

Prenatal Substance Use – Alcohol and Other Drugs

“Pregnant women want to do the best they can for their babies; their baby is often what inspires them to make a positive change.”

Rita Scardaci, Director, Sonoma County Department of Health Services

“Every individual woman has a different road to follow on her path to recovery.”

Michael Spielman, Executive Director, Drug Abuse Alternatives Center

Pregnancy is normally a time charged with the excitement of new life; a time of opportunity for mothers- and fathers-to-be to look to the future for themselves and their babies. But for some pregnant women, the anticipation of the future is overshadowed by use of alcohol, tobacco and other drugs that can have serious consequences for their babies. Prenatal alcohol exposure is the leading cause of birth defects and mental retardation in the United States.ⁱ Heavy use of AOD during pregnancy can lead to fetal death or serious birth complications and can result in life-long debilitating physical and neurological damage to children. Even moderate use of AOD during pregnancy is proven to impair brain development and affect children’s health.

The rate of substance use during pregnancy is significant in Sonoma County. As many as 14% of pregnant women use AOD during pregnancy, a rate higher than both the state and national averages. By conservative estimates, a minimum of 600 babies are born AOD exposed each year in Sonoma County. Experts estimate that 70 to 80% of children in California placed in foster care are there because of parental AOD use.ⁱⁱ Because of these trends, preventing prenatal AOD use was identified as one of the top five priorities in a recent comprehensive Maternal and Child Health needs assessment conducted by Sonoma County.ⁱⁱⁱ Similarly, First 5 Sonoma County, a commission dedicated to improving the lives of children 0 to 5, has made prenatal AOD treatment a major priority.

Fortunately, there is reason for optimism. While substance use rates are high, health officials and treatment providers are working together to create a network to intervene with substance-using pregnant women. Due to these collaborative efforts, women are being screened for AOD use during pregnancy and significant numbers are getting help. Many women are discovering the joy of a pregnancy free from alcohol and other drugs. As one mother put it, *“treatment has given me my life back and made me an honest, willing, respectful person. It has also given me a drug-free baby.”* The growing understanding of the dramatic impacts of maternal AOD use on the developing fetus and young children has sparked a concerted effort in our community to educate women about the dangers of substance use and to provide more preventive services and treatment opportunities.

Prenatal Substance Use Defined

If a pregnant woman drinks alcohol, uses drugs or smokes cigarettes, so does her fetus. These substances cross the placenta freely; there is no “safe” dose. Prenatal AOD exposure occurs when a mother has consumed alcohol or used drugs during the course of her pregnancy. Estimates of AOD use during pregnancy vary. Most reliable statistics show that a minimum of 10% of women in the United States have substance abuse problems during pregnancy.^{iv v} Roughly 11% of women smoke at some point during pregnancy.^{vi}

Moderate and accidental exposure. Many women unknowingly expose their fetus to drugs, alcohol or tobacco before they realize they have become pregnant and may abstain from use as soon as they learn they are pregnant. Other women continue to use or smoke into and throughout pregnancy, either because they are unaware of the risks or because they have not received the support necessary to stop.

Substance Abuse. Some women are habitual AOD abusers. Many are “polydrug users” – using a variety of substances, including alcohol and many illicit drugs. Abuse of legal, prescription drugs is also common. Women who use alcohol and other drugs are also likely to smoke during pregnancy. These women, who typically are not fully aware of the damage AOD use can have on the fetus, often need intensive interventions and treatment in order to stop using.

The Consequences of Prenatal Substance Use

High rates of alcohol, drug and tobacco use by pregnant women is putting the future health of many Sonoma County children at risk.

Alcohol Use

The harmful impact of alcohol exposure on infants and children is well documented.

While there is still debate about the effects of light alcohol consumption on the developing fetus, the research is clear that moderate to heavy use of alcohol during pregnancy has very serious physical and neurological consequences. Alcohol is most damaging in the early stages of pregnancy when the fetus is highly vulnerable but can cause damage at any stage in pregnancy. The physical, cognitive and behavioral effects of prenatal AOD use are life-long.

Alcohol use during pregnancy is the “leading known cause of mental retardation and birth defects in the United States.”^{vii} Fetal Alcohol Syndrome (FAS) is a serious condition caused by exposure to alcohol during gestation and is characterized by a number of symptoms: specific facial characteristics; growth deficits; mental retardation;

heart, lung, and kidney defects; hyperactivity; behavioral and memory problems; poor coordination and motor skill delays; and central nervous system abnormalities. FAS is estimated to occur in 1 to 3 out of every 1,000 live births in the United States each year.^{viii ix} Many more children are not classified as having FAS, but have some of the characteristics of FAS and will suffer the consequences of prenatal exposure to alcohol throughout their lives.^x

The Surgeon General has determined that no amount of alcohol use during pregnancy is safe.^{xi} The Surgeon General has issued an opinion advising women to abstain entirely from alcohol use during pregnancy. The American Academy of Pediatrics takes the same position.^{xii}

Drug Use

The implications of prenatal exposure to both illicit drugs and non-therapeutic prescription drugs used during pregnancy vary widely from “almost imperceptible problems discovered throughout development to devastating birth defects, mental retardation, or even death.”^{xiii} Birth complications attributable to drug use can include pre-term delivery, low birth weight, smaller than normal head size, miscarriage, genital and urinary tract deformities, and nervous system damage.

Risks associated with specific drugs:

- Marijuana - slow fetal development and low birth weight.
- Cocaine - birth defects (urinary tract and heart defects), neonatal stroke and heart attack, placental abruption, feeding difficulties, sleep disturbances, physical and mental delay, extreme irritability and possible reduction of child IQ levels.
- Heroin and other opiates - newborn withdrawal, miscarriage and premature birth, increased risk of low child IQ, physical and mental retardation, behavior problems and increased risk of Sudden Infant Death Syndrome.
- Amphetamines (including methamphetamine) - birth defects, pregnancy complications, slow fetal growth, premature delivery and possible increase in congenital heart defects.

Tobacco Use

- **Women who smoke or who are exposed to “second hand smoke” when they are pregnant subject their children to significantly increased health risks.** Smoking during gestation reduces the supply of oxygen and nutrients to the fetus and is associated with low-birth weight, poor birth outcomes, including poor fetal growth and premature delivery. Both of those contribute to infant illness and death. Pregnant women who smoke are more likely to have ectopic pregnancies (pregnancies outside

of the uterus) and their babies are more likely to die from sudden infant death syndrome (SIDS).^{xiv} Children whose mothers smoked during pregnancy are more likely to be affected by colic, asthma and childhood obesity.^{xv xvi}

- **The American College of Obstetricians and Gynecologists (ACOG) recommends that perinatal providers uniformly counsel pregnant women to abstain from smoking during pregnancy.** According to ACOG, “[s]moking is one of the most important modifiable causes of poor pregnancy outcomes in the United States.”^{xvii}

Scope of the Problem

Sonoma County women are using AOD during pregnancy in significant numbers, at rates above the national average, making prenatal alcohol and drug use a serious cause for concern. In 2006, the Drug Free Babies Project and Kaiser Permanente surveyed nearly half of pregnant women in Sonoma County to determine if they used AOD during pregnancy. More than a quarter of the women surveyed said they had used tobacco, alcohol or another drug during their pregnancy.^{xviii}

Several factors contribute to the high rate of AOD use in Sonoma County. Sonoma County’s place as a hub in the methamphetamine and marijuana distribution networks in Northern California ensures broad access to these and other drugs. In addition, Sonoma County’s unique status as a leader in the wine industry supports and promotes social norms that encourage drinking.

A Note on the Lack of Data

The data on prenatal alcohol and drug use from statewide and local surveys has significant limitations. The last statewide prevalence study – the Vega Study – was conducted in 1992. Though dated, it provides the best statically reliable data on alcohol and other drug use by pregnant women in Sonoma County. This study analyzed maternal urine toxicology. Locally, the Drug Free Babies Project (DFB) screened roughly 20% of pregnant women in Sonoma County in 2006 for substance use, using a screening tool and relying on self-reporting. While these data sets are not entirely comparable, they are the best currently available sources of data.

Key Findings on Prenatal Substance Use in Sonoma County

- **Between 10% and 14% of pregnant women use alcohol and other drugs (exclusive of tobacco).** The Drug Free Babies (DFB) survey found that 10% reported using alcohol or other drugs during pregnancy.^{xix} The Vega Study found that 14% of women in Sonoma County used alcohol and drugs during pregnancy.^{xx}

- **Illicit drug use by pregnant women in Sonoma County is a major problem on a par with or greater than the national average.** The DFB survey found that 4% of women reported using drugs during pregnancy. The Vega Study found 6% of pregnant women in Sonoma County used drugs during pregnancy, while national statistics indicate that roughly 4-5% of women giving birth in the United States use drugs during their pregnancy.^{xxi}
- **Alcohol is the most frequently used substance by pregnant women.** A 2003 statewide maternal and child health study found that alcohol use during pregnancy in the Bay Area region, including Sonoma County, is the highest in the state at 19% - almost twice the national rate.^{xxii} The DFB survey found that 9% of women self-reported using alcohol during pregnancy.
- **Marijuana is the drug used most often, but for pregnant women in treatment, methamphetamine is the primary drug of abuse.** The Drug Free Babies Study found that 7% of the pregnant women surveyed reported using marijuana during pregnancy. The Vega Study found that 21% of women used marijuana. For pregnant Sonoma County women in treatment, methamphetamine is the primary drug of abuse.^{xxiii} However, 80% of AOD treatment system admissions are criminal justice referrals and, thus, this data does not reflect the use of methamphetamine by the general population.^{xxiv}
- **With roughly one-fifth of pregnant women smoking in Sonoma County, tobacco use during pregnancy is widespread.** DFB data show that 16% of Sonoma County women reported smoking during pregnancy. Vega found that 21% of women smoked.
- **AOD use is linked to child neglect and abuse, and child mortality.** The Sonoma County Department of Health Services estimates that 80% of the high-risk infants and abused children referred to Sonoma County Public Health Nursing come from families involved with substance abuse. Twenty-eight percent (28%) of women whose infants died during pregnancy or early infancy reported heavy drinking and/or use of street drugs between conception and the first prenatal care appointment. An additional 13% reported some alcohol consumption. Twenty percent (20%) reported smoking during pregnancy.^{xxv}
- **Sonoma County teens are at high risk for giving birth to a substance-exposed child.** According to the California Healthy Kids Survey 2004, Sonoma County teens have significantly higher rates of alcohol and drug use than their peers across the state. (See Table 1. Alcohol and Other Drug Use, p. 45). When combined with sexual activity, alcohol and other drug use can result in fetal exposure during unplanned pregnancies.^{xxvi}

The Story Behind the Problem

“[D]rug use during pregnancy is a problem that affects all women, not just certain demographic subgroups.” *“The Vega Study,” Profile of Alcohol and Drug Use During Pregnancy in California.*^{xxvii}

Ethnicity and socioeconomic circumstances. Prenatal AOD use cuts across all economic, racial and social categories. In California, prevalence of alcohol consumption during pregnancy is highest in women who are white, older, college graduates and higher income. Women with at least a college degree report the highest rates of drinking alcohol during pregnancy. They are 2 to 5 times more likely than other women to drink during pregnancy.^{xxviii} The impact of class and ethnicity on prevalence remains murky but it is clear that efforts to address this problem cannot be focused on any particular racial or social demographic group. Latinas were the second most likely group to drink during pregnancy. Some studies indicate that African-American women give birth to AOD exposed babies at disproportionate rates,^{xxix} while Asian and Hispanic women appear to give birth to exposed babies at lower rates.^{xxx} One study found that low-income women on Medi-Cal give birth disproportionately to AOD exposed infants.^{xxxi} In Sonoma County, 73% of pregnant women in treatment are white, 16% are Hispanic, 5% are Native American, 3% are black, and 2% are Asian/Pacific Islander.^{xxxii}

Connection with mental health disorders. There is a strong correlation between substance abuse and serious, chronic mental health problems. Individuals who use drugs are 4.5 times more likely to have a mental disorder than those who do not use drugs. Heavy, life-time drug abusers are more than 50% more likely to have a psychiatric disorder than non-users.^{xxxiii} Among California women utilizing drug services during parole, 45% of women with illicit drug dependence and 31% of women with alcohol dependence have “serious co-occurring mental illnesses.”^{xxxiv} Given this strong correlation, efforts to identify and treat substance-abusing women of child bearing age should focus on making connections between county and private mental health systems, Maternal and Child Health programs and alcohol and other drug treatment systems.

Life circumstances. A woman’s life circumstances play a large role in her prenatal AOD use. Women who are pregnant and who use alcohol and other drugs are more likely to have suffered from emotional, physical and sexual abuse either as children or adults.^{xxxv} Importantly, treatment providers and research indicate that men often are involved in introducing women to substances and helping to maintain their chemical dependency.^{xxxvi} A partner’s involvement in AOD abuse can strongly influence a woman to begin substance use or continue using during pregnancy. Efforts to help women stop using substances during pregnancy must take into account the important role her partner’s addiction plays in her own use.

The voices of Sonoma County women who have found help...

“The treatment program has opened my eyes to a bright new world. I actually want to stay clean and sober now. I love my life. I’ve built a family here and it feels great to be able to trust again. I’m never alone and every day I look forward to coming here. Every day is a brand new day. I owe my life to the program because without it, I wouldn’t be here today for myself or my son.”

Anonymous.

“Before I came to treatment, I thought I was never going to get off the drugs. But coming here and talking about my feelings was very helpful. I had to face my drug use so that I was doing everything in my power to give my baby the best chance for proper development.”

Anonymous.

“I came to treatment because I was pregnant and using the whole time. I finally got clean and I needed help staying clean. Treatment has shown me how to be a productive parent, and how to be present for my baby. I love that I can take my baby to treatment with me. The program has given me the opportunity to build better relationships with clean and sober women and to receive resources around the community.”

Brenda T.

The Costs of Prenatal Alcohol and Other Drug Use

Exposure to substances during pregnancy takes an enormous toll on families and especially on children, but also creates significant costs to society in general.

- **The cost of Fetal Alcohol Syndrome.** The cost of child exposure to Fetal Alcohol Syndrome on American society is estimated at up to \$9.7 billion.^{xxxvii}
- **The cost of raising a child with FAS.** Raising a single child with FAS is estimated to cost up to \$1.9 million.^{xxxviii}
- **The costs of medical treatment for drug exposed infants.** Each child born with cocaine exposure generates an additional \$5,000 in medical costs at birth.^{xxxix} The lifetime costs are much greater.
- **The costs of delinquency and criminal activity.** Borderline retardation caused by exposure to alcohol is linked to delinquency and criminal activity which carry large economic and social costs.^{xl} It is also linked to school failure.
- **The costs to the foster care system.** Many children of alcohol and other drug abusing

parents are removed from the home and placed in foster care. The costs associated with out-of-home placement resulting from parental AOD use are enormous.

- **The cost of the repeating cycle of abuse.** Children who were exposed to AOD before birth are more likely to be alcohol and other drug users themselves and perpetuate the cycle of abuse in their children. Their children may, themselves, grow up to be AOD abusers carrying with them the associated costs of foster care, delinquency, incarceration and treatment. Without prevention and intervention, this destructive cycle simply continues.

What Our Service System Offers and Where the Gaps Are

Resources

In Sonoma County, many perinatal providers (health centers, clinics and hospitals) and the AOD treatment system work closely together to identify, screen and treat pregnant women who are using AOD. Medical providers screen and refer women to treatment and the AOD treatment system provides counseling, and intensive perinatal day treatment programs and residential perinatal programs to help pregnant women stop using.

Most pregnant women in Sonoma County get their prenatal care through their primary medical provider, such as Kaiser Permanente a private physician's office, or one of the county's community health centers. Through its Early Start program, Kaiser conducts AOD screening on all pregnant women in their care and refers those who appear to be at risk to an Early Start Specialist. That specialist provides counseling and referral to treatment when indicated. Early Start also offers individual and couples counseling, stress management, parenting information and follow-up care after delivery.

Women receiving perinatal care at community health centers or at private physician's offices that participate in the Drug Free Babies Program (DFB) are screened for AOD use during their perinatal care. Those determined to be at risk are then referred to the program's Perinatal Placement Specialist for a more complete assessment and to receive counseling and support to stop using. They are referred to treatment where it is appropriate. Currently, all of the community health centers and about half of the private providers in Sonoma County are participating in the assessment program.

Gender-specific treatment is crucial to address the unique needs and concerns of pregnant women. Here in Sonoma County, a pregnant woman may attend either a perinatal day treatment program, lasting 180 day sessions over the course of a year, or a 90- or 120-day perinatal residential treatment program. These programs encourage women to achieve and maintain clean and sober living, deliver healthy infants, strengthen family units, and

lead productive lives. Many of these programs offer core alcohol and drug treatment, tobacco cessation services, childcare, transportation, parenting skills, child development education, counseling and a variety of other services. The goal is to help a woman abstain from use during pregnancy and continue a clean and sober life after delivery.

Gaps

A woman's ability to access treatment programs is determined in large part by whether she has medical coverage that pays for treatment – either private insurance or Medi-Cal. Most women with private insurance or the ability to pay for treatment will go to a private treatment program. Unfortunately, none of these programs offer treatment focused specifically on the needs of pregnant women. In addition, some health insurances may limit coverage or offer a sub-optimal level of care to pregnant women. Women with Medi-Cal or women with no insurance coverage, who cannot afford treatment, will have even greater difficulty finding treatment. They may be eligible for a publicly funded treatment slot, but they may have significant wait time.

In Sonoma County, the treatment capacity for women without the ability to pay is limited.

Residential Treatment Capacity – Two local residential facilities offer a total of 20 publicly funded perinatal residential treatment beds. Women may bring their children to treatment with them. Occasionally, residential facilities will limit the number or age of children as they reach their licensing cap for children in residence. These facilities together are licensed to serve an additional 10 women, but currently do not have public or community funding to pay for the additional beds.

Outpatient and Perinatal Day Treatment Capacity – There is currently room for a maximum of 33 women at a perinatal day treatment center, which offers childcare and transportation. If women are unable to get into this program due to lack of space, they may attend an outpatient program, which may not be focused solely on treating pregnant women.

Until recently, day and residential treatment capacity has been sufficient to serve pregnant women seeking to enter treatment in Sonoma County. In the recent past, because of lack of funding, and therefore, space for perinatal day treatment, some women have had to accept a less than optimal level of care in an outpatient program until space became available. Both residential and day treatment providers now anticipate that the demand for publicly funded perinatal treatment will soon outstrip capacity as more women are screened, counseled and referred to treatment.

Examples of Innovation

The Drug Free Babies Program

Through the Drug Free Babies (DFB) Program, Sonoma County has made major advances in the past five years toward creating a network to combat perinatal AOD exposure. That network includes hospitals, private perinatal care providers, community health centers, AOD treatment programs, and the county Department of Health Services. The primary goals of the program are to implement universal screening of all pregnant women in Sonoma County, to ensure that women who need treatment get it regardless of their ability to pay, and to educate the community and particularly pregnant women about the dangers of prenatal exposure.

Prior to 2004 when DFB started, assessment and referral were sporadic and treatment information was not centralized. When a medical provider – either a hospital or physician – identified a woman needing treatment, that provider had to contact multiple programs to find an appropriate placement. Difficulty locating appropriate treatment may have kept some providers from conducting assessments. Centralization of referral and treatment through the DFB's Perinatal Placement Specialist has changed this situation. More than 90% of perinatal care providers in Sonoma County have been trained on best screening practices and how to access the Perinatal Placement Specialist. Currently at least half of the perinatal treatment providers in Sonoma County screen pregnant women for AOD use and refer women to treatment on a regular basis.

In addition to the centralization of resources and referral, DFB is working with hospitals to implement a countywide protocol for evaluating and reporting cases involving possible prenatal AOD exposure. DFB is working to develop reliable local data on the prevalence of AOD use among pregnant women so that progress on this issue can be tracked. The program has engaged in social marketing activities to spread the word about the dangers of prenatal exposure to AOD. The DFB Program is making a difference in reducing exposure of Sonoma County babies to alcohol, drugs and tobacco before birth and helping women who will soon be mothers to quit smoking and find their way into treatment.

Kaiser's Early Start Program

Offered in conjunction with Kaiser Permanente's prenatal services, the Early Start Program reduces negative maternal and neonatal outcomes associated with prenatal substance use by making education and early intervention accessible to pregnant women. All soon-to-be mothers are screened by their physicians for tobacco, alcohol and other drug use during routine prenatal visits. Those considered to be at risk of using tobacco, alcohol or other drugs during pregnancy are referred to the program. A licensed

counselor, the Early Start Specialist, joins the mother’s prenatal care team. While the patient is receiving prenatal care from Kaiser, the program makes available opportunities for individual counseling, couples and family counseling, stress management, parenting information, and advocacy. The Early Start Specialist provides education to the patient about the impact of tobacco, alcohol and other drug use on the developing fetus and helps her seek special help if she is experiencing difficulty quitting. The Specialist helps the patient develop a plan to stop using substances, and directs patients to in-depth resources at Kaiser Permanent and in the community if necessary. Kaiser has found the Early Start program to be very successful in improving birth outcomes at Kaiser Santa Rosa.

Key Indicators to Track – How We Might Measure Progress

<i>Health Indicators</i>
The percentage of pregnant women in Sonoma County screened by perinatal providers for alcohol, drug and tobacco use during current pregnancy.
The percentage of women in Sonoma County who report alcohol, drug and tobacco use during current pregnancy at screening.
The percentage of pregnant women in Sonoma County with positive screening who meet the criteria for admission to treatment and successfully complete a treatment plan or leave treatment early with satisfactory progress.
The percentage of babies born in Sonoma County with positive toxicology for fetal AOD exposure.
The number of publicly funded treatment beds and day treatment slots in Sonoma County available to pregnant women and their children.

What would it take to make progress on prenatal alcohol and drug use?

Despite the work of the County of Sonoma, providers, Kaiser’s Early Start program and the Drug Free Babies Program, significant improvements can still be made to the system of prenatal AOD screening, referral and treatment that will result in a stronger system with better results for women and children.

Spectrum of Prevention

<i>Strategies</i>	<i>Activities</i>
Influencing policy and legislation	<ul style="list-style-type: none"> • Advocate at the state and national level for increased funding for perinatal AOD treatment. • Urge the State Department of Alcohol and Drug Programs

<i>Strategies</i>	<i>Activities</i>
	<p>to compile statewide prevalence data by updating the 1992 statewide perinatal substance abuse prevalence study.</p> <ul style="list-style-type: none"> • Urge local policy makers to identify funding for the ten perinatal residential treatment beds that are licensed but not currently funded.
Mobilizing neighborhoods and communities	<ul style="list-style-type: none"> • Neighborhoods can work to minimize the presence of drug use in their communities through collaborative efforts with law enforcement and community groups.
Changing organizational practices	<ul style="list-style-type: none"> • Implementing a new universal screening standard of care and referral to ensure that every pregnant and delivering woman in Sonoma County is screened for AOD use. Hospitals can support this standard of care by requesting that prenatal care providers include the DFB screening form in the information sent to labor and delivery. • Hospitals should adopt and implement the proposed countywide protocol for evaluating and reporting cases involving possible perinatal alcohol and other drug exposure.
Fostering coalitions and networks	<ul style="list-style-type: none"> • Encourage the medical community, the Health Department and medical providers to actively participate in gathering and reporting data on AOD prevalence and assessments. Statistically accurate local data on prenatal AOD use is not yet available^{xli}
Educating providers	<ul style="list-style-type: none"> • Conduct consistent and ongoing training of the community's perinatal providers in AOD assessment and referral.
Promoting community education	<ul style="list-style-type: none"> • Educate and train health care providers and public institutions to raise the awareness of residents to the extent of the problem; encourage pregnant women to abstain from AOD; and increase recognition of addiction as a chronic disease, reducing stigma and encouraging women to enter treatment.

<i>Strategies</i>	<i>Activities</i>
Strengthening individual knowledge and skills	<ul style="list-style-type: none"> • Expand education to women, families and the general public to understand the full, devastating impacts of alcohol and drug use on the developing fetus. Local collaboratives and providers should continue and step up efforts to spread the word about the dangers of alcohol and drug use during pregnancy.

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