 years had the highest rates of illicit drug or alcohol dependence, at 19.6 percent.

Table 3.5 Abuse/Dependence of Illicit Drugs or Alcohol in the Past Year by Age Groups, Pennsylvania, 2008-2009, 2009-2010, 2010-2011[5]

	12 to 17			18 to 25			26+		
	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011
Illicit drugs or alcohol	6.9%	7.0%	7.0%	20.8%	20.6%	19.6%	6.8%	7.0%	7.3%
Illicit drugs only	4.3%	4.5%	4.3%	8.2%	8.2%	7.7%	1.8%	1.8%	1.7%
Alcohol only	4.2%	4.2%	4.2%	17.1%	16.6%	15.6%	5.6%	5.6%	6.0%

Table 3.6 Use of Alcohol or Drugs, Pennsylvania, 2008-2009, 2009-2010, 2010-2011[6]

	12 to 17			18 to 25			26+		
	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011
Alcohol use – past month	16.7%	15.8%	14.1%	66.3%	66.3%	65.1%	57.8%	58.0%	57.7%
Binge alcohol use – past month	9.7%	9.0%	8.0%	46.9%	46.1%	43.5%	23.9%	23.4%	23.3%
Nonmedical pain reliever use – past year	6.1%	5.8%	6.0%	11.2%	11.6%	10.8%	3.2%	3.1%	2.9%
Marijuana use – past month	7.2%	7.4%	7.2%	17.1%	19.2%	18.3%	3.8%	3.9%	4.0%
Illicit drug (not marijuana) – past month	4.4%	4.1%	4.1%	7.7%	8.0%	7.5%	2.3%	2.3%	2.4%

According to the 2010-2011 NSDUH, 8.8 percent of the U.S. population aged 12 or older used an illicit drug in the past month, and 51.8 percent used alcohol in the past month. In Pennsylvania, 8 percent of persons aged 12 or older used an illicit drug and 54.8 percent used alcohol in the past 30 days.

For most substances, use typically increases through adolescence, peaks between the ages of 18 and 25 and then decreases through adulthood. A comparison of NSDUH results from 2002-2003 and 2010-2011 shows that past year use of marijuana, past month use of alcohol and past month binge drinking have increased among those aged 26 and older. For youth aged 12 to 17, past year cocaine use, past month alcohol use, and past month binge drinking decreased from 2002-2003 to 2010-2011.[7] In 2010-2011, Pennsylvania ranked 19th among the fifty states for 12 to 17 years who reported use of alcohol in the past 30 days. Pennsylvania's 14.1 percent is higher than the national percentage of 13.5.

Alcohol

Data from the 2011 Behavioral Risk Factor Surveillance System (BRFSS) indicate that 57 percent of Pennsylvania adults 18 and older had at least one drink of alcohol within the past 30 days, 18 percent engaged in binge drinking and 7 percent were heavy drinkers.[8] Pennsylvania's 18 percent binge drinking in the past 30 days figure is the same as the national rate, and places Pennsylvania 26th among the fifty states. It was an increase from 2006 BRFSS rate of 16.6 percent binge drinking within the past 30 days.

According to NSDUH for 2010-2011, 55 percent of Pennsylvanians aged 12 or older drank alcohol in the past month and 25 percent reported binge drinking in the past month. Past month alcohol use and binge drinking were highest among persons 18 to 25 years old.

In 2011, the Pennsylvania Youth Survey (PAYS) was conducted in schools with grades 6, 8, 10 and 12. Results showed that alcohol was the most frequently used substance among 8th, 10th and 12th graders. Lifetime prevalence of alcohol use was found to range from a low of 15 percent for 6th graders to a high of 68 percent for 12th graders. Past-30-day prevalence of alcohol use ranged from a low of four percent for 6th graders to a high of 44 percent for 12th graders.[9]

According to the CDC's Pregnancy Risk Assessment Monitoring System in 2008, 57 percent of Pennsylvania mothers surveyed reported having any alcoholic drinks during the three months prior to becoming pregnant, and 7 percent reported having any alcoholic during the last three months of pregnancy.[10] Alcohol use during pregnancy is a specific concern because it can cause a Fetal Alcohol Spectrum Disorder, including physical problems and problems with behavior and learning. SAMSHA's FASD Center for Excellence notes that an estimated 40,000 U.S. babies are born with the disorder each year.[11]

Prescription Drugs

In 2010-2011, 4.2 percent of Pennsylvania residents aged 12 and older reported nonmedical use of prescription pain relievers in the past year. By comparison, the rate for the general U.S. population was slightly higher at 4.8 percent. Among 18 to 25 year old Pennsylvania residents, the rate increased to 10.8 percent.

In 2010, of the 38,329 drug overdose deaths in the United States, 22,134 (60%) were related to pharmaceuticals.[12]

Illicit Drugs

According to 2010-2011 NSDUH data, 6.1 percent of Pennsylvania residents ages 12 and older used marijuana in the past month; by comparison, the rate for the general U.S. population was 6.9 percent. Eighteen percent of adults 18 to 25 years old in Pennsylvania reported past month use of marijuana. Lifetime prevalence of marijuana use among youth, as measured by the 2011 PAYS, ranges from a low of one percent for 6th graders to a high of 41 percent for 12th graders.

Results from the Pennsylvania Youth National Outcome Measures (NOMS) survey of 12 to 18 year olds attending drug and alcohol prevention services show the percent of youth who report they "never used" marijuana has increased from 82.4 percent (2007) to 86 percent (2011).

In 2010-2011, 3.2 percent of Pennsylvanians aged 12 or older reported past month use of illicit drugs other than marijuana; this rate was virtually identical to the national median of 3.3 percent. The 2011 PAYS found very low rates of past 30 day use for illicit drugs other than marijuana and inhalants. Lifetime prevalence of any illicit drug (other than marijuana) use ranged from a low of 6.9 percent for 6th graders to a high of 15.4 percent for 12th graders.

According to the 2011 PAYS, past 30 day use of illicit drugs other than marijuana found 4.5 percent used inhalants, 0.3 percent used crack cocaine, 0.3 percent used methamphetamine and 0.2 percent used heroin. Among Pennsylvania adults age 18 and older, 1.8 percent reported past year cocaine use. Trend data from NSDUH and the PA NOMs show that past 30 day use of illicit drugs other than marijuana has remained nearly the same since 2008 for youth and adults.

Youth Perception of Alcohol and Drug Use

Perception of risks associated with substance use is an important determinant of whether he or she engages in substance use. Those who perceive high risk of harm are less likely to use drugs than those who perceive low risk of harm.

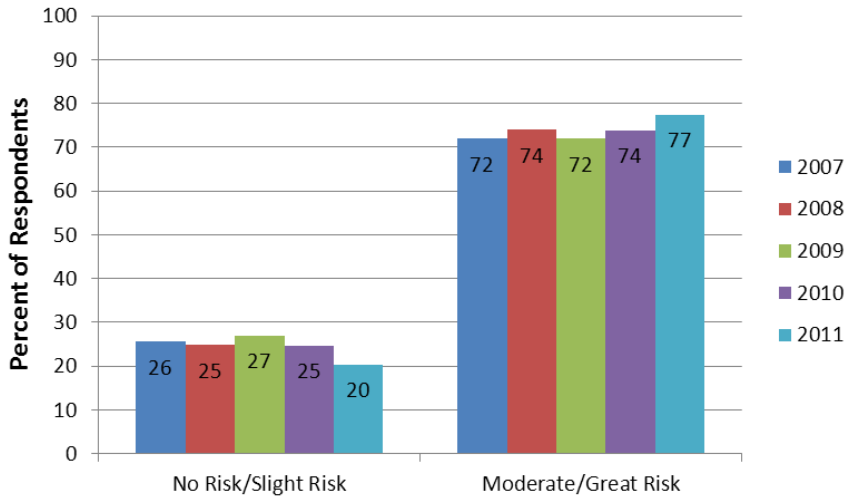
According to findings from the 2011 PAYS, 62 percent of students assigned "great risk of harm" to regular use of marijuana, 32 percent assigned "great risk of harm" to near daily use of alcohol, and 29 percent assigned "great risk of harm" to trying marijuana once or twice. The NSDUH found a similarly low percent of youth responding with "great risk of harm" from alcohol and marijuana use.

Table 3.7 Youth Perception of "Great Risk of Harm" for Marijuana and Alcohol, Pennsylvania, 2008-2009, 2009-2010, 2010-2011[13]

	Ages 12 to 17		
	2008-2009	2009-2010	2010-2011
Smoking marijuana once a month	30.7%	29.4%	27.7%
Having five or more drinks of alcoholic beverage once or twice a week	36.2%	38.1%	38.7%

In 2011, perception of "no or slight risk of harm" for each of the following substances, among PA NOMS respondents, was: 22.5 percent for marijuana, 20 percent for alcohol, 18 percent for prescription drugs not prescribed to the user, 16 percent for inhalants, 14 percent for synthetic drugs and 12 percent for cigarettes. The percent of youth responding that "five or more drinks of an alcoholic beverage once or twice a week" poses a "moderate or great risk of harm" increased from 72 percent (2009) to 77 percent (2011).[14]

Figure 3.23 Youth Perception of Risk for Five or More Alcoholic Beverages Once or Twice a Week, Pennsylvania, 2007, 2008, 2009, 2010, 2011



* 2.53% (2007), 1.26% (2008), 1.14% (2009), 1.47% (2010) and 2.23% (2011) of survey respondents did not respond to this question.

According to the 2011 PAYS, large majorities of Pennsylvania students reported that their parents believe it is "very wrong" for them to smoke marijuana (86.0 percent), smoke cigarettes (82.5 percent), or drink alcohol regularly (75.7 percent).

The NSDUH also measures perception of risk of use for adults. Of all age groups, the lowest percent of "great risk of harm" responses for marijuana and alcohol was from 18 to 25 year olds.

Table 3.8 Adult Perception of "Great Risk of Harm" for Marijuana and Alcohol, Pennsylvania, 2008-2009, 2009-2010, 2010-2011[15]

	Ages 18 to 25			Ages 26 +		
	2008-2009	2009-2010	2010-2011	2008-2009	2009-2010	2010-2011
Smoking marijuana once a month	18.2%	16.6%	17.1%	37.2%	36.0%	35.1%
Having five or more drinks of alcoholic beverage once or twice a week	28.8%	29.9%	29.9%	38.4%	40.9%	40.0%

The PA Adult NOMS also collected information about adult perception of risk. The percent of adults reporting moderate or great risk of harm from smoking marijuana once or twice per week decreased from 76 percent in 2007 to 69 percent in 2011. Of the five questions on the PA Adult NOMS survey in 2011 regarding the potential harm posed by use of certain substances (i.e., cigarettes, marijuana, alcohol, prescription drugs, synthetic drugs), more respondents said "no or only slight risk" about marijuana than any other.

Driving Under the Influence

According to the NSDUH, 12 percent of U.S. persons aged 12 and older drove under the influence of alcohol or illicit drugs in 2011. Five percent of students surveyed in the 2011 PAYS reported driving under the influence of alcohol, and six percent said they drove under the influence of marijuana. The percent of students who reported driving under the influence increased with age; sixteen percent of high school seniors reported at least one drinking and driving incident.

PA Adult NOMS data show that the rate of driving under the influence decreased for adults from 21.1 percent (2007) to 11.6 percent (2011). However, the Pennsylvania Department of Transportation (PennDOT) reports 11,805 alcohol-related traffic crashes and 428 alcohol-related traffic fatalities in 2011. These were the lowest figures over the previous five years, but on average each day 23 persons were injured in alcohol-related crashes in Pennsylvania that year. While 13 percent of all holiday crashes involved alcohol use, 41 percent of crash deaths over holiday weekends were related to alcohol use.[16]

In 2010, there were 52,403 arrests made for DUI in Pennsylvania, according to data from the state police's Uniform Crime Report. This puts the DUI arrest rate at 412.5 per 100,000 residents. This is a two percent decrease from the previous year, a 20.5 percent increase since 2000, and a 35.3 percent increase from 1995. More than three-quarters (76.5 percent) of DUI arrests were male, and 85.7 percent were white. Counties with the highest DUI arrest rates were (in order from highest to lowest): Monroe, Clinton, Greene, Fulton, Fayette, Cameron, Venango, Franklin and Centre.[17]

Drug Abuse Violations

The Pennsylvania State Police Uniform Crime Report includes data on arrests for various drug abuse violations, including those related to unlawful possession, distribution, growing, manufacture and creation of narcotic drugs.

In 2010, there were 56,755 arrests made in Pennsylvania for drug abuse violations, the incidence of which has increased over time. In 1990, drug abuse violations were six percent of all arrests; in 2010, that figure was 12.2 percent. The drug abuse violation rate was 446.8 arrests per 100,000 residents. Nearly two-thirds of drug abuse arrests (65.7 percent) were for possession charges. Over eighty percent were male (83.6 percent) and 56.6 percent were white. For minorities, the arrest rate for these crimes was 944 per 100,000; for whites, it was 318.4 per 100,000 residents. Counties with the highest drug abuse violation rates were (in order from highest to lowest): Philadelphia, Dauphin, Allegheny, Delaware and Lackawanna.[18]

Intervention Strategies

A variety of evidence-based substance abuse prevention, intervention and treatment programs are in place in Pennsylvania. Treatment providers across the state use approaches such as Motivational Interviewing (MI), Cognitive-Behavioral Therapy (CBT), the Matrix Model and Contingency Management. Health care providers use Screening, Brief Intervention, and Referral to Treatment (SBIRT) as a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as those who are at risk of developing these disorders. Evidence-based prevention programs being implemented include curriculum based educational programs for youth such as "Too Good for Drugs" and "LifeSkills Training," parenting programs such as the Strengthening Families Program and Active Parenting Now, youth mentoring programs such as Big Brothers Big Sisters and Across Ages, and programs seeking to change community norms, policies and practices such as Communities Mobilizing for Change on Alcohol. In addition the Student Assistance Program, which is required to be implemented in all school districts, has been an effective strategy for identifying and helping students overcome issues including alcohol and drugs which pose a barrier to a student's success.

Endnotes

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Mental Health

Healthy People 2020 "Mental Health and Mental Disorders" objectives define mental health as "a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with challenges." Mental health is essential to personal well-being, family and interpersonal relationships, and the ability to contribute to one's community.[1]

Poor mental health is characterized by changes in thinking, mood and/or behavior associated with distress and/or impaired functioning. It can be classified into depression, anxiety and major psychotic disorders (e.g., schizophrenia, manic/depressive illness). It can contribute to a host of problems, including disability, pain, or death. Poor mental health is many times called "mental illness," and it can be classified using the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) of the American Psychiatric Association. Mental disorders refer to a broad range of conditions, from those that are temporary and self-limiting, to ones that are devastating and lifelong.

For adults, the economic costs of mental health disorders can include loss of productivity (e.g., days of work missed, dropping out of the workforce, increased use of medical care, legal issues) and personal costs (e.g., anguish from symptoms of depression and anxiety, failed or troubled relationships, suicide).

For youth, the costs of poor mental health can include hampered psychological development, poor school performance, dropping out of school, drug use, delinquency, early pregnancy, sexually transmitted diseases, accidents and suicides. Parents also experience the costs of their children's mental disorder, including loss of productivity in terms of missed work days, dropping out of the work force to care for their children, anxiety, depression and stress.

For society, the costs of poor mental health include loss of productivity, cost of care (e.g., hospitalization, intensive outpatient services, primary care mental health), legal and societal costs (e.g., law enforcement, criminal and civil court systems, prisons). Between 1996 and 2006, both the number of U.S. citizens paying for mental health services and the costs of those services steadily increased.[2] Over this ten-year period, the number of people paying for mental health services increased 87.6 percent, and total expenditures on mental health services increased 63.4 percent. At the same time, the average cost per person for mental health services decreased slightly. (Note that estimates do not account for inflation.)

According to the 2000 Behavioral Risk Factor Surveillance System (BRFSS), the average monthly number of poor mental health days among Pennsylvania residents was 2.7; for the general U.S. population, it was 3.0. In 2012, the average for Pennsylvania was 4.1 days; for the general U.S. population, it was 3.4. Pennsylvania ranked 34th out of the fifty U.S. states for mental health that year.[3] (Note this may be a predictor of future health, particularly office visits at one and 12 months, as well as hospitalizations.[4])

Unfortunately, we don't know the scope of mental illness in Pennsylvania. We do know that the National Alliance for the Mentally Ill (NAMI), a grassroots mental health advocacy organization, gave Pennsylvania a grade of D+ in 2006,[5] in large part due to the state's suicide statistics. Pennsylvania was 34th among 50 states in terms of number of suicides, and suicides are often considered a surrogate measure for effectiveness of public mental health services. In 2009, NAMI did upgrade Pennsylvania to a "C", which represents progress although not excellence.[6] Mental health service providers in Pennsylvania are working to build on that momentum.

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Oral Health

Oral diseases range from dental caries and tooth decay to degenerative conditions of the supporting gums and bone tissues to oral cancers. These cause pain and disability for millions of Americans, and some affect a person's overall health. A growing body of evidence links oral health, particularly periodontal (gum) disease, to both chronic and acute health conditions, including diabetes, heart disease and stroke. Many systemic diseases also manifest in the oral cavity. In some cases, symptoms appear in the mouth before they are expressed elsewhere in the body.

The Healthy People 2020 "Oral Health" goal is to increase the proportion of children, adolescents and adults who used the oral health care system in the past 12 months.[1] Specifically, according to the state's Department of Health, Pennsylvania's goal is to increase the percentage of adults who have visited a dentist over the past year by 10 percent of the baseline, set by the 2008 Behavioral Risk Factor Surveillance System (BRFSS). According to that survey, 70 percent of all Pennsylvania adults visited a dentist in the past year. The goal, then, is for 77 percent of Pennsylvania's adult residents to report seeing a dentist within the past year.[2]

According to 2010 data from the U.S. Centers for Disease Control and Prevention (CDC), 69.7 percent of adults nationwide reported visited a dentist within the past year; in Pennsylvania, in 2010, 72.3 percent said they had seen a dentist[3]. Pennsylvania ranked 22nd among the 50 states according to this measure.[4]

Age, Sex, Race and Ethnicity

Pennsylvania adults age 65 and older were significantly less likely to have visited the dentist (67 percent; CI: 65-69), compared with those ages 30 to 44 years old (72 percent; CI: 70-75).

Significantly fewer of Pennsylvania's male population reported they had visited the dentist (68 percent; CI: 66-71), compared with female residents (73 percent; CI: 72-75).

For 2010, Pennsylvania's black, non-Hispanic adults reported having visited a dentist in the past year significantly less (55 percent) than the state's white, non-Hispanic adults (73 percent, CI: 72-74).

Figure 3.24 Visited a Dentist in the Past 12 Months by Age Group, Adults, Pennsylvania, 2010[5]

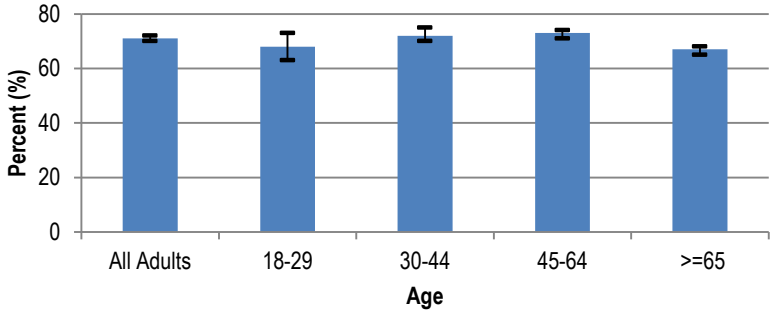


Figure 3.25 Visited a Dentist in the Past 12 Months by Sex, Adults, Pennsylvania, 2010[6]

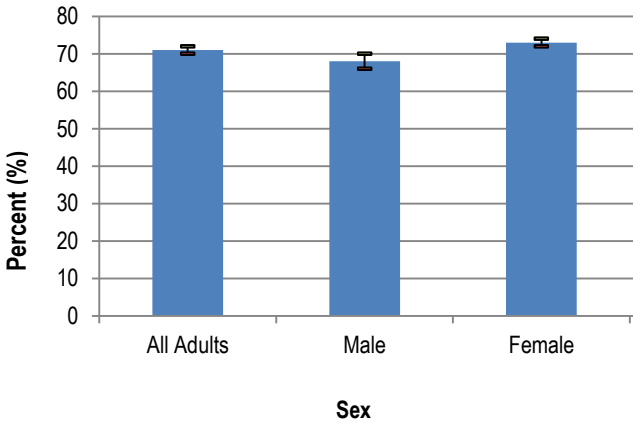
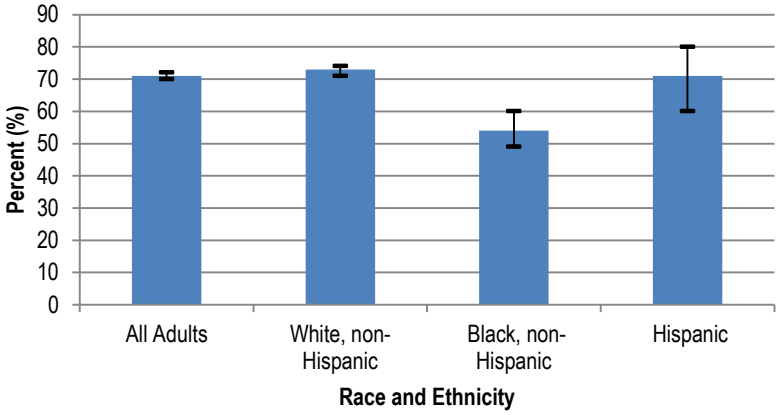


Figure 3.26 Visited a Dentist in the Past 12 Months by Race and Ethnicity, Adults, Pennsylvania, 2010[7]



Income and Education

Pennsylvania adults who reported household incomes of less than $15,000 were significantly less likely to have visited a dentist in the past year than other Pennsylvania adults. Less than half (46 percent; CI: 41-51) had received dental care.

In addition, those who had not completed high school or earned an equivalent degree were significantly less likely to report they had visited a dentist in the past year, compared with those who had a high school diploma or more education.

Figure 3.27 Visited a Dentist in the Past 12 Months by Household Income, Adults, Pennsylvania, 2010

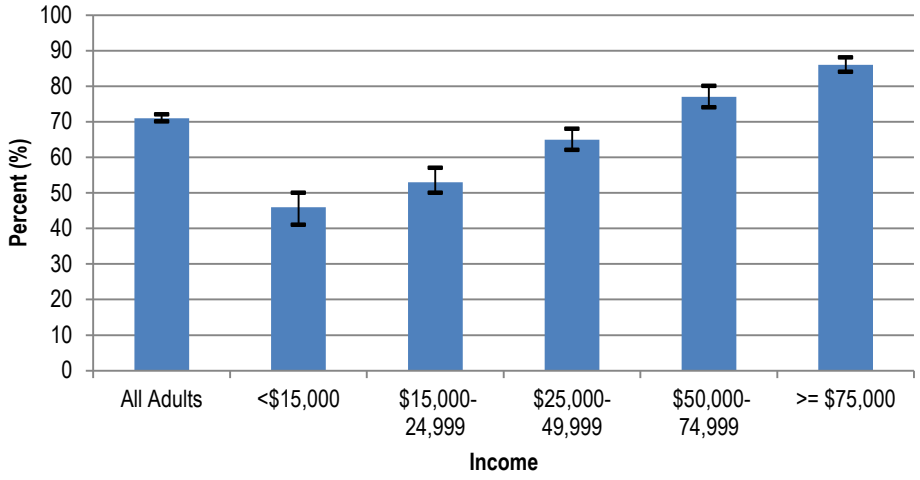
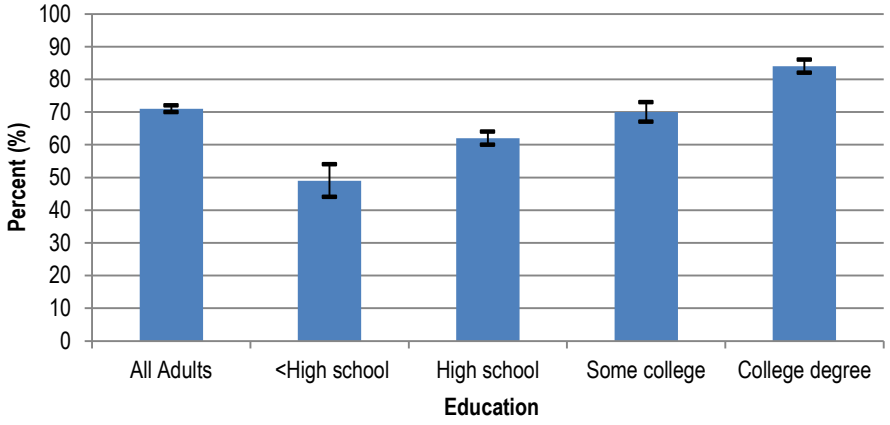


Figure 3.28 Visited a Dentist in the Past 12 Months by Education, Adults, Pennsylvania, 2010



Risks and Protective Factors

Between 2008 and 2010, more than 54,000 students participated in fluoride tablet programs each year. An additional 8,000 students participated in topical fluoride programs during this period, and more than 4,200 students annually participated in fluoride mouth rinse programs.

The overall percent of children in Pennsylvania who had dental sealants applied to their teeth decreased slightly at this time, from 61 percent in 2008 to 58 percent in 2010. In 2011, 50,243 third graders were determined to be eligible for Medicaid for dental coverage; 22,672 (45 percent of eligible children) had encounter or payment codes for dental sealants in 2009 to 2011. During 2011, 45,761 seventh graders were found eligible for Medicaid-covered dental care, and 19,579 (43 percent) had encounter or payment codes for dental sealants at this time.[8]

Intervention Strategies

Community Water Fluoridation

According to the American Dental Association (ADA), fluoridation of community water supplies is simply an adjustment of the existing, naturally occurring fluoride levels in drinking water to an optimal level recommended by the U.S. Public

Health Service for the prevention of tooth decay. Currently, that amount is 0.7-1.2 parts per million. Fortifying water with fluoride is similar to fortifying milk with vitamin D, table salt with iodine, or bread and cereal with folic acid. Studies conducted over the past 65 years have consistently shown that fluoridation of community water supplies is safe and effective in preventing dental decay in both children and adults. Simply by drinking water, residents can benefit from fluoride's cavity protection, whether at home, work, or school. However, according to 2010 data from the CDC's Water Fluoridation Reporting System and the U.S. Census Bureau, only 54.6 percent of Pennsylvania residents received fluoridated water. By comparison, about 66.2 percent of persons nationwide have fluoridated drinking water.[9]

School-Based or School-Linked Programs

Approximately 25 percent of first, third and seventh graders in Pennsylvania were seen by their school dentist in 2008 to 2010. About half of these students were referred for further evaluation or treatment. Of those referred, about 20 percent submitted a completed referral form to their school nurse.

During the same period, about 75 percent of students in Pennsylvania were seen by a school dental hygienist. About 25 percent of those students were referred for further evaluation or treatment; of those referred, about 23 percent submitted proof of a completed referral. Each year, 6 percent or fewer students were treated at school by the dental hygienist there.

Fluoride Varnish

On April 1, 2010, the Pennsylvania Department of Public Welfare (DPW), Office of Medical Assistance Programs (OMAP) adopted the policy of compensating physicians and Certified Registered Nurse Practitioners (CRNPs) to provide topical application of fluoride varnish to the teeth of Medical Assistance enrolled youth. Between October 1, 2010 and September 30, 2011, about 6,625 youth received topical dental fluoride varnish by non-dental providers.[10]

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