

## Substance Use Disorders and Pregnancy **CONSENSUS STATEMENT**

September 2006

### POSITION

Poor birth outcomes related to substance use are 100% preventable. The only way to proactively prevent poor outcomes is to universally screen all pregnant women for alcohol, tobacco and other drugs (ATOD) usage. There is no other reliable method to determine substance use disorders. Every pregnant woman in Indiana should have the opportunity to discuss and be screened for usage of alcohol, tobacco and other drugs (ATOD) with her primary care provider.

### PURPOSE

The purpose of this statement is to alert all healthcare providers, legislators, child welfare staff and consumers about the incidence and significance of substance abuse during pregnancy, and recommended interventions that can be taken at the public policy, provider and consumer level. Substance abuse is a disease that requires special attention and treatment. Proper care of women who suffer from substance use disorders before, during and after pregnancy, is essential in preventing unnecessary damage to the individual, newborn, immediate family and the community. Policy makers, health care providers and others who directly impact pregnant women affected by substance abuse should utilize all possible resources for proper identification of signs and symptoms, screening, referrals and interventions.

### SCOPE OF THE PROBLEM

Alcohol, tobacco and other drug (ATOD) use during pregnancy is a major public health and social problem in Indiana. Several nationally published reports indicate that the use of ATOD is present in as many as 10 to 30 percent of all pregnancies.<sup>4 5 6 7 8 9 10 11 12</sup>

### SMOKING

Adverse pregnancy outcomes caused by maternal smoking are 100% preventable. Smoking during pregnancy can adversely affect the health of both the mother and infant leading to death, illness, and disability.

Estimates suggest that the elimination of smoking during pregnancy could prevent approximately: 5 percent of perinatal deaths, 20 percent of low birth weight births, and 8 percent of preterm deliveries in the United States.<sup>1</sup> Women who stop smoking before pregnancy or during the first three months of pregnancy reduce their risk of having a low birth weight baby to the same risk as women who never smoked.<sup>1</sup> The more a pregnant woman smokes, the greater the risk to the baby.

In 2003, 18.5% of pregnant women (15,954) in Indiana smoked compared to 10.7% of pregnant in the United States.<sup>2</sup> Individual county rates ranged from a high of 35.5% in Vermillion County to a low of 5.4% in Hamilton County.<sup>2</sup> Sixty-four (64) of Indiana's 92 counties have a smoking during pregnancy rate higher than the Indiana average. All but five Indiana counties have a smoking during pregnancy rate higher than the United States average.<sup>2</sup> Higher smoking rates have been found among low income, poorly educated, young women. According to a 12 year trend analysis in 2000, Indiana smokers were 1.3 times more likely to have a preterm birth, 2.1 times more likely to have a low birth weight baby, and 2.4

times more likely to have a small for gestational age baby.<sup>3</sup>

## ALCOHOL

FASD (Fetal Alcohol Spectrum Disorder) is the leading known preventable cause of mental retardation and birth defects. The 2003 birth certificate data states that there were 86,382 births in Indiana and 539 women (0.6%) acknowledged alcohol use during pregnancy. Birth certificate data on substance use is not an accurate count of all users because the information is obtained by self report. It is estimated that FASD affects 1 in 100 live births or as many as 40,000 infants each year nationally (or 800+ infants in Indiana) (NOFAS). Children do not outgrow FASD. The physical and behavioral problems can last for a lifetime. FAS and FASD are found in all racial and socio-economic groups. FAS (Fetal Alcohol Syndrome), the most serious alcohol related disorder, and FASD are not genetic disorders. Women with FAS or affected by FASD have healthy babies if they do not drink alcohol during their pregnancy.

The Centers for Disease Control and Indiana State Department of Health monitor the prevalence of alcohol use among women of childbearing age through the Indiana Behavior Risk Factors State Survey (BRFSS). In 2002, with the inclusion of a family planning module in the BRFSS survey, information became available to assess the alcohol consumption patterns among pregnant women and also among women who might become pregnant. The prevalence rate for binge drinking (5 or more drinks on any one occasion) among child-bearing aged women (18-44) was 12.4% to 16.2% (state ranges from 5.4% - 21.6%; US average 12.4%).

## DRUGS

The only actual prevalence study conducted in Indiana was done in 1997. Haywood Brown, MD and his colleagues at the Indiana University (IU) Medical Center looked at the prevalence of drug use in pregnant women in Indiana. Thirteen counties were grouped by population into metropolitan, medium-sized, and rural counties. The meconium of newborns was tested along with the urine samples of the mother. They found that marijuana was present in over four percent of births, impacting approximately 3,700 babies, while cocaine was present in little over one percent of births, impacting approximately 1,000 babies. Opiates, PCP and amphetamines were rarely found in meconium or prenatal urine in 1997. The study also found that no Indiana county, regardless of size, is immune to drug exposure among pregnant women.<sup>13</sup>

In 1997, the Indiana General Assembly passed PL 260-1997(now PL 246-2005) requiring hospitals to submit a meconium specimen for every infant under their care who meets a certain set of high risk criteria. Data from the 4337 newborn meconium screens conducted in 2004 revealed that 20% were positive for marijuana (10.5%), cocaine (7.2%), opiates (3.5%) and methamphetamine (0.9%). A total of 1007 referrals were made to Child Protective Services, First Steps and/or treatment services for mother.<sup>14</sup>

Methamphetamine abuse is rapidly increasing in Indiana, particularly in Evansville, Terre Haute, and other southwestern and rural areas. The U.S. Attorney for the Southern District reports that methamphetamine abuse is spreading from rural to more urban areas like Indianapolis. Fifty percent of the drug overdoses in the Lake County HIDTA (High Intensity Drug Trafficking Area) area of responsibility involved methamphetamine.

## SCREENING

Health care providers have a responsibility to screen all pregnant and postpartum women for substance use, just as mothers have the responsibility to accept the help that is provided. The American College of Obstetricians and Gynecologists (ACOG) Committee Opinion 294 addresses the ethical rationale for universal

screening for at-risk drinking and illicit drug use.<sup>15</sup> The American Medical Association also endorses universal screening.<sup>16</sup> Universal screening offers each patient an opportunity to discuss the risks of alcohol, drug use, smoking, prescription drug use and other at-risk behaviors. When incorporated into the initial obstetrical history, structured screening tests identify substance users and promote earlier intervention and treatment. Most important, when identified and treated, the rate of abstinence increases, maternal and fetal complications decrease, and for each dollar spent on treatment, \$7 dollars are saved.<sup>17</sup>

Although a compassionate practitioner may be best able to detect substance use disorders, there are numerous factors that obscure this problem. First, many health care providers are not well trained or lack the skills to detect substance use. Second, many practitioners consider detection and screening to be time consuming and reimbursement is poor. Finally, they are not aware of treatment resources and do not have the time required to make referrals. Likewise, pregnant patients are often reluctant to disclose their drug and alcohol use. They are subjected to considerable social stigma for alcohol use and smoking. Drug use also carries a risk of losing custody of their children as well as criminal prosecution.<sup>18</sup> Fortunately, universal screening is easy to learn and implement and in a compassionate setting, social stigma is reduced and compliance with care is increased.<sup>19</sup>

The most reliable methods of screening for substance use are the interview (history) and self-reporting (questionnaire). Although clinical observations are helpful and include alcohol on the breath, poor hygiene, slurred speech, tremors, pinpoint or dilated pupils, among others, most drug or alcohol users show no signs on physical examination. Thus, a screening tool should be used with every patient.

There is a plethora of screening tools; most screening tools are specific for alcohol use and were originally developed for male patients. The CAGE questions are probably the best known but do not assess the problem of tolerance. Two modifications of the CAGE test for screening female patients are the T-ACE and TWEAK tests (the T stands for tolerance). In addition, the National Institute of Alcohol Abuse and Alcoholism (NIAAA questions) established guidelines for at-risk drinking in women.

Tools that screen for both drugs and alcohol are called conjoint tools. The rationale for a conjoint test is especially appealing. Patients may be forthright with answers about use of legal substances (alcohol and nicotine) but are often less than candid with respect to illegal drug use. By combining the two, patients tend to be more open in their answers. In addition, there are very easy screening tools to integrate into the patient interview, the easiest and most reliable are the FOUR P's Plus and the TWO-ITEM Screen. Each of these tools takes less than 5 minutes to complete. The table in Appendix A contains screening tools which could be used to detect perinatal substance abuse.

Screening does require some skill with interviewing techniques. Most important, screening works best when the practitioner has an ongoing relationship with the patient and can thereby create a respectful and confidential environment. Screening is optimal when performed at every prenatal visit and can include inquiries about substance use in family members as well as for risks of domestic violence. It is well documented that sexual, emotional and physical abuse are often precursors to substance use.

## URINE TESTING

The most common form of laboratory testing is urine testing. Sensitivity for detecting drug use, however, depends directly on timing of drug use and the urinary excretion of drug metabolites. With the exception of THC (delta-9-tetrahydrocannabinol), almost all other substances are excreted within 72 hours. Various techniques may be employed by drug users who wish to avoid detection that further reduce the sensitivity

of urine testing e.g. abstaining from drug use, etc. False-positive results from urine drug screening are possible due to cross-reaction with other medications or naturally occurring compounds in foods. However, repeated urine testing will eventually reveal the majority of common substance use.

Urine testing does have significant benefits including confirming the presence of a substance and revealing the use of multiple substances. It is most effective in monitoring compliance with treatment. When the patient states that she is “clean” and the urine tests are consistently negative, the patient has created a record of compliance. This also serves as a measure of the effectiveness of the prenatal recovery program.

Alcohol and substance use appear to be far more common than the disorders for which we routinely perform urine screening e.g. diabetes, preeclampsia, and urinary tract infection. If urine substance testing was as inexpensive and simple as these dipstick tests, one could argue for universal urine testing as a routine part of prenatal care. The issue then becomes one of consent, autonomy and justice.

#### Legal and Ethical Issues in Urine Testing:

There is no uniform policy on maternal or newborn drug testing. It is well established that patients may refuse even life saving care.<sup>20</sup> When it comes to childbearing, the most prominent issue places the mother’s right to autonomy against a fetus’ right to physical integrity. This is especially true for issues such as court order cesarean delivery, abortion, employment in the toxic workplace and criminalization of maternal drug use.<sup>21</sup>

Current opinions indicate two lines of thought about drug testing:

Focus on autonomy: A specific and informed consent needs to be obtained for maternal or newborn testing. Such a consent must also inform the patient that positive results may be reported to Child Protective Services or may be used for legal action if the state enacts criminal penalties for drug use in pregnancy.

Focus on Beneficence and Justice: In contrast, the other opinion holds that the signed consent for prenatal and obstetrical care covers all tests necessary for medical diagnosis and treatment. Implied in this opinion is that all information acquired by the physician remains “privileged” and confidential between the patient and physician.

#### Legal Issues

It is clear that state laws that criminalize maternal conduct (i.e. that make illegal substance use a felony) do not resolve the issue of drug use in pregnancy. The greatest risk is that such laws create an adversarial situation and drive patients away from prenatal care. Thus, it is most important to identify alcohol and drug use within the “privileged” and confidential clinical setting and this appears to be best achieved by universal screening at each prenatal visit.

South Carolina enacted a law that makes the use of an illegal or illicit substance during pregnancy a Class D felony. Two issues became clear as a result of this law and they were noted in a United States Supreme Court decision, *Ferguson v. City of Charleston*.<sup>22</sup> The case noted that 40 out of 41 women arrested as a result of postpartum drug testing for cocaine were African-American. In contrast, when tests were positive for heroin or methamphetamine, more often used by white women, patients were more likely referred to social services. The second issue in this case involved a point of law. The Court held that if the drug test was obtained without the patient’s consent, then the patient cannot be subject to criminal prosecution

because it constitutes an unlawful search under the Fourth Amendment.

This Supreme Court decision is, in fact, the law of the land and it creates an ethical dilemma. If a physician obtains informed consent for urine drug screening, the patient may be liable for criminal sanction and the physician may become the patient's adversary. If the physician obtains the drug test without consent, then the patient is not subject to legal penalty. Although her autonomy is compromised, the physician remains the patient's advocate.

## INTERVENTION AND TREATMENT

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There are three aspects of treatment for all forms of addiction:

- Intervention
- Abstinence
- Harm reduction.

During the last five years, research has revealed substantial evidence that addiction is a medical disorder and specifically, a disease of the brain.<sup>23</sup> Positron emission tomography (PET) scans have mapped the location in the brain where drugs and addictive behaviors leave their mark.<sup>24</sup> Addiction is a chronic relapsing disease and successful treatment is comparable to, or better than, compliance with treatment plans for hypertension or diabetes.<sup>25</sup> Thus, aggressive screening, detection and intervention are critical to initiating the treatment process.

It is unusual to find a pregnant addict in denial of either her addiction or the pregnancy. The overwhelming majority is ambivalent; that is, they do not want to hurt the fetus but they still want their drug. This paradoxical energy creates an ideal setting for intervention. Positive support will enhance the patient's motivation to remain abstinent beyond the pregnancy.<sup>26</sup>

Intervention and treatment of addiction has changed markedly over the last two decades. The most important shifts include the evaluation and treatment of medical and psychiatric co-morbid conditions such as depression, bipolar disorders and post traumatic stress disorders, increased social and spiritual support (12 Step programs) and a shift from cognitive behavioral therapy to motivational enhancement therapy (MET).<sup>27</sup> In MET, treatment strategies are matched to the patient's awareness and readiness to accept change.<sup>28</sup>

A current model of how people change, developed by Prochaska, DiClemente and Norcross, indicates that people go through various distinctive stages in changing behavior.<sup>29</sup> This is often called the Stages-of-Change approach. The majority of patients will change when they are ready to do so. Thus, the goal of the clinician is enhance the patient's motivation to change and match the treatment strategy to the stage of awareness and readiness to change.

The American College of Obstetricians created a presentation that describes and endorses the use of motivational enhancement therapy with a Stages-of-Change approach to illicit drug use in women.<sup>30</sup> The basic interviewing skills include: the ability to express empathy, avoid argumentation and to motivate the patient to move from one stage to the next. MET and Stages of Change are described in more detail in Appendix B.

## ADDITIONAL CONSIDERATIONS

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**LABOR AND DELIVERY** — Many patients in recovery are fearful that pain medications in labor will lead to relapse and may resist medications. Many addicts appear to have a low tolerance for pain and a high tolerance for opioid analgesics. For the patient in recovery, many believe that the best approach is to give

her “whatever it takes,” to relieve her discomfort. This may require large doses of narcotics. Regional blocks, such as epidurals are most effective. Agonist/antagonist analgesia such as nalbuphine (Nubain) in the methadone or buprenorphine maintenance patient must be avoided. This will initiate a rapid and distressing withdrawal and is associated with fetal distress.

The active substance user poses special problems for the anesthesiologist.<sup>31</sup> Thus, it is imperative that the clinician is aware of a patient’s substance use history. In one study, 27 out of 32 (84.3%) methadone maintenance patients were positive for other drugs of abuse at the last screen or at delivery.<sup>32</sup> Interestingly, a subsequent study in the same institution using a motivational enhancement approach found only 2 out of 14 (14.2%) methadone patients positive<sup>33</sup>.

**BREAST FEEDING** — Breastfeeding can be supported as appropriate depending on the substance. Ultimately, the decision to breastfeed should be made after serious consideration and consultation from a physician. Protocols vary by hospital and substance. There is no prohibition to breastfeeding in the methadone or buprenorphine maintenance baby.<sup>34</sup> However, methadone babies often experience neonatal abstinence syndrome (NAS) or withdrawal, which is dose related and often results in prolonged stays in the neonatal units at great expense. Interestingly, breast milk with methadone is often used to treat withdrawal.<sup>35</sup> Methadone breast-feeding mothers must be warned that abrupt cessation of breastfeeding may result in abrupt onset of withdrawal in the infant.<sup>36</sup>

In contrast, the studies evaluating the effects of buprenorphine maintenance indicate it is safe for the mother and newborn and NAS is noted to be minimal to absent.<sup>37</sup> Minimal to no NAS results in less morbidity to the newborn, better bonding with the mother and normal length of stay in a normal nursery. Financially, this results in a huge cost savings for the patient. This makes buprenorphine highly cost effective compared to methadone, even though methadone is less expensive to prescribe.<sup>38</sup>

## COST BENEFIT

The Office of Justice Programs Drug Court Clearinghouse and Technical Assistance Project estimates that the costs associated with caring for babies that were prenatally exposed to drugs or alcohol over their lifetime range from \$750,000 to \$1.4 million per child. The costs associated with the birth of a drug-addicted baby include: hospital costs relating to delivery and immediate intensive care of the infant; detox costs for drug-exposed infants; foster care costs; first year medical costs; special education costs; costs relating to developmental deficiencies<sup>39</sup>. A detailed description of these costs can be found in Appendix C.

One study, done by the John Hopkins University School of Medicine, found that infants born to women who received treatment for substance use disorders showed better clinical outcomes at delivery with less drug use and higher infant estimated gestational age, birth weight and Apgar scores. Infants of treatment patients were less likely to be admitted to the NICU and the length of stay for those who were admitted to the NICU was shorter. Treating women for substance abuse resulted in a mean net savings of \$4,644 per mother/infant pair, in the peripartum period. It was also reported that additional savings could potentially be made “if strategies are developed to encourage more women to enroll in drug treatment earlier in their pregnancy.”<sup>40</sup> Another study conducted on the impact of substance abuse treatment modality on birth weight and health care expenditures found a near linear relationship between birth weight and the amount of treatment received. Women who received a combination of both residential and outpatient care showed the greatest impact on improving birth weight, although outpatient programs alone proved to be the most cost-effective.<sup>41</sup>

In the case of Fetal Alcohol Syndrome alone, it has been found that an individual with fetal alcohol syndrome can incur a lifetime health cost of over \$800,000. In 2003, fetal alcohol syndrome cost the United States \$5.4 billion; direct costs were \$3.9 billion, while indirect costs added another \$1.5 billion. (site)

The investment in prevention and treatment is the best way to reduce the burden of substance abuse on public programs. Targeted interventions on select populations hold the highest promise for return on investment. Getting women who suffer from substance use disorders into treatment would multiply the state investment and avoid future costs to the currently taxed state burden.

## RECOMMENDATIONS

The following recommendations regarding Substance Use Disorders and Pregnancy were developed from the many meetings of the Indiana Perinatal Network's Substance Abuse and Pregnancy Committee.

### I. Public Education and Outreach:

Education is the key to primary prevention/intervention for substance use disorders. It is imperative to better understanding the special needs of pregnant women suffering from substance use disorders and the need to outreach to those women.

- a. Educate all healthcare providers, legislators, employees of the criminal justice system and social welfare workers in Indiana on the prevalence and incidence of and issues related to addiction in the state, with an emphasis on addiction as a chronic relapsing disease.
- b. Implement a state-wide consumer education campaign that encourages substance abusing women to seek care for their addiction, and creates a more supportive community.
- c. Implement a state-wide public awareness campaign which will educate the community, including churches and schools, about the harm of substance use and its affects during pregnancy. The campaign should have age and gender appropriate messages for children, teenagers, adults and seniors.
- d. Develop and support programs that use traditional and non-traditional methods of outreaching to the most resistant and difficult to reach women suffering from addiction.
- e. Develop and maintain an up-to-date resource list of available residential and non residential treatment and/or recovery programs with name, address, telephone number, email address and cost on Indiana Perinatal Network and other state-wide agency websites, 211 Helpline directories, Indiana Family Helpline directories and in all public libraries.

### II. Screening:

Every health care provider in Indiana has a responsibility to screen each of their pregnant and postpartum patients for substance use.

- a. Develop and adopt consistent state wide verbal prenatal and postpartum screening and testing protocols that adequately identify women and newborns in need of services. Make verbal screening for substance use throughout pregnancy, as well as counseling and drug use treatment, a consistent component of prenatal care.
- b. Disseminate information about screening in order to give all pregnant and post partum women in Indiana the option to receive addiction treatment. The 4P's and T-ACE are two tools that have been shown to be consistently effective with pregnant women.
- c. Expand PSUPP (Prenatal Substance Use Prevention Program) to all Maternal and Child Health prenatal clinics in the state.

### III. Treatment:

Addiction is a medical disorder and specifically, a chronic relapsing disease of the brain therefore,

intervention and treatment is a necessity in rehabilitating brain function.

- a. Establish residential treatment programs that are geographically available throughout the state of Indiana. The programs should be family centered and **allow women and children to stay together** in the facility while addiction treatment is being administered. Treatment programs should also be affordable, on a sliding scale, and resources should be available for services to patients who can not afford to pay themselves.
- b. Reassess the policies and practices of the Hoosier Assistance Program (HAP) as a mechanism to ensure that women are eligible to receive necessary services and the cost to the provider is not burdensome.

#### IV. Provider Education and Training:

Initial and on-going training of medical professionals is required for continued screening and identification of pregnant and post-partum women in need of addiction treatment.

- a. Emphasize and expand education and information regarding substance use and pregnancy in medical schools, nursing schools and on-going residency programs.
- b. Allocate sufficient resources to provide ongoing training of hospital personnel in ways to screen, test and assist women into needed treatment services.

#### V. Research and Data:

Further development of successful screening and treatment services will be enhanced by improved monitoring of substance use disorders in Indiana.

- a. Implement pilot studies, risk screening and laboratory testing to show the prevalence of substance use and the need for universal screening.
- b. Create a consistent and more comprehensive data collection system to more closely monitor prevalence and impact of treatment efforts, and participate in national surveys.

#### VI. Legal:

Laws that criminalize maternal conduct do not resolve the issue of drug use in pregnancy. The greatest risk is that such laws create an adversarial situation and drive patients away from prenatal care.

- a. Work closely with Indiana Division of Child Services officials to better understand and assess their current approach and develop a consistent policy and CPS protocol regarding the screening, testing and treatment of substance using pregnant women and exposed newborns.
- b. Develop guidelines and enact legislation as needed to adopt a consistent, statewide policy and response to detecting substance use during pregnancy, and placement of substance-exposed newborns. Policies that emphasize treatment rather than a purely punitive approach should take precedence. Key organizations should include DCS, law enforcement, prosecutors, healthcare and treatment facilities.

## RESOURCES

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The Substance Abuse and Mental Health Service (SAMHSA) maintains an on-line resource for finding drug and alcohol abuse treatment programs throughout the nation. All information in the Locator is completely updated each year, based on facility responses to SAMHSA's National Survey of Substance Abuse Treatment Services. New facilities are added monthly. Updates to facility names, addresses, and telephone numbers are made monthly, if facilities inform SAMHSA of changes. SAMHSA's Center for Substance Abuse Treatment also operates Referral Helplines, for anyone seeking additional information.

- 1-800-662-HELP
- 1-800-662-9832 (Español)
- 1-800-228-0427 (TDD)

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