Women of Reproductive Age: Substance Abuse

This brief was put together by the Informatics, Epidemiology, and Health Planning Team at Tri-County Health Department with the collaboration and assistance of the Maternal and Child Health Team at Tri-County and the Health Statistics team at the Colorado Department of Public Health and Environment.

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Substance Misuse Among Women of Reproductive Age (Ages 18-44)

Substance abuse poses significant health risks to women of reproductive age (18-44). Many substances, both illegal and legal, have the potential for abuse or misuse; common examples include tobacco, alcohol, cocaine, heroin, marijuana, methamphetamine, and prescription drugs. The abuse of substances is associated with health risks and poor health outcomes like addiction, mental health disorders, organ damage, overdose, and death. For women who become pregnant, substance abuse is associated with preterm birth, stillbirth, fetal development problems including brain abnormalities, infant death, and childhood developmental problems that can be long lasting. Women who abuse substances are also at higher risk for a range of social problems including domestic violence, unintended pregnancy, and child abuse.

Despite the consequences to women using substances, and the child for those who become pregnant; collecting data around these issues is challenging. Data is not readily available for this specific population and what is available must be adapted from datasets that are often not intended to address these issues. The majority of the data collected for this report has been compiled by the Colorado Department of Public Health through self-reported surveys and vital records data and from the Colorado Hospital Association data. Most of these dataset help to provide some perspective on some of the commonly used substances such as tobacco and alcohol, however, more data is needed to better understand issues arising from marijuana, opioids and other illicit substances.

What Is TCHD Doing About This Issue?

Substance Misuse Among Pregnant and Postpartum Women is a 2016-2020 Maternal and Child Health (MCH) priority in Colorado. In 2017, the TCHD MCH Program identified substance misuse prevention among women of reproductive age, with a focus on pregnant and postpartum women, as one of seven MCH priorities. The 2017-2018 TCHD MCH Goal for this priority is to decrease the percent of women ages 18-44 in Adams, Arapahoe & Douglas counties who misuse substances, including prescription drugs and marijuana. Three strategies have been identified to begin to tackle this goal, namely to:

1) Identify key partners, stakeholders, responsible parties and resources in the community.

2) Expand local use of pregnant/postpartum substance use data.

3) Leverage and support community-level strategies that impact pregnant/postpartum women.

The evaluation of alcohol, tobacco, and other drug use in reproductive age women is critically important to identify harmful and hazardous use, and to provide women with information on the risks of use, and brief interventions or referrals to substance use treatment as clinically indicated. Despite the numerous substances that may effect a pregnancy, this data presentation focuses on the most common substances as indicated by the data to create a foundation for making data-driven decisions during action planning to meet 2020 MCH Goals for the TCHD MCH Program going forward.

Contact Information:
Emma Goforth | egoforth@tchd.org

1 National Institute on Drug Abuse
Despite the evidence of the negative effects of tobacco use, the Centers for Disease Control and Prevention reports that tobacco use remains the single largest preventable cause of death and disease in the United States. Current smoking has declined from nearly 21 of every 100 adults (20.9%) in 2005 to about 15 of every 100 adults (15.1%) in 2015.

However, the rate of decline in the prevalence of smoking has been slowing, especially among adolescent girls. More than 80% of current smokers began their addiction to tobacco before age 18 years. In Colorado, 30.9% of female high school students use tobacco products while 27.3% and 31.3% of female high school students use tobacco products in Arapahoe and Douglas Counties.

Tobacco use by women is most prevalent among women who have attained lower levels of education, are poor, and are white or of mixed race. In Adams, Arapahoe, and Douglas Counties, rates of current smoking for women ages 18-44 range from 6.0% - 12.6% while Colorado is at 13.9%.

In the last 50 years, a woman’s risk of dying from smoking has more than tripled and is now equal to men’s risk. Cigarette smoking is estimated to cause 201,773 deaths annually among women in the United States (including deaths from secondhand smoke). It is a primary cause of lung cancer, which surpassed breast cancer as the leading cancer killer of women, and is a primary cause of cardiovascular disease. Women are at risk for many forms of gynecologic cancer and other types of cancer, coronary and vascular disease, chronic obstructive lung disease, and osteoporosis.

For women of reproductive age, smoking presents unique risks to pregnancy-related health outcomes. Compared with women who are nonsmokers, women who smoke cigarettes have greater risks of reproductive health problems, including increased risk for difficulty conceiving, infertility, and spontaneous abortion.

7 © Centers for Disease Control and Prevention
Alcohol Use Among Women of Reproductive Age

In 2017, slightly more than half of women of reproductive age drank alcohol in the past 30 days in the Tri-County area and in Colorado. Within the Tri-County area, women in Adams County report the lowest use in the past month at 48.8%.

In Colorado, 22.8% of women of reproductive age binge drank (drank 4+ drinks on one occasion) at least once in the past month, and 8.5% of women of reproductive age engaged in heavy drinking (drinking 8+ drinks per week) at least once in the past month. Rates of binge drinking are similar across the Tri-County area compared to Colorado, but fewer Adams and Arapahoe County women engaged in heavy drinking compared to Colorado.

Of female high school students in Colorado (2017), 31% had at least one or more drink of alcohol in the past 30 day. Adams, Arapahoe, and Douglas Counties have similar rates at 28.8%, 28.6% and 27.9%.

There is no known safe amount of alcohol use during pregnancy or while trying to get pregnant. There is also no safe time during pregnancy to drink. All types of alcohol are equally harmful, including all wines and beer. When a pregnant woman drinks alcohol, so does her baby.

The CDC recommends that women not using an effective birth control method not drink alcohol. This is because a woman might get pregnant and expose her baby to alcohol before she knows she is pregnant. Nearly half of all pregnancies in the United States are unplanned. Most women will not know they are pregnant for up to 4 to 6 weeks.2

In Adams County and Douglas County, alcohol poisoning Emergency Department (ED) visits for women of reproductive age have slightly increased from 2017 to 2018. Arapahoe County had the lowest rates in 2018, but Adams County has the highest rates across both 2017 and 2018. In Adams, Arapahoe, and Douglas Counties alcohol poisoning hospitalizations for women decreased from 2017 to 2018. Douglas County has the lowest rates in 2018, but all three counties decreased by around 50% in 2018 compared to 2017.

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Marijuana use among women of reproductive age (18-44) in the past month is lower in the Tri-County area than in the state overall (17.4%). Douglas County has the lowest rate of past month use (13.2%). Adams and Arapahoe Counties have similar rates of marijuana poisoning Emergency Department (ED) visits in 2018 whereas Douglas County has a lower rate of ED visits at 10.3 per 100,000. In addition, the average age of first marijuana use is similar in the Tri-County area and Colorado (16.7 and 17.3 respectively).

Of female high school students in Colorado, 19.7% have used marijuana one or more times in the past 30 days. Arapahoe Counties has a similar rates of use (19.4%), whereas 13.2% of female high school students used marijuana in the past month.
Opioid use disorder is increasing at alarming rates for both men and women in the United States. The prevalence of prescription opioid, heroin, and illicit synthetic opioid use among women is substantial. In the United States between 1999 and 2015, the rate of deaths from prescription opioid overdoses increased 471 percent among women, compared with an increase of 218 percent among men, and heroin deaths among women increased at more than twice the rate than deaths among men. Most alarmingly, there has been a startling increase in the rates of synthetic opioid-related deaths; these deaths have increased 850 percent in women between 1999 and 2015. While the epidemic is being addressed at many different levels, much still needs to be done. The differences in how prescription opioid and heroin use impacts women and men are not well understood. There is emerging knowledge about the many factors that affect a woman’s path to opioid misuse, including biological and social influences, past experiences, geography, and demographic characteristics, but gaps in knowledge about these factors remain.¹

Slightly more women of reproductive age in the Tri-County area used prescription opioids in the past month than did all women in Colorado. However, one percent more of individuals in the Tri-County area have never used prescription opioids compared to all Colorado women.

| Table 1: How Long Since Used Prescription Opioids Among Women Ages 18-44 (%), 2016 |
|------------------|---------------|---------------|---------------|---------------|
|                  | <30 Days      | 30 Days-12 Months | >12 Months | Never        |
| Tri-County Area  | 14.8          | 24.9           | 41.9        | 18.4         |
| Colorado         | 13.2          | 23.4           | 46.2        | 17.3         |

Source: Colorado BRFSS

In the Tri-County area and in Colorado, women of reproductive age who use prescription opioids, most do so to relieve short-term pain. Statewide, 3.5% of women use prescription opioids to relieve other physical symptoms compared to 1.9% in the Tri-County area (Table 2).

| Table 2: Main Reasons for Using Prescription Opioid Among Women Ages 18-44 (%), 2016 |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                  | Relieve Short-term Pain | Relieve Long-Term Pain | Relieve both short and long-term pain | Relieve other physical symptoms | Relieve anxiety | For Fun   |
| Tri-County Area                  | 83.9             | 11.4            | 1.4             | 1.9             | 0              | 1.4       |
| Colorado                         | 82.1             | 8.7             | 2.7             | 3.5             | 1.6            | 0.4       |

Source: Colorado BRFSS

¹ Office On Women’s Health
In the Tri-County area and Colorado, women of reproductive age obtained prescription opioids mainly through a prescription from a doctor to relieve pain (Table 3). In the Tri-County area, 1.5% of women of reproductive age used a prescription opioid at a higher dose and more frequently than directed similar to the overall number for Colorado at 1.2%.

| Prescription Opioids (continued) |

<p>| Table 3: Where Did you Get Prescription Opioid Among Women Ages 18-44 (%), 2016 |
|----------------------------------|---------------------------------|---------------------------------|----------------|----------------|-----------------------------|-----------------------------|</p>
<table>
<thead>
<tr>
<th></th>
<th>Prescribed by Doctor to Relieve Specific Pain</th>
<th>Prescribed by Doctor for Other Reason Apart from Specific Pain</th>
<th>Given to Me From Another Person</th>
<th>Taken From Another Person</th>
<th>Bought From Another Person Without a Prescription</th>
<th>From Some Other Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tri-County Area</td>
<td>94.8</td>
<td>0.4</td>
<td>1.9</td>
<td>0.5</td>
<td>0</td>
<td>2.3</td>
</tr>
<tr>
<td>Colorado</td>
<td>96</td>
<td>0.3</td>
<td>2.3</td>
<td>0.6</td>
<td>0.2</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Source: Colorado BRFSS

In the Tri-County area, non-fatal overdoses to prescription opioids resulting in an ED visit decreased in Adams and Arapahoe Counties between 2017 and 2018. Douglas County increased from a rate of 12.0 to 22.2. Hospitalizations due to non-fatal prescription opioid poisonings decreased in Arapahoe and Douglas Counties, but increased in Adams County from 8.1 to 9.6 between 2017 and 2018.

Figure 5: Prescription Opioid Poisoning Emergency Department Visits and Hospitalization Trends

Source: Colorado Hospital Association
Prescription Opioids (continued)

Table 4: Drug Poisoning Deaths: Women Ages 18-44 (Rates per 100,000)  
Adams, Arapahoe, Douglas Counties

|--------------------------------|-----------|-----------|-----------|-----------|-----------------|
| All Unintentional Drug Poisoning Deaths  
ICD10 Codes: X40-X44, X60-X64, X85, Y10-Y14 | 13.3      | 15.3      | 16.8      | 13.8      | 14.8            |
| Alcohol Deaths  
ICD10 Codes: X45, X65, Y15 | 0.4       | 0.7       | 0.7       | 0.6       | 0.6             |
| Heroin Deaths  
ICD10 Codes: X45, X65, Y15 | Suppressed* | 0.7       | 1.3       | 2.6       | 1.2             |
| Prescription Opioid Deaths  
ICD10 Codes: X40-X44, X60-X64, X85, Y10-Y14 and ACME1-ACME11 Codes: T40.2, T40.3, T40.4 | 4.6       | 3.7       | 6.7       | 6.3       | 5.4             |

Source: CDPHE Vital Records
*Rates due to 1 or 2 events are suppressed for patient privacy

Law Enforcement and Treatment Data

Denver is exploring the implementation of the Law Enforcement Assisted Diversion (LEAD) program. The goal of LEAD is to help heroin addicts arrested for low-level misdemeanors transition into community-based treatment and support services, thereby reducing arrests for misdemeanor crimes and linking addicts to support services. LEAD is operating in police departments across the country.

2016 Denver Metro Treatment Client Survey

Represents patients in the Metro Denver Region which includes all three counties in the Tri-County area

Survey given to all 9 Denver-Metro methadone clinics collected 713 responses.

- Median patient age is 35 years old
- Respondents were predominately Non-Hispanic White
- 55.1% of respondents were men, 44.3% of respondents were female
- 46.5% of respondents had 1-3 years of college experience
- 37% were employed
- 48% had a household income less than $25,000
- 70% of respondents said that prescription pain killers played a role in their decision to use heroin
- Amongst individuals who obtained opioids for non-medical use (352 responses), 37.1% had a prescription

*Heroin Response Workgroup
In the Tri-County area, 19.0% - 20.0% of prescriptions were dispensed to women of reproductive age. Fewer women of reproductive age in Douglas County were prescribed opioids in 2016 (43.0%) compared to Colorado, whereas a higher rate of women in Adams County were prescribed opioids in 2016 (62.0%) compared to Colorado. The rate of multiple provider episodes is higher in Adams and Arapahoe Counties compared to Colorado, and Douglas County has a lower rate compared to Colorado.

Figure 6: Drug Prescription Data Among Women Ages 15-44, 2015

In Colorado in 2017, 12.4% high school age females have taken a prescription drug without a doctor’s prescription once or more in their lifetime. In Arapahoe County, that number is 12.1% while in Douglas County it is 12.5%.

Figure 7: % of Female High School Students Who Have Ever Taken a Prescription Drug without a Doctor’s Prescription 1+ Times

Source: The Colorado Prescription Drug Monitoring Program (PDMP)

Source: Healthy Kids Colorado Survey, 2017
Effects of Alcohol Use During Pregnancy

How do Fetal Alcohol Spectrum Disorders (FASDs) happen? FASDs are caused by alcohol consumption during pregnancy. According to the surgeon general, there is NO safe amount or type of alcohol to consume during pregnancy or when planning to become pregnant. It makes no difference if the alcohol is wine, beer, or liquor. To prevent FASD, a woman should not drink alcohol while she is pregnant or planning to become pregnant. This is because a woman can get pregnant and not know for several weeks. Half of all pregnancies in the United States are unplanned.\(^5\)

A developing baby cannot process any amount of alcohol. Developing babies lack the ability to process alcohol with their liver, which is not fully formed. They absorb all of the alcohol and have the same blood alcohol content as the mother. Alcohol causes more harm than heroin or cocaine during pregnancy. The National Academy of Sciences says, “Of all the substances of abuse (including cocaine, heroin, and marijuana), alcohol produces by far the most serious neurobehavioral effects in the fetus.” Alcohol used during pregnancy can result in FASD with damaging effects ranging from subtle to major\(^6\) of which an estimated 40,000 newborns each year are affected by the most severe form of the condition known as Fetal Alcohol Syndrome.

Alcohol Use During Pregnancy

In the Tri-County area and Colorado, around \(\frac{2}{3}\)rd of mothers reported being told how alcohol could affect the baby and \(\frac{2}{3}\)rd of mothers reported drinking during the 3 months before pregnancy. Around 14% of mothers in Douglas County and Colorado drank alcohol in the last 3 months of pregnancy. Adams and Arapahoe Counties had a lower rate of around 12% of mothers used alcohol in the same time period.

Figure 8: Alcohol Use During Pregnancy, 2015-2017

Source: Colorado PRAMS

<table>
<thead>
<tr>
<th>Source: Colorado PRAMS</th>
</tr>
</thead>
</table>

Table 5: % Drank Alcohol During the Last 3 Months of Pregnancy by Education, 2015-2017

<table>
<thead>
<tr>
<th>Education</th>
<th>Less Than HS Diploma</th>
<th>High School Graduate</th>
<th>College 1 to 3 Years</th>
<th>College 4+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>6.7</td>
<td>9.6</td>
<td>12.3</td>
<td>20.6</td>
</tr>
</tbody>
</table>

Table 6: % Drank Alcohol During the Last 3 Months of Pregnancy by Maternal Age, 2015-2017

<table>
<thead>
<tr>
<th>Maternal Age</th>
<th>Age 15-19</th>
<th>Age 20-24</th>
<th>Age 25-34</th>
<th>Age 35+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>3.5</td>
<td>7.6</td>
<td>16.6</td>
<td>17.9</td>
</tr>
</tbody>
</table>

Table 7: % Drank Alcohol During the Last 3 Months of Pregnancy by Race/Ethnicity, 2015-2017

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>White, Non-Hispanic</th>
<th>Hispanic</th>
<th>Black, Non-Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>17.0</td>
<td>10.3</td>
<td>10.1</td>
</tr>
</tbody>
</table>

\(^5\)Substance Abuse & Mental Health Services Administration (SAMHSA), \(^6\)National Organization of Fetal Alcohol Syndrome (NOFAS),
Local Analysis of Alcohol and Tobacco Use Any Time During Pregnancy

TCHD analyzed all birth records in the Tri-County area between 2016-2017, and identified mothers who used tobacco or alcohol at any time during pregnancy. Mothers were flagged if they used at least one cigarette anytime during pregnancy or consumed at least one alcoholic drinking anytime during pregnancy.

The majority of women that smoked during pregnancy were between ages 20-29 (57.0%) and Non-Hispanic White (66.5%). Only 7.2% had a Bachelor’s degree or higher. A higher percentage of women who smoked during pregnancy are enrolled in Medicaid compared to all women who gave birth between 2016-2017 (69.9% vs 39.9%). Mothers who smoked any cigarettes during pregnancy are most highly concentrated in the Thornton/Federal Heights, Aurora, and Englewood areas, as shown in Figure 9.

Among women that drank alcohol during pregnancy the majority are ages 25-34 (63.4%), Non-Hispanic White (72.2%), and 49.1% have a Bachelor’s degree or higher. A lower percentage of women who drank alcohol during pregnancy are in the WIC program compared to all women who gave birth between 2016-2017 (16.5% vs 25.6%). A lower percentage of women who drank alcohol during pregnancy are enrolled in Medicaid compared to all women who gave birth between 2016-2017 (30.7% vs 40.0%). Mothers who drank any alcohol during pregnancy are most highly concentrated in the Aurora, Englewood, and Highlands Ranch areas, as shown in Figure 10.

Figure 9: Heat Map of Mothers Who Used Cigarettes During Pregnancy Between 2016-2017

Figure 10: Heat Map of Mothers Who Used Alcohol During Pregnancy Between 2016-2017
Effects of Smoking During Pregnancy

Smoking or exposure to secondhand smoke puts a mother and her developing baby at risk. Compared with nonsmokers, women who smoke before pregnancy are about twice as likely to experience the following conditions:

- Delay in conception
- Premature rupture of the membranes
- Infertility
- Placental abruption
- Ectopic pregnancy
- Placenta previa

Compared with babies born to nonsmokers, babies born to women who smoke during pregnancy are more likely to have one of the following conditions:

- Premature birth
- Low birth weight
- Fetal growth restricted
- Cleft lip or Cleft palate
- Small for gestational age
- Higher risks of SIDS (Sudden Infant Death Syndrome)

All tobacco products that are burned contain nicotine and carbon monoxide. These are harmful during pregnancy.7

Tobacco Use During Pregnancy

In Colorado, 2/3rds of mothers were told how smoking could affect the baby. In the Tri-County area and Colorado, fewer women smoked during pregnancy compared to before pregnancy. Smoking rates increased slightly postpartum in all geographies compared to smoking rates during pregnancy.

Women who smoked cigarettes during the last 3 months of pregnancy are more likely to have low educational attainment (HS Diploma or lower), and be between ages 15-19. A higher percentage of white, non-Hispanic mothers smoked during pregnancy than Non-Hispanic Black and Hispanic mothers.

Figure 11: Tobacco Use During Pregnancy, 2015-2017

Table 8: % Smoked During the Last 3 Months of Pregnancy by Education - 2015-2017

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than HS Diploma</td>
<td>11.8</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>10.1</td>
</tr>
<tr>
<td>College 1 to 3 Years</td>
<td>7.6</td>
</tr>
<tr>
<td>College 4+ Years</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 9: % Smoked During the Last 3 Months of Pregnancy by Maternal Age - 2015-2017

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Colorado</th>
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</thead>
<tbody>
<tr>
<td>15-19</td>
<td>10.4</td>
</tr>
<tr>
<td>20-24</td>
<td>7.6</td>
</tr>
<tr>
<td>25-34</td>
<td>5.7</td>
</tr>
<tr>
<td>35+</td>
<td>3.8</td>
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Table 10: % Smoked During the Last 3 Months of Pregnancy by Race/Ethnicity - 2015-2017

<table>
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<th>Colorado</th>
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<tbody>
<tr>
<td>White, Non-Hispanic</td>
<td>7.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3.5</td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>4.1</td>
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</table>

Source: PRAMS 2015-2017

7Centers for Disease Control and Prevention (CDC)
Substance Use During Pregnancy: Marijuana

Effects of Marijuana Use During Pregnancy

There is no known safe amount of marijuana use during pregnancy or while breastfeeding. Using marijuana in any form (smoked, vaporized or eaten) while pregnant passes Tetrahydrocannabinol (THC)—the psychoactive part of marijuana—on to the baby. Marijuana can harm a developing baby and may cause behavior and learning problems, especially as the child grows older. Children exposed to marijuana may have difficulties paying attention, learning and performing well in school. Just like tobacco, the chemicals in marijuana smoke and secondhand smoke may harm a pregnant mother and her baby. The American College of Obstetricians and Gynecologists recommends that pregnant women and women contemplating pregnancy be screened for and discouraged from using marijuana and other substances. 

“Use of marijuana during pregnancy is associated with negative effects on exposed children, no matter when it is used during pregnancy. The negative effects include decreased academic ability, cognitive function, and attention. These effects may not appear until adolescence.” - CDPHE HCP Guidance

Marijuana While Breastfeeding

“If you use marijuana while breastfeeding, it gets passed to your baby. THC is stored in fat cells. That means THC stays in your breast milk, so “pumping and dumping” doesn’t work. THC gets into your breast milk and may affect your baby. Talk to your doctor if you have any questions.” - Good to Know—CDPHE

Marijuana Use During Pregnancy

Marijuana use among mothers before, during, and after birth is lower in Arapahoe County and Douglas County compared to Colorado. Adams County has similar rates of marijuana use before, during, and after pregnancy compared to Colorado. Use was lowest during the last three months of pregnancy.

Figure 12: Marijuana Use During Pregnancy—2015-2017

Source: Colorado PRAMS

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8Colorado Department of Public Health and Environment (CDPHE), 9CDPHE
Substance Use During Pregnancy: Prescription Drugs

Effects of Opioid Use During Pregnancy

“Research has shown that the use or abuse of opioids during pregnancy is associated with a significantly increased risk of poor birth outcomes, such as low birthweight. Babies born to mothers who took or abused opioids during pregnancy have tested positive for these drugs at birth, showing traces in the umbilical cord, placenta, and stool. Researchers have also found that mothers who took opioids during the first two months of pregnancy were two times more likely to have a pregnancy affected by a neural tube defect than women who did not use opioids during pregnancy.” —March of Dimes

Mandatory Reporting for Positive Test of Maternal Substance Use/Infant Exposure

If pregnant women report their substance use to their prenatal health care provider and/or have a positive drug test during a prenatal care visit, Colorado law prevents that information from being used in criminal prosecution. (C.R.S. § 13-25-136)

Some hospitals test babies after birth for drugs. If a baby tests positive for substances including recreational or medical Tetrahydrocannabinol (THC), alcohol, or other drugs at birth, Colorado law says child protective services must be notified.

Current Colorado law defines a baby testing positive at birth for a schedule I controlled substance or a schedule II controlled substance as an instance of child neglect, which requires a report to social services. (C.R.S. § 18-18-203) A report is not required if the child tests positive for a schedule II controlled substance as a result of the mother’s lawful intake of such substance as prescribed. (C.R.S § 19-3-102) (Source for first three bullets: Colorado Children’s Code)

The Child Abuse Prevention and Treatment Act (CAPTA) requires Colorado to have policies and procedures in place to notify child protective services (CPS) systems of substance-exposed newborns and to establish a plan of safe care for newborns identified as being affected by substance abuse or having withdrawal symptoms resulting from prenatal drug exposure or a Fetal Alcohol Spectrum Disorder. CAPTA also requires states to have substance use disorder treatment available not just for infants but also their family. (Source: https://www.childwelfare.gov/ and 2 2 42 U.S.C. § 5106a(b), as amended by the CAPTA Reauthorization Act of 2010 (P.L. 111-320).

Substances in schedule I have no currently accepted medical use in the United States, a lack of accepted safety for use under medical supervision, and a high potential for abuse. Some examples of substances listed in Schedule I are: heroin, lysergic acid diethylamide (LSD), marijuana (cannabis), peyote, methaqualone, and 3,4-methylenedioxymethamphetamine (“Ecstasy”). Tetrahydrocannabinol (THC), both recreational and medical, is considered a Schedule I drug under federal and Colorado law. (C.R.S. § 18-18-203) (Source: https://www.deadiversion.usdoj.gov/schedules/)

Substances in schedule II have a high potential for abuse which may lead to severe psychological or physical dependence. Examples of Schedule II narcotics include: hydromorphone, methadone, meperidine, oxycodone, and fentanyl. Other Schedule II narcotics include: morphine, opium, codeine, and hydrocodone. (Source: https://www.deadiversion.usdoj.gov/schedules/)

Neonatal Abstinence Syndrome (NAS)

Neonatal abstinence syndrome (NAS) is a drug withdrawal syndrome that most commonly occurs in infants after in utero exposure to opioids, although other substances have also been associated with the syndrome. NAS usually appears within 48–72 hours of birth with a constellation of clinical signs, including central nervous system irritability (e.g., tremors), gastrointestinal dysfunction (e.g., feeding difficulties), and temperature instability. Opioid exposure during pregnancy might result from clinician-approved use of prescription opioids for pain relief; misuse or abuse of prescription opioids; illicit use (e.g., heroin); or medication-assisted treatment (MAT) of opioid use disorder.

Cases of Neonatal Abstinence Syndrome births have increased 83% from 132 in 2010 to 242 in 2015.
Maternal Mortality

A case series of pregnancy associated deaths in the state of Colorado between 2004 and 2012 was reported in 2016. Among the 211 total maternal deaths reviewed, 30% were from self-harm (accidental drug overdose and suicide). Seventeen percent had a known substance use disorder, and among the women with toxicology testing available, the most commonly detected class of drugs was opioids. In the majority of women, psychiatric disorders were present, with depression being the most common psychiatric diagnosis. Almost half of women on psychiatric medications in early pregnancy discontinued them during pregnancy or postpartum either on their own or at the recommendation of a care provider.12

Substance Use and Prenatal Care

TCHD also performed an analysis assessing whether women who use tobacco or alcohol at all during pregnancy received adequate prenatal care. Adequate prenatal care is defined using the Kotelchuck Index.14

The percentage of mothers who received adequate prenatal care is lower for mothers who used cigarettes (56.3%) and alcohol (58%) during pregnancy compared to all mothers who gave birth in the Tri-County area between 2016-2017 (65.9%).
Why is childhood adversity so harmful? In the past few decades, research has documented the effects of early adversity on health and well-being throughout life. During the early years of life, rapid physical and mental development occurs. For example, during early childhood, more than one million new neural connections are formed per second. Adverse experiences, such as witnessing domestic violence or parental substance abuse, can induce toxic stress—a “prolonged activation of the stress response systems” that impairs brain and immune system development. (Source: https://www.coloradokids.org/new-report-what-impacts-do-adverse-childhood-experiences-aces-have-on-colorados-future/)

The 2014 BRFSS included a module assessing adverse childhood experiences (ACEs) among respondents. ACEs are stressful or traumatic experiences occurring before age 18 including abuse, neglect, family instability, and exposure to domestic violence or substance use disorders. Exposure to ACEs have been linked to risky health behaviors and chronic health conditions.

ACEs are divided into two types Abuse and Household Dysfunction. 62% of Colorado adults report experiencing at least one or more ACEs, while 15% of adults reported high ACE exposure (4 or more ACEs). More women compared to men reported experiencing 4+ ACEs (17.4% vs 12.1%). Adults without a HS diploma reported high ACE exposure compared to those who completed high school and/or college (72.6% vs 60.5%).

Among adults reporting abuse in childhood, the majority of adults reported emotional abuse followed by physical and sexual abuse. Among adults reporting household dysfunction in childhood, most adults reported parental divorce followed by substance abuse, mental illness, domestic violence, and incarceration.

"In Colorado, we are focused on understanding and preventing intergenerational transmission of adversity across our research, policy and program efforts"

Parental History of Adversity and Child Well-Being: Insights from Colorado
Sarah Enos Watamura

Highlights

- Coloradans with greater childhood adversity were more likely to smoke cigarettes.
- Parental history of adversity did not predict current smoking in the home or drinking and driving, but it did predict use and presence of marijuana products in the last 30 days.
- A study based on the original ACEs data found that nearly 14% of adolescents with four or more ACEs initiated illicit drug use, compared to only 4% of adolescents without ACEs. Other studies corroborate the results, finding that individuals with four or more ACEs have a 3.5 to 10 times higher risk of using illicit drugs or reporting a substance use problem.


Services and policies that help strengthen families, prevent abuse and neglect, aid caregivers struggling with adversity, and promote positive interactions within families and caregiving communities help kids develop their potential. Parents and caregivers need access to services and need to have a voice in their development. These can help parents and caregivers deliver their best care.

(Source: http://eccp.civiccanopy.org/message-platform/)
Substance misuse and abuse poses significant health risks to reproductive age women and, for those who become pregnant, to their children. Alcohol is the most prevalent substance consumed by women of reproductive age, followed by tobacco and various illicit drugs. Substance use in the preconception period predicts continued but often limited substance use during the prenatal period. Reproductive age women's unique physiologic, psychological, and social needs and the related legal and ethical ramifications surrounding substance abuse are important to consider in prevention, identification and treatment strategies. The evaluation of alcohol, tobacco, and other drug use in reproductive age women is critically important to identify harmful and hazardous use, and to provide women with information on the risks of use, and brief interventions or referrals to substance use treatment as clinically indicated. Confidential treatment and support are available for women and their families. State and federal Law both address prenatal substance exposure as a key issue for giving babies the healthiest start possible. We prioritize prevention, identification, and treatment - for women and their babies.

Conclusion: Substance use during pregnancy is a complex issue


