SUBSTANCE USE AND OUTCOMES

2015 MARYLAND STATE EPIDEMIOLOGICAL PROFILE

SPRING 2016

The Maryland Statewide Epidemiological Outcomes Workgroup
Department of Pharmaceutical Health Services Research
University of Maryland School of Pharmacy
Saratoga Building, 12th Floor
220 Arch Street
Baltimore, Maryland 21201

http://www.pharmacy.umaryland.edu/programs/seow/
CONTRIBUTORS

This report was compiled by the following faculty, staff, and students of the Department of Pharmaceutical Health Services Research in the University of Maryland School of Pharmacy:

Linda Simoni-Wastila, BPharm, MSPH, PhD
Professor and Director, SEOW
410.706.4352
lsimoniw@rx.umaryland.edu

Patience Moyo, MS, PhD Candidate
Graduate Research Assistant

Ting-Ying Jane Huang, MS, BPharm, PhD Candidate
Graduate Research Assistant

Jacqueline Milani, MS, CPP
Director, Pharmaceutical Research Computing
SEOW Project Coordinator

Sarah Tom, PhD, MPH
Assistant Professor

Peter Hur, PharmD, MBA
Postdoctoral Fellow

Wendy Klein-Schwartz, PharmD
Professor, Maryland Poison Center

Jeanne Yang, MCP
Information Systems Engineer, Pharmaceutical Research Computing

Brianna Phair
Pharmacy Student

ACKNOWLEDGMENTS

We thank Larry Dawson and the other staff at the Behavioral Health Administration (BHA) in the Maryland Department of Health and Mental Hygiene for their support and guidance on this report.

We also thank Pharmaceutical Research Computing for analytical support.
# TABLE OF CONTENTS

Executive Summary .................................................................................................................. 5
Maryland Demographic Snapshot ............................................................................................. 8
Alcohol, Tobacco, and Drugs: Use and Consequences .............................................................. 9
Alcohol Use ............................................................................................................................... 10
  Past-Month Alcohol Use ....................................................................................................... 11
  Volume of Alcohol Consumption ......................................................................................... 12
  Past-Month Binge Drinking ................................................................................................. 13
  Alcohol Consumption by Type ............................................................................................ 15
Alcohol Consequences ............................................................................................................. 16
  Alcohol Abuse/Dependence .................................................................................................. 16
  Emergency Department Visits and Hospitalizations .............................................................. 17
  Motor Vehicle Crashes ......................................................................................................... 18
  Mortality Rates .................................................................................................................... 20
Tobacco Use ............................................................................................................................ 22
  Use and Risk Perceptions of Smoking ................................................................................. 23
  Frequency of Cigarette Use .................................................................................................. 24
  Quit or Tried to Quit Smoking ............................................................................................. 25
Tobacco Consequences ............................................................................................................ 26
  Mortality Rates .................................................................................................................... 26
Prescription and Illicit Drugs Use ............................................................................................. 27
  Prescription Drugs ............................................................................................................... 28
  Illicit Drugs .......................................................................................................................... 33
  Marijuana .............................................................................................................................. 37
Prescription and Illicit Drug Consequences ............................................................................. 43
  Past-Year Illicit Abuse/Dependence .................................................................................... 43
  Emergency Department Visits and Hospitalizations ............................................................ 44
  Mortality Rates .................................................................................................................... 49
Maryland Poison Center Calls ................................................................................................ 52
  Cases of Intentional Poisoning ............................................................................................. 52
  Substances Implicated in Calls ............................................................................................ 53
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic Cannabinoids</td>
<td>54</td>
</tr>
<tr>
<td>Drugs Mentioned in Drug Identification Calls</td>
<td>55</td>
</tr>
<tr>
<td>Treatment for Substance Use Disorders</td>
<td>56</td>
</tr>
<tr>
<td>Admissions to Substance Use Treatment Programs</td>
<td>57</td>
</tr>
<tr>
<td>Primary Substances Reported at Treatment Admission</td>
<td>58</td>
</tr>
<tr>
<td>Needing But Not Receiving Treatment for Alcohol Use</td>
<td>59</td>
</tr>
<tr>
<td>Mental Health</td>
<td>60</td>
</tr>
<tr>
<td>Mental Illness and Substance Use Disorder Co-occurrence</td>
<td>61</td>
</tr>
<tr>
<td>Past-Year Major Depressive Episode</td>
<td>62</td>
</tr>
<tr>
<td>Lifetime Prevalence of Depressive Disorder</td>
<td>63</td>
</tr>
<tr>
<td>Types of Mental Illness</td>
<td>64</td>
</tr>
<tr>
<td>Maryland Substance Abuse Initiatives</td>
<td>65</td>
</tr>
<tr>
<td>Prescription Drug Monitoring Program</td>
<td>65</td>
</tr>
<tr>
<td>Maryland Overdose Response Program</td>
<td>68</td>
</tr>
<tr>
<td>Maryland Strategic Prevention Framework 2 Program</td>
<td>69</td>
</tr>
<tr>
<td>Conclusions</td>
<td>70</td>
</tr>
<tr>
<td>Appendix</td>
<td>71</td>
</tr>
<tr>
<td>Data Sources</td>
<td>72</td>
</tr>
<tr>
<td>Indicators</td>
<td>75</td>
</tr>
<tr>
<td>Additional Links and Resources</td>
<td>76</td>
</tr>
<tr>
<td>Substance-Related International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Diagnostic Codes</td>
<td>78</td>
</tr>
</tbody>
</table>
EXCLUSIVE SUMMARY

The Maryland Statewide Epidemiological Outcomes Workgroup (SEOW) is pleased to present Substance Use and Outcomes: 2015 Maryland State Epidemiological Profile. This report provides the latest findings on the use of and consequences associated with alcohol, tobacco, and drug use in Maryland. The purpose of the SEOW is to provide current and useful data to policy makers, providers, and citizens in order to support evidence-based information necessary for state and county planners and other interested stakeholders in determining substance use prevention and treatment priorities. To achieve this mandate, the SEOW monitors and analyzes over a dozen different data sources to provide information on key indicators in several domains: substance use disorders; consequences of use; factors associated with use and consequences; treatment for substance use disorders; and mental health status. In this edition of the Epidemiological Profile, we also highlight state policies intended to address the epidemic of opioid overdose and overdose prevention.

In this report, we examine substance use overall, as well as focus on at-risk populations, including youth and young adults. The manner and frequency with which individuals consume harmful substances can lead to substance-related consequences, the social, economic, and health problems associated with the excess use of alcohol, tobacco, and drugs. We provide insight into hospitalizations, poisonings, motor vehicle crashes, fatalities, and other adverse consequences associated with substance use. Treatment indicators provide valuable information on treatment patterns, substances implicated in substance use disorders, and met and unmet needs. In response to national and state mandates to integrate prevention, treatment, and recovery efforts for substance use and mental health, we provide data on mental health status among Maryland citizens. Finally, we provide information on important state-wide initiatives intended to reduce drug use and overdose.

KEY FINDINGS

Alcohol Use and Consequences

- Nearly 60 percent of Maryland citizens aged 12 or over consume alcohol every month.
- Past-month alcohol use and binge-drinking among underage youth continue their five-year decline.
- Although binge drinking among Maryland young adults aged 18-25 has declined since 2012, it has markedly increased among adults aged 26 years or older.
- Hospital admissions associated with alcohol use have steadily increased.
- The proportion of fatal and non-fatal motor vehicle crashes involving alcohol and/or drugs continues to decline in Maryland.
- Maryland mortality rates for conditions associated with alcohol remain lower than the national average and continue to show reductions over time.
- Per capita alcohol sales in Maryland remain lower than the national average. Spirits sales have increased in the past year, and are purchased more frequently than either beer or wine.
Tobacco Use and Consequences

• Tobacco use by Maryland citizens remains lower than the national average.

Prescription and Illicit Drugs

• With the exception of cocaine, the use of prescription pain-relievers and illicit substances, including marijuana, was more prevalent among Maryland citizens and exceeded the rest of the nation in 2014.
• All substance use by young adults aged 18-25 remains high.
• Marijuana use is increasing across all age groups (12-17, 18-25, and 26+) in Maryland.
• Drug-related emergency department and inpatient hospital admissions, including opioid-related admissions, continue to increase over the past several years.
• Substances implicated most frequently in intentional poisonings include alcohol, marijuana and marijuana homologs (synthetic marijuana), heroin, prescription pain-relievers, benzodiazepines, and dextromethorphan combinations.
• Perceptions of the risks of smoking marijuana have declined in Maryland, especially among young adults aged 18-25.
• The use of synthetic cannabinoids has resulted in significant increases in the number of calls placed to the Maryland Poison Center.

Mental Health

• In Maryland, one out of five adults aged 18 or older report having at least one indicator of mental illness; of these, 25% meet DSM-IV criteria for serious mental illness.
• Maryland youth aged 12-17 are more likely than adults to have had at least one major depressive episode in the past year.
• Among Maryland residents in treatment for a substance use disorder, the prevalence of a co-existing mental health disorder has increased from 35.3% in fiscal year 2008 to 43.8% in fiscal year 2013.

Treatment Admissions for Substance Use Disorders

• Alcohol, heroin, and marijuana are the top three most frequently used substances of abuse by Maryland citizens entering State-supported treatment programs.
• Heroin and prescription opioids accounted for 38.9% of all 2013 Maryland treatment admissions.
• In 2013, more than 6.4% of Maryland citizens reported they needed treatment for alcohol use but failed to receive it.

Policy Initiatives in Maryland

• In 2013, the Maryland Prescription Drug Monitoring Program was implemented. To date, over 16,000 prescribers, dispensers, and/or their designated delegates have registered to use the system.
• An important state initiative, the Opioid Misuse Prevention Program, focuses on reducing opioid misuse, opioid overdoses, and overdose fatalities in Maryland through evidence-based prevention and intervention strategies.
• The Opioid Response Program is another state initiative intended to provide access to naloxone and overdose education in order to reduce opioid overdose deaths.
• The Maryland Strategic Prevention Framework is a state-wide program to prevent and reduce underage and youth binge drinking since rates continue to exceed rates of other substances used by Maryland youth.

CONCLUSIONS

This report provides the latest estimates of alcohol, tobacco, and drug use and the consequences of use in the state of Maryland. Findings suggest that non-medical use of prescription pain-relievers, use of marijuana, and non-cocaine illicit drugs are growing problems in all age groups. Although 2012 data on alcohol use showed concerning trends of binge drinking among young adults aged 18-25, more recent data suggest steady decreases in binge drinking in this age group. However, young adults aged 18-25 remain the highest users of all substances monitored in this report, including marijuana. Given recent legislation in the state to allow use of marijuana for medical purposes, and the decriminalization of possession of small amounts of marijuana, young adults’ lax perceptions of marijuana risk may decline even further, and use may further increase. The non-medical use and misuse of prescription opioid analgesics and benzodiazepines remain current and growing problems.

Maryland has implemented significant policy initiatives to combat alcohol and substance use across the state. With the 2013 implementation of the State of Maryland’s Prescription Drug Monitoring Program (PDMP), monitoring the use of and treatment admissions for prescription medications with addiction potential will become increasingly important. The state also launched the Opioid Response Program (ORP) dedicated to increasing education about and access to naloxone, a potent opioid antagonist demonstrated to save lives. The Opioid Misuse Prevention Program (OMPP) provides jurisdictions with resources to prevent opioid use and overdose on the local levels. In combatting underage and young adult binge-drinking, the second wave of the Maryland State Prevention Framework Program (MSPF) has helped launch new prevention initiatives across the state.

Identifying trends in overdose deaths and hospitalizations related to prescription medications will remain a focus of future SEOW efforts. As well, the SEOW will continue to support alcohol use reduction efforts aimed at underage and young people. Finally, the SEOW will closely monitor the use of and consequences associated with the growing trends in marijuana and heroin use.
MARYLAND DEMOGRAPHIC SNAPSHOT

Maryland is the 24th most populous state in the US, with a 2015 total population of 6,006,401 citizens. In 2015, Maryland had the 26th most rapid annual population growth among all states.1 Maryland remains one of the most densely populated states 2 and among the states with the highest percentage of residents born outside of the country (14%).3

Adults age 18 – 64 years account for 63% of the population, while people under 18 years of age and those age 65 years and older account for 23% and 14% of Maryland’s citizens, respectively. The majority of the Maryland population is white (60%), and the state has a large black or African American community (30%). Asians account for 6% of the population, and American Indian and Native Alaskans for 0.6%. Marylanders who identify with two or more races account for 2.6% of the population; among all races, 9% of the population identifies as Hispanic or Latino.4

In Maryland, 89% of adults age 25 years and over have completed high school or more, with 37% of Marylanders having attained a Bachelor’s degree or greater. Of people under age 65 years, 7% have a disability and 9% lack health insurance. Of those age 16 years and greater, 68% are in the civilian labor force. The median household income is estimated at $74,149, one of the highest in the nation. Yet, among all Marylanders, 10% live in poverty.

---

ALCOHOL, TOBACCO, AND DRUGS: USE AND CONSEQUENCES
**ALCOHOL USE**

Alcohol remains the most commonly used substance by Maryland citizens, with 58% of Marylanders aged 12 or older reporting at least one alcohol drink in the past 30 days—nearly 6% higher than the national average.

Binge drinking by adults aged 26 years or older is on the rise and decreasing among young adults aged 18-25.

Drinking and binge drinking among underage drinkers aged 12-20 have declined in recent years. The total number of fatal and non-fatal motor vehicle crashes involving alcohol continues to decline in Maryland.

Among underage drinkers, impaired injury crashes declined minimally but impaired fatal crashes decreased substantially.
Past-Month Alcohol Use

• Since 2010, past-month alcohol use in Maryland has remained constantly higher than national use, with 58% of all state citizens aged 12 and older reporting use in 2014.
• While US estimates remained constant, past-month alcohol use in Maryland has increased.

![Graph showing Past-Month Alcohol Use, Age 12+ Years]

• Past-month alcohol use among underage drinkers aged 12-20 has continued to decline.

![Graph showing Past-Month Alcohol Use, Age 12-20 Years]

Data Source: NSDUH 2003-2014
Volume of Alcohol Consumption

- In Maryland and the United States, the average number of drinks per day and the maximum number of drinks consumed on a single occasion decreased with increasing age.
- In 2014, the average number of daily drinks consumed by Marylanders was lower than the national average in all age groups except underage drinkers.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>US</th>
<th>MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>6.8</td>
<td>7.5</td>
</tr>
<tr>
<td>21-25</td>
<td>5.3</td>
<td>5.1</td>
</tr>
<tr>
<td>26-44</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>45-64</td>
<td>3.8</td>
<td>3.1</td>
</tr>
<tr>
<td>65+</td>
<td>3.5</td>
<td>3.4</td>
</tr>
</tbody>
</table>

- Among past-month drinkers, youths aged 25 and under reported greater per occasion alcohol consumption compared to other age groups.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>US</th>
<th>MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>10.4</td>
<td>9.6</td>
</tr>
<tr>
<td>21-25</td>
<td>8.9</td>
<td>7.3</td>
</tr>
<tr>
<td>26-44</td>
<td>6.9</td>
<td>7.4</td>
</tr>
<tr>
<td>45-64</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>65+</td>
<td>4.9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Data Source: BRFSS 2014
Past-Month Binge Drinking

• While past-month binge drinking in the US has remained constant, binge drinking by Maryland citizens aged 12 and older has increased from 20.2% in 2010 to 22.6% in 2014.

Data Source: NSDUH 2003-2014
• Past-month binge drinking was highest among young adults aged 18-25.
• The percentage of Maryland young adults reporting past-month binge drinking peaked at 43.2% in 2012 and then declined to 35.2% in 2014.

Past-Month Binge Drinking, Age 18-25 Years

The percentage of adults aged 26 and older in Maryland reporting past-month binge drinking increased from 19.0% in 2010 to 22.5% in 2014, surpassing the national average.

Past-Month Binge Drinking, Age 26+ Years

Data Source: NSDUH 2003-2014
Alcohol Consumption by Type

- In 2013, spirits marginally surpassed beer as the most commonly consumed type of alcoholic beverage in Maryland.
- The overall trend of per capita ethanol consumption for the state is similar to the national trend (data not shown) except that Maryland observed recent increases in sales of spirits and decreases in sales of wine.

**Per Capita Alcohol Consumption (in gallons), ages 21 and older in Maryland**

- Per capita consumption of spirits was consistently higher in Maryland than in the nation (data not shown) during 2007-2013.

*Data Source: AEDS 2007-2013\(^5\)*

**ALCOHOL CONSEQUENCES**

**Alcohol Abuse/Dependence**

- In Maryland, past-year alcohol abuse/dependence decreased from 7.7% (2007) to 5.1% (2011), but rebounded to 6.7% in 2014, greater than the national average.

![Past-Year Alcohol Abuse/Dependence, Age 12+ Years](chart)

- Past-year alcohol abuse/dependence among teenagers aged 12-17 continued to decline across the state and nation.

![Past-Year Alcohol Abuse/Dependence, Age 12-17](chart)

Data Source: NSDUH 2003-2014
Emergency Department Visits and Hospitalizations

- The total annual percentage of emergency department (ED) visits and inpatient hospitalizations related to alcohol use stabilized in recent years in Maryland, for total as well as short- and long- term consequences of alcohol.\textsuperscript{6}
- In 2014, 3.3\% of all ED and inpatient admissions in Maryland hospitals were related to alcohol use. Of these, 99.6\% of alcohol-related admissions were due to acute, short-term alcohol symptoms attributed to accidental poisoning; 0.4\% of admissions were due to chronic alcohol exposure.
- Alcohol-related admissions accounted for over half (51.7\%) of ED and hospital admissions that were alcohol or drug-related in 2014 compared to 54.7\% in 2008 (data not shown).

Data Source: HSCRC 2008-2014

\textsuperscript{6}Alcohol-related emergency department and hospital admissions are defined using ICD-9 codes: 291.x, 303, 305.0x, 535.3, 655.4, 760.71, 790.3, 980.x, and E860 (acute, short-term alcohol-related conditions), as well as 357.5, 425.5, and 571.0-571.3 (chronic, long-term alcohol-related conditions).
Motor Vehicle Crashes

All Ages

- Between 2007 and 2013, total motor vehicle crashes in Maryland declined from 100,943 (2007) to 92,039 (2013).
- The percentage of crashes involving alcohol and/or drugs out of all crashes in Maryland also declined from 8.5% (2007) to 7.9% (2013).

![](chart1.png)

- In 2013, there were an estimated 432 fatal crashes (resulting in at least one fatality) and 29,213 injury crashes (resulting in at least one non-fatal injury) statewide. Nearly one-third (31.9%) of fatal crashes and 8.0% of injury crashes were impaired-related.

![](chart2.png)

Data Source: MAARS 2007-2013
**Crashes among Underage Drinkers**

- The number of motor vehicle crashes where the driver was under 21 years of age decreased from 18,993 (2007) to 11,547 (2013) in Maryland.
- Among all crashes involving at least one driver under the age of 21, the proportion of crashes involving alcohol and/or drugs has declined from 4.9% (2007) to 3.9% (2013).

![Percent of Statewide Crashes that Involved Alcohol and/or Drugs among Young Drivers](chart1)

- In 2013, there were an estimated 38 fatal crashes and 4,123 injury crashes statewide where at least one driver was under the age of 21. The percent of fatal crashes involving an impaired young driver declined sharply from 27.9% in 2011 to 13.2% in 2013. Among injury crashes involving a young driver 4.0% were impaired-related.

![Percent of Crashes Related to Alcohol and/or Drugs among Fatal and Injury Crashes Involving Young Drivers](chart2)

*Data Source: MAARS 2007-2013*
Mortality Rates

Alcohol-Involved Deaths

- In 2014, deaths involving alcohol occurred at a lower rate in Maryland than the nation.
- Alcohol-involved deaths in Maryland remained stable from 2010 to 2014, whereas national trends suggest an increasing rate of alcohol-induced deaths.

Data Source: NVSS, CDC WONDER 2010-2014
**Alcohol-Induced Chronic Disease Mortality**

- In Maryland, deaths with an underlying cause of death from chronic diseases associated with alcohol\(^7\) occurred at nearly half the rate of deaths in the United States.
- Although the US experienced marginal increases in alcohol-related mortality, death rates in Maryland declined to 2.4 per 100,000 in 2014 after increasing from 2.6 to 2.8 per 100,000 between 2010 and 2013.

*Data Source: NVSS, CDC WONDER 2010-2014*

---

\(^7\)Chronic alcohol-induced conditions include: alcohol-induced chronic pancreatitis, alcoholic liver cirrhosis, alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, alcoholic fatty liver, alcoholic hepatitis, alcoholic hepatic failure, alcoholic liver disease, alcoholic fibrosis and sclerosis of the liver.
**TOBACCO USE**

Past-month cigarette and tobacco use remains relatively low among Maryland citizens, and lower than the national average.

Two-thirds of teenagers perceive great risk of cigarette smoking, lower than that reported by young adults and adults.

Mortality attributable to tobacco use continues to decline across the state and the nation.
Use and Risk Perceptions of Smoking

- Past-month cigarette and tobacco use in Maryland remained low, reflecting high and stable perceptions of tobacco risk.
- In 2014, past-month tobacco and cigarette use were highest among young adults aged 18-25 (32.7%), followed by adults aged 26 and older (22.0%).

- Over two-thirds of Maryland youth aged 12-17 perceived great risk from cigarette smoking.

Data Source: NSDUH 2014
Frequency of Cigarette Use

- In 2014, the overall percentage of Marylanders who smoke cigarettes every day or on some days, among those who smoked at least 100 cigarettes (5 packs) in their entire life, was lower than the national average (39.3% vs. 41.5%, respectively).
- In both Maryland and the United States, the proportion of individuals who smoke cigarettes daily or on some days declined with increasing age.
- Current smoking was more prevalent among young adults (18-25) in Maryland than in the nation; however, Marylanders aged 26-44 had lower prevalence of current smoking status compared to their national peers.

![Chart showing the percentage of current smokers by age group in Maryland vs. the United States in 2014.](chart.png)

*Data Source: BRFSS 2014*
## Quit or Tried to Quit Smoking

- Among Maryland and US current smokers, the percentage of Marylanders who quit or tried to quit in the past 12 months remained stable at greater than 60%.

### Data Source: BRFSS 2014

- Among 18 to 25 year olds in the United States, 70.0% of smokers attempted to quit smoking compared to 52.2% among those 65 years or older. In Maryland, the proportion of current smokers who attempted to quit smoking aged 65 years or older was higher than for those 45 to 64 years of age. Among 18 to 25 year olds in Maryland, 72.7% of smokers attempted to quit smoking compared to 60.4% among those 65 years or older.
- This data should be interpreted cautiously as it does not differentiate those who briefly ceased smoking (e.g., for one day) from those who were successfully able to quit smoking.

#### 2014: Quit or Tried to Stop Smoking in the Past 12 Months by Age Group, MD vs US

<table>
<thead>
<tr>
<th>Age Group</th>
<th>US</th>
<th>MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>70.0</td>
<td>72.7</td>
</tr>
<tr>
<td>26-44</td>
<td>63.1</td>
<td>67.0</td>
</tr>
<tr>
<td>45-64</td>
<td>56.9</td>
<td>50.9</td>
</tr>
<tr>
<td>65+</td>
<td>60.4</td>
<td>52.2</td>
</tr>
<tr>
<td>Overall</td>
<td>60.8</td>
<td>60.1</td>
</tr>
</tbody>
</table>

![Bar chart showing quit or tried to quit smoking rates by age group in US and MD](chart.png)
TOBACCO CONSEQUENCES

Mortality Rates

- From 2010 to 2014, both Maryland and the United States experienced declines in deaths where the underlying cause of death was attributable to smoking.\(^8\)
- In Maryland, smoking-related deaths occurred at slightly lower rates than the United States.
- Between 2010 and 2014, the reduction in smoking attributable deaths was 25.1 per 100,000 people in the United States and 31.4 per 100,000 people in Maryland.

\[^8\]This measure examines deaths with an underlying cause of death from chronic diseases associated with tobacco use. The conditions captured include malignant neoplasms (e.g., lung, pharynx, and trachea), respiratory diseases (e.g., bronchitis, emphysema, chronic airway obstruction) and cardiovascular diseases (e.g., ischemic heart disease, atherosclerosis, arterial disease). Age-adjusted rates for smoking attributable mortality in Maryland and the United States are presented.
**PRESCRIPTION AND ILLICIT DRUGS USE**

Illicit drugs—including marijuana and prescription pain-relievers—are used more frequently by Maryland citizens than across the nation.

Past-year non-medical use of prescription opioids has increased in young adults (18-25) and adults 26 and older.

Marijuana use has increased among all age groups, including youth aged 12-17 and young adults.

In 2014, almost 13% of all alcohol and/or drug-related hospital and emergency department visits among older adults included prescription opioid use.

Between 2008 and 2014, drug-related deaths in Maryland hospitals increased by 63%.
Prescription Drugs

**Top 10 Controlled Prescriptions Filled in Maryland**

- Maryland’s ten most dispensed controlled prescription medications did not differ from 2012 to 2013; however, the ranking of the medications changed (see table below).
- In 2013, medications belonging to the opioid class were the top four prescribed controlled drugs, followed by benzodiazepines (alprazolam, clonazepam, lorazepam), a sedative-hypnotic (zolpidem), and stimulants.

<table>
<thead>
<tr>
<th>Top 10 Controlled Prescription Medications Dispensed in 2012 and 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARYLAND 2012</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

*Data source: IMS National Prescription Audit 2012-2013*
Top 10 Controlled Prescriptions Filled in Maryland and Surrounding States

- Compared to surrounding states and the District of Columbia, Maryland had lower numbers of prescription fills per 1000 persons for the majority of the top 10 drugs in 2013.
- From 2012 to 2013, the rates of hydrocodone/acetaminophen and oxycodone/acetaminophen prescription fills per 1000 persons in Maryland decreased 6.4% and 14.8%, respectively (data not shown).
- Maryland experienced increases in the number of oxycodone (3.3%) and tramadol (6.4%) prescriptions filled per 1000 persons from 2012 to 2013 (data not shown).

Data source: IMS National Prescription Audit 2013
**Past-Year Nonmedical Use of Pain Relievers**

- In 2014, the percentage of young adults aged 18-25 in Maryland reporting past-year nonmedical use of pain relievers surpassed the national average.
- Nationally, young adults aged 18-25 continued to report reduced nonmedical use of pain relievers; however, the current data show increasing use by Maryland young adults.

- Maryland adults aged 26 and older continue to report increased use of pain relievers, whereas the national average decreased in 2014.

Data Source: NSDUH 2004-2014
Total Opioid Analgesic Prescription Fills

- The quantity of controlled\(^9\) medication prescriptions dispensed serves as a proxy for drug availability and use.
- In 2013, prescription opioid analgesics (e.g., hydrocodone, oxycodone, Fentanyl, codeine) were widely used by Marylanders. On average, 83 opioid analgesic prescriptions were filled for every 100 Marylanders, ranging from 62 to 162 fills per 100 people.
- In 2013, the rate of opioid analgesic prescription fills per capita was highest in western Maryland, followed by Baltimore metro area.

\(^9\)The Drug Enforcement Agency’s Controlled Substance Act has five established categories of controlled substances, Schedules I, II, III, IV and V. Schedule classification represents a drug or substance's relative potential for abuse, current status of accepted medical use in treatment in the United States, and status of accepted safety for clinical use. Drugs or substances that fall under Schedule I (e.g., heroin, lysergic acid diethylamide (LSD)), have no medically accepted uses and are not available by prescription. Schedule II (e.g., oxycodone, fentanyl), III (e.g. buprenorphine, ketamine), IV (e.g. alprazolam, diazepam), and V (e.g., cough preparations with codeine) medications are available by prescription. Each successive schedule represents a lower risk of abuse, as well as indicates the relative severity of psychological or physical dependence that can occur as a result of abuse.
**Total Stimulant Prescription Fills**

- Prescription stimulants (e.g., Ritalin, Adderall, Vyvanse) are widely used by Marylanders. On average, 22 stimulant prescriptions were filled for every 100 Marylanders, ranging from 17 to 39 fills per 100 people.
- In 2013, the rate of stimulant prescription fills per capita was highest in western Maryland.

*Data source: IMS National Prescription Audit 2013*
Illicit Drugs

Past-Month Illicit Drug Use

- Past-month illicit drug use in Maryland and the United States showed increasing trends. The increase was more pronounced in Maryland, where illicit drug use rates increased from 7.3% (2012) to 10.8% (2014).

- In 2014, past-month illicit drug use among Maryland teenagers aged 12-17 continued to surpass the national average as in 2013.

Illicit drug use includes use of marijuana/hashish, cocaine (including crack), inhalants, hallucinogens, heroin, and prescription-type psychotherapeutics used non-medically.
• In 2014, past-month illicit drug use among Maryland’s young adults aged 18-25 increased to a record high of 25.5%, surpassing the national average of 21.8%.

Data Source: NSDUH 2003-2014
**Past-Year Cocaine Use**

- In Maryland and the nation, past-year cocaine use continued to decrease across all age groups, with Maryland use estimates constantly lower than national averages.

![Graph showing trend in past-year cocaine use by age and year](image)

- In 2014, young adults aged 18-25 reported the highest prevalence of past-year cocaine use, followed by adults aged 26 and older.

![Bar chart showing past-year cocaine use by age, 2014](image)

*Data Source: NSDUH 2003-2014*
**Past-Month Non-Marijuana Illicit Drug Use by Age**

- From 2012 to 2014, past-month non-marijuana illicit drug use among Marylanders increased among all age groups: 22.6% among 12-17, 3.3% among 18-25, and 42.9% among individuals 26 years and older.

*Data Source: NSDUH 2003-2014*
Marijuana

*Past-Month Marijuana Use*

- Estimates of the population reporting past-month marijuana use continued to increase, reaching 8.6% in Maryland and 8.0% in the US in 2014.

*Data Source: NSDUH 2003-2014*
• In 2014, past-month marijuana use among Maryland young adults exceeded use by peers across the country (23.4% versus 19.3%, respectively).

![Past-Month Marijuana Use, Age 18-25 Years](chart1.png)

• Past-month marijuana use by adults 26 years and older continued to increase in both Maryland and the nation. For the first time since 2003, in 2014 Marylanders in this age group surpassed the nation in reporting past-month marijuana use.

![Past-Month Marijuana Use, Age 26+ Years](chart2.png)

*Data Source: NSDUH 2003-2014*
**Past-Year Marijuana Use**

- Past-year marijuana use among Maryland teenagers aged 12-17 and young adults aged 18-25 showed increasing trends, with 15.0% of teens and 36.4% of young adults reporting past-year marijuana use in 2014.

---

**Past-Year Marijuana Use, Age 12-17 Years**

![Graph showing past-year marijuana use among 12-17 year olds in Maryland and the US, with increasing trends from 2003 to 2014.](graph1)

**Past-Year Marijuana Use, Age 18-25 Years**

![Graph showing past-year marijuana use among 18-25 year olds in Maryland and the US, with increasing trends from 2003 to 2014.](graph2)

*Data Source: NSDUH 2003-2014*
- Past-year marijuana use by Marylanders aged 26 and older has increased from 6.0% in 2011 to 9.6% in 2014.

Data Source: NSDUH 2003-2014
**First Use of Marijuana**

- The proportion of Maryland teenagers aged 12-17 who initiated marijuana use remained higher than the national average from 2012 (6.1% vs. 6.0%) to 2014 (6.6% vs. 5.6%).

- The proportion of Maryland adults aged 18-25 who initiated marijuana use dropped sharply to 6.6% in 2011 but increased to 8.8% by 2014.

---

*Data Source: NSDUH 2003-2014*
Risk Perceptions of Marijuana Use

- Perceptions of marijuana’s risk continued to decline among Maryland teenagers aged 12-17 and young adults aged 18-25.

![Graph showing use vs perceptions of great risk of smoking marijuana once a month, Maryland Teens Age 12-17]

- During the same period, both age groups reported increases in past-year and past-month marijuana use, with adult’s aged 18-25 reporting prevalence of marijuana use surpassing perceptions of marijuana risk.

![Graph showing use vs perceptions of great risk of smoking marijuana once a month, Maryland Young Adults Age 18-25]

Data Source: NSDUH 2003-2014
PRESCRIPTION AND ILLICIT DRUG CONSEQUENCES

Past-Year Illicit Abuse/Dependence

- Past-year illicit drug abuse or dependence in Maryland remained highest among young adults aged 18-25, and surpassed the national average at 8.2%.
- National estimates of past-year illicit drug dependence or abuse among adults aged 18-25 decreased in 2014 but slightly increased in Maryland.

*Data Source: NSDUH 2003-2014*
Emergency Department Visits and Hospitalizations

- The total number of drug and/or alcohol exposures—including unintentional poisoning, suicide attempts, intentional poisonings, and assault—reported in Maryland emergency departments (ED) and inpatient hospitals grew 26.1% from 2008 to 2014.
- Unintentional poisonings or accidental overdose, which excludes suicide, intentional self-inflicted poisoning, and assault, grew 21.8% during this time period, and accounted for 10.6% of total drug and alcohol exposures in 2014.
- Total drug exposures involving (excluding alcohol) increased 34.4%; whereas unintentional drug poisonings increased 26.0% over the same period of time.

Data Source: HSCRC 2008-2014

- Unless otherwise noted, we report on total drug and/or alcohol exposures that occur in both ED and inpatient settings. For more details on unintentional poisonings in ED settings, visit:
  http://bha.dhmh.maryland.gov/OVERDOSE_PREVENTION/Pages/Data-and-Reports.aspx
Drug-Related Poisoning in Emergency Department Visits and Hospitalizations

- In 2014, 0.6% of ED and inpatient admissions reported from Maryland hospitals were associated with drug poisoning/overdose.
- The annual rate of ED visits and hospitalizations in Maryland related to drug poisonings increased by 0.4% between 2008 and 2014.
- Of the 2,685,867 ED visits and hospitalizations that occurred in Maryland hospitals in 2014, 77.6% of those events took place in the ED setting.
- While the proportion of drug-related ED and hospital admissions remains small relative to the total volume of ED and inpatient hospital admissions, the percentage of these cases is trending upward.

Data Source: HSCRC 2008-2014

11Total ED visits and inpatient admissions resulting from drug poisoning-related admissions are defined using ICD-9 codes: 965.x (poisoning by analgesics, antipyretics, and anti-rheumatics), 967.x (poisoning by sedatives and hypnotics), 968.x (poisoning by other central nervous system depressants and anesthetics), 969.x (poisoning by psychotropic agents), 970.x (poisoning by central nervous system stimulants), E850-E858 (accidental poisoning by drugs, medicinal substances and biologicals), E939.4 (benzodiazepine-based tranquilizers), E950.0-E950.5 (suicide and self-inflicted poisoning by solid or liquid substance), E962.0 (assault by drugs and medicinal substances), and E980.0-E980.5 (poisoning by barbiturates, undetermined whether accidentally or purposely inflicted).
Drug- and Opioid- Related Emergency Department and Hospitalizations

- The annual percentage of ED visits and hospitalizations in Maryland related to drugs\textsuperscript{12} rose steadily from 2008 to 2014. There was a similar but smaller increase in the rate of ED visits and hospitalizations in Maryland related to opioid (prescription or heroin) drugs.
- In 2014, 6.3% of ED and inpatient events in Maryland hospitals were due to alcohol/drug/substance exposure, and 1.5% were due to opioid drug exposure. Overall, the percentage of alcohol/drug/substance-related admissions increased by 1.1% between 2008 and 2014; during this same time period, the change in opioid-related hospitalizations increased by 0.3%.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{drug-related-ede-hospitalizations.png}
\caption{Drug-Related Emergency Department Visits and Hospitalizations in Maryland}
\end{figure}

\textit{Data Source: HSCRC 2008-2014}

\textsuperscript{12}Substances include: alcohol and drugs such as opioid, cocaine, cannabis, heroin, methadone, sedative-hypnotics, anxiolytics, psychotropics, amphetamines and psychostimulants, hallucinogens, and other drugs causing poisoning and death. Drug-related events are defined using ICD-9 codes: 2920, 304.x, 305.x, 965.x, 967.x, 968.x, 969.x, 970.x, E850-E858, E950.0-E950.5, E9394, E9620, and E980.0-E980.5.
**Prescription Opioid and Heroin Hospital Events and Mortality, Older Adults**

- In 2014, 12.7% of all alcohol and/or drug-related ED and inpatient visits by adults aged ≥ 65 years were related to prescription opioids; 0.3% were related to heroin.
- Among all opioid-related hospitalizations and ED visits, 1.9% resulted in death.
- Among heroin-related visits, 2.5% resulted in death.

**Data Source: HSCRC 2014**
**Multiple Substance Use: Prescription Opioids, Benzodiazepines, & Heroin**

- In 2014, Marylanders made 42,891 ED visits and inpatient hospital admissions that involved prescription opioids, benzodiazepines, and/or heroin.
- Of these, 1890, or 4.4% involved 2 or more of these drugs.

![Venn Diagram](image)

**Data Source: HSCRC 2014**

- From 2010 to 2014, drug-related emergency department visits and hospitalizations associated with heroin increased steadily; there was little change in the proportion of benzodiazepine overdoses. Prescription opioid overdoses stabilized starting in 2011 but remained higher than overdoses from benzodiazepines or heroin.

![Graph](image)

**Data Source: HSCRC 2008-2014**
Mortality Rates

**Drug-Related ED Visits and Hospitalizations Resulting in Death**

- Maryland citizens hospitalized or admitted to the ED for alcohol and/or drug use disorders\(^1\) experienced increased annual mortality rates. In particular, the rate of opioid-related ED and hospital deaths over the 7-year period increased.
- Between 2008 and 2014, drug-related deaths rose by 63% and opioid-related deaths rose by 73%.

<table>
<thead>
<tr>
<th>Year</th>
<th>Any Drug</th>
<th>Any Opioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>4.8</td>
<td>1.1</td>
</tr>
<tr>
<td>2009</td>
<td>4.6</td>
<td>1.0</td>
</tr>
<tr>
<td>2010</td>
<td>4.4</td>
<td>0.9</td>
</tr>
<tr>
<td>2011</td>
<td>6.9</td>
<td>1.2</td>
</tr>
<tr>
<td>2012</td>
<td>6.9</td>
<td>1.3</td>
</tr>
<tr>
<td>2013</td>
<td>7.3</td>
<td>1.7</td>
</tr>
<tr>
<td>2014</td>
<td>7.8</td>
<td>1.9</td>
</tr>
</tbody>
</table>

*Data Source: HSCRC 2008-2014*

- In 2011, 7.8% of total deaths in Maryland EDs and hospitals were alcohol or drug-related; nearly one-quarter of these alcohol or drug deaths, were associated with opioid use (1.9% of total deaths).

\(^1\)Alcohol and drug-related events were identified by claims with an ICD-9 code of E850-858, E950.x, E962.0 or E980.x OR indicating death with an ICD-9 code of 292.0, 304.x, 305.x, 965.x, 967-969, 970.x, or E939.4. ED visits and hospitalizations related to opioid use that resulted in death are reported as well. This measure only captures deaths in the ED and hospital setting. Refer to the next page for estimated drug-related death rates in the state as a whole.
Drug-Induced Mortality

- Deaths associated with drug use increased in both Maryland and the United States.
- The rate of increase in drug-induced deaths was higher in Maryland compared to the nation.
- In Maryland, drug-induced death rates grew by an additional 6.4 deaths per 100,000 people; whereas, the national rate grew by an additional 2.6 deaths per 100,000 people.
- While drug-induced death rates in Maryland were lower than the national average in 2010 and 2011, Maryland surpassed the nation in 2012.

Data Source: NVSS, CDC WONDER 2010-2014
Alcohol and/or Drug Involvement in Office of Chief Medical Examiner Cases

- In 2012, among deaths investigated by the Maryland Office of Chief Medical Examiner (OCME), 25.7% of 579 suicide cases tested positive for alcohol and 27.3% tested positive for drugs.\(^{14}\)
- In 2012, the percent of homicide cases testing positive for alcohol was 29.1% (of 429 cases), down 2.7% compared to 2011; 21.7% tested positive for drugs, a 0.8% reduction from 2011.
- Although there was no change in the percent of accidental death cases testing positive for alcohol between 2011 and 2012, the proportion of accidental deaths testing positive for drugs declined 0.7%.

### Number of OCME Cases by Manner of Death, 2011-2012

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidents</td>
<td>1684</td>
<td>1859</td>
</tr>
<tr>
<td>Homicides</td>
<td>431</td>
<td>429</td>
</tr>
<tr>
<td>Suicides</td>
<td>563</td>
<td>579</td>
</tr>
</tbody>
</table>

### Toxicology Testing for Alcohol and/or Drugs Among OCME Cases in Maryland

\[\text{\% Positive \text{ of the manner of death}}\]

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidents</td>
<td>17.4</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td>17.4</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>31.8</td>
<td>22.5</td>
</tr>
<tr>
<td></td>
<td>29.1</td>
<td>21.7</td>
</tr>
<tr>
<td></td>
<td>28.6</td>
<td>25.7</td>
</tr>
<tr>
<td></td>
<td>32.1</td>
<td>27.3</td>
</tr>
<tr>
<td>Homicides</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>17.4</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td>17.4</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>31.8</td>
<td>22.5</td>
</tr>
<tr>
<td></td>
<td>29.1</td>
<td>21.7</td>
</tr>
<tr>
<td></td>
<td>28.6</td>
<td>25.7</td>
</tr>
<tr>
<td></td>
<td>32.1</td>
<td>27.3</td>
</tr>
<tr>
<td>Suicides</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>17.4</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td>17.4</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>31.8</td>
<td>22.5</td>
</tr>
<tr>
<td></td>
<td>29.1</td>
<td>21.7</td>
</tr>
<tr>
<td></td>
<td>28.6</td>
<td>25.7</td>
</tr>
<tr>
<td></td>
<td>32.1</td>
<td>27.3</td>
</tr>
</tbody>
</table>

Data Source: 2011-2012 OCME Annual Reports\(^{15}\)

\(^{14}\)Drugs include alprazolam, amphetamine, benzoylecgonine, brompheniramine, chlorpheniramine, cocaine, codeine, diazepam, diphenhydramine, doxylamine, fentanyl, heroin, hydrocodone, methadone hydroxyzine, meperidine, methamphetamine, methylenedioxyamphetamines, morphine, oxycodone, methylenedioxymethamphetamine, nordiazepam, noroxide, phencyclidine, propoxyphene, tramadol, and zolpidem. Previous years (prior to 2011) included only cocaine, heroin, methadone, morphine and phencyclidine.

\(^{15}\)Retrieved from: http://dhmh.maryland.gov/ocme/Pages/Reports.aspx
Cases of Intentional Poisoning

- The total number of intentional misuse poisoning cases where the reported motive for exposure included suicide attempts, misuse, and abuse\(^{16}\) increased between 2009 and 2012, and then decreased in 2013 and 2014.
- Intentional poisoning cases increased from 6,175 cases (17% of total cases reported to the Maryland Poison Center, data not shown) in 2009, to 6,573 cases (21% of total cases) in 2014.
- Overall, from 2009 to 2014, the frequency of reported poisonings related to substance misuse or suicide decreased, 7% and 0.3% respectively; the frequency of abuse-related poisoning cases increased (20%).

\(^{16}\) *Intentional misuse* is defined as an exposure resulting from the intentional improper or incorrect use of a substance for reasons other than the pursuit of a psychotropic effect. For example, a person deliberately increases the dosage of a medication to enhance its therapeutic effect or overuse of caffeine to study for an exam. *Intentional abuse* is defined as an exposure resulting from intentional improper or incorrect use of a substance where the patient was likely attempting to gain a high, euphoric effect, or psychotropic effect, including recreational use of a substance for any effect.
Substances Implicated in Calls

- In 2014, prescription medications accounted for almost one-third of total calls implicated in intentional abuse in Maryland.

Data Source: MPC 2014

- Identifiable substances most frequently implicated in cases of intentional substance abuse in Maryland were ethanol, benzodiazepines, heroin, prescription opioids, THC (tetrahydrocannabinol) homologs, antihistamine/decongestant/dextromethorphan combination products.
- Other agents represented 21% of calls, and include (but are not limited to): acetaminophen, ibuprofen, mouthwash, hand sanitizers, energy drinks, plants, gasoline, laxatives, electronic cigarettes isopropanol, Freon/other propellants, paint, hair spray, promethazine, sleep aids and synthetic cathinones (i.e., bath salts).
Synthetic Cannabinoids

- Synthetic cannabinoids refer to a mixture of herbs and spices typically sprayed with a man-made compound chemically similar to THC, the psychoactive ingredients in marijuana.\textsuperscript{17,18} Spice or K2 is an example of a synthetic cannabinoid.
- The total annual count of synthetic cannabinoid cases reported to the Maryland Poison Center surged between 2013 and 2015 after initially dropping from 2012 to 2013.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{synthetic_cannabinoid_cases.png}
\caption{Synthetic Cannabinoid Cases Reported to Maryland Poison Center: 2010-2015}
\end{figure}

Data Source: MPC 2010-2015

- Additional state and individual county data from the Maryland Poison Center can be retrieved from annual reports available at: [http://www.mdpoison.com/factsandreports/](http://www.mdpoison.com/factsandreports/)

Drugs Mentioned in Drug Identification Calls

- In 2014, a total of 11,888 drug identification calls were made to the Maryland Poison Center. Among the top ten medications most frequently mentioned in these calls, five were opioid analgesics and three were psychopharmacological medications (benzodiazepines, atypical antipsychotics, and clonidine).
- After benzodiazepines, which were identified in 2,733 (23%) of the calls, opioids (including oxycodone alone or with acetaminophen (APAP), hydrocodone/acetaminophen, tramadol and buprenorphine) were the second frequently mentioned medication class in drug identification calls—accounting for 2,562 (22%) drug identification calls.

**Data Source: MPC 2014**

- The category listed as ‘Others’ includes, but is not limited to, other opioids, promethazine, nonprescription drugs (e.g. acetaminophen), prescription strength ibuprofen, zolpidem and similar drugs, and cardiac drugs.
TREATMENT FOR SUBSTANCE USE DISORDERS

In 2013, treatment admissions for heroin and prescription opioids accounted for 38.9% of all state-sponsored treatment admissions.

Treatment admissions for heroin increased in 2013, and reached the same proportion of treatment admissions for alcohol problems.
Admissions to Substance Use Treatment Programs

- Alcohol, heroin, and marijuana were the top three most frequently reported substances of abuse by Marylanders entering State-supported substance use treatment programs in the state.
- As a percentage of total admissions, treatment admissions involving alcohol or cocaine/crack as the primary substance of abuse declined between fiscal 2008 and 2013, admissions for heroin, prescription opioids, marijuana/hashish, or benzodiazepines increased.

Data Source: Statewide Maryland Automated Record Tracking system fiscal years 2008-2013
Chart represents percentage of total treatment admissions in the fiscal year

Data Source: SMART 2008-2013
Primary Substances Reported at Treatment Admission

- Treatment admissions involving heroin as the primary problem increased by 14% from fiscal 2008 to 2013.
- Admissions for other leading substances of abuse declined over that time period, except for prescription opioids, whose admissions more than doubled from fiscal 2008 to 2012, then decreased in fiscal 2013.

![Graph showing primary substances reported on admissions to Maryland State Supported Alcohol and Drug Abuse Treatment Programs]

**Data Source:** SMART 2008-2013

- A data brief,\(^\text{19}\) prepared by the Maryland Department of Legislative Services, containing an additional year of data than presented here reports that heroin admissions surpassed alcohol admissions in fiscal 2014. Fiscal 2014 was the first year since reporting began in the mid-1970s that a substance other than alcohol was the leading problem among treatment admissions.

\(^\text{19}\) Maryland Department of Legislative Services. Substance Use in Maryland: Opioids. Accessed 18 February 2016. [http://dls.state.md.us/data/polanasubare/polanasubare_das/HHS_SubstanceAbuseInMarylandOpioids.pdf](http://dls.state.md.us/data/polanasubare/polanasubare_das/HHS_SubstanceAbuseInMarylandOpioids.pdf)
Needing But Not Receiving Treatment for Alcohol Use

- Maryland estimates of the prevalence of individuals needing but not receiving alcohol-related treatment were similar to national estimates in 2013 and 2014.
- The observed trends in Maryland and the US mirror the changes observed for the prevalence of individuals reporting past-year alcohol abuse/dependence.

Data Source: NSDUH 2003-2014
MENTAL HEALTH

Depression among youth and adults in Maryland and The United States is dramatically increasing.

Life-time prevalence of depression has increased among young adults.
Mental Illness and Substance Use Disorder Co-occurrence

- In 2013, more than 2 in 5 admissions for substance use treatment in Maryland also involved a current mental health problem.
- Over 43,000 admissions to Maryland state-supported alcohol and drug abuse treatment were reported in 2013. Of these, a current mental health problem was deemed present, according to a counselor’s evaluation, in 43.8% of treatment admissions, an increase from 35.0% in 2008.

![](chart.png)

**Data Source: SMART 2008-2013**

- The prevalence of co-existing mental illness varied depending on the substance of abuse reported upon admission.
- In 2013, admissions for substance use treatment that involved benzodiazepines were most likely associated with mental illness (64.6%), whereas admissions involving marijuana were least likely to be associated with mental illness (39.0%).
- From 2008 to 2013, the growth in co-existing mental illness was most notable among cases involving heroin (33.8% to 49.8%), marijuana (33.8% to 39.0%), and alcohol (37.2% to 44.1%).
- Increases in the prevalence of co-existing mental illness may be due in part to more intensive screening and/or better diagnostic capabilities over time.
Past-Year Major Depressive Episode

- Prevalence of major depression among teenagers aged 12-17 has increased markedly over time in Maryland and across the nation.
- The prevalence of major depression among Maryland teenagers increased from 8.1% in 2012 to 11.3% in 2014.

**Data Source: NSDUH 2005-2014**
**Lifetime Prevalence of Depressive Disorder**

- In 2014, for all age groups except young adults aged 18 to 25, lower percentages of Maryland residents were ever told they had a depressive disorder compared to their peers across the United States (data not shown).
- The overall prevalence of lifetime depressive disorders increased by 1.7% in Maryland between 2012 and 2014, a change largely driven by the rise in the percentage of 18 to 25 year olds reporting being told they had a depressive disorder.
- For those younger than 65 years of age, the proportion of individuals ever told that they have a depressive disorder increased with age, but this observation may be a result of the likelihood of developing the condition and being diagnosed increasing with age.
- Contrary to the trend of rising prevalence of depressive disorders with increasing age, those 65 years or older had the lowest prevalence of ever being told they had a depressive disorder compared to other age groups.

---

**2012-2014: Ever told had depressive disorder by Age Group, MD**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>11.2</td>
<td>13.6</td>
<td>15.8</td>
</tr>
<tr>
<td>26-44</td>
<td>14.7</td>
<td>15.6</td>
<td>16.1</td>
</tr>
<tr>
<td>45-64</td>
<td>16.6</td>
<td>17.7</td>
<td>16.1</td>
</tr>
<tr>
<td>65+</td>
<td>9.1</td>
<td>14.0</td>
<td>14.1</td>
</tr>
<tr>
<td>Overall</td>
<td>15.9</td>
<td>15.9</td>
<td>15.8</td>
</tr>
</tbody>
</table>

*Data Source: BRFSS 2012-2014*
Types of Mental Illness

- The prevalence of all types of mental illness or psychological distress in Maryland showed no significant change since 2009.
- Any mental illness had the highest prevalence, followed by major depression.

*Data Source: NSDUH 2003-2014*
MARYLAND SUBSTANCE ABUSE INITIATIVES

Prescription Drug Monitoring Program

The Centers for Disease Control and Prevention (CDC) has described prescription drug abuse as a national epidemic. The national strategy for tackling prescription drug abuse includes the use of prescription drug monitoring programs (PDMPs). PDMPs are state-run programs intended to monitor the prescribing, dispensing, and purchase of medications classified as controlled substances. PDMPs are a clinical and public health surveillance tool that can be used to monitor suspected abuse or diversion and identify high-risk patients who would benefit from early interventions such as addiction treatment. All states except Missouri have adopted PDMP laws.

In May 2011, Maryland legislation authorized Maryland’s PDMP and went into effect five months later. By law, dispensers were required to begin reporting to the PDMP beginning in August 2013, and full clinical user access to PDMP data via the Chesapeake Regional Information System for our Patients (CRISP) opened in December 2013. Pilot law enforcement user requests began at the end of February 2014. PDMP functionality allowing interstate data sharing was announced to CRISP registrants, professional organizations, Boards, and other stakeholders in August 2015. Access to patient prescription information collected by the PDMP is available at no cost to physicians, nurse practitioners, pharmacists, and others who provide pharmaceutical care to their patients.

Registration and utilization of PDMP data by prescribers is currently voluntary in Maryland, although this may change as the national trend moves toward mandatory registration and use of PDMP data in certain circumstances. As of early February in 2016, over 16,000 health care providers in Maryland had registered for access to PDMP data. Physicians (excluding interns, residents and assistants) accounted for 47% of total registrants; whereas 16% were pharmacists, 9% were registered nurses, 7% were nurse practitioners, 1% were licensed clinical social workers, and nearly 0.1% were dentists.

For more information on the Maryland Prescription Drug Monitoring Program, visit these sites:

1. Maryland Prescription Drug Monitoring Program. Behavioral Health Administration:
   http://bha.dhmh.maryland.gov/PDMP/SitePages/Home.aspx

2. The Maryland Prescription Drug Monitoring Program. Chesapeake Regional Information System for our Patients:
   https://crisphealth.org/CRISP-HIE-SERVICES/Prescription-Drug-Monitoring-Program-PDMP
Number of CRISP PDMP Registrants by Provider Type:
December 2013- February 2016

Data Source: CRISP 2013-2016
Maryland Opioid Misuse Prevention Program (OMPP)

The purpose of the Opioid Misuse Prevention Program (OMPP) is to reduce opioid misuse, opioid overdoses, and overdose fatalities by supporting the implementation of effective and sustainable prevention strategies. Currently, 17 local jurisdictions and one regional coalition of jurisdictions receive OMPP funding to strengthen and enhance local overdose prevention plans and to implement evidence-based opioid misuse prevention strategies contained in those enhanced plans. These strategies include: (1) universal prevention strategies designed to reach the general public, (2) selected prevention strategies designed to reach members of high risk groups that are not known to be using opioids, and (3) indicated prevention strategies designed to reach high-risk individuals who are known to be using opioids.

In year 1, jurisdictions conducted the first three steps of the SAMHSA strategic prevention framework (SPF) process (data collection/assessment, capacity building and strategic planning) while implementing local communication campaigns designed to increase community awareness about opioid misuse. The communications campaigns include messages that focus on awareness of prescription drug abuse and its potential consequences; education directed to high-risk populations; direction on how to get help with a substance related problem, and messaging around safe storage and disposal of medications. Various forms of media such as print, broadcast, and web-based have been used to get the messaging out to different audiences. Information about specific local campaigns can be found on the Facebook Substance Use Disorders in Maryland page.

In year 2, the OMPP Strategic Plan strategies are being implemented, including strategies such as prescriber (physician) education; dispenser (pharmacist) education; PDMP awareness and enrollment activities; media campaigns on sharing, safe storage and disposal of medications; youth targeted education on the risks of opioid misuse; general education on the risk of opioid addiction, overdose, and the pathway from legitimate medical opioid use to opioid misuse to heroin use; public awareness of the Good Samaritan Law; public awareness of the benefits and use of Naloxone; distribution of Naloxone to law enforcement, first responders, opioid users, and the family and friends of users/high risk individuals; prescription drug take back events; increasing drug drop boxes at police stations and pharmacies; distribution of drug lock boxes to parents and senior citizens; training for law enforcement and first responders on referring high-risk individuals to treatment; and Screening, Brief Intervention, and Referral to Treatment (SBIRT) programs.

For more information on the Opioid Misuse Prevention Program visit:

http://bha.dhmh.maryland.gov/ompp/SitePages/home.aspx
Maryland Overdose Response Program

Naloxone is an opioid antagonist which, upon administration, can immediately reverse an opioid overdose. In March 2014, the Department of Health and Mental Hygiene (DHMH) began Maryland’s Overdose Response Program (ORP), which allowed family members and friends of opioid users to access naloxone. The DHMH authorized private and public organizations to conduct naloxone training. Under ORP, these organizations apply to become authorized training entities and a licensed physician or nurse practitioner must directly conduct or supervise the education program.

The training provides information on how to recognize an opioid overdose, administer naloxone, and care for the individual until emergency services arrive. The program stresses the importance of contacting emergency services. Upon completion of the training program, authorized sites provide a naloxone kit and a certificate of completion valid for two years.

On December 14, 2015, DHMH deputy secretary for Public Health Dr. Howard Haft issued a statewide standing order allowing all Maryland-licensed pharmacists to dispense naloxone without a prescription to individuals trained and certified under ORP. To obtain naloxone, individuals need only to present their training certificate at participating pharmacies. The standing order allows for the dispensing of two doses of naloxone and necessary devices for administration. Available formulations include single-dose prefilled syringes for intranasal administration; intramuscular injection vials; and the Evzio® auto injector two-pack for subcutaneous or intramuscular injection. Only naloxone products included on the Medicaid preferred drug list (which includes generic naloxone) are available for reimbursement under the standing order and requires a $1 copay.

For more information on naloxone and the Maryland Overdose Response Program, visit these sites:

1. Overdose Response Program (ORP). Behavioral Health Administration:  
   http://bha.dhmh.maryland.gov/NALOXONE/Pages/Overdose-Prevention-.aspx

2. Dontdie.org: http://dontdie.org/

3. Statewide order issued for pharmacies to dispense overdose reversal drug:  

   Maryland Overdose Response Program: Statewide Naloxone Standing Order Guidance for Pharmacy Dispensing:  
Maryland Strategic Prevention Framework 2 Program

The Maryland Strategic Prevention Framework 2 (MSPF2) Project utilizes federal SAMHSA funding to strengthen the efforts of 10 local community coalitions in preventing and reducing underage and youth binge drinking in their communities. These coalitions, with training and technical assistance provided by the MSPF Technical Assistance and Evaluation Team, will build upon their past successes and overcome challenges they have faced over the past five years while implementing the original MSPF initiative.

Underage and youth binge drinking are the state’s youth substance use priorities as determined by a recent statewide youth AOD needs assessment. The primary recipients of the prevention strategies are 367,356 youth living in the ten selected jurisdictions. These jurisdictions were selected based on a formula that considered prevalence of youth alcohol use, consequences and contributing factors (this accounted for 70% of their selection score) as well as past coalition success in bringing original MSPF resources to bear and each jurisdiction’s contribution to the cultural diversity and geographic balance of the initiative (30% of score).

**Goal 1** of the initiative is to reduce underage and youth binge drinking in Maryland. Its objectives are (1) to reduce *underage drinking* in the 10 selected jurisdictions and statewide and (2) to reduce *binge drinking* by youth, ages 18-25, in the 10 jurisdictions and statewide. The interventions to attain this goal will be evidence-based prevention strategies primarily addressing key intervening variables for underage and youth binge drinking, including retail access to alcohol, social access, perception of harm and risk, community and social norms, enforcement of alcohol laws, alcohol pricing, and promotions.

**Goal 2** of the initiative is to strengthen state and local community prevention capacity and infrastructure. Its objectives are (1) to increase the *capacity* of sub-recipient prevention coalitions through the provision of guidance, training and technical assistance and (2) to strengthen the state and local prevention *infrastructure* by leveraging, redirecting and realigning the prevention resources administered by the Maryland Behavioral Health Administration (BHA) to exclusively support evidence-based prevention programs and strategies.

The MSPF2 initiative is currently in its beginning stages, focusing on developing data-driven community needs assessments, strengthening the capacity of the local community coalitions that will steer the initiatives, and developing comprehensive localized MSPF Strategic Plans for reducing and preventing underage drinking and youth binge drinking.

For more information on the Maryland Strategic Prevention Framework 2 Program, visit: [http://bha.dhmh.maryland.gov/mspf/SitePages/Home.aspx](http://bha.dhmh.maryland.gov/mspf/SitePages/Home.aspx)
CONCLUSIONS

This report provides the latest estimates of alcohol, tobacco, and drug use and the consequences of use in the state of Maryland. Findings suggest that non-medical use of prescription pain-relievers, use of marijuana, and non-cocaine illicit drugs are growing problems in all age groups. Although underage drinking and binge drinking among young adults have decreased; binge drinking among adults aged 26+ increased in recent years. Finally, although motor vehicle crashes related to impaired driving has declined in recent years, the proportion of all substance-related crashes resulting in a fatality remained high. Prevention and education efforts should be encouraged, including increased DUI surveillance and better understanding of environmental and legal efforts to reduce impaired driving.

Young adults aged 18-25 remain the highest users of all substances monitored in this report. In particular, this age group perceives marijuana to be relatively 'safe' and, as such, have increased their use of marijuana over the past several years. Given recent legislation in the state to allow use of marijuana for medical purposes, as well as decriminalization of small amounts of marijuana, young adults' perceptions of marijuana risk may decline even further. It will be important to monitor marijuana perceptions of risk, use, consequences of use, and treatment admissions in young adults, as well as in youth, as the substance becomes increasingly available for medical purposes in Maryland.

The non-medical use of prescription opioid analgesics and benzodiazepines remain current and growing problems. As the state implements its Prescription Drug Monitoring Program, monitoring the use of and treatment admissions for prescription medications with addiction potential will become increasingly important. Accordingly, identifying trends in overdose deaths and hospitalizations related to prescription medications will be a focus of future SEOW efforts, as will the use of potential 'substitute' substances (such as prescription opioids for heroin and benzodiazepines for alcohol or marijuana).

More than 40 percent of Maryland citizens in treatment for a substance use disorder have evidence of a concurrent mental health problem. The need to treat both conditions is important, as an individual's substance use behavior may be due to self-medicating for the mental health problems. Focusing on this at-risk population will also be a focus of future SEOW initiatives to provide evidence-based information to state policy-makers, researchers, and citizens.
APPENDIX

The report utilizes a number of data sources to provide the most current estimates of substance use and consequences of use in the state of Maryland. Data are made available by national and state agencies. The SEOW analyzes the data to provide information on key indicators of substance use disorders and dependence; outcomes of use; and treatment. As well, we provide indicators of mental health status and comorbidity with substance use disorders.

There are many data sources available to assess the consumption of substances and their associated consequences. The availability of data, however, does not necessarily mean the data has value. As well, the presentation of too much data has the tendency to overwhelm the end user. Thus, selecting both data and useful measures, or indicators, within these data sources proves a challenge for the SEOW. Each data source is briefly described below.
Data Sources

Alcohol Epidemiologic Data System (AEDS): The AEDS reports trends in consumption of alcohol in the United States using alcoholic beverage sales. The data are collected annually and reported in the autumn with a lag time of two years. Data are current through 2013. The report provides data on national consumption of beer, wine, and distilled spirits as well as for all alcoholic beverages combined. Alcoholic beverage sales data are either collected by the AEDS from states or provided by beverage industry sources. Population data from the U.S. Census Bureau are used to calculate rates. http://pubs.niaaa.nih.gov/publications/surveillance.htm

Behavioral Risk Factor Surveillance System (BRFSS): Initiated in 1984, BRFSS is an ongoing representative sample providing national- and state-level prevalence estimates of major behavioral risks associated with premature morbidity and mortality among adults aged 18 or older. Factors assessed by the BRFSS include alcohol and tobacco use, health care coverage, test results for HIV/AIDS, physical activity, and fruit and vegetable consumption. The Centers for Disease Control and Prevention (CDC) developed standard core questions for states to use in collecting data that could be compared across states. Initially conducted with paper-administered survey forms, interviews are now conducted through computer-assisted telephone interviewing (CATI). The typical statewide sample size is approximately 8,900 households in Maryland. The survey is administered annually and includes county level data starting in 2002. The sampling design of the survey changed in 2011; therefore data from 2011 and beyond is not directly comparable to data from prior years. Data are current through 2014. http://www.cdc.gov/brfss/

Health Services Cost Review Commission (HSCRC)/State Inpatient Databases (SID): The State Inpatient Databases (SID) are a powerful set of hospital databases from data organizations in participating states developed as part of the Healthcare Cost and Utilization Project (HCUP). The SID contains the universe of inpatient discharge abstracts translated into a uniform format to facilitate multi-state comparisons and analyses. Together, the SID encompasses about 90 percent of all U.S. community hospital discharges. In Maryland, the HSCRC an independent agency is charged with regulating hospital rates for all payers and is responsible for maintaining both the inpatient and outpatient facility data sets. The inpatient dataset contains discharge medical record abstracts and billing data on each of the state's approximately 800,000 yearly inpatient admissions. Hospitals submit data to the HSCRC on a quarterly basis and the agency generates research-ready datasets for public use. Access to the research level version of the inpatient or outpatient data requires the submission of an application to the HSCRC. Data is available through 2014. http://www.hscrc.state.md.us/

Maryland Automated Accident Reporting System (MAARS): The MAARS data is comprised of information extracted from motor vehicle accident reports submitted by over 200 Maryland law enforcement agencies. All accidents resulting in a vehicle being towed away, personal injury, or fatality are reported. Accident data is recorded by federal, state, county or local law enforcement officers at the scene of the reportable accident. Typically, within 10 days of the accident occurrence, the report is submitted to the Maryland State Police Central Records
Division for transfer into the Maryland Automated Accident Reporting System (MAARS) database file. Within 30 days, the data is uploaded to the Maryland State Highway Administration's database. The Central Records Division of the Maryland State Police manages the MAARS database and maintains the electronic accident database, which is shared with Transportation Safety Analysis Division and other agencies for analysis. This data is reported to National Highway Traffic Safety Administration and the national Fatality Analysis Reporting System. MAARS data are current through 2013.

**Maryland Poison Center (MPC):** The MPC, one of the regional poison centers that are certified by American Association of Poison Control Centers, collects information on poisonings and overdose cases through voluntary calls from Maryland residents. From over 60,000 calls annually, most exposure calls are from the public at the patient’s residence, followed by calls from providers in health care facilities (e.g., emergency departments; inpatient hospital settings, including intensive care units; and doctors’ offices). There are over 2,000 calls yearly from pre-hospital providers. The MPC database consists of information regarding the names of the product(s) involved, all reported ingredients, the amount of product(s) involved, time of the potentially toxic exposure, clinical effects, treatments, and outcomes. In addition, the MPC collects information on demographics (e.g., age, gender, and zip code), which is useful in examining the types of poisoning events in specific age groups and county regions. MPC data are current through 2014 and available upon request. [http://www.mdpoison.com/](http://www.mdpoison.com/)

**National Survey on Drug Use and Health (NSDUH):** The NSDUH provides national- and state-level data on mental health as well as the use of tobacco, alcohol and illicit drugs (including non-medical use of prescription drugs) in the United States. NSDUH is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency of the U.S. Public Health Service within the U.S. Department of Health and Human Services. A random sample of households is selected across the United States, and a professional field interviewer makes a personal visit to each selected household. After answering a few general questions during the in-person visit by the interviewer, residents of the household may be asked to participate. Participants answer most of the interview questions in private by entering their responses directly into a computer. The survey is conducted annually, with state-level data available from 1999-2013, substate-level data available every 2 years from 1999-2013 and national data available 1999-2014. [https://nsduhweb.rti.org/respweb/homepage.cfm#](https://nsduhweb.rti.org/respweb/homepage.cfm#)

**National Vital Statistics System (NVSS):** The National Center for Health Statistics, a division of the CDC, collects data from vital registration systems operated across the nation and from various jurisdictions legally responsible for the registration of vital events: births, deaths, marriages, divorces, and fetal deaths. NCHS provides important surveillance information that helps identify and address critical health problems including those related to the consequences of substance use. Data are current through 2014. [http://www.cdc.gov/nchs/nvss.htm](http://www.cdc.gov/nchs/nvss.htm). The data in this report were accessed through the CDC's Wide-ranging Online Data for Epidemiologic Research (WONDER) internet system. [http://wonder.cdc.gov/](http://wonder.cdc.gov/)
**State of Maryland Automated Record Tracking (SMART):** SMART data include treatment admissions from all substance use disorder treatment facilities that receive state alcohol and/or drug agency funds (including Federal Block Grant funds) for the provision of treatment for substance use disorders. SMART does not include data from private or for-profit treatment facilities, hospitals, the state correctional system (unless licensed through the state substance use disorders agency) or federal agencies (the Bureau of Prisons, the Department of Defense, and the Veterans Administration). Data elements in SMART include: reason for admission, primary and secondary substances of use, sociodemographic information, the presence or absence of mental illness and treatment modality. Data are current through 2013. SMART data for the 2014 and are not reported due to significant declines in reporting associated with changes in data collection and reporting.

**IMS Health National Prescription Audit:** The IMS Health captures elements of the prescription details recorded in retail pharmacies of all types—chain, independent, mail-order, and specialty. In total, IMS Health receives data on more than 3 billion dispensed prescription transactions a year. Data extracted for this study provide detail on prescription fills of select controlled medications, including opioid analgesics of all schedules (i.e., morphine, hydrocodone, oxycodone, methadone, codeine, and tramadol). For each medication, drug name and the total number of prescription fills were summarized by prescription fill status (new/refill), location (down to state-specific metropolitan statistical area level), and calendar month. Data requested by SEOW covers data from 2012 and 2013 in Maryland and surrounding states, including Washington DC, Virginia, West Virginia, Delaware, and Pennsylvania. The schedule classification of each controlled substance was added by the research team pharmacists, referencing the US Drug Enforcement Administration and state controlled substance schedules.


**Office of the Chief Medical Examiner (OCME):** The OCME is the statewide agency designated to investigate deaths from injury, homicide, unusual or suspicious circumstances, or when a person is not attended by a physician. Along with forensic investigation to determine the cause and manner of death, OCME serves an important public health role by identifying injury trends or potential infectious diseases that may pose risk to Marylanders. More information about OCME is available at [http://dhmh.maryland.gov/ocme/Pages/Home.aspx](http://dhmh.maryland.gov/ocme/Pages/Home.aspx)
Indicators

In identifying and selecting potential indicators of tobacco, alcohol, and drug use and consequences of use, we relied on the availability of data to operationalize the indicators, as well as materials and guidance provided by SAMHSA for statewide epidemiological initiatives. In selecting primary indicators for alcohol and substance use, we applied the following epidemiologically-driven criteria:

1) **Relevance:** To be included in this report, each indicator must be directly related to substance use and/or consequences of use. As well, the proposed indicator must be evaluable. The chosen indicator must be related to the problem being assessed. That is, if an indicator is too broadly defined, inferences about its relationship to alcohol and/or substances may not be clear or direct.

2) **Generalizability:** The proposed indicator must be available at the state level AND national and/or sub-state levels. The ability to generalize the prevalence of an indicator to the nation provides both context and an assessment of a particular indicator’s relative severity. National comparisons help provide some idea of whether a particular problem (e.g., binge drinking among young adults) is significant in the state. Such knowledge helps prioritize prevention efforts, as well as evaluate efforts that have active prevention initiatives. Similarly, comparison of sub-state regions can help identify areas to target resources and initiatives.

3) **Timeliness:** The proposed indicator must be available over time. Evaluation of indicators over time provides a sense of change, and hence the effectiveness of prevention and policy initiatives. The proposed indicator must be current and available. The lag time between data collection and availability is important for states and their jurisdictions in prioritizing prevention efforts. Currently available data provides a more accurate snapshot of consequences and consumption of alcohol and substances.

4) **Reliability and Validity:** The data from which the proposed indicator derives must have accepted validity and reliability. An indicator is only as good as its data source. If sample sizes are inadequate, then reliable estimates cannot be made. If the data are not collected uniformly or routinely, then the indicator may not be valid.

5) **Availability:** For an indicator to be included in this report, data regarding its use must be available from a regular and reliable source.

In addition to primary indicators evaluated in this report, the SEOW also recognizes the changing needs of SAMHSA and ADAA to include mental health, recovery, and treatment imperatives. To address these mandates, the SEOW has identified additional secondary indicators. Although these secondary indicators do not meet all the criteria established for the primary indicators, they have intrinsic value to the state. For this report, the secondary indicators serve as benchmark for future epidemiological profiles. Secondary indicators incorporated in this report include those reported in the sections on mental health, suicide, and co-occurring disorders.
Additional Links and Resources


Maryland’s Tobacco Resource Center: [http://mdquit.org/](http://mdquit.org/)


State Resources

Maryland Statewide Epidemiological Outcomes Workgroup (SEOW):  
http://www.pharmacy.umaryland.edu/programs/seow/

Department of Health and Mental Hygiene (DHMH):  
http://dhmh.maryland.gov/Pages/Index.aspx

DHMH Virtual Data Unit  
http://dhmh.maryland.gov/DATA/Pages/home.aspx

Maryland Office of the Chief Medical Examiner  
http://dhmh.maryland.gov/ocme/Pages/Home.aspx

Behavioral Health Administration (BHA):  
http://bha.dhmh.maryland.gov/Pages/Index.aspx

Overdose Response Program (ORP):  
http://bha.dhmh.maryland.gov/NALOXONE/Pages/Home.aspx

Maryland Prescription Drug Monitoring Program (PDMP)  
http://bha.dhmh.maryland.gov/pdmp/Pages/Home.aspx

Office of Prevention and Wellness (OPW):  

Maryland Strategic Prevention Framework (MSPF):  
http://bha.dhmh.maryland.gov/mspf/SitePages/Home.aspx

Opioid Misuse Prevention Program (OMPP):  
http://bha.dhmh.maryland.gov/ompp/SitePages/home.aspx

Federal Resources

Substance Abuse and Mental Health Services Administration (SAMHSA):  
http://www.samhsa.gov/

National Institute on Drug Abuse (NIDA):  http://www.drugabuse.gov/

National Institute on Alcohol Abuse and Alcoholism (NIAAA):  http://www.niaaa.nih.gov/

Office of National Drug Control Policy:  https://www.whitehouse.gov/ondcp