

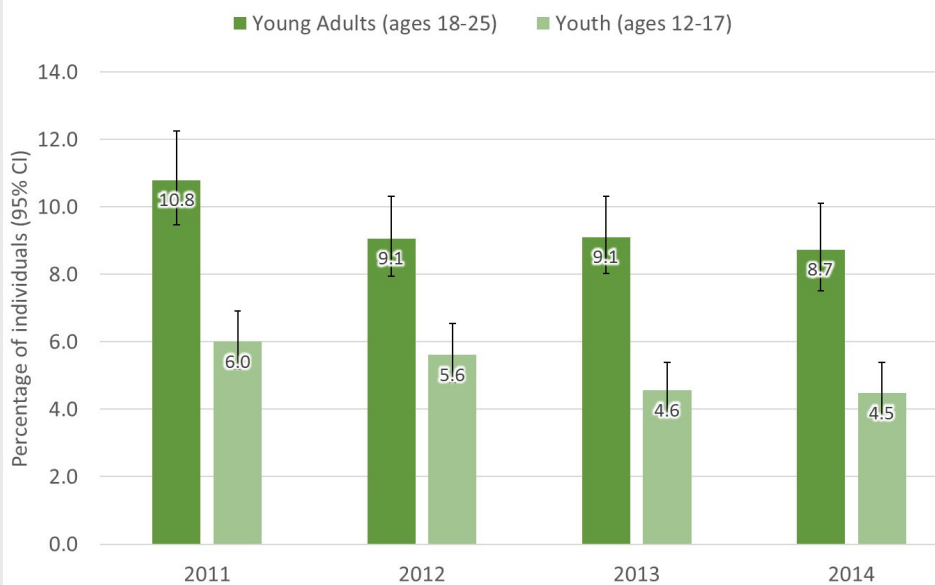


## PRESCRIPTION OPIOID MISUSE IN PA

The data sources used in this brief varied in how prescription opioids were defined. The NSDUH dataset provides a broader range of prescription opioid examples than the PAYS dataset (see **Table 1**). Common opioids between the two datasets include: Codeine, Oxycotin (oxycodone), Percocet (oxycodone), Tylox, and Vicodin (hydrocodone).

**Table 1.** Prescription opioids included in analyses by dataset. *NSDUH 2011-2014. PAYS 2013, 2015.*

Data Source	Prescription Opioid Examples Provided to Youth in Survey
NSDUH	Codeine, Darvocet-N, Darvon, Demerol, Dilaudid, Fioricet, Fiorinal, Hydrocodone, Lorcet/Lorcet Plus, Lortab, Methadone, Morphine, OxyContin, Percocet, Percodan, Phenaphen with Codeine, Propoxyphene, SK-65, Stadol, Talacen, Talwin, TalwinNX, Tramadol, Tylenol with Codeine, Tylox, and Ultram.
PAYS	Codeine, Oxycontin, Percocet, Tylox, and Vicodin.

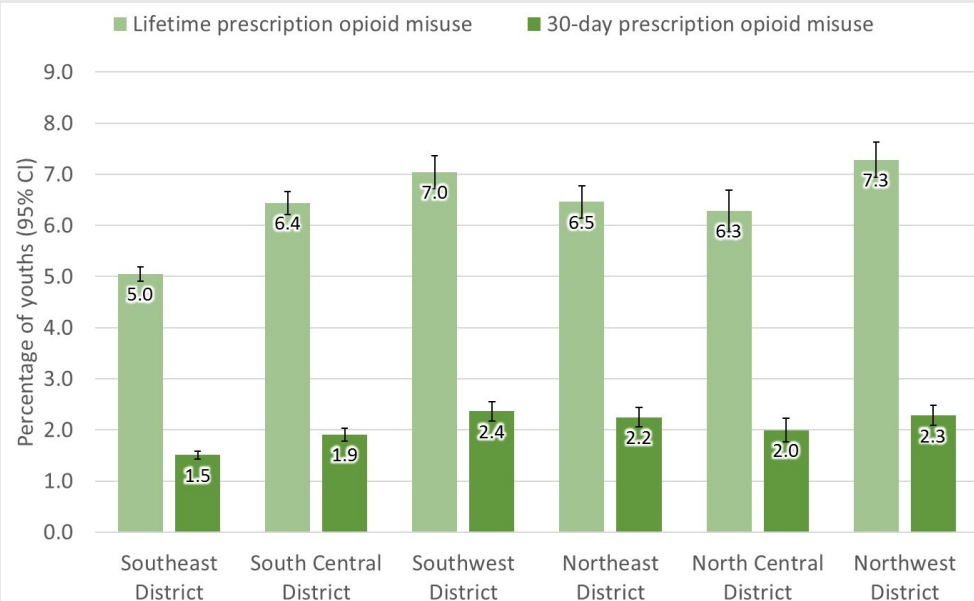


Data Source: 2011 - 2014 National Survey on Drug Use and Health (NSDUH).

In **Figure 1**, state estimates demonstrated a slight downward trend from 2011 to 2014 in self-reported prescription opioid misuse among young adults and youth in Pennsylvania.

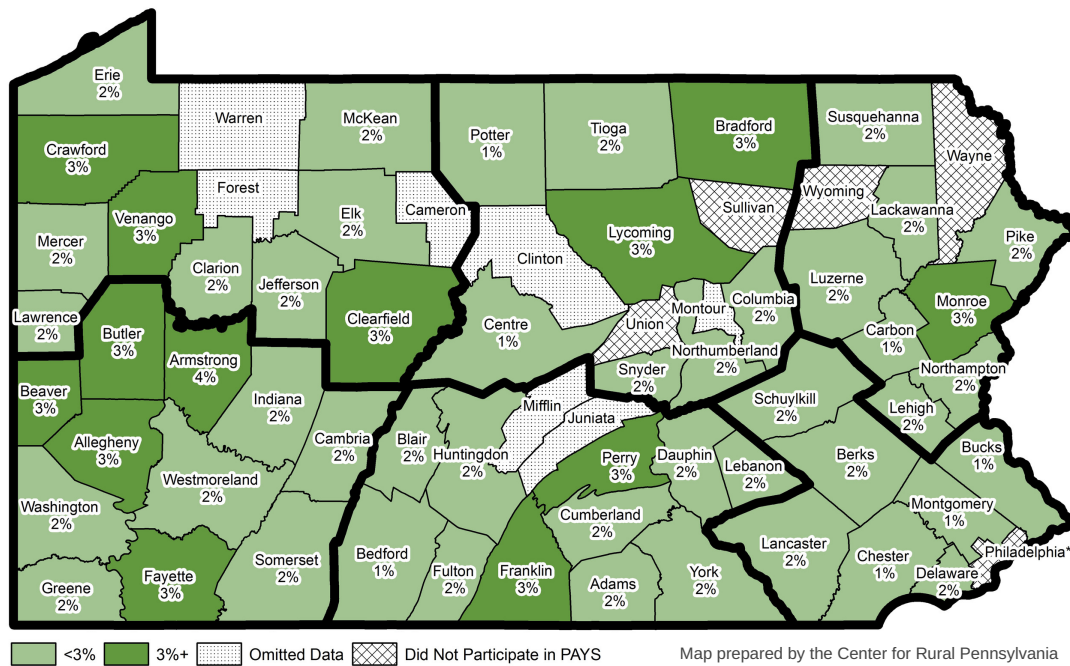
**Figure 1.** State estimates of prescription opioid misuse in the past year among young adults and youths in Pennsylvania, 2011-2014.

In **Figure 2**, in 2015, lifetime and 30-day prescription opioid misuse among youths varied by regional health district in PA, with the Northwest District reporting the highest lifetime use at 7.3% and the Southwest District reporting the highest 30-day misuse at 2.4%.



Data Source: 2015 Pennsylvania Youth Survey (PAYS)

**Figure 2.** Lifetime and 30-day prescription opioid misuse among youths (grades 6-12) in Pennsylvania, 2015.



Data Source: 2015 Pennsylvania Youth Survey (PAYS)  
 Omitted Data: Responses are suppressed to protect the privacy of the individuals who participated.  
 \*Schools run by the Philadelphia school district did not participate

As **Map 2** shows, the percentage of youth who indicated 30-day prescription opioid misuse varied across counties, ranging from 1% to 4%. 3% was used as a cut-point to highlight counties above the average county rate.

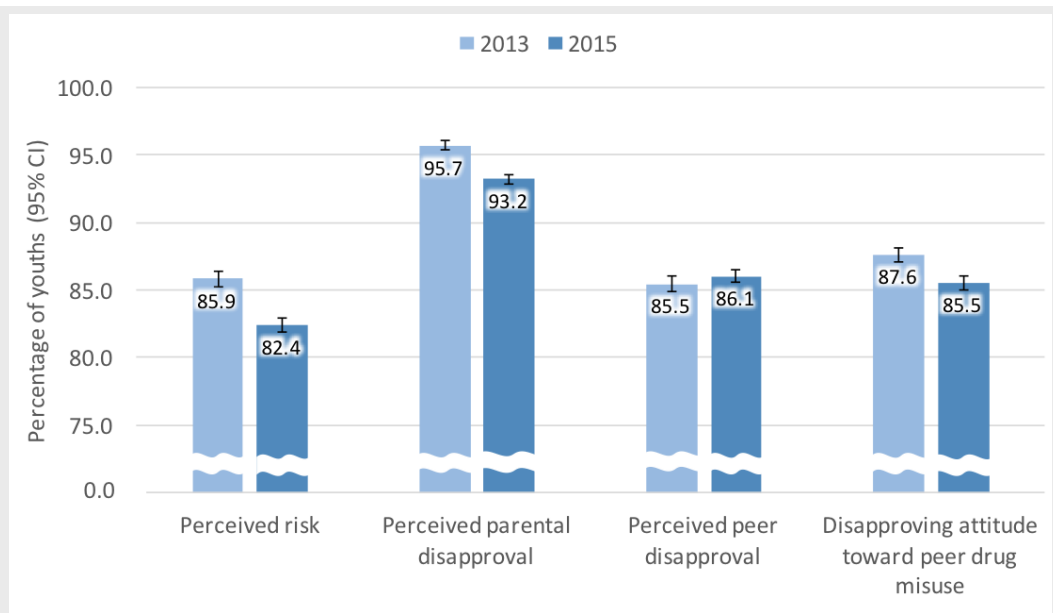
Overall, a greater percentage of youths in the western half of Pennsylvania, that tends to have more rural counties, indicated a higher percentage of 30-day prescription opioid misuse compared to the eastern half of the state, that tends to have more urban counties.

**Map 2.** Percentage of prescription opioid misuse among youths (grades 6-12) in the past 30 days in Pennsylvania, 2015.

## PERCEPTION & ATTITUDES TOWARDS PRESCRIPTION DRUG MISUSE IN PA

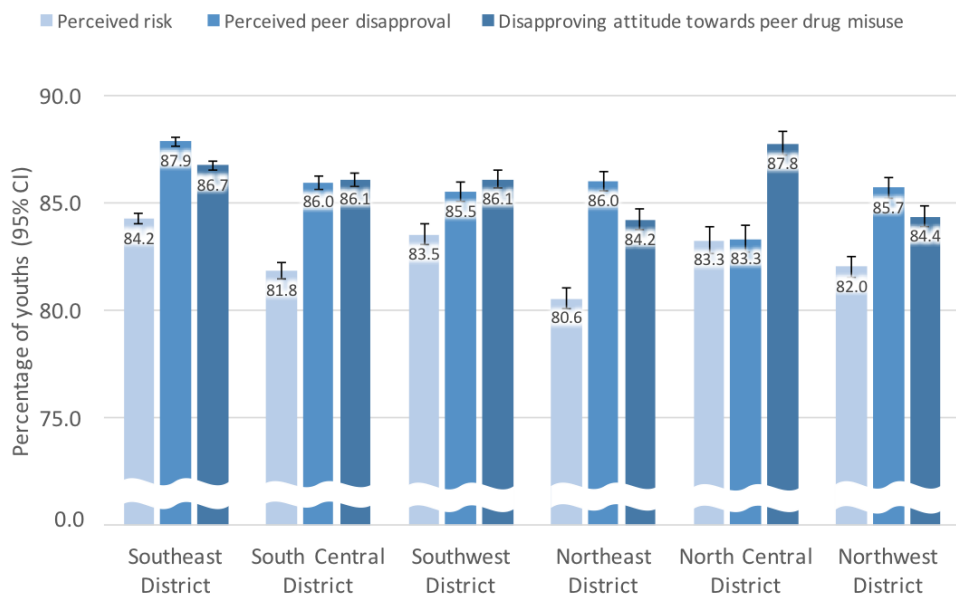
Perception and attitudes were measured with questions about perceived risk, perceived parental disapproval, perceived peer disapproval, and disapproving attitudes toward peer **prescription drug** misuse in 2013 and 2015.

In **Figure 3**, from 2013 to 2015, perceived risk, perceived parental disapproval, and disapproving attitude all showed a downward trend whereas perceived peer disapproval remained relatively consistent. Overall, data suggests a declining sense of risk and fewer normative constraints towards misuse of prescription drugs.



Data Source: 2015 Pennsylvania Youth Survey (PAYS)

**Figure 3.** State estimates of perceptions and attitudes towards prescription drug misuse among youths (grades 6-12) in Pennsylvania, 2013-2015.

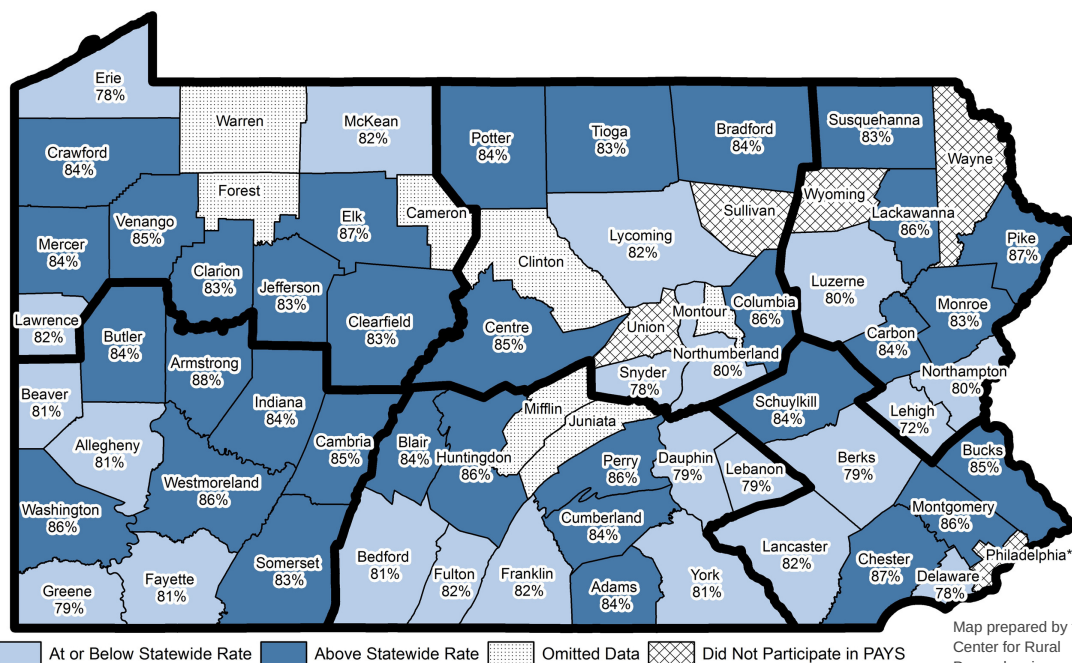


Data Source: 2015 Pennsylvania Youth Survey (PAYS)

**Figure 4.** Perceptions and attitudes towards prescription drug misuse among youths (grades 6-12) in Pennsylvania, 2015.

In **Figure 4**, in most districts, youth reported a lower perceived risk compared to perceived peer disapproval; that is, more youths perceived their peers as disapproving when compared to their own perceived risk. This trend is different in the North Central District, as perceived risk and perceived peer disapproval displayed near equal percentages. Moreover, as compared to other districts in PA, the North Central District demonstrated the highest percentage of youths with disapproving attitudes towards peer drug misuse.

**Map 3** displays the percentage of youth who reported moderate to great perceived risk of harm associated with misuse of prescription drugs. Overall, 75% or more of youth in all reporting counties indicated moderate to great harm associated with misuse of prescription drugs. The statewide rate for PA was 82%.



Data Source: 2015 Pennsylvania Youth Survey (PAYS)

Omitted Data: Responses are suppressed to protect the privacy of the individuals who participated.

\*Schools run by the Philadelphia school district did not participate

Map prepared by the Center for Rural Pennsylvania

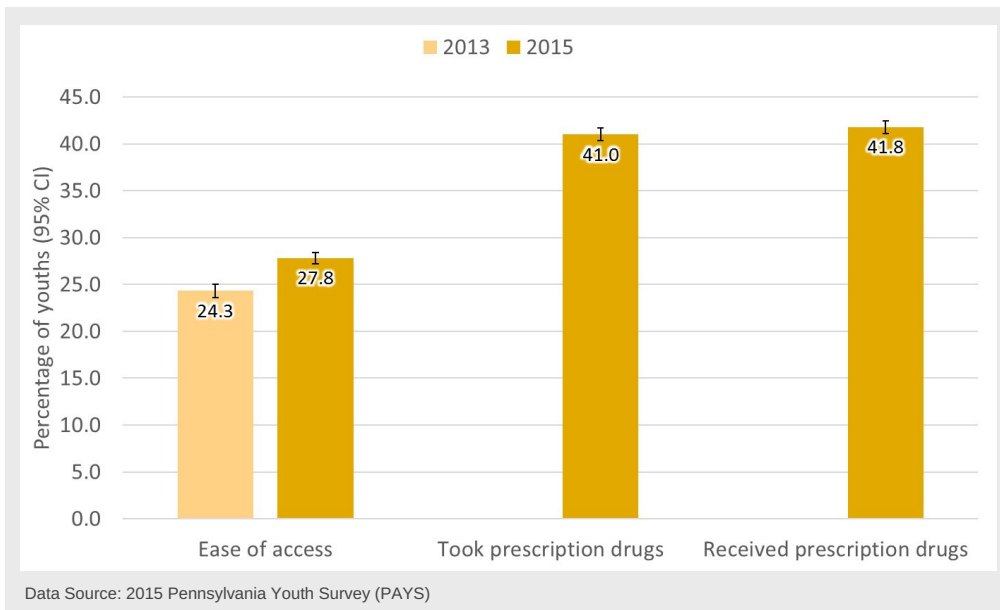
**Map 3.** Percentage of youths (grades 6-12) whose perceived risk was associated with prescription drug misuse in Pennsylvania, 2015.

While not displayed, in Pennsylvania, over 90% of youth thought their parents disapproved of prescription drug misuse, indicating their parents would feel prescription drug misuse is "wrong" or "very wrong." However, when comparing parent disapproval from 2013 to 2015, the percentage of youth who indicated their parents would strongly disapprove of misusing "prescription drugs not prescribed to you" decreased in all counties from 2013 to 2015.



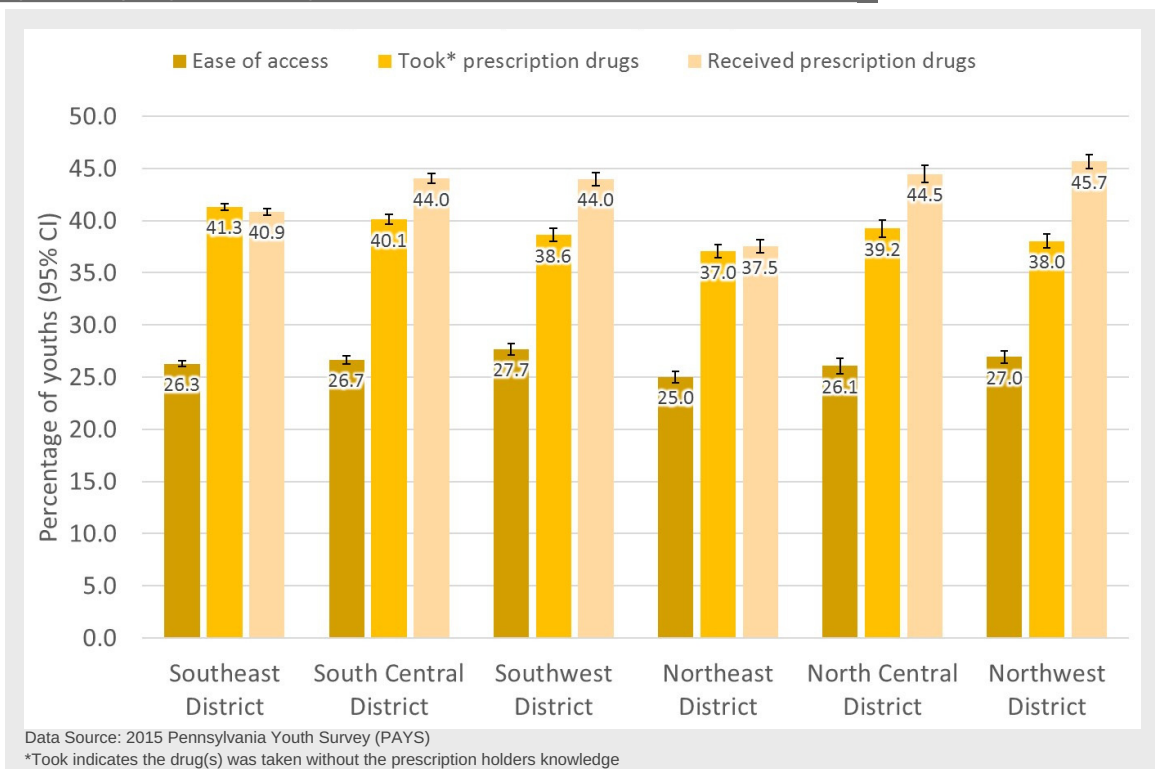
## ACCESS TO PRESCRIPTION DRUGS IN PA

Youth reported ease of access to prescription drugs that were not prescribed to them on a 4-point scale ranging from "very easy" to "very hard." Ease is reported here when youth indicated acquisition was "very easy" or "sort of easy."



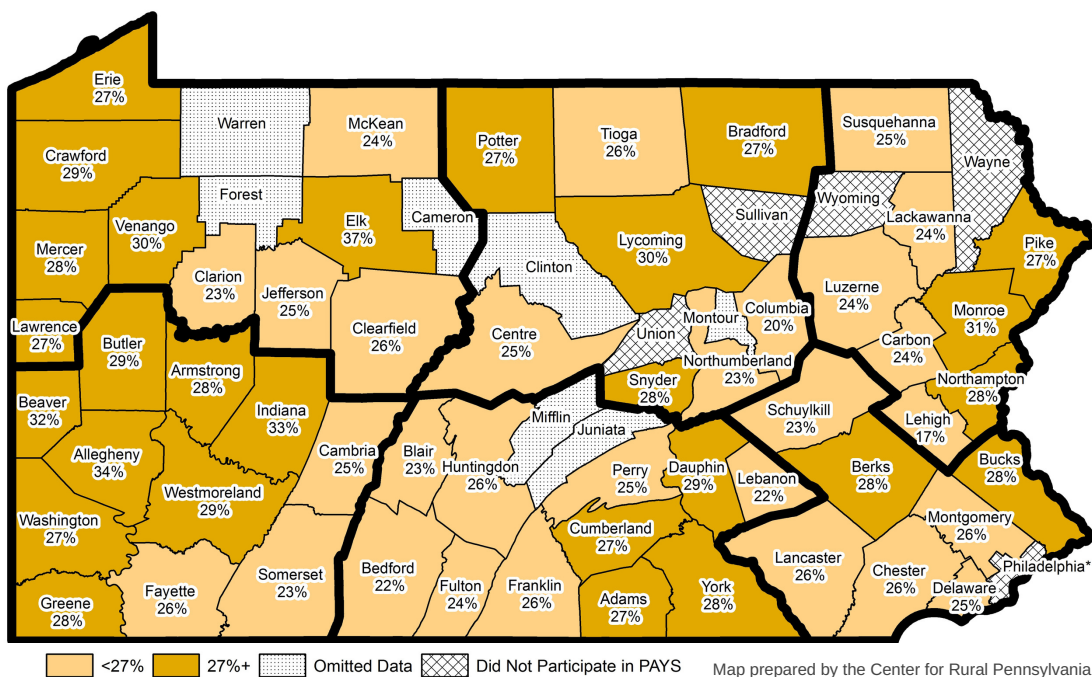
In **Figure 5**, state-level estimates indicated a slight increase in self-reported ease of access between 2013 and 2015. Data from 2013 were not available for "took" or "received" prescription drugs.

**Figure 5.** State estimates of access and acquisition source of prescription drugs among youths (grades 6-12) over the past year in Pennsylvania, 2013-2015.



**Figure 6.** Access and acquisition sources of prescription drugs as reported by youths (grades 6-12) in Pennsylvania, 2015.

In **Figure 6**, all health districts displayed similar trends in ease of access and how prescription drugs were acquired. In most districts a greater percentage of youth reported receiving prescription drugs as compared to taking prescription drugs without permission. However, a few notable differences were seen in the Northeast and Southeast districts, where a similar percentage of youth reported taking prescription drugs without permission and receiving prescription drugs.



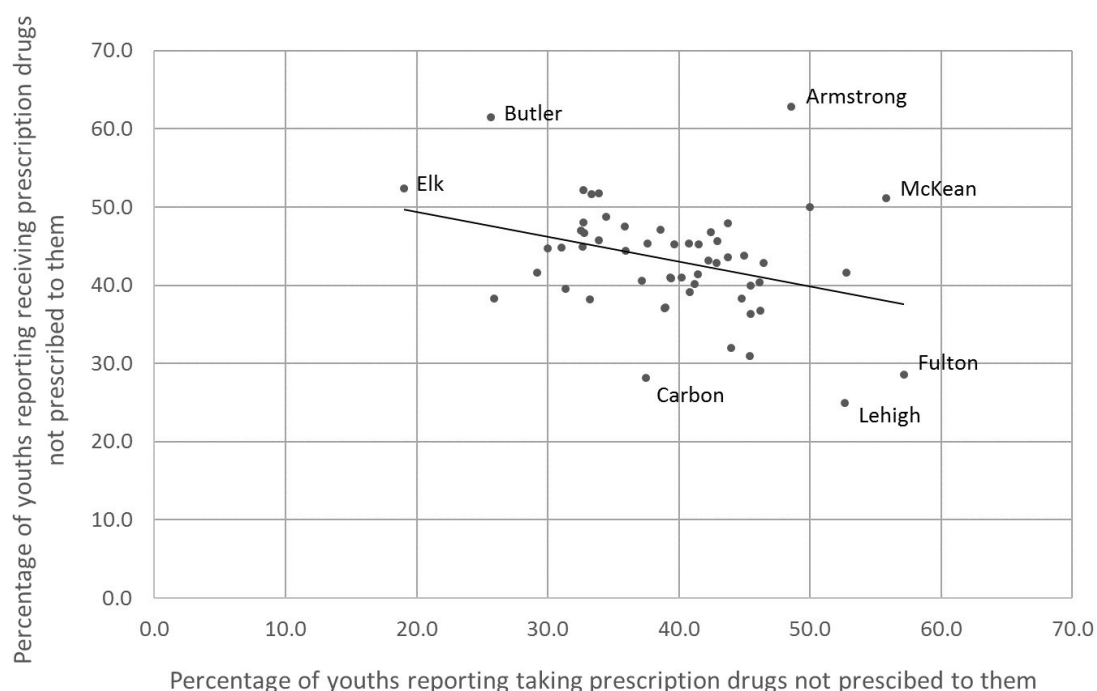
The percentages shown in **Map 4** are students who reported, “sort of easy” or “very easy” to acquire prescription drugs. The statewide average of 27% was used as the cutoff. Perceived ease of access to prescription drugs varied across counties, ranging from 17% to 37%.

Data Source: 2015 Pennsylvania Youth Survey (PAYS)  
Omitted Data: Responses are suppressed to protect the privacy of the individuals who participated.  
\*Schools run by the Philadelphia school district did not participate

**Map 4.** Percentage of perceived availability of prescription drugs among youths (grades 6-12) in Pennsylvania, 2015.

**Figure 7** shows a scatterplot of counties based on the percentage of youth who reported taking prescription drugs not prescribed to them (horizontal axis), compared to the percentage of youth who reported receiving prescription drugs not prescribed to them (vertical axis). Counties in the lower, right quadrant of the plot report a greater percentage of youth taking prescription drugs compared to receiving them (e.g., Fulton, Lehigh, and Carbon). Conversely, counties in the upper, left quadrant of the plot report a greater percentage of youth receiving prescription drugs compared to taking them (e.g., Elk and Butler). Counties in the upper, right quadrant of the plot report a greater percentage of youth both receiving and taking prescription drugs (e.g., Armstrong and McKean).

The correlation coefficient ( $r = -0.34$ ) indicates a moderate negative correlation, meaning that on average, as a greater percentage of youth report taking prescription drugs, the percentage of youth who report receiving prescription drugs declines.



Data Source: 2015 Pennsylvania Youth Survey (PAYS)

**Figure 7.** Acquisition source of prescription drugs among youths (grades 6-12) in Pennsylvania by county, 2015.

## LIMITATIONS

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Differences in how prescription opioid questions were worded across the two data sources may bias these results, as different examples of drugs were given in each data source. In addition, participants' self-reported perceptions, attitudes, and accessibility may include prescription drugs outside of the scope of this project, as specific prescription opioids were not given as examples in these questions.

Data availability may also limit the findings. Not all school districts in PA participated in PAYS, potentially biasing the data and limiting the generalizability of the results. In addition, the most recent PAYS data were available from 2015. The next administration of the PAYS is in 2017, data available in 2018. For the NSDUH, 2014 data were used for this report. Data from 2015 were available, however, due to a redesign in question and response categories, we could not use the 2015 data as the questions were not compatible with estimates from previous years.

In addition, self-reported data may obscure actual percentages of misuse, perceptions, attitudes, and accessibility. Furthermore, while the described factors related to prescription opioid misuse among youth are described, the associations or potential causal pathways that could lead to misuse were not examined. Finally, the misuse of illicit drugs, such as heroin, which is also associated with misuse of prescription opioids, is not examined.

## RECOMMENDATIONS

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Preventing prescription opioid misuse among youth is a major public health concern, as research suggests that prescription opioid misuse is a main driver of increased heroin use [6]. Many persons start with prescription opioids and transition to heroin use in part due to greater availability and potency of the illicit drug [7,8]. To prevent the misuse of prescription opioids, and potentially the future use of illicit opioids such as heroin, the SEOW offers the following recommendations to prevent prescription opioid misuse in Pennsylvania:

**1) Encourage greater participation in standardized data collection from all schools across Pennsylvania.**

Data were not available in some counties, and in other counties, not all schools or school districts participated in data collection. Greater participation from schools across PA will strengthen the data available to inform prevention strategies that reach youth.

**2) Design health education and awareness campaigns to address changes in perceptions and attitudes towards prescription drug misuse.** As perceptions of risk and perceived parent and peer disapproval are high overall, positive messaging that highlights the current norm that most youth perceive prescription drug misuse to be risky and disapproval of peer misuse may be helpful in preventing any further decreases in perception of risk and perceived disapproval.

**3) Tailor prevention strategies based on how youth access prescription drugs.** Different prevention strategies may be needed to address the different ways youth acquire prescription drugs; that is, identifying strategies to address differences between obtaining without permission and receiving prescription drugs. Such strategies may include the PA Prescription Drug Monitoring Program (PDMP) or statewide and national drug take back events.

**4) Use the data to engage and dialogue with communities, including counties, health districts, and state representatives.** Data are presented at three levels to provide stakeholders and communities with information that may allow for comparisons and drive decision making. We encourage stakeholders to use the various levels of data to inform intervention and policy, and to engage urban and rural communities in a meaningful way.

**5) Make long-term investments in the development of both local and state infrastructure for prevention.** Specifically, ongoing support and resources should be provided to assess needs and better understand the local conditions that are influencing prescription drug misuse.

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## Pennsylvania SEOW

The State Epidemiological Outcomes Workgroup (SEOW) was revitalized through the Pennsylvania Strategic Prevention Framework - Partnerships for Success (SPF-PFS) grant, funded through the Substance Abuse and Mental Health Services Administration (SAMHSA); a substance abuse prevention initiative. The Pennsylvania SPF-PFS grant specifically addresses underage drinking and prescription drug abuse and misuse. The goal of the SEOW is to inform and enhance state and community decisions regarding substance abuse and mental illness prevention programs, practices, and policies.

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## SUGGESTED CITATION

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