

The Problems No One Wants to See: Mental Illness and Substance Abuse Among Women of Reproductive Age in North Carolina

Laura Louison, MSW, MSPH; Sherri L. Green, PhD, MSW, LCSW; Sheila Bunch, PhD, MSW, LCSW;
Anna Scheyett, PhD, MSW, LCSW

High rates of infant mortality and morbidity persist in North Carolina despite efforts at the state and federal level to improve women's physical health and access to prenatal care in order to promote healthy birth outcomes. While infant mortality and low birth weight rates have declined over the past decade, more focused attention to women's behavioral health, specifically mental illness and substance use disorders, is needed to further close this gap. Women's mental health and substance use are often overlooked as determinants of both preconceptional health and pregnancy outcomes. This is regrettably shortsighted: addiction and mental illness not only pose risks to prenatal development and birth outcomes but also impair women's ability to be safe and sober mothers. Promoting positive birth outcomes requires that health care providers, policymakers, and communities in North Carolina collaborate to create a system of comprehensive care in order to support women's recovery from mental illness and substance abuse.

Prevalence

Though overall rates of having any mental disorder are similar for men and women, the prevalence of specific disorders vary greatly by gender. According to the National Household Survey on Drug Use and Health, in 2007 the prevalence of serious mental illness (defined as a diagnosable mental, behavioral, or emotional disorder with substantial

functional impairment) was higher in women, particularly those of reproductive age, than in men: 13.5% in women versus 10% in men for ages 18–25 and 10.1% versus 5.5% for ages 26–49.¹ More women, 11.6% versus 7.7%, suffered mood disorders.¹ Substance use disorders are less common among women, with overall prevalence of substance use disorders of 5.7% among women as compared to 12.3% among men.¹

Mental illness and substance use disorders are associated with significant morbidity, mortality, and disability. One in four individuals visiting a health care provider has at least one mental or behavioral disorder, yet these often go undiagnosed and untreated.² In the United States, only about one in four individuals who need substance abuse treatment receive it.³ Failure to diagnose and treat has serious negative consequences. Mental illnesses are associated with increased risk of cardiovascular disease and diabetes and an increase of high-risk behaviors associated with substance abuse or HIV transmission.² Women who abuse substances are at increased risk for a variety of adverse health outcomes, including breast cancer, infertility, mental illness, unintentional injuries, suicide, and intimate partner violence.^{4–9} This relationship between mental health, and substance use disorders, and risk behaviors is supported by data from the North Carolina Treatment Outcomes and Program Performance System (NC-TOPPS), a state reporting system that captures service and

*...addiction and
mental illness not
only pose risks
to prenatal
development and
birth outcomes
but also impair
women's ability
to be safe and
sober mothers.*

Laura Louison, MSW, MSPH, is the perinatal substance use specialist at the North Carolina Family Health Resource Line, a project of the Department of Maternal and Child Health at the UNC Gillings School of Global Public Health.

Sherri L. Green, PhD, MSW, LCSW, is a research fellow at the Cecil G. Sheps Center for Health Services Research and a research assistant professor in the Department of Maternal and Child Health at the UNC Gillings School of Global Public Health.

Sheila Bunch, PhD, MSW, LCSW, is an assistant professor and interim director of the School of Social Work at East Carolina University.

Anna Scheyett, PhD, MSW, LCSW, is the associate dean for academic affairs and a clinical associate professor at the School of Social Work at the University of North Carolina at Chapel Hill.

descriptive data for a subset of individuals admitted to mental health and substance abuse treatment programs that receive public funding.^a Of the NC-TOPPS subset of 25,721 women ages 18 years and older who were admitted to treatment during state fiscal year (SFY) 2008-2009, one-third (33%) reported one or more visits to a hospital emergency department in the three months prior to admission to treatment, and 17% reported having used a needle to inject drugs at some point in their lives. Women in this sample reported high rates of suicidal ideation (33%) or suicide attempts (32%); both were more frequently reported by women with concurrent mental health and substance use disorders (45% and 46% respectively).^b

Gender is an important factor in both mental illness and substance use disorders and their related consequences. Women may present with different symptoms or patterns, may respond to psychotropic medications differently, and may have different courses of illness as compared to men.¹⁰⁻¹² Women have differing risk factors for mental illnesses based on biology or sociocultural experience, including pregnancy and vulnerability to sexual assault or other traumatic experience. Research suggests that 24% to 58% of women seeking substance abuse treatment have post-traumatic stress disorder (PTSD).¹³⁻¹⁵ Histories of domestic violence and sexual abuse are the most common predictors of PTSD for women, and without targeted intervention, women with PTSD are at high risk for relapse and are less likely to complete treatment.^{14,16-21} In North Carolina, over half of all women receiving services through the North Carolina Perinatal and Maternal Substance Abuse Initiative reported having experienced domestic violence (55%) and sexual abuse (52%) at some time in their lives.^{b,c}

Impact on Pregnancy and Parenting

Substance abuse and mental illness, particularly depression, have significant effects on pregnancy. Postpartum blues occur in up to 85% of women, postpartum depression in 12% to 13%, and postpartum psychosis in up to 0.1%.¹⁰ For women with a mental health disorder, treatment with psychotropic medication during pregnancy is complex and not without risk; poor neonatal adaptability has been found when pregnant women were given selective serotonin reuptake inhibitors (SSRIs) or tricyclic antidepressants (TCAs). A recent study shows a higher risk of preterm birth in both women with untreated depression and women treated with SSRI antidepressants.²² Medications for bipolar disorder carry risks

for serious birth defects, as may benzodiazepines and other anxiolytics.^{10,22} Thus, the care of women with a mental illness requiring medication during pregnancy must balance risk to the woman and fetus as a result of untreated symptomatology.

The negative impact of substance use during pregnancy is widely known, yet rates of substance use during pregnancy still continue to be high.^{1,23-28} National rates of illicit drug use in pregnant women in 2007 averaged over 5%, and an estimated 11.6% of pregnant women used alcohol.¹ Prenatal alcohol and drug exposure is strongly associated with infant mortality and morbidity, including elevated risk of low birth weight and preterm birth.²³⁻²⁵ Subsequent care for children exposed to alcohol and drugs in utero has significant financial costs as a result of hospitalizations and early intervention services.²⁶⁻²⁸

Many women in North Carolina's publicly-supported mental health and substance abuse services are mothers. In the NC-TOPPS sample, 49% of women overall reported having children under the age of 18, and 3.1% reported being pregnant. A higher percentage of women admitted to substance abuse treatment in the sample were mothers (61%), and over half of all pregnant women admitted were in substance abuse treatment.^b Substance abuse treatment utilization is correlated with improved birth outcomes for women in comparison with those who do not attend treatment.²⁹ Appropriate mental health and substance abuse services for mothers can have positive and long-reaching implications for their children and support families in breaking intergenerational patterns.

Identification of Substance Abuse and Mental Health Problems in Women of Reproductive Age

Women who abuse substances or struggle with mental health disorders face significant social stigma. Fear of hospitalization, legal reprisal, or child protective services involvement often deter women from seeking treatment.³⁰⁻³¹ Health care providers are uniquely positioned to address this fear with patients by serving as compassionate links to mental health and substance abuse treatment.

Because of their ability to assist women by addressing issues of substance use and mental health disorders, obstetrician-gynecologists have an ethical obligation to provide screening for these problems.^{23,32} We believe the evidence commands a similar obligation for other providers of women's health services. Existing clinical guidelines for substance abuse and mental health screening pertain chiefly to women who are pregnant. However, women of reproductive age should also be

-
- a The web-based NC-TOPPS system collects data for adults and children ages six years and above who have been formally admitted to a Local Management Entity with a unique identifier and have begun receiving qualifying mental health and/or substance abuse services from a publicly-funded source. Some populations who receive mental health treatment are not reflected in this data. For more information, see <http://www.ncdhhs.gov/mhddsas/nc-topps/index.htm>.
- b S. Green, unpublished data, 2009. Analysis of a subset of NC-TOPPS consumer data from state fiscal year 2007-2008 of women ages 18 and older admitted to substance abuse treatment in North Carolina. Conducted as part of an external evaluation of the North Carolina Perinatal and Maternal Substance Abuse Initiative.
- c Based on SFY 2007-2008 annual reports submitted to the NC Division of MH/DD/SAS from 21 providers in the North Carolina Perinatal and Maternal Substance Abuse Initiative.

screened for substance abuse and mood disorders as part of pre- and interconceptional health care.³³ According to data from the Pregnancy Risk Assessment Monitoring System (PRAMS), from 2004 through 2006 approximately 45% of live births in North Carolina were the result of unintended pregnancies.³⁴ Substance abuse and mental health screening in prenatal care settings alone does not address the needs of women who may not plan to become pregnant and inadvertently delay seeking prenatal care. These women may not seek care from an obstetrician-gynecologist but may utilize primary or other health care services. Substance abuse and mental health screening in primary care settings is therefore essential to promote positive reproductive outcomes for all women.³³

The American College of Obstetricians and Gynecologists advocates universal screening during pregnancy for substance abuse and mood disorders, ideally using a screening tool validated for use during pregnancy.^{23,32} Positive screening results should be addressed individually by the health care provider in a brief educational intervention and appropriate referrals to treatment. Such interventions must respect women's autonomy and be provided in non-punitive environments.²³ A variety of studies document the efficacy of supportive brief interventions and referrals in prenatal care. Women who receive an assessment and brief intervention for alcohol and drug use in health care or social services settings are more likely to report abstinence or reduce their use during pregnancy.³⁵⁻³⁸

The implementation of standardized mental health and substance abuse screening in health care settings remains far from universal. A variety of barriers prevent health care professionals from conducting universal screening and interventions, including time constraints, lack of training, misinformation, and limited community referrals.^{30,39,40} Prenatal care screening rates are high in North Carolina, but there is room for improvement. NC PRAMS 2007 data revealed that nearly 80% of women reported that a doctor, nurse, or other health care worker talked with them during a prenatal care visit about how using alcohol (75.3%) or illegal drugs (67.7%) could affect their infants, and over 75% of women received education on postpartum depression as part of prenatal care. It remains unclear whether providers use appropriate instruments for screening, and little is known about screening practices in primary care or hospital settings.⁴¹

Services for Women in North Carolina

Women of childbearing age who struggle with substance use and mental health disorders require a comprehensive service-delivery system that enhances and sustains recovery. These women generally experience clinical challenges related to parenting, intimate partner violence, social stigma, and lack of familial and community supports, and many have endured

lifetimes of trauma and social ills that may predispose them to substance use and mental health disorders. Women require a comprehensive system of care that exemplifies collaborative partnerships and meets women's unique needs. Such a system should emphasize gender-specific and holistic substance abuse and mental health treatment, with social and medical ancillary services including childcare and transportation to increase women's access to treatment.³¹ Cultural barriers to access and utilization of services should also be emphasized to reduce health disparities. Receiving gender-specific substance abuse treatment positively impacts women's length of stay in treatment and the likelihood of remaining abstinent after treatment.^{17-19,31,38}

Several divisions within the North Carolina Department of Health and Human Services have program initiatives to meet the needs of substance dependent women. The Division of Social Services has recognized the linkages between child welfare and substance abuse with programs such as the Work First/Child Protective Services Substance Abuse Initiative. The Women's Health Branch in the Division of Public Health emphasizes prevention, preconceptional health, and infant mortality reduction initiatives. The majority of the services are provided by the North Carolina Division of Mental Health, Developmental Disabilities, and Substance Abuse Services (NC MHDDSAS). Block grant requirements made effective March 31, 1993, required states to expend not less than 5% of their 1993 Substance Abuse Prevention and Treatment Block Grants to "increase availability of treatment services designed for pregnant women and women with dependent children."⁴² Women in North Carolina who are pregnant and using substances can access gender-specific treatment through the NC MHDDSAS Perinatal and Maternal Substance Abuse Initiative. The Initiative is composed of 21 specialized programs for substance abusing pregnant and parenting women and their children that provide comprehensive gender-specific substance abuse treatment including outpatient and residential services.

Although NC MHDDSAS estimates that there is greater unmet need for treatment among individuals with substance use disorders than individuals with mental illness in the state,^d gender-specific mental health services in the state have not received similar attention. However, the growing emphasis in North Carolina on dual diagnosis treatment and trauma-informed care, in addition to the development of new programs such as the Perinatal Mood Disorders Inpatient Program at the University of North Carolina Chapel Hill Center for Women's Mood Disorders, offers hope that outcomes will improve for the most vulnerable of women with mental health and substance use disorders and their families.

Supporting healthy families in North Carolina requires state and community recognition that a woman's physical and mental health and the health of her children are inextricably linked. It is our hope that North Carolina will continue to

d S. Clark, operations manager, North Carolina Division of Health and Human Services. Oral communication, August 2009.

promote women's health and strive toward reducing infant mortality and morbidity by supporting women's recovery from mental health and substance use disorders. Such support should include enhanced universal screening for mental health

and substance use disorders among women of reproductive age in public and private health care settings and an integrated system of care utilizing evidence-based gender-specific treatment for women who require it. **NCMJ**

REFERENCES

- 1 Substance Abuse and Mental Health Services Administration. *National Survey on Drug Use and Health*. Rockville, MD: US Dept of Health and Human Services; 2007.
- 2 Stewart DE, Ashraf IJ, Munce SE. Women's mental health: a silent cause of mortality and morbidity. *Int J Gynaecol Obstet*. 2006;94(3):343-349.
- 3 World Health Organization. The global burden of disease: substance abuse. World Health Organization website. http://www.who.int/substance_abuse/facts/global_burden/en/index.html. Accessed August 10, 2009.
- 4 Coker AL, Smith PH, McKeown RE, King MJ. Frequency and correlates of intimate partner violence by type: physical, sexual, and psychological battering. *Am J Pub Health*. 2000;90(4):553-559.
- 5 McCauley J, Kern DE, Kolodner K, et al. The battering syndrome—prevalence and clinical characteristics of domestic violence in primary-care internal-medicine practices. *Ann Intern Med*. 1995;123(10):737-746.
- 6 Martin SL, English KT, Clark KA, Cilenti D, Kupper LL. Violence and substance use among North Carolina pregnant women. *Am J Pub Health*. 1996;86(7):991-998.
- 7 Grodstein F, Goldman MB, Cramer DW. Infertility in women and moderate alcohol use. *Am J Pub Health*. 1994;84(9):1429-1432.
- 8 Kelly TM, Lynch KG, Donovan JE, Clark DB. Alcohol use disorders and risk factor interactions for adolescent suicidal ideation and attempts. *Suicide Life Threat Behav*. 2002;31(2):181-193.
- 9 Helzer JE, Pryzbeck TR. The co-occurrence of alcoholism with other psychiatric disorders in the general population and its impact on treatment. *J Stud Alcohol*. 1988;49(3):219-224.
- 10 Burt V, Stein K. Treatment of women. In: Hales R, Yudofsky R, Gabbard G, eds. *The American Psychiatric Publishing Textbook of Psychiatry*. 5th ed. Washington, DC: American Psychiatric Publishing, Inc.; 2007:1489-1522.
- 11 Hommer DW, Momenan R, Kaiser E, Rawlings RR. Evidence for a gender-related effect of alcoholism on brain volumes. *Am J Psychiatry*. 2001;158(2):198-204.
- 12 Greenfield SF. Women and alcohol use disorders. *Harvard Rev Psychiatry*. 2002;10(2):76-85.
- 13 Dansky B, Saladin M, Brady K, et al. Prevalence of victimization and posttraumatic stress disorder among women with substance use disorders: a comparison of telephone and in-person assessment samples. *Subst Use Misuse*. 1995;30(9):1079-1099.
- 14 Moylan, PL, Jones HE, Haug NA, Kissin WB, Svikis DS. Clinical and psychosocial characteristics of substance-dependent pregnant women with and without PTSD. *Addict Behav*. 2001;26(3):469-474.
- 15 Najavits LM, Weiss RD, Shaw SR, Muenz LR. Seeking safety: outcome of a new cognitive-behavioral psychotherapy for women with posttraumatic stress disorder and substance dependence. *J Trauma Stress*. 1998;11(3):437-456.
- 16 Back SE, Dansky BS, Carroll KM, Foa EB, Brady KT. Exposure therapy in the treatment of PTSD among cocaine-dependent individuals: description of procedures. *J Subst Abuse Treat*. 2001;21(1):35-45.
- 17 Brown VB, Melchior LA, Panter AT, Slaughter R, Huba GJ. Women's steps of change and entry into drug abuse treatment: a multidimensional Stages of Change model. *J Subst Abuse Treat*. 2000;18(3):231-240.
- 18 Camp JM, Finkelstein N. Parenting training for women in residential substance abuse treatment. *J Subst Abuse Treat*. 1997;14(5):411-422.
- 19 Cosden M, Cortez-Ison E. Sexual abuse, parental bonding, social support, and program retention for women in substance abuse treatment. *J Subst Abuse Treat*. 1998;16(2):149-155.
- 20 Killeen T, Brady KT. Parental stress and child behavioral outcomes following substance abuse residential treatment. *J Subst Abuse Treat*. 2000;19(1):23-29.
- 21 Palacios WR, Urmann CF, Newel R, Hamilton N. Developing a sociological framework for dually diagnosed women. *J Subst Abuse Treat*. 1999;17(1-2):91-102.
- 22 Wisner KL, Sit DKY, Hanusa BD, et al. Major depression and antidepressant treatment: impact on pregnancy and neonatal outcomes. *Am J Psychiatry*. 2009;166(5):557-566.
- 23 American College of Obstetricians and Gynecologists. ACOG Committee Opinion No. 422: at-risk drinking and illicit drug use: ethical issues in obstetric and gynecologic practice. *Obstet Gynecol*. 2008;112(6):1449-1460.
- 24 Dew PC, Guillory VJ, Okah FA, Cai J, Hoff GL. The effect of health compromising behaviors on preterm births. *Matern Child Health J*. 2007;11(3):1092-7875.
- 25 Goldenberg RL, Culhane JF, Iams JD, Romero R. Epidemiology and causes of preterm birth. *Lancet*. 2008;371(9606):75-84.
- 26 National Abandoned Infants Assistance Resource Center. *Literature Review: Effects of Prenatal Substance Exposure on Infant and Early Childhood Outcomes*. Berkeley, CA: University of California at Berkeley; 2006. http://aia.berkeley.edu/media/pdf/prenatal_substance_exposure_review.pdf. Accessed August 20, 2009.
- 27 Joyce T, Racine AD, McCalla S, Webeh H. The impact of prenatal exposure to cocaine on newborn costs and length of stay. *Health Serv Res*. 1995;30(2):341-58.
- 28 Phibbs CS, Bateman DA, Schwartz RM. The neonatal costs of maternal cocaine use. *JAMA*. 1991;266(11):1521-1526.
- 29 Whiteside-Mansell L, Crone CC, Connors NA. The development and evaluation of an alcohol and drug prevention and treatment program for women and children. *J Subst Abuse Treat*. 1999;16(3):265-275.
- 30 Herzig K, Huynh D, Gilbert P, Danley DW, Jackson R, Gerbert B. Comparing prenatal providers approaches to four different risks: alcohol, tobacco, drugs, and domestic violence. *Women Health*. 2006;43(3):83-101.
- 31 Ashley OS, Marsden ME, Brady TM. Effectiveness of substance abuse treatment programming for women: a review. *Am J Drug Abuse*. 2003;29(1):19-53.
- 32 American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women. ACOG Committee Opinion No. 343: psychosocial risk factors: perinatal screening and intervention. *Obstet Gynecol*. 2006;108(2):469-477.

- 33 Johnson K, Posner SF, Biermann J; CDC/ATSDR Preconception Care Work Group; Select Panel on Preconception Care. Recommendations to improve preconception health and health care—United States. A report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. *MMWR Recomm Rep*. 2006;55(RR-6):1-23.
- 34 North Carolina State Center for Health Statistics. *North Carolina PRAMS Fact Sheet. March 2009. Unintended Pregnancies, 2004-2006 NC Pregnancy Risk Assessment Monitoring System (PRAMS)*. Raleigh, NC: North Carolina Dept of Health and Human Services; 2009. North Carolina State Center for Health Statistics website. <http://www.schs.state.nc.us/SCHS/pdf/UnintendedPregnancies.pdf>. March 2009. Accessed August 20, 2009.
- 35 Chang G, McNamara TK, Orav EJ, Wilkins-Haug L. Brief intervention for prenatal alcohol use: the role of drinking goal selection. *J Subst Abuse Treat*. 2006;31(4):419-424.
- 36 Handmaker NS, Wilbourne P. Motivational interventions in prenatal clinics. *Alcohol Res Health*. 2002;25(3):219-229.
- 37 O'Connor MJ, Whaley SE. Brief intervention for alcohol use by pregnant women. *Am J Pub Health*. 2007;97(2):252-258.
- 38 Goler NC, Armstrong MA, Taillac CJ, Osejo VM. Substance abuse treatment linked with prenatal visits improves perinatal outcomes: a new standard. *J Perinatol*. 2008;28(9):597-603.
- 39 Diekman St, Floyd RL, Decoufle P, Schulkin J, Ebrahim SH, Sokol RJ. A survey of obstetrician-gynecologists on their patient's alcohol use during pregnancy. *Obstet Gynecol*. 2000;95(5):756-763.
- 40 Taylor P, Zaichkin J, Pilkey D, Leconte J, Johnson BK, Peterson AC. Prenatal screening for substance use and violence: findings from physician focus groups. *Matern Child Health J*. 2007;11(3):241-247.
- 41 LaRocco-Cockburn A, Melville J, Bell M, Katon W. Depression screening attitudes and practices among obstetrician-gynecologists. *Obstet Gynecol*. 2003;101(5):892-898.
- 42 Substance Abuse and Mental Health Services Administration, US Department of Health and Human Services. 45 CFR Part 96: Substance Abuse Prevention and Treatment Block Grants. *Fed Regist*. 1993;58(60):1921-1954.

Got Internet? Need Services?

North Carolina's web-based information and referral service
is ready to serve you.

Find the right health and human services assistance with access to statewide information available through NCcareLINK, your connection to up-to-date information about programs and services offered across North Carolina.



Search your virtual directory
of community resources:

www.NCcareLINK.gov

For assistance or more information,
call the N.C. CARE-LINE,
1-800-662-7030 (English/Spanish)
1-877-452-2514 (TTY).

*NCcareLINK is a partnership involving agencies within state government,
and local and community-based information and referral services.*

