The SCE Narrative is written by the Sentinel Community Epidemiologist (SCE) and provides their interpretation of important findings and trends based on available national data as well as sources specific to their area, such as data from local medical examiners or poison control centers. As a local expert, the SCE is able to provide context to the national and local data presented.

This SCE Narrative contains the following sections:

◊ SCS Highlights
◊ Changes in Legislation
◊ Substance Use Patterns and Trends
◊ Local Research Highlights (if available)
◊ Infectious Diseases Related to Substance Use (if available)

The SCE Narratives for each of the 12 Sentinel Community Sites and detailed information about NDEWS can be found on the NDEWS website at www.ndews.org.
National Drug Early Warning System (NDEWS)
Wayne County (Detroit Area) Sentinel Community Site (SCS)
Drug Use Patterns and Trends, 2016: SCE Narrative

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Highlights

- **Heroin** continues to be the primary drug of concern in Michigan and Wayne County as measured by increasing deaths and steadily high levels of treatments admissions and seizures.

- **Cocaine** seems to be more of a problem in urban Wayne County than for the state as whole and may be stabilizing as measured by treatment admissions, seizures, and deaths.

- In contrast, **methamphetamine** seems to be more of a problem across the state than in urban Wayne County and accounts for far fewer treatment admissions than other drugs of abuse.

- **Prescription opioids** are more of a problem across the state than in urban Wayne County based on treatment admissions and seizures; **hydrocodone** continues to be more commonly identified in seizures than other prescribed opioids despite upscheduling.

- Few **novel psychoactive substances** measured in either absolute numbers and diversity were identified by seizures.

- There were no substantial new patterns of drug use or new emerging drugs.
Changes in Legislation

Specific policies affecting drug use include the statewide approval of medical marijuana in 2008. At the local level, several municipalities have decriminalized possession of small amounts of marijuana, including Detroit in 2012. Michigan scheduled compounds used in synthetic cannabinoids and cathinones in 2012. Nevertheless, Michigan lagged in approving the wider use of naloxone and Good Samaritan rules. Only in late 2014 were they approved, with additional clarifying laws signed in 2015. The Good Samaritan rule in particular only applies to minors who report overdoses from alcohol or prescription medications. Additional legislature is under discussion at this time.

The Michigan Prescription Drug and Opioid Abuse Task Force released its recommendations in October 2015, which included updating and requiring the use of the prescription monitoring system. In 2014, substance abuse was added to the mental health law as a possible cause for involuntary treatment. Also signed into law was the requirement that all first-responders in the state be required to have naloxone. Funding and training issues are still being resolved in some counties. Naloxone has been dispensed to a limited extent at needle exchanges, one of which is operated by a nonprofit organization in Detroit.

Michigan was one state that expanded Medicaid, which allowed for an increase in the number of people entering drug treatment that is reflected in the treatment admissions data provided in this profile. In addition, the integration of substance abuse services with mental health services included the use of a common admission form in fiscal year 2015.

Substance Use Patterns and Trends

OVERVIEW

- There were no substantial new patterns of drug use or new emerging drugs.

Heroin continues to be the primary drug of abuse in Michigan and Wayne County. In Wayne County, deaths attributed to heroin increased every year from 2010 (2.9 per 100,000) through 2014 (9.4 per 100,000) (see Exhibit 1). The number of deaths attributed to heroin was also higher than the number of deaths attributed to other opioids (3.8 per 100,000 for natural and seminatural opioids and 2.2 per 1000,000 for synthetic opioids) or cocaine (4.3 per 100,000) (see Exhibit 1). Admissions for heroin use disorder accounted for 38.8% of publicly funded treatment during 2015 in Wayne County, which was more than for any other substance. In 2011, such admissions accounted for 32.2% of all treatment admissions. For the state, heroin was the second most common primary drug of abuse for publicly funded treatment (30.4% in 2015 compared with 19.1% in 2011). The medications used in treatment, namely, methadone and buprenorphine, are increasingly dispensed (see Exhibits 6 and 7). The recent approval of naloxone for first-responders has not been fully implemented yet in all counties.
Prescription opioids continue to account for a minority of treatment admissions (Michigan, 13.5% in 2015 compared with 14.7% in 2011; Wayne County, 6.5% in 2011 and 6.6% in 2015) and deaths (3.8 per 100,000 for natural and seminatural opioids and 2.2 per 1000,000 for synthetic opioids).

Treatment admissions for cocaine were lower than in 2011 (Wayne County: 11.6% for 2015 compared with 14.4% and Michigan: 6.9% for 2015 compared with 8.6%). For both Wayne County and Michigan, cocaine admissions have a higher percentage of African Americans than other substances (65.6% in Wayne County and 51.6% for Michigan). Additionally, people admitted with cocaine as the primary drug of abuse were more likely 45 years of age or older (60.6% for Michigan and 71.7% for Wayne County) than other drugs of abuse. Nevertheless, there were more admissions with cocaine as a secondary drug to major drugs of abuse than as a primary drug for Michigan (6,339 compared with 3,907) and Wayne County (2,422 compared with 1,556).

Methamphetamine accounts for far fewer treatment admissions than other major drugs of abuse (n = 12 for Wayne County and 801 or 1.4% for Michigan).

Benzodiazepines and marijuana contribute more to admissions as secondary drugs of abuse to major drugs of abuse than as primary drugs, for both Wayne County and Michigan. For benzodiazepines, the numbers were 454 compared with 77 as primary drug in Wayne County and for Michigan, 3,026 compared with 534. For marijuana, the numbers were 1,622 compared with 1,042 as primary drug in Wayne County and for Michigan, 8,583 compared with 6,142.

Drug poisoning deaths (not adjusted for age or other demographic variables) increased almost every year in Michigan from 1999 to 2014 to 20.7 per 100,000 (from 7.2 per 100,000). The rate surpassed that of the country every year. In contrast, alcohol poisoning deaths only increased to 9.1 per 100,000 in 2014. The increase in drug poisoning deaths occurred in both sexes, age groups with sufficient numbers to test, and in both Whites and Blacks. The subgroup with the greatest increases was Whites although it is of great concern that there were increases in heroin-specific deaths among people 21–34 and 35–54 years of age.

**BENZODIAZEPINES**

The number of people admitted with benzodiazepines as the primary drug of abuse in 2015 was low at both the state (n = 534) and the county level (n = 77). Nevertheless, the number of admissions with benzodiazepines as secondary drug of abuse was higher (n = 454 for the county and 3,026 for the state). The 2015 NFLIS highlights benzodiazepine diversion or abuse. Alprazolam ranked 6th in Wayne County (184 items or 2.5% of drug reports) and 7th in Michigan (881 items or 2.7% of drug reports).

**COCAINE**

- Cocaine seems to be more of a problem in urban Wayne County than for the state as whole and may be stabilizing as measured by treatment admissions, seizures, and deaths.

The number of Wayne County drug-associated deaths with laboratory confirmed cocaine detected was 143 in fiscal year 2015 (from 146 in fiscal year 2014). The numbers of deaths are consistently more than 118 in fiscal year 2013. Additionally, from 2012 to 2013, the number of overdose deaths with cocaine as
a cause increased from 75 to 78, underscoring that using cause of death may underestimate its involvement. Cocaine was the third most common primary drug of abuse at admission to treatment at the county level \((n = 1,556 \text{ or } 11.6\%)\) and 5th at the state level \((n = 3,907 \text{ or } 6.9\%)\), but more people had cocaine as a secondary drug than as a primary drug of abuse. People admitted with the primary drug of cocaine were most likely to smoke it; at the state level, it was 77.7%, and at the county level, it was 86.8%. Those who were admitted to treatment were more likely to be Black (65.6% for county and 51.6% for state) and older (45 or older, 71.7% for county and 60.6% for state) than for other drugs of abuse. Cocaine was the second-ranked drug identified in reports for items seized and analyzed in the National Forensic Laboratory Information System (NFLIS) database for 2015; it accounted for 13.7% of items analyzed across the state and 18.7% in Wayne County. Wayne County accounted for 30.4% of cocaine items analyzed statewide.

**MARIJUANA**

The number of medical marijuana certificates declined from a peak of 118,368 (14,169 in Wayne County or 12.0%) in fiscal year 2013 to 96,408 (12,258 in Wayne County or 12.7%) in fiscal year 2014, possibly suggesting that people are not viewing the certificate as legal protection or as necessary as in past years. Nevertheless, in fiscal year 2015, there were 182,091 patients approved for medical marijuana with 25,949 in Wayne County (14.3% of total; see Exhibit 2). Treatment admissions, traditionally driven by legal pressure, declined over time at both the state \((n = 6,142 \text{ or } 10.8\%)\) and the county \((n = 1,042 \text{ or } 7.8\%)\) level during 2015. Admissions with the primary drug of abuse of marijuana still had the youngest age distribution (state, 15.8% younger than 18 years of age and 13.1% at the county level). At the county level, people admitted were predominately Black (64.1%), but at the state level, the majority were White (52.6%). Among treatment admissions, it is the most common secondary drug of abuse for Michigan and second to cocaine for Wayne County. Marijuana is the most common drug identified in reports for items seized and analyzed in NFLIS at both the state (44.2% of items) and the county level (50.1% of items). Wayne County accounted for 25.2% of marijuana items analyzed statewide.

**METHAMPHETAMINE**

- In contrast, methamphetamine seems to more a problem across the state than in urban Wayne County accounts for far fewer treatment admissions than other drugs of abuse.

Methamphetamine is the 6th-leading primary drug of abuse at treatment admission at the state level \((n = 801 \text{ or } 1.4\%)\) and 8th for the county \((n = 12 \text{ admissions or } 0.1\%)\). At both the state and the county level, the people admitted with methamphetamine as the primary drug of abuse are most likely to be non-Hispanic Whites (90.8% for the state and 58.3% for the county). At the state level, 47.4% of admissions smoked it and 75.0% at the county level ingested it orally. In the 2015 NFLIS, methamphetamine ranked 5th for the state (4.4% of items) and 12th for the county (0.4% with 29 items). Wayne County accounted for 2.0% of methamphetamine items analyzed statewide.

**NEW PSYCHOACTIVE SUBSTANCES (OTHER THAN OPIOIDS)**

- Few novel psychoactive substances measured in either absolute numbers and diversity were identified by seizures.
Calls to the Michigan Poison Control Center were low for synthetic cannabinoids \( n = 29 \). No one was admitted for synthetic cannabinoids use disorder in Michigan during the first half of 2016.

At the state level, 20 different synthetic substances of interest to NDEWS (and 264 reports) were identified in reports for items seized and analyzed in NFLIS; 10 (50\%) different substances were in Wayne County (60 reports or 22.7\% of the state’s total). The synthetic with the most items identified was BZP for both Wayne County and Michigan in 2014. Nevertheless, in 2015, the substance most frequently identified was ethylone (29 at the county level and 93 at the state level). Wayne County accounted for 31.5\% of piperazine, 28.9\% of synthetic cathinone, 8.6\% of phenethylamine, and no items that were identified as tryptamine or synthetic cannabinoid items. The low proportions for some of these synthetic substances could represent different distributions, different likelihoods of items being seized by law enforcement, or other items being more attractive for prosecutors to request analysis.

For the state, the only piperazines identified were BZP \( n = 20 \) vs. 128 in 2014) and TFMPP \( n = 37 \) in 2015). The most common synthetic cathinone was ethylone \( n = 93 \) out of 128 drug reports for the state and 29 out of 37 for the county). The most common phenthylamine was 25-I-NBOME \( n = 33 \) out of 58 for the state and 2 out of 5 for the county). The only tryptamine identified at the state level was DMT \( n = 13 \) compared with 22 in 2015), and the most common synthetic cannabinoid was AB-PINACA \( n = 4 \) out of 8 in 2015 compared with \( n = 11 \) in 2015). Compared with the nation, Michigan does not seem to have the diversity or number of synthetic compounds identified in other sites in the NFLIS database. This does not mean that the synthetics are absent or that those that are being distributed are safe. It means that the items seized by law enforcement and requested by the prosecutor to be analyzed were mostly marijuana, cocaine, and heroin (69\% of drug reports in 2015).

Data are limited to determine temporal trends for NFLIS. In 2012, there were 135 synthetic cathinone items analyzed compared with 116 in 2014 and 128 in 2015 (state of Michigan). As in 2012, there were more synthetic cathinone items identified in 2014 than synthetic cannabinoid items identified. For 2015, there 8 reports of synthetic cannabinoids with none of them seized in Wayne County. It is not possible from the NFLIS report to determine the form of the synthetics (e.g., sold as Ecstasy or as bath salts).

**OPIOIDS**

- Heroin continues to be the primary drug of concern in Michigan and Wayne County as measured by increasing deaths and steadily high levels of treatments admissions and seizures.

- Prescription opioids are more a problem across the state than in urban Wayne County based on treatment admissions and seizures; hydrocodone continues to be more commonly identified in seizures than other prescribed opioids despite upscheduling.

**Heroin**

The number of Wayne County drug-associated deaths with laboratory-confirmed heroin detected increased to 267 in fiscal year 2015, up from 239 the prior year. It surpassed the number of deaths for all other drugs and alcohol. Deaths with heroin as a cause increased from 147 in 2013 to 155 in 2014 for an age-adjusted rate of 9.5 per 100,000. For both the state and the county, treatment admissions with the primary drug of heroin accounted for a substantial proportion (24.7\% and 40.6\% in 2014 vs. 30.4\%
and 38.8% in 2015). In 2015, heroin was the second most common drug reported at admission at the state level (after alcohol) and the first at the county level. The state reports that it again spent a record amount on methadone treatment ($17.9 million) in FY 2015 (see Exhibit 6). The number of units of buprenorphine dispensed in the state also increased (see Exhibit 7). The proportion of treatment admissions injecting heroin continued to be higher for state admissions (75.5%) than for the county (55.7%). At the state level, a greater percentage of people had prescription opioids as a secondary drug of abuse (5.9%) compared with Wayne County (2.2%). During the last years, there has not been an increase in the proportion of admissions among young people, in contrast to changes at the state level from 2003 to 2008. For both the county and the state, heroin was the 3rd-ranked drug identified in reports for items seized and analyzed in NFLIS. For the state, it accounted for 11.1% of items, and for the county, it accounted for 13.5% of items analyzed. Overall, Wayne County accounted for 27.1% of heroin items analyzed statewide even though the county has 17.9% of the population.

**Prescription Opioids and Fentanyl**

The number of prescription units dispensed increased from 2007 to 2015 (see Exhibit 4). The number of prescription units dispensed for Schedule II medications saw a decline in 2015 compared with 2014 for the first time since prescription monitoring moved online (2007), which is consistent with national reports. Units dispensed of Schedule IV also increased consistent with scheduling of tramadol. Units dispensed of Schedule V medications were lower in 2015 than at any time since 2007.

Prescription opioids as primary drug of abuse ranked 3rd in the state (13.5% of admissions) and 5th in the county (6.6% of admissions). Similar to methamphetamine, the people admitted were predominately White at the state and county levels.

The most dramatic finding with regard to opioids was the increase in drug-associated deaths with laboratory-confirmed fentanyl detected. Over the 3-year period of fiscal years 2013–2015, the number of deaths increased from 11 in FY2013 to 148 in FY2015. Nevertheless, the number of deaths is much lower (148) than is the number of deaths with heroin (267). Some decedents only had fentanyl detected. The number of deaths with all other prescribed opioids (whether obtained with a prescription or otherwise) accounted for 144 deaths, which is a decline from 177 in FY2014 and 190 in FY2013. Within Wayne County, the age-adjusted death rate for synthetic opioids (fentanyl and tramadol according to the CDC) doubled from 1.1 per 100,000 in 2013 to 2.3 in 2014.

In the NFLIS database, hydrocodone is the most common prescription medication identified in reports for items seized and analyzed. For Wayne county, hydrocodone was ranked 5th with 209 items and oxycodone was ranked 7th with 89 items. At the state level, hydrocodone was ranked 6th with 1,179 items and oxycodone was ranked 11th with 367 items.
Infectious Diseases Related to Substance Use

There were 814 new HIV infections reported in Michigan in 2014, which was an increase from 789 in 2013. The 814 people represent a rate of 8.2 per 100,000 population for 2014. Risk groups for the newly diagnosed infections include Male–Male Sex (MSM; 60%), Heterosexual Contact (17%), Injection Drug Use (IDU; 2%), MSM/IDU (1%), Perinatal (1%), and Undetermined (19%). The age groups with the most new diagnoses were 20–24 years (24%), 25–29 years (20%), and 30–39 years (20%). African Americans were most impacted (64%) followed by Whites (26%).

As of July 2015, there are 16,190 people living in Michigan with diagnosed HIV infection for a rate of 163 per 100,000. This rate is lower than 170.4 per 100,000 reported in 2011. Overall, risk groups for the prevalent cases include MSM (52%), Heterosexual Contact (19%), IDU (8%), MSM/IDU (4%), Perinatal (1%), and Undetermined (16%). The age groups with the most prevalent cases were 20–24 years (16%), 25–29 years (17%), and 30–39 years (32%). African Americans were most impacted (58%) followed by Whites (33%). More than half (54%) of the prevalent cases live in Wayne County (n = 8,760) for a rate of 425 per 100,000. Within Wayne County, Detroit is home for 6,840 prevalent cases for a rate of 800 per 100,000.

There were 50 new acute cases of hepatitis B in 2014 (the most recent year of published data), which is a rate of 0.5 per 100,000. This rate has decreased every year since 2008 and is below the national rate of 1.0 per 100,000. The new cases did not differ by gender (50% female and 50% male) but were predominately White (62%) with a mean age of 46. There were 1,141 new chronic hepatitis B diagnoses in Michigan in 2014 for a rate of 11.55 per 100,000 people with a predominance of males (56.5%) and Whites (25%) and Asian Americans (22.7%).

There were 76 new hepatitis C infections in 2014, which is a rate of 0.8 per 100,000 that is similar to rates in 2012 and 2013. It is also similar to the national rate of 0.7 per 100,000. For new cases in 2013, injection drug use was reported by 69.8% of acute hepatitis C cases. There were 8,233 new chronic hepatitis C cases in 2014 for a rate of 83.30 per 100,000. The rate is twice as high among men (107.57) compared with women (59.58). The rate is also higher among American Indians and Alaskan Natives (122.6) and African Americans (115.77) than the general population. Injection drug use was a risk factor for 64.9% and incarceration for 67.3%. No information is published on the rates by county. Nevertheless, since 2004, the number of cases among persons 18–29 years of age increased by more than 484%. For this age group, 87.2% reported injection drug use.
Exhibit 1. Wayne County Drug Poisoning Death Rates by Drug and Year, 2010–2014

Drug poisoning death rates by drug and year, Wayne County: 2010-2014

Exhibit 2. Wayne County Age-Adjusted Drug Poisoning Death Rates by Drug and Year, 2010–2014

Age-adjusted drug poisoning deaths by drug and year, Wayne County: 2010-2014
Exhibit 3. Wayne County Overdose Deaths by Drug, by Fiscal Year 2013–2015


Exhibit 4. Number of People Certified to Use Medical Marijuana in Michigan, by Fiscal Year 2013–2015

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number Approved</th>
<th>Number Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>118,368</td>
<td>14,169</td>
</tr>
<tr>
<td>2014</td>
<td>96,408</td>
<td>12,258</td>
</tr>
<tr>
<td>2015</td>
<td>182,091</td>
<td>25,949</td>
</tr>
</tbody>
</table>

Source: Department of Licensing and Regulation Affairs
### Exhibit 5. Poison Control Center Information for the State of Michigan, by Year 2012–2014

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th></th>
<th>2013</th>
<th></th>
<th>2014</th>
<th></th>
<th>% change from 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All exposures</td>
<td>Unintentional</td>
<td>%</td>
<td>All exposures</td>
<td>Unintentional</td>
<td>%</td>
<td>All exposures</td>
</tr>
<tr>
<td>Cocaine</td>
<td>169</td>
<td>9</td>
<td>5.3</td>
<td>189</td>
<td>8</td>
<td>4.2</td>
<td>152</td>
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<tr>
<td>Heroin</td>
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<td>1</td>
<td>0.6</td>
<td>330</td>
<td>0</td>
<td>0.0</td>
<td>246</td>
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<tr>
<td>Marijuana</td>
<td>264</td>
<td>26</td>
<td>9.8</td>
<td>215</td>
<td>11</td>
<td>5.1</td>
<td>222</td>
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<td>THC homologs</td>
<td>280</td>
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<td>1.4</td>
<td>25</td>
<td>0</td>
<td>0.0</td>
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<td>Methamphetamine</td>
<td>59</td>
<td>26</td>
<td>44.1</td>
<td>62</td>
<td>27</td>
<td>43.5</td>
<td>46</td>
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<td>Hallucinogenic Amphetamines</td>
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<td>2</td>
<td>2.9</td>
<td>55</td>
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<td>5.5</td>
<td>59</td>
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<td>Select Opioids</td>
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<td></td>
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</tr>
<tr>
<td>Fentanyl</td>
<td>69</td>
<td>12</td>
<td>17.4</td>
<td>66</td>
<td>11</td>
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<tr>
<td>Hydrocodone</td>
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<td>4</td>
<td>21.1</td>
<td>24</td>
<td>8</td>
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<tr>
<td>Oxycodone</td>
<td>148</td>
<td>50</td>
<td>33.8</td>
<td>149</td>
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<td>Benzodiazepines</td>
<td>2,978</td>
<td>569</td>
<td>19.1</td>
<td>2,820</td>
<td>538</td>
<td>19.1</td>
<td>2,684</td>
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Source: Children’s Hospital of Michigan Poison Control, provided by Michigan State Police.

<table>
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<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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</thead>
<tbody>
<tr>
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<td># scripts</td>
<td>%</td>
<td># scripts</td>
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<tr>
<td>Schedule II</td>
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<td>3,029,489</td>
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<tr>
<td>Schedule III</td>
<td>6,503,453</td>
<td>38.2</td>
<td>6,598,127</td>
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<tr>
<td>Schedule IV</td>
<td>6,701,637</td>
<td>39.4</td>
<td>6,758,505</td>
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<tr>
<td>Schedule V</td>
<td>896,021</td>
<td>5.3</td>
<td>1,014,519</td>
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<tr>
<td>total</td>
<td>17,007,858</td>
<td>1086,230,111</td>
<td>17,400,640</td>
</tr>
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</table>

|           | change from prior year | 2.3% | 6.7% | 2.7% | 3.6% |

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># scripts</td>
<td>%</td>
<td># scripts</td>
</tr>
<tr>
<td>Schedule II</td>
<td>3,581,342</td>
<td>18.9</td>
<td>3,933,409</td>
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<tr>
<td>Schedule III</td>
<td>7,342,654</td>
<td>38.7</td>
<td>8,160,970</td>
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<tr>
<td>Schedule IV</td>
<td>7,085,734</td>
<td>37.4</td>
<td>6,635,037</td>
</tr>
<tr>
<td>Schedule V</td>
<td>944,442</td>
<td>5.0</td>
<td>1,034,264</td>
</tr>
<tr>
<td>total</td>
<td>18,954,172</td>
<td>1,251,390,139</td>
<td>19,763,680</td>
</tr>
</tbody>
</table>

|           | change from prior year | 6.0% | 4.2% | 4.3% | 5.1% | 6.2% | 5.5% |
### Exhibit 6. Prescription Drug Monitoring Program Number and Percentages of Prescriptions and Units, State of Michigan, by Schedule and Year 2007–2015 (continued)

<table>
<thead>
<tr>
<th>Schedule</th>
<th>2013</th>
<th>2014</th>
<th>5-year change, %</th>
<th>1-year change, %</th>
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</thead>
<tbody>
<tr>
<td></td>
<td># scripts</td>
<td>%</td>
<td># units</td>
<td>%</td>
</tr>
<tr>
<td>Schedule II</td>
<td>4,500,619</td>
<td>21.5</td>
<td>282,352,544</td>
<td>20.0</td>
</tr>
<tr>
<td>Schedule III</td>
<td>8,280,239</td>
<td>39.6</td>
<td>586,109,834</td>
<td>41.5</td>
</tr>
<tr>
<td>Schedule IV</td>
<td>7,125,334</td>
<td>34.1</td>
<td>389,558,304</td>
<td>27.6</td>
</tr>
<tr>
<td>Schedule V</td>
<td>1,019,141</td>
<td>4.9</td>
<td>152,784,022</td>
<td>10.8</td>
</tr>
<tr>
<td>total</td>
<td>20,925,333</td>
<td>1,410,804,704</td>
<td>21,069,043</td>
<td>1,422,687,293</td>
</tr>
</tbody>
</table>

Change from prior year:
- Schedule II: 0.3%
- Schedule III: 1.6%
- Schedule IV: 0.7%
- Schedule V: 0.8%

Source: Michigan Department of Licensing and Regulatory Affairs

Number of dispensed units of medications by Michigan by schedule over time: 2007-2015

SOURCE: Michigan Automated Prescription Monitoring System

Exhibit 8. Amount Spent on Methadone for Treating Opioid Use Disorder in Michigan, FY2006-FY2015

Michigan is spending more on methadone for treating opioid use disorder: FY2006 – FY2015

$12,880,056 more spent in FY2015 than in FY2006

SOURCE: MDHHS reporting requirements


Approved by FDA 2002
Data Sources

Data for this report were drawn from the following sources:

**Treatment admissions** data were provided by the Performance Measurement and Evaluation Section of the Division of Quality Management and Planning in the Bureau of Behavioral Health and Developmental Disabilities, Michigan Department of Health and Human Services, for those clients whose treatment was covered by Medicaid or Block Grant funds. It therefore underestimates the total number of people receiving treatment as it does not include treatment paid by cash or covered by private insurance. Additionally, the data do not include admissions funded by the Michigan Department of Corrections.

**Data on drug reports among drug items seized** in Wayne County and the State of Michigan and analyzed were provided by the National Forensic Laboratory Information System (NFLIS) for calendar year 2015 as reported in May 2016. The total reports include primary, secondary, and tertiary substances detected. The totals are preliminary and subject to change.

**Numbers of prescriptions filled in the state of Michigan** were provided by the Michigan Department of Licensing and Regulatory Affairs.

**Numbers of people certified to use Medical Marijuana** were provided by the Michigan Department of Licensing and Regulatory Affairs.

**Drug-related infectious disease** data were provided by the Michigan Department of Health and Human Services on human immunodeficiency virus (HIV) and hepatitis.

**Numbers of accidental drug associated deaths** for Wayne County were provided by the Office of the Medical Examiner (Wayne County).

**Drug poisoning death** data are from the Centers for Disease Control and Prevention (CDC)’s online WONDER database (http://wonder.cdc.gov/) and from the National Vital Statistics System-Mortality (NVSS-M) data accessed from the CDC’s Health Indicators Warehouse (www.healthindicators.gov) on 12/16/2015–2/9/2016.

**Calls to Children’s Hospital of Michigan Poison Control** are for human exposures and cover the entire state of Michigan. Michigan State Police provided the data.

*For additional information about the drugs and drug use patterns discussed in this report, please contact Cynthia L. Arfken, Ph.D., Professor, Wayne State University, Department of Psychiatry and Behavioral Neurosciences, 3901 Chrysler Service Drive, Tolan Park Medical Building, Detroit MI 48207, Phone: 313–993–3490, E-mail: cynthia.arfken@wayne.edu.*