



# **Pennsylvania Youth Survey (PAYS) 2005: Key Findings**

**Center for Research, Evaluation and Statistical Analysis  
Pennsylvania Commission on Crime and Delinquency  
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The Pennsylvania Youth Survey (PAYS), redesigned in 2001 but with a comparable predecessor dating back to 1989, is a long-term study of Pennsylvanian adolescents in grades 6 through 12. It is conducted by the Pennsylvania Commission on Crime and Delinquency (PCCD) and is supported by funding under the federal Safe and Drug Free Schools and Communities Act.

The need for a study such as PAYS is evident. Substance use by American, and specifically Pennsylvania's, young people has proven to be a rapidly changing phenomenon, requiring frequent assessments and reassessments. Since the mid-1960s, when illicit drug use burgeoned in the normal youth population, it has remained a major concern for the nation. Smoking, drinking, and illicit drug use are leading causes of morbidity and mortality, both during adolescence as well as later in life. How vigorously the nation and our state responds to adolescent substance use, how accurately we identify the substance abuse problems that are emerging, and how well we come to understand the effectiveness of the many policy and preventive intervention efforts largely depends on the ongoing collection of valid and reliable data. PAYS is designed to generate such scientific data in order to provide an accurate picture of what is happening in this domain and why. It has served that function quite well for 16 years.

All together, 14,348 students in grades 6, 8, 10 and 12 from approximately 200 public school districts participated in the 2005 PAYS; they constitute the statewide random probability sample. Overall, the percentage of respondents by gender of surveyed PAYS 2005 Statewide students was 49.9% female versus 49.7% male. A majority of students identified themselves as White (60.1%). The largest identifiable minority group is African American (4.2%), followed by Latino (2.7%), Asian (1.8%) and American Indian (0.7%). Of sampled youth, 25.5% marked their ethnicity as "Other/Multiple". Note that while the "Other/Multiple" category that we report includes students who selected "Other" as their primary ethnicity, this category also includes those students who selected multiple ethnicities. Therefore, for example, students who reported both African American and Latino ethnicity would be classified in the "Other/Multiple" category for the purposes of this study. Nearly all of the surveyed students (95.1%) reported English as the language they most often speak at home.

It should also be noted that for the first time, PCCD offered administration of the PAYS to schools in an online/web-based format. Of the total sample, 25.1% of students completed the survey online versus 74.9% that utilized the paper-pencil version. Notably, the response rate variation between methodologies was extremely close and consistent across student age groups and outcomes.

The *PAYS* was developed to provide scientifically sound information to communities, prevention planners, and policymakers. It measures a variety of risk and protective factors by using groups of survey items, which are called scales. Please note that some of the risk factors are measured with more than one scale.

The *PAYS* was developed from research funded by the Center for Substance Abuse Prevention of the U.S. Department of Health and Human Services. This research supported the development of a student survey to measure the following constructs:

- Risk and protective factors<sup>1</sup> that predict alcohol, tobacco and other drug (ATOD) use, delinquency and other problem behaviors in adolescents.
- The prevalence and frequency of drug use.
- The prevalence and frequency of antisocial behaviors.

This fact sheet presents findings on a number of topics, including ATOD<sup>2</sup> use, other antisocial/problem behaviors, and risk and protective factors. A brief summary of the key findings from each of these sections is presented here. A more detailed summary, as well as detailed tables and graphs, will be presented in the final report, followed by an item-by-item discussion of the results. The statewide report should be available in May 2006.

On many fronts, Pennsylvania was in an unusual place in 2005. When compared to previous administrations of the Pennsylvania Youth Survey (PAYS), younger students in the state, those in grades 6, 8, and 10, have some of the lowest substance abuse and risky behavior prevalence rates ever recorded. On the other hand, older students, those in grade 12, have some of the highest substance abuse and risky behavior rates ever recorded. This tale of two different groups of young Pennsylvanians dominates throughout the 2005 PAYS report.

Not only are the 2005 statistical estimates some of the lowest ever for students in grades 6, 8, and 10, but many numbers are also well below national benchmark numbers. For example, in 2005 past 30-day use of alcohol by 8<sup>th</sup> graders in Pennsylvania was 14.5 percent, nearly 3 percentage points lower than what was reported for 8<sup>th</sup> graders from the 2005 Monitoring the Future (MTF) study, a national survey used to assess substance abuse and risky behaviors. The 30-day marijuana use rate was also nearly 3 percentage points lower than what was reported from the MTF study.

Perhaps it is fair to suggest that for younger Pennsylvanians prevention activities in the state work, and they work very well. Not only are these younger students using fewer substances, but they also are less willing to even try alcohol, marijuana, cocaine or inhalants. In 2005, nearly all of these numbers are down. For example, in 2001, 32.1 percent of the 10<sup>th</sup> graders statewide reported that they were willing to marijuana compared to 25.1 percent in 2005.

What may be working for younger Pennsylvanians, however, is not necessarily working as effectively for high school seniors in the state, and as readers make their way through this report an extremely clear picture of 12<sup>th</sup> graders emerges. Not only are many of the statistics for seniors at all-time highs—especially the binge drinking statistics, but seniors in the state also drink, smoke, and use more drugs than their peers nationally. Seniors are also more willing to try alcohol and drugs, and to drive while under the influence.

But beyond the data for seniors, two new concerns emerge from the 2005 PAYS: the high numbers of young Pennsylvanians using prescription drugs for non-medical reasons (without a medical doctor's orders) and the

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<sup>1</sup>Protective factors, also known as “assets,” are conditions that buffer youth from exposure to risk by either reducing the impact of the risks or changing the way that young people respond to risks. Risk factors are conditions that increase the likelihood of a young person becoming involved in drug use, delinquency, school dropout, depression, and/or violence. Research during the past 30 years supports the view that delinquency; alcohol, tobacco and other drug use; school achievement; and other important outcomes in adolescence are associated with specific characteristics in the student's community, school and family environments, as well as with characteristics of the individual (Hawkins, Catalano & Miller, 1992). In fact, these characteristics have been shown to be more important in understanding these behaviors than ethnicity, income or family structure (Blum et al., 2000).

<sup>2</sup> “ATOD” stands for Alcohol, tobacco, and other drug use.

numbers who are gambling for money on a regular basis. For the first time, PAYS asked students both about the use of prescription drugs and gambling for money. Statewide, about 1 in 6 (16.6 percent) high school seniors reported the use of prescription narcotics at some time in their life (a good measure of experimentation), and 1 in 10 (11.6 percent) reported using in the prior 12 months. Statewide, about 1 in 4 students in grade 10 (24.5 percent) and grade 12 (25.4 percent) reported gambling for money in the last 30 days. There are yet no trend data to help put these statistics in context or perspective; however, both of these issues are worth pursuing further for these rates suggest unknown environmental influences provoking these behaviors.

- Overall, PAYS 2005 Statewide students recorded the highest lifetime prevalence-of-use rates<sup>3</sup> for alcohol (58.8%), cigarettes (29.6%) and marijuana (19.1%).
- Compared to their national counterparts, PAYS 2005 Statewide students reported a higher average level of lifetime alcohol use and lower average levels of lifetime marijuana, inhalant and methamphetamine use.
- For past-30-day ATOD use, students reported higher average levels of alcohol and cigarette use than their national counterparts.
- The largest grade-level differences in lifetime substance use were for alcohol in the 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> grades (52.9%, 74.8% and 85.0% versus 41.0%, 63.2% and 75.1% for *Monitoring the Future*).
- For past-30-day ATOD use, students in PAYS 2005 Statewide reported higher average levels of alcohol and cigarette use than their national counterparts.
- The largest grade-level differences in past-30-day substance use were for cigarettes in the 12<sup>th</sup> grade (28.5% versus 23.2% for *Monitoring the Future*), binge drinking in the 12<sup>th</sup> grade (33.7% versus 28.1% for *Monitoring the Future*) and alcohol in the 12<sup>th</sup> grade (53.7% versus 47.0% for *Monitoring the Future*).
- For the overall sample, the past-12-month prevalence rates recorded for the seven other problem behaviors cover a broad range. In PAYS 2005 Statewide, 11.7% of students reported *Attacking Someone with Intent to Harm* in the past year, making it the most prevalent of the seven behaviors. *Getting Suspended* is the second most prevalent antisocial behavior, with 9.6% of PAYS 2005 Statewide students reporting having been suspended in the past year.
- For the overall sample of 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> graders in PAYS 2005 Statewide, percentile scores across the eight protective factor scales range from a low of 48 to a high of 58, with an average score of 54, which is four points higher than the national normative average of 50.
- The three lowest overall scores were for the following protective factor scales: *Community Rewards for Prosocial Involvement* (48), *School Rewards for Prosocial Involvement* (50) and *Religiosity* (51).

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<sup>3</sup> Prevalence refers to the proportion or percentage of the sample reporting use of the given substance on one or more occasions in a given time interval—e.g., lifetime, past 12 months, or past 30 days.

- PAYS 2005 Statewide students reported the three highest overall scores for the following protective factor scales: *Belief in the Moral Order* (58), *School Opportunities for Prosocial Involvement* (57) and *Family Rewards for Prosocial Involvement* (56), ranging between 6 and 8 points higher than the normative average.
- PAYS 2005 Statewide students reported the three highest overall scores for the following risk factor scales: *Community Disorganization* (55), *Personal Transitions and Mobility* (53) and *Laws and Norms Favorable to Drug Use and Handguns* (50).
- The three lowest overall scores were for the following risk factor scales: Low Perceived Risks of Drug Use (35), Perceived Availability of Drugs and Handguns (37) and Early Initiation (of Drug Use and Antisocial Behavior) (40).
- Binge drinking (defined as a report of five or more drinks in a row within the past two weeks) is extremely dangerous. Several studies have shown that binge drinking is related to higher probabilities of drinking and driving as well as injury due to intoxication. Across grades, the prevalence rate of binge drinking ranges from a low of 1.0% for 6<sup>th</sup> graders to a high of 33.7% for 12<sup>th</sup> graders. Overall, 14.9% of PAYS 2005 Statewide students have reported at least one episode of binge drinking in the past two weeks. Compared to national findings, 8<sup>th</sup> graders reported a lower rate of binge drinking, 10<sup>th</sup> graders reported a similar rate and 12<sup>th</sup> graders reported a higher rate of use.
- Past-30-day prevalence of heroin use ranges from a low of 0.1% for 6<sup>th</sup> graders to a high of 0.6% for 12<sup>th</sup> graders. Overall, 0.3% of PAYS 2005 Statewide students have used heroin at least once in the last 30 days. Compared to national findings, 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> graders reported similar rates of past-30-day heroin use.
- ◆ For the first time, the 2005 *PAYS* included 12 questions designed to measure non-medical prevalence-of-use rates across four prescription drug categories: amphetamines, sedatives, tranquilizers, and narcotics other than heroin.
  - **Amphetamines.** In general, compared to MTF findings, Pennsylvania youth reported similar rates of amphetamines use. However, 10<sup>th</sup> and 12<sup>th</sup> graders in Pennsylvania report slightly higher 30-day rates than do their peers nationwide on the MTF. For example, 4.4 percent of the 12<sup>th</sup> graders in Pennsylvania reported using amphetamines in the past 30 days compared to 3.9 percent of MTF 12<sup>th</sup> graders.
  - **Sedatives.** In general, compared to MTF findings, Pennsylvania youth reported similar rates of sedatives use. However, 10<sup>th</sup> and 12<sup>th</sup> graders in Pennsylvania report slightly higher 30-day rates than do their peers nationwide on the MTF. For example, 4.2 percent of the 10<sup>th</sup> and 12<sup>th</sup> graders in Pennsylvania reported using sedatives in the past 30 days compared to 3.2 percent of MTF 12<sup>th</sup> graders
  - **Tranquilizers.** In general, compared to MTF findings, Pennsylvania youth reported similar rates of tranquilizers use. However, 12<sup>th</sup> graders in Pennsylvania report slightly higher lifetime and 30-day rates than do their peers nationwide on the MTF. For example, 11.2 percent the 12<sup>th</sup> graders in Pennsylvania reported using tranquilizers lifetime and compared to 9.9 percent of MTF 12<sup>th</sup> graders.
  - **Narcotics.** Regardless of the time period, high school seniors in Pennsylvania report higher narcotics use than do their peers nationwide on the MTF. For example, 16.6 percent the 12<sup>th</sup> graders in Pennsylvania reported using narcotics in their lifetime compared to 12.8 percent of MTF 12<sup>th</sup> graders. And the 30-day use of narcotics by 12<sup>th</sup>

graders in Pennsylvania is the only 30-day use prevalence rate for prescription drugs that exceeds 5 percent. Statewide, 5.4 percent of the 12th graders reported using narcotics in the past 30 days.

- **Variations by Select Demographics.** In general, prescription drug use rates are similar for males and females, and across ethnic groups. Students in the Southwest region of the state, however, report higher use of prescription drugs than students in other regions of the state.
- **Symptoms of Depression.** In 2003, for the first time, PAYS included questions that asks students about feelings—sadness, hopelessness and worthlessness—that *can* be symptoms of depression. The same four questions were asked in 2005, and for the first time the data are being reported. These symptoms of depressions are not clinical signs or symptoms of depression or suicide; however, it is perhaps fair to use them as red flags or warning signs that not all is normal with young Pennsylvanians. Statewide, more than 30 percent of the students surveyed reported feeling depressed and worthless. Students in the 10<sup>th</sup> grade have the highest percentage of students reporting symptoms of depression, but in general, rates are fairly similar across the grades. Students with the most symptoms of depression (i.e., students reporting that they are sad, hopeless, and worthless) report higher rates of ATOD use than do students with few symptoms of depression. For example, 41.4 percent of the students with high levels of depressive symptoms reported alcohol use in the past 30-days compared to 19.4 percent of those with low levels of depressive symptoms (see Graph 1-5).
- **Variations by Select Demographics.** In general, males are more likely to report that they gambled for money than females, and females report higher levels of depression than males. Whites are more likely to report that they gambled for money than African Americans; however, reported levels of depression are similar across ethnic groups. Students in the Southwest regions of the state are more likely to gamble for money than students in other regions of the state, and students in both the Northeast and Southwest reported higher levels of depression than students in other regions of the state.