



.....

Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health



.....
.....
.....
.....
.....
.....
.....

Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health

By
Barbara Morse, Ph.D.,
Shelly Gehshan, M.P.P., and
Ellen Hutchins, Sc.D.

Published by
National Center for Education in Maternal and Child Health
Arlington, Virginia

Cite as

Morse B, Gehshan S, Hutchins E. 1997. *Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health*. Arlington, VA: National Center for Education in Maternal and Child Health.

Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health is not copyrighted. Readers are free to duplicate and use all or part of the information contained in this publication. In accordance with accepted publishing standards, the National Center for Education in Maternal and Child Health (NCEMCH) requests acknowledgment, in print, of any information reproduced in another publication.

The mission of the National Center for Education in Maternal and Child Health (NCEMCH) is to promote and improve the health, education, and well-being of children and families by leading a national effort to collect, develop, and disseminate information and educational materials on maternal and child health; and by collaborating with public agencies, voluntary and professional organizations, research and training programs, policy centers, and others to advance knowledge in programs, service delivery, and policy development. Established in 1982 at Georgetown University, NCEMCH is part of the Georgetown Public Policy Institute. NCEMCH is funded primarily by the U.S. Department of Health and Human Services through its Maternal and Child Health Bureau.

ISBN 1-57285-042-6

Published by:

National Center for Education in Maternal and Child Health
2000 15th Street, North, Suite 701
Arlington, VA 22201-2617
(703) 524-7802
(703) 524-9335 fax
Internet: info@ncemch.org
World Wide Web: <http://www.ncemch.org>

Single copies of this publication are available at no cost from:

National Maternal and Child Health Clearinghouse
2070 Chain Bridge Road, Suite 450
Vienna, VA 22182-2536
(703) 356-1964
(703) 821-2098 fax

This publication has been produced by the National Center for Education in Maternal and Child Health under its cooperative agreement (MCU-119301) with the Maternal and Child Health Bureau, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services.



ACKNOWLEDGMENTS

The concept for this document came out of a consensus meeting held in July 1992 convened by the Center for Substance Abuse Prevention under the auspices of the National Resource Center for the Prevention of Perinatal Abuse of Alcohol and Other Drugs to examine substance abuse screening and assessment instruments and develop a reference manual. The Maternal and Child Health Bureau would like to thank the participants of that meeting as well as the following persons for reviewing drafts of this document and assisting us in the selection of several screening instruments appropriate for use with pregnant women in the clinic setting: Gene Burkett, M.D., Perinatal Division, University of Miami, Miami, FL; Donna Caldwell, Ph.D., National Perinatal Information Center, Providence, RI; Grace Chang, M.D., Harvard School of Medicine, Boston, MA; Ira Chasnoff, M.D., National Association for Families, Addiction Research and Education, Chicago, IL; Wendy Chavkin, M.D., M.P.H., Chemical Dependency Institute, Beth Israel Medical Center, New York, NY; Nancy Day, Ph.D., Western Psychiatric Institute and Clinic, Pittsburgh, PA; Karol Kaltenbach, Ph.D., Family Center, Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA; Sandra Lapham, M.D., Substance Abuse Research Program, Lovelace Medical Foundation, Albuquerque, NM; Susan Martier, Ph.D., Hutzel Hospital, Detroit, MI; Pat Paluzzi, C.N.M., American College of Nurse-Midwives, Washington, DC; Elizabeth Rahdert, Ph.D., Division of Clinical and Services Research, NIDA, Rockville, MD; Marcia Russell, Ph.D.,

Research Institute on Addictions, Buffalo, NY; Sydney Schnoll, M.D., M.P.H., Division of Substance Abuse Medicine, Virginia Commonwealth University, Richmond, VA; and Robert A. Welch, M.D., Department of OB/GYN, Providence Hospital, Detroit, MI.

This document was prepared by Barbara A. Morse, Ph.D., Director, Fetal Alcohol Education Program, Boston University School of Medicine, Boston, MA; Shelly Gehshan, M.P.P., Program Principal, Forum for State Health Policy Leadership, National Conference of State Legislatures, Washington, DC; and Ellen Hutchins, Sc.D., Health Care Administrator, Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services, Rockville, MD. Editorial and graphic design services were provided by Judith Serevino, Editor, National Center for Education in Maternal and Child Health (NCEMCH), Arlington, VA; Oliver Green, Senior Graphic Designer, NCEMCH; and Carol Adams, M.A., Director of Communications, NCEMCH.



SUMMARY

Substance Abuse Is a Major Problem During Pregnancy

- Five to 10 percent of all women have substance abuse problems during pregnancy
- Substance abuse contributes to obstetric and pediatric complications, including fetal alcohol syndrome, prematurity, and abruptio placenta
- Treatment for substance abuse during pregnancy is significantly more effective than at other times in a woman's life

Screening Tools Are the Most Effective Way to Determine Risk

- Laboratory tests and urine toxicologies are ineffective tools for determining substance abuse
- Quick, brief questionnaires have been demonstrated to be effective in prenatal care for assessing alcohol and drug use
- Pregnant women describe their health care providers as the best source of information and will generally follow the provider's advice

How to Use Screening Tools

- Choose a screen that fits your style
- Be nonjudgmental and supportive when asking about use
- Stress benefits of abstinence and offer to help the patient achieve it
- Know where to refer a patient for further assessment

Screening Example: T-ACE

- How many drinks does it take for you to feel high? (**T**olerance)
- Have people **A**nnoyed you by criticizing your drinking?
- Have you ever felt you ought to **C**ut down on your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? (**E**ye-opener)

(Sokol et al. 1989)



THE PROBLEM

“Not in my practice.” This statement describes the belief of many health care providers regarding the occurrence of domestic violence, HIV, and substance abuse among their patients (Schwartz 1993). Everyone agrees that these problems exist—but not in their practice. As a result, inquiring about drug and alcohol use is often neglected when providing prenatal care.

In today’s fiscal climate, it is difficult to hear of one more problem that should be addressed in the medical setting. Time allotted with each patient is reduced, and successful practice is measured by cost containment as often as by patients’ health. Yet attention to substance abuse problems during pregnancy is one area in which patient health can be improved and costs can be reduced. This manual was developed to provide prenatal providers with the background and skills to successfully recognize alcohol and drug abuse among patients, to institute protocols to improve the health of both mother and newborn, and to reduce the financial and physical costs associated with prenatal substance abuse.

Alcohol abuse and/or drug abuse occurs in 5 to 10 percent of women in the childbearing years, evenly spread across all ethnic, geographic, and socioeconomic groups (Stratton et al. 1996; Chasnoff et al. 1990). There are multiple risks to both mother and child when alcohol or drugs are abused during pregnancy. Alcohol abuse is associated with fetal alcohol syndrome (FAS) or fetal alcohol effect (FAE), which represent neurologic disorders and physical anomalies. FAS and FAE affect as many as 30,000

births each year (Abel and Sokol 1991). Cocaine or crack abuse contributes to extreme prematurity and possible long-term central nervous system disorders. Estimates of the number of infants in the United States born exposed to cocaine each year range from 91,500 to 240,000 (GAO 1990; Gomby and Shiono 1991). Opiate use can cause physical addiction in the newborn, requiring intensive medical intervention at birth. Substance abuse can also contribute to decreased birthweight and the risk of increased obstetrical problems such as poor weight gain, abruption placenta, and HIV.

The most recent nationally cited estimates report that 5.5 percent of all pregnant women use an illicit drug during pregnancy (National Pregnancy and Health Survey 1996). Abuse of drugs and alcohol among pregnant women often remains unnoticed and untreated. Outward signs of substance abuse may be subtle. Pregnant women who are abusing drugs or alcohol may not present with the same stereotypical symptoms seen in an older or late-stage abuse population. Studies at Boston City Hospital in the late 1970s found that heavily drinking women were no more likely than nonabusing patients to miss appointments, register for prenatal care late, or come in intoxicated. They were, however, slightly older and more likely to use other drugs and cigarettes (Rosett et al. 1983). Early studies of alcohol abuse among prenatal patients found that clinic staff reported no alcohol abuse among their patients, when, in fact, screening identified between 9 and 11 percent drinking at risk levels (Rosett et al. 1983; Sokol 1980; Larsson 1983). Addiction

specialists estimate that in the early stages of heavy use as many as 90 percent of all people who abuse drugs or alcohol are able to maintain their normal lifestyle, keeping appointments, jobs, and relationships. It would be a rare professional today who does not have someone in his or her practice

with drug or alcohol problems. Attention to illicit drug abuse has alerted practitioners that addictions are more widespread than might be expected. However, many are still unclear how to routinely and comfortably identify women at risk, and how to provide effective interventions.



THE SOLUTION

A number of clinical methods have been developed to detect substance abuse. These include blood tests, urine toxicology screens, and educated guessing based on clinical experience. Blood tests (such as liver function tests) may detect organ damage or malfunction, but only identify those patients with long-term use in whom secondary symptoms have occurred. Early stage substance-abusing women are rarely identified by this means. In spite of the popularity of urine toxicologies (in response to illicit drug use), these screens are able to identify only fairly recent use of a substance (i.e., cocaine may be detected for no more than 36 hours after use) and provide no information about frequency or length of use. Women who have not used drugs in the day or two prior to a prenatal visit will not be identified. Urine, blood, and breath tests are all unreliable indicators of alcohol use, as alcohol is metabolized quickly and is unlikely to be detected in body fluids (Christmas 1992). Educated guessing based on clinical experience may identify some users, but is heavily dependent on the practitioner's attitudes and experiences. The majority of at-risk women who do not fit stereotypic molds will be missed. The most effective method for

detecting substance abuse remains a screening tool.

Screening tools are questionnaires designed to be administered face-to-face, patient to provider. They are not designed to diagnose a substance abuse problem, but are intended to determine if a patient may be at risk for alcohol or drug problems and would benefit from a more comprehensive evaluation by a specialist. Effective screening tools in the prenatal setting are those that:

- Can be administered in 5–10 minutes
- Are used routinely with every patient, not just those in whom substance abuse is “suspected”
- Can be adapted to fit a provider's personal history-taking style
- Can be administered multiple times across a pregnancy, since patients may be more forthcoming as they develop trust with a provider
- Provide an opportunity to educate about alcohol and drug abuse and the benefits of stopping while pregnant

A screening tool for substance abuse should be incorporated into every prenatal intake

and history form. Asking *every* patient questions in a health context lessens the stigma associated with the topic, and expresses concern for the health of the mother and baby. Just as screening for diabetes is a routine and ongoing part of prenatal care, questions about substance abuse are most effective when used consistently and routinely. Intervention can be provided for problems as soon as they are identified, reducing the chances of obstetrical and newborn complications.

Pregnancy may be a window of opportunity to intervene for substance abuse problems (Weiner and Larsson 1987). It may be the first time that a woman has sought medical care (Woods 1993). Denial—a concern whenever questions are asked about substance abuse—may be less common during pregnancy. Pregnant women as a group are invested in the health of their babies and can no longer deny that their alcohol or drug abuse is hurting anyone but

themselves. Women in recovery have reported that they wanted help during pregnancy but didn't know how to ask (McElaney 1991). Pregnant women report that they consider health care providers one of their best sources of information, and are likely to comply with advice given (Minor and Van Dort 1982). This makes the prenatal setting the ideal place for discussion of substance abuse.

Even for women who do not have substance abuse problems, a routine screening offers the chance to discuss the risks of alcohol and drug use, particularly use that may have occurred prior to knowledge of pregnancy. Substance abuse problems in a partner may also be discussed. Initiating this discussion in what is generally a nonjudgmental, health-oriented setting conveys the message that these issues are important to the healthiest possible pregnancy.



THE BENEFITS OF SCREENING

Screening can have several immediate benefits:

1. Substance abuse during pregnancy is placed as an issue critical to the health of mothers and babies.
2. Education can be provided about the risks of alcohol and illicit drugs, and about behaviors that might have occurred prior to the prenatal visit.
3. Identification of women whose pregnancies are at risk due to their

substance abuse allows for the earliest possible intervention or referral to specialized treatment.

While each of these benefits is important, the greatest one is identification of women at risk. Over the past 20 years multiple studies have demonstrated benefits to both mothers and their infants when substance abuse treatment was provided. Rosett et al. (1983) demonstrated that women identified as heavy drinkers in the prenatal setting were responsive to treatment. Those who

completed at least three counseling sessions (66 percent) had babies who were significantly healthier at birth. Obstetrical complications were also reduced. Larsson (1983) and Smith et al. (1986) had similar findings. Follow-up studies of children born to heavily drinking women who responded to treatment demonstrated a persistence of the benefits observed at birth (Larsson 1985).

Chasnoff (1989) reported a reduction of one-half in the incidence of abruptio placenta and prematurity among a group of women who reduced cocaine abuse during pregnancy. Low birthweight was not observed among the group participating in treatment, but was 25 percent among those who continued cocaine use.

Cost savings from screening and identification of substance-abusing mothers are also substantial. For every birth with cocaine exposure that can be prevented, more than \$5,000 in medical costs can be saved. Reductions in crack use, other drug use, or the use of foster care can add substantially to the savings. At the national level, the total medical cost for neonatal cocaine exposure is estimated to be \$500 million (Phibbs et al. 1991).

Preventing FAS could save at least a portion of the \$74.6 million dollars estimated to be the annual cost for the care of affected individuals (Abel and Sokol 1991). Thus the 5–10 minutes of screening followed by an appropriate intervention during prenatal care is a relatively modest investment that can result in enormous cost benefits.



THE ROLE OF THE HEALTH CARE PROVIDER

Physicians, nurses, and others involved in prenatal care can play a unique role in the reduction of substance abuse during pregnancy and its related problems. In this positive, health-oriented context, supportive inquiry about all aspects of a woman's life, including her use of drugs or alcohol, can open the door to referral and treatment. Many pregnant women will reduce their use of drugs and/or alcohol following supportive advice from a health care professional, even if they never disclose that use (Rosett and Weiner 1981). Health care professionals can also help women see the benefits of stopping through improved sense of well-being, physical measures such

as weight gain, and better personal relationships.

All health care professionals have the basic skills to identify and refer at-risk women for treatment. While the topic may be difficult for patients and providers alike to discuss, the basic skills of interviewing, being empathic and supportive, providing education on the risks of continuing the adverse behaviors, and describing the benefits of treatment, referral, and follow-up are no different than they would be for any other medical problem. Providers can make the difference.



FINDING AND USING A SCREENING TOOL

The first question that occurs to most practitioners about screening is, “When am I going to find the time to do this?” followed by, “There’s really no point in asking anyway. Denial is so powerful that no one will tell you the truth.” Finding time for any additional procedure is a challenge for every provider. Yet most screening will take a relatively short amount of time—perhaps 30 seconds for the majority of patients who do not have a substance abuse problem and 5–10 minutes for the 10–15 percent of patients who do. Many professionals find that the time taken for the screening actually saves time in other ways, either by answering questions that might have come up at another time, or in reduced care time for a patient in whom obstetrical complications can be prevented.

While denial may occur, routine screening begins the discussion. For those patients in whom you suspect substance abuse, even if they have been unable to disclose it to you, it is important to review the benefits of reduction or abstinence. Some women may seek help or cut down on their own, based on your advice. However, statements such as “Now that you’re pregnant, just don’t drink” or “You don’t drink or use drugs, do you?” may inadvertently reinforce denial and may convey the message that there is no benefit to be achieved by stopping now. The purpose of the screening should be to begin an open discussion about alcohol and drug use.

HOW TO ASK AND HOW TO RESPOND

1. *Find an approach that is comfortable for you.*

Choose a screening tool that you can use with all patients. For convenience, five screens are listed in the back of this document. Remember that there is no one perfect way to ask, and that screens can be adapted to fit each person’s preferred style.

2. *Be nonjudgmental.*

Experience has shown that patients are generally not offended by questions about alcohol and drug use if they are asked in a nonjudgmental, nonmoralistic, nonthreatening manner, and if the health implications and benefits of reduction and abstinence are stressed. As each of us comes with experiences, attitudes, and beliefs that may be intentionally or unintentionally conveyed during an interview, it is always important to recognize and address personal attitudes that may influence a patient’s response. In an office or clinic setting, it is important that all staff understand the reasons for asking about substance abuse, even those who may not be involved in the actual interview. This helps reduce bias that may be conveyed to patients.

3. *Make it a routine part of prenatal care.*

Just as women are routinely screened for gestational diabetes, appropriate weight gain, anemia, etc., screening for substance abuse should be seen as another low-cost way to provide optimal prenatal care. Asking the same questions of every patient reduces subjectivity in deciding who should and should not be screened.

4. *Know how to respond.*

Prepare yourself for patients' questions about why you are asking. Become familiar with the risks of substance abuse and the benefits of stopping during pregnancy. Set the tone with introductory statements such as "I ask all my patients these questions because it is important to their health and the health of their babies." Know how to counsel women with both negative and positive screens.

For patients with a *negative* screen (no risk determined):

- a. Review the benefits of abstinence for the duration of the pregnancy.
- b. Reassure patients that small amounts of alcohol (one drink or less in any 24-hour period) consumed prior to the visit need not be a concern, that occasional use before conception does not pose a risk, and that foods containing alcohol (such as Kahlua ice cream or rum cake) are not a problem.

For patients who have a *positive* screen (risk determined):

- a. Review for the patient what she has just reported to you.
- b. State your concern for the health of the mother and the baby.

- c. State your belief that you know the mother wants her baby to be as healthy as possible and that she can improve the health of her baby by stopping use of alcohol and drugs.
- d. State the need for her to stop using drugs and/or alcohol during pregnancy, and that you and she will work together to achieve this.
- e. Discuss possible strategies for her to stop—e.g., individual counseling, 12-step programs, and addiction treatment programs.
- f. Suggest a referral for a more in-depth assessment by a specialist. Become knowledgeable regarding specialists and treatment centers for appropriate referrals. If feasible, call and make the appointment while the patient is in the office.
- g. Make a follow-up appointment to see the patient after her drug/alcohol assessment and keep an ongoing interest in the problem. Praise any reduction in use that she reports to you.
- h. Maintain communication with the treatment provider to monitor progress.

5. *Be positive.*

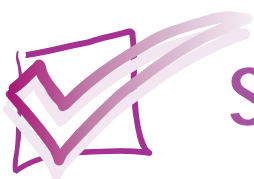
While no one can promise any woman a perfect pregnancy outcome, you can assure women that they will improve the chances that their babies will be healthy by discontinuing drug and alcohol use. Emphasize that benefits will begin as soon as the woman reduces or stops use, and that the earlier she is able to stop the better. It is never too late.



REFERRAL SOURCES

Most hospitals have substance abuse treatment programs and should be able to provide you with patient assessments. If a program is not available where you practice, contact your state Division of Substance Abuse Services (usually part of the Department of Public Health) and ask for a referral. Pregnant women have unique treatment needs, and will do best in a program that can address these needs. Most states now have programs specifically designed for pregnant women and for mothers. There are also numerous private hospitals and counselors who treat substance abuse. Twelve-step programs such as Alcoholics (or Cocaine or Narcotics) Anonymous can also provide useful support to women addressing these problems. All of these programs are listed in the Yellow Pages.

If you live in an area where no formal treatment programs exist or access to them is extremely limited, you may be the only resource available to a woman to help her reduce her substance use during pregnancy. In these circumstances, meeting weekly or even biweekly (as is done with other high-risk pregnancies) may be a first step towards expressing your concern and the seriousness of the situation. Suggest that the woman reduce her use by one-half each day, over several days until abstinence is achieved. Determine if her use is related to other problems in her life (depression, marital problems or domestic violence, history of sexual or physical abuse) and seek referrals for these issues. Above all, maintain support for her and affirm your belief that you know she can reduce her use and improve the health of her baby.



SCREENING INSTRUMENTS

Five screening instruments are presented on the following pages. They were chosen from a large field of instruments for their brevity, validity, specificity, and sensitivity in detecting alcohol and drug problems. All have been tested with populations of pregnant women. While most substance abuse screens were initially developed to inquire about alcohol use, it is possible to add the term “drugs” (or specifically list drugs of concern) to any of the screens listed here. Some of these screens

inquire about the frequency and quantity of use; others ask about problems associated with substance abuse. Ideally the questions are asked face-to-face while taking a history. However, many providers have had success screening for substance abuse by placing these questions on an intake form that the patient fills out, and then doing follow-up when reviewing the history.

The screens are presented in alphabetical order.

AUDIT

1. How often do you have a drink containing alcohol?
 - (0) Never
 - (1) Monthly
 - (2) 2–4 times a month
 - (3) 2–3 times a week
 - (4) 4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?
 - (0) 1–2
 - (1) 3 or 4
 - (2) 5 or 6
 - (3) 7–9
 - (4) 10 or more
3. How often do you have six or more drinks on one occasion?
 - (0) never
 - (1) less than monthly
 - (2) monthly
 - (3) weekly
 - (4) daily or almost daily
4. How often during the last year have you found that you were unable to stop drinking once you started?
 - (0) never
 - (1) less than monthly
 - (2) monthly
 - (3) weekly
 - (4) daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking?
 - (0) never
 - (1) less than monthly
 - (2) monthly
 - (3) weekly
 - (4) daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
 - (0) never
 - (1) less than monthly
 - (2) monthly
 - (3) weekly
 - (4) daily or almost daily
7. How often during the last year have you felt guilt or remorse after drinking?
 - (0) never
 - (1) less than monthly
 - (2) monthly
 - (3) weekly
 - (4) daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because of drinking?
 - (0) never
 - (1) less than monthly
 - (2) monthly
 - (3) weekly
 - (4) daily or almost daily
9. Have you or someone else been injured as the result of your drinking?
 - (0) no
 - (2) yes, but not in the last year
 - (4) yes, during the last year
10. Has a friend, relative, or doctor or other health worker been concerned about your drinking or suggested you cut down?
 - (0) no
 - (2) yes, but not in the last year
 - (4) yes, during the last year

Scores are in parentheses. A score of 8 or more is considered a positive screen.

4Ps

Have you ever used drugs or alcohol during this **P**regnancy?

Have you had a problem with drugs or alcohol in the **P**ast?

Does your **P**artner have a problem with drugs or alcohol?

Do you consider one of your **P**arents to be an addict or alcoholic?

This screening device is often used as a way to begin a discussion about drug or alcohol use. Any woman who answers yes to one or more questions should be referred for further assessment.

Ewing H. Medical Director, Born Free Project, Contra Costa County, 111 Allen Street, Martinez, CA 94553. Phone: (510) 646-1165.

T-ACE

How many drinks does it take for you to feel high? (**T**olerance)

Have people **A**nnoyed you by criticizing your drinking?

Have you ever felt you ought to **C**ut down on your drinking?

Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? (**E**ye-opener)

Any woman who answers more than two drinks on the tolerance question is scored 2 points. Each yes to the additional three questions scores 1. A score of 2 or more is considered a positive screen, and the woman should be referred to a specialist for further assessment.

Sokol RJ, Martier SS, Ager JW. 1989. The T-ACE questions: Practical prenatal detection of risk drinking. *American Journal of Obstetrics and Gynecology* 160(4).

TWEAK

How many drinks does it take for you to feel high? (**T**olerance)

Does your partner (or do your parents) ever **W**orry or complain about your drinking?

Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?
(**E**ye-opener)

Have you ever **A**wakened the morning after some drinking the night before and found that you could not remember part of the evening before?

Have you ever felt that you ought to **K**/Cut down on your drinking?

A woman receives 2 points on the tolerance questions if she reports that she can hold more than five drinks without falling asleep or passing out. A positive response to the worry question scores 2 points, and a positive response to each of the last three questions scores 1 point each. A total score of 2 or more indicates that the woman is a risk drinker and requires further assessment.

Russell M. 1994. New assessment tools for risk drinking during pregnancy. *Alcohol Health and Research World* 18(1).

TEN-QUESTION DRINKING HISTORY (TQDH)

Beer: How many times a week do you drink beer?
How many cans do you have at one time?
Do you ever drink more?

Wine: How many times per week do you drink wine?
How many glasses do you have at one time?
Do you ever drink more?

Liquor: How many times per week do you drink liquor?
How many drinks do you have at one time?
Do you ever drink more?

Has your drinking changed during the past year?

Any woman who reports drinking more than four drinks once a week or more is considered at risk and requires further evaluation.

Weiner L, Rosett HL, Edelin KC. 1982. Behavioral evaluation of fetal alcohol education for physicians. *Alcoholism: Clinical and Experimental Research* 6(2).



REFERENCES

- Abel EL, Sokol RJ. 1991. A revised conservative estimate of the incidence of FAS and its economic impact. *Alcoholism: Clinical and Experimental Research* 15(3).
- Chasnoff IJ, Griffith R, MacGregor. 1989. Temporal patterns of cocaine use in pregnancy. *Journal of the American Medical Association* 261:1741–1744.
- Chasnoff IJ, Landress HJ, Barrett ME. 1990. The prevalence of illicit drug or alcohol use during pregnancy and discrepancies in mandatory reporting in Pinellas county, Florida. *New England Journal of Medicine* 322:1202–1206.
- Christmas J, Knisely J, Dawson K, Dinsmoor M, Weber S, Schnoll S. 1992. Comparison of questionnaire screening and urine toxicology for detection of pregnancy complicated by substance abuse. *Obstetrics and Gynecology* 80:750–754.
- General Accounting Office. *Drug Exposed Infants: A Generation at Risk*. Washington, DC: U.S. General Accounting Office, 1990. Publication No. GAO/HRD 90-138.
- Gomby D, Shiono PH. 1991. Estimating the number of substance exposed infants. *The Future of Children* 1:17–25.
- Larsson G. 1983. Prevention of fetal alcohol effects: An antenatal program for early detection of pregnancies at risk. *Acta Obstetrica et Gynecologica Scandinavica* 62:171–178.
- Larsson G, Gohlin A-B, Tunell R. 1985. Prospective study of children exposed to variable amounts of alcohol in utero. *Archives of Diseases in Childhood* 60:316–321.
- McElaney L (producer). 1991. *Straight from the Heart* [videotape]. Cambridge, MA: Vida Health Communications.
- Minor M, Van Dort B. 1982. Prevention research on the teratogenic effects of alcohol. *Preventive Medicine* 11:346–359.
- National Institute on Drug Abuse. 1996. *National pregnancy and health survey: Drug use among women delivering live births*: 1992. Rockville, MD: U.S. Department of Health and Human Services.
- Phibbs CS, Bateman DA, Schwartz RM. 1991. The neonatal costs of maternal cocaine use. *Journal of the American Medical Association* 266:1521–1526.
- Rosett HL, Weiner L. 1981. Identifying and treating pregnant patients at risk from alcohol. *Canadian Medical Association Journal* 125:149–154.
- Rosett HL, Weiner L, Edelin KC. 1983. Treatment experience with problem pregnant drinkers. *Journal of the American Medical Association* 249:2029–2033.
- Schwartz RH. 1993. Not in my practice [editorial]. *Obstetrics and Gynecology* 82(4).
- Smith IE, Coles CD, Lancaster J, Fernoff PM, Falek A. 1986. The effect of volume and duration of prenatal ethanol exposure on neonatal physical and behavioral development. *Neurobehavioral Toxicology and Teratology* 8:375–381.

Sokol RJ. 1980. Alcohol and spontaneous abortion [Letter to the editor]. *Lancet* 2.

Stratton K, Howe C, Battaglia F, eds. 1996. *Fetal Alcohol Syndrome: Diagnosis, Epidemiology, Prevention and Treatment*. Washington, DC: National Academy Press.

Weiner L, Larsson G. 1987. Clinical prevention of fetal alcohol effects: A reality. *Alcohol, Health and Research World* 2(4):60–63.

Woods J, ed. 1993. *Clinical Obstetrics and Gynecology* 36(2):221–222.



MCHB

Maternal and Child Health Bureau



National Center for Education
in Maternal and Child Health

ISBN 1-57285-042-6